

MILLENNIUM CHALLENGE ACCOUNT SENEGAL
(MCA-SENEGAL)



Post-Compact Monitoring and Evaluation Plan



Revision N° 01/2015
Main Document and Annexes

With the support of:



REVISION No:	N1
DATE:	
DATE OF APPROVAL BY THE BOARD	
DATE OF APPROVAL BY THE MCC	

TABLE OF CONTENTS

PREAMBLE	4
ACRONYMS	5
1. PRESENTATION OF THE POST-COMPACT EVALUATION AND MONITORING PLAN	6
1.1. INTRODUCTION	6
1.2. PROGRAM INTERVENTION LOGIC.....	6
1.2.1. <i>The Roads Rehabilitation Project</i>	7
1.2.2. <i>The Irrigation and Water Resource Management Project</i>	8
1.3. ECONOMIC IMPACTS OF THE PROJECTS.....	9
1.4. PROGRAM BENEFICIARIES	10
2. MONITORING COMPONENT	11
2.1. MONITORING STRATEGY	11
2.1.1. <i>Objectives and organization</i>	11
2.1.2. <i>Performance Indicators</i>	11
2.2. DATA QUALITY REVIEWS	13
2.3. REPORTING REQUIREMENTS	13
2.3.1. <i>Post-Compact Annual Report</i>	13
TABLE 5 : SCHEDULE FOR THE COLLECTION AND USE OF PERFORMANCE INDICATORS	14
3. EVALUATION COMPONENT	15
3.2. SPECIFIC EVALUATION PLANS.....	15
3.2.1. <i>Impact Evaluation</i>	16
6. ANNEXES.....	22
6.1. ANNEX I: GLOSSARY	22
6.2. ANNEX II: PROGRAM LOGIC	24
6.2.1. <i>Logic of the Irrigation and Water Resources Management Project</i>	24
6.2.2. <i>Logic of the Roads Rehabilitation Project</i>	25
6.3. ANNEX III: ANALYSIS OF POST-COMPACT MONITORING AND EVALUATION STAKEHOLDERS	26
6.4. ANNEX V: PERFORMANCE INDICATOR TARGETS.....	28
6.5. ANNEX VIII: ANNUAL REPORTING FRAMEWORK	31
6.5.1. <i>Annual Status Report Outline</i>	31
6.6. ANNEX IX: FOCAL POINTS OF POST COMPACT MONITORING AND EVALUATION	32

List of tables

TABLE 1 :	TRAFFIC ON ROAD SECTIONS TO BE REHABILITATED BY THE COMPACT.. 8ERROR! BOOKMARK NOT DEFINED.	
TABLE 2 :	IWRM PROJECT OBJECTIVES	9
TABLE 3 :	RESULTS OF THE ECONOMIC ANALYSIS OF MCA-SENEGAL PROJECTS	9
TABLE 4 :	ESTIMATION OF PROGRAM BENEFICIARIES.....	10
TABLE 5 :	POST-COMPACT GOAL, OBJECTIVE, AND RESULT INDICATORS.....	12
TABLE 6 :	SCHEDULE FOR THE COLLECTION AND PROCESSING OF PERFORMANCE INDICATORS	14

PREAMBLE

This Post-Compact Monitoring and Evaluation Plan (MEP):

- ❖ Is part of the action plan set out in the Compact signed on September 16, 2009 between the United States of America, acting through the Millennium Challenge Corporation (MCC), a public institution of the United States Government, and Senegal, acting through its government;
- ❖ and is a guide for monitoring the sustainability of MCC's investments;
- ❖ is governed by principles stipulated in the policy for monitoring and evaluation of Compacts and Threshold Programs (MCC M&E Policy);
- ❖ In accordance with the close-out plan, the post-compact MEP will ensure observation of the sustainability of impacts achieved under the compact. The plan will include a description of future monitoring and evaluation activities, identify individuals and entities that will support these activities and provide the budget framework for the next monitoring and evaluation activities that will be drawn from both MCC's and the host country's resources.

The M&E plan is considered a binding document, and failure to comply with its stipulations could be regarded as a violation of the agreement between MCC and the Government of Senegal.

ACRONYMS

AfDB:	African Development Bank
AGEROUTE:	Roads Management Agency
ANSD:	National Statistics and Demography Agency
APR:	Annual Progress Report
BADEA:	Arab Bank for Economic Development in Africa
BLS:	Baseline Study
CCR:	Compact Completion Report
CD:	(MCA) Communication Directorate
CGS:	?
CNCAS:	National Agricultural Credit Institution of Senegal
DAF:	(MCA) Directorate of Administration and Finance
DEEC:	Department of Environmental Affairs and Classified Institutions
DFRI:	(MCA) Land Tenure and Institutional Reforms Directorate
DG:	(MCA) Director General
DDG:	(MCA) Deputy Director General
ERR:	Economic Rate of Return
ESA:	(MCA) Environmental and Social Assessment Directorate
EU:	European Union
GIS:	Geographic Information System
GPRSP:	Growth and poverty reduction strategy paper
GTZ:	German Technical Cooperation
IEA :	Implementing Entity Agreement
IT:	Invitation to tenders
ITT:	Indicator Tracking Tables
IWRMP:	Irrigation and Water Resources Management Project
JICA:	Japan International Cooperation Agency
LOASP:	Agro-silvo-pastoral (agriculture, forests and pastoral) guidance law
MCA-S:	Millennium Challenge Account Senegal
MCC:	Millennium Challenge Corporation
MDGs:	Millennium Development Goals
MED:	(MCA) Monitoring and Evaluation Directorate
MEF:	Ministry of Economy and Finance
M&E:	Monitoring and Evaluation
MEP:	Monitoring and Evaluation Plan
NPRSS:	National Program for Rice Self-sufficiency
PCAR:	Post-Completion Assessment Report
PDRG:	Development Plan for the Left Bank of the Senegal River
PM:	Prime Minister's Office
PMU:	Project Management Unit
QPR:	Quarterly Progress Report
RAP:	Resettlement Action Plan
RRP:	Roads Rehabilitation Project
SAED:	National Agency for agricultural land development in the Senegal River Delta and the valleys of the Senegal and Faleme Rivers
SB:	(MCA) Supervisory Board
SU/MCA-S:	Support Unit for the Millennium Challenge Account Senegal
WB:	World Bank

1. PRESENTATION OF THE POST-COMPACT EVALUATION AND MONITORING PLAN

1.1. INTRODUCTION

1. Monitoring and evaluation within the framework of the Compact is an essential function for the success of the program in connection with the results-based approach. These are decision-aiding tools at different levels of monitoring, oversight, supervision and implementation of MCA-Senegal.
2. The post-Compact Monitoring and Evaluation Plan (MEP) is intended to define the organization and operation of this function in order to facilitate the post-Compact monitoring and evaluation missions.
3. The post-Compact Monitoring and Evaluation Plan describes (i) how the objectives and performance indicators will be monitored and measured, and (ii) how evaluations will be carried out. It is prepared based on Annex III of the Compact, which describes the approach and monitoring and evaluation methods recommended for the management of the Millennium Challenge Corporation (MCC) funds.
4. MCA-Senegal's post-Compact Monitoring and Evaluation Plan:
 - explains in details the terms and conditions of post-Compact monitoring through performance indicator tables of the program and of various projects and a data collection and quality control strategy;
 - describes the needs of projects for M&E information that the government has to provide to the various stakeholders;
 - is used as a monitoring tool for MCC, the MCA-Senegal Stakeholders Committee and for other stakeholders during the post-Compact period;
 - is used to provide guidance on measuring progress towards the achievement of objectives and targets during the post-Compact three-year period.
5. The Post-Compact Monitoring and Evaluation Plan is based on the principles of:
 - participation and accountability of all stakeholders, including women and other vulnerable groups, in program monitoring and evaluation, namely in data collection, processing and analysis;
 - linkage with the evaluations through the incorporation of performance indicators listed in the reference documents and common indicators identified by MCC;
 - diversity in indicator types: quantitative and qualitative indicators;
 - getting things done by outsourcing a number of tasks to consultants or to implementing partners;
 - reliability and accuracy of data and situations reported in the indicator tracking tables¹
 - availability and transparency in reporting results data on the MCA-Senegal website.

1.2. PROGRAM INTERVENTION LOGIC

6. On 16 September 2009, the United States of America through the Millennium Challenge Corporation (MCC) and the Government of the Republic of Senegal signed a "Compact" contract meant to reduce poverty through economic growth.
7. Pursuant to this agreement, MCC grants the Government of Senegal acting through the Millennium Challenge Account Senegal (MCA-Senegal), a financing program of up to five hundred and forty million US Dollars (US \$ 540 million, or about 270 billion CFAF) to implement the Compact² over a five-year period.
8. With a population of about 12 million people, Senegal is bordered in the north by Mauritania, in the east by Mali, in the west by the Atlantic Ocean and in the south by the Republic of Guinea, Guinea-Bissau and the enclave of Gambia that runs through the center and isolates the natural region of the Casamance from the rest of the territory. The Republic of Senegal was declared eligible for MCC assistance in 2004.
9. During the period from February to July 2008 and following extensive consultations undertaken by the Government to analyze the economic constraints of the country, the MCA -Senegal Program decided to focus on

¹ Using the Indicator Tracking Tables (ITT)

² See Annex II : Logic of the Roads Rehabilitation Project

reducing poverty in the northern (in the Senegal River Valley) and the southern (in the Casamance) regions of Senegal.

10. The northern and southern areas were chosen to promote economic growth in these regions, increase food security in Senegal by tapping the agricultural potential in these areas and encourage penetration into the sub regional market. The Senegal River Valley, like the Casamance, is an agriculturally rich region, especially with rice, which is the staple food crop of the Senegalese people.
11. The northern zone, which is very conducive to intensive irrigation, is facing small areas under cultivation and low crop yields due to the low capacity of the existing irrigation infrastructure and drainage systems (insufficient water availability, increased land salinity due to lack of drainage).
12. Despite its economic development potential, which is considered important, the natural region of the Casamance is one of the poorest in Senegal. Enhancing this potential, characterized by its rich natural resources and its large agricultural production, could significantly contribute to increasing food security at the national level. A primary constraint to the development of this potential is the poor road network, which limits national and regional-level export of regional products and services.
13. See Annex 2: Logic of IWRM and Roads Rehabilitation Projects.

1.2.1. The Roads Rehabilitation Project

14. The Roads Rehabilitation Project (RRP) is designed to increase beneficiaries' access to domestic and international markets by improving the quality of roads and reducing the time and costs³ of travel.
15. The RRP focus was on national roads no. 2 ("RN#2") and no. 6 ("RN#6"), which were identified as priorities in the road sector. They are expected to help facilitate the transport of manufactured goods, minerals and agricultural products.
16. The RRP activities included:
 - Rehabilitation (strengthening, widening and replacing associated structures) of National Road 2 over 120 kms from Richard-Toll to Ndium and of National Road 6 up to 256 kms from Ziguinchor to Kounkané;
 - Implementation of environmental and social mitigation measures including (i) developing community reforestation plans, (ii) implementing an HIV/AIDS awareness-raising program, (iii) relocating or resettling families likely to be affected by the rehabilitation construction, (iv) implementing an environmental awareness program for communities, (v) ensuring environmental monitoring, (vi) tree planting in lines, (vii) constructing/relocating weekly markets, (viii) supporting the use of wood products from deforestation caused by communities, and (ix) an affirmative action strategy for the recruitment of women in infrastructure works.
17. The RN#2 is the main transportation and export road for products from irrigated perimeters along the Senegal River. It is also a strategic road link with Mauritania and Mali.
18. The RN#6 links Senegal with Guinea Bissau, Guinea (Conakry), and Mali. The RN#6 is also a strategic road that enables the transportation of local agricultural products and other products and services from the Casamance region to the rest of Senegal without having to travel through the Gambia. The RN#6 is the single national road providing land access to and from the Casamance. The rehabilitation of these national roads (NRs) is expected to stimulate the internal and trans-border traffic and facilitate trade by providing reliable access all year round.
19. According to the Compact, RN # 2 is expected to benefit some 21,000 households or 250,000 people over the next 20 years.

³ About 99% of goods produced in Senegal are transported by road and 95% of national travels are made by road.

20 According to the Compact, the RN # 6 activity is expected to affect some 102,000 households, or about 1.1 million people over the next 20 years.

21. The expected traffic results are presented in the table below:

Table 1: Traffic on sections of roads to be rehabilitated by the Compact⁴

Sections	2009 (*)	Results for 2012 (**)	Targets in 2015 (***)
RN2 Richard-Toll – Ndioum	870	1,029	1,116
RN6 Lot 1 Ziguinchor – Tanaff	540	181	963
RN6 Lot 2 Tanaff – Kolda	820	23	562
RN6 Lot 3 Kolda – Vélingara	1,200	716	1,426

N.B.: (*): Objectives and baseline as set in the Compact.
(**): Results of the counting study undertaken in 2012 by AGERROUTE
(***): Targets from the Closeout M&E Plan

1.2.2. *The Irrigation and Water Resource Management Project*

22. The Senegal River Valley is conducive to intensive irrigation because of its:

- Long history of irrigation in the valley for over 30 years;
- Availability of water for irrigation;
- Support from the government, from the National Company for the Development and Exploitation of Land in the Delta of the Senegal River and the Valleys of the Senegal River and the Faleme (SAED), from banking institutions such as the National Agricultural Credit Institution of Senegal (CNCAS) and from the financial partners (World Bank, JICA, French Cooperation, GTZ, African Development Bank (AfDB), BADEA, Kuwait Fund, etc.;
- Strengthened capacity of farmers' associations to manage irrigation systems.

23. Tapping the full agricultural production potential in the valley could largely address the national needs for agricultural products, particularly for rice, even without further improvements that are still needed along the value chain. However, various constraints have led to the abandonment of thousands of hectares of land. Associated with low agricultural yields, this situation was largely attributable to insufficient availability of water for irrigation, the lack of an adequate drainage system and its consequence, i.e., soil salinity.

24. The Irrigation and Water Resource Management Project contributes to the poverty reduction strategy and agricultural development in the Valley. Its objective is to increase the productivity of the agricultural sector by (1) increasing cropping intensity; (2) increasing agricultural production and farm incomes; (3) increasing investments in the agricultural sector, and (5) improving the local governance of land resources⁵. The project focuses on 3 activities: "Delta activity", "Podor activity" and "land tenure security activity."

25. The goal of the land tenure security activity was to provide or maintain an environment conducive to land tenure for all beneficiaries directly involved in the project by granting them land tenure titles and by providing local governments with adapted land registers and records. This is expected to help improve the level of investment in the area. To fulfill such an ambition, the project supported the development and implementation of efficient land allocation conditions and processes for fair and secured access to land. It strengthened the capacities of local officials through the development of tools such as procedures manuals as well as through communication and training in land management. This process facilitated the allocation and formalization of land use rights in accordance with current legislation and contributed to considerable reduction of land conflicts in the program area.

26. According to the Compact, the Irrigation and Water Resource Management Project will benefit the households using the perimeters, the owners or the shareholders of agricultural enterprises and the households working in the farms. The total number of beneficiaries is estimated at about 22,390 households or 260,000 people, 52% of which are female.

⁴ OD and counting surveys data

⁵ See Annex II: Logic of the Irrigation and Water Resources Management Project

27. The key results expected from the Irrigation and Water Resources Management Project are presented in the table below:

Table 1 : IWRM Project objectives

Indicators	2009 (*)	2012 (**)	Targets in 2015 (***)	Long-Term Targets (***)
Production of paddy rice (tons)	55,000	107,000	111,000	277,000
Production of Tomatoes (tons)	10,500	14,200	35,500	115,000
Production of onions (tons)	5,000	16,000	40,000	130,000
Delta cropping intensity	60%	60%	70%	150%
Ngalenka cropping intensity	0%	20%	120%	180%

N.B. : (*) : Baseline as set in the Compact.
 (**) : 2012 Targets as set in the Closeout M&E Plan
 (***) : Targets as set in the Closeout M&E Plan

1.3. ECONOMIC IMPACTS OF THE PROJECTS

28. The projects implemented under the MCA-Senegal Program are to attain revised economic rates of return somewhere between 2% and 11%, based on calculations over a 20-year period. The projects will mostly benefit:

- quintiles 2 (<\$2 per day) and 3 (from \$2 to \$4 per day) for the RN#2 and RN#6 rehabilitation project;
- quintiles 1 (<\$1.25 per day), 2 (<\$2 per day) and 3 (from \$2 to \$4 per day) for activities in Ngalenka, and;
- quintiles 2 (<\$2 per day), 3 (from \$2 to \$4 per day) and 4 (>\$4 per day) for activities in the Delta⁶.

Table 2: Results of the economic analysis of MCA-Senegal projects

Activities	Original (ERR) (*)	Date of original ERR	Revised current ERR	Date of revised current ERR
RN#6 Rehabilitation	11%	Year 2009	1 to 6.8%	June 2015
RN#2 Rehabilitation	11%	Year 2009	8 to 11%	June 2015
Irrigation and Water Resources Management	16%	Year 2009	10 to 11%	March 2013

N.B.: (*)ERR incorporating the Compact management costs. ERR: Economic Rate of Return

Sources: Economic Analysis du MCC, 2009, 2012 and 2013, and 2015.

See <http://www.mcc.gov/pages/countries/err/senegal-compact> or www.mcasenegal.org

⁶ See the beneficiary study

1.4. PROGRAM BENEFICIARIES

29. The purpose of the MCA-Senegal Compact is to help reduce poverty in Senegal through economic growth. The objective of the program⁷ is to help improve agricultural productivity and access to markets and services through investment in structural infrastructure in the road and irrigation sectors through two major projects:

- ✦ The Project for the Rehabilitation of national roads 2 and 6 with the objective of improving access to markets and services with a view to reducing the duration and costs of transportation.
- ✦ The Irrigation and Water Resources Management Project which seeks to increase the productivity of the agricultural sector through expansion and improvement of the irrigation systems in Northern Senegal.

30. According to the Compact, the number of direct beneficiaries is estimated at about 1.55 million people by 2029, or about 138,600 households, including 1.1 million people living in the natural region of the Casamance⁸. In that area, the majority of direct beneficiaries come from households living with less than \$US 2 per person and per day, with 42% of them living with less than \$US 1.25 per person and per day. In the northern area, about 45% of direct beneficiaries are households living with less than \$US 2 per person and per day, including 25% living with less than \$US 1.25.

31. The program will generate direct services to beneficiaries, including about 38% for those living in the natural region of the Casamance and 62% for those in the Senegal River Valley. Ultimately, the program would contribute significantly to the development of the Casamance by facilitating future investments in the region (leverage effect). See table below.

Table 3 : Estimation of Program Beneficiaries

Projects	Estimated number of beneficiaries	Estimated number beneficiary households
Roads Rehabilitation Project	1,350,000 people	123,000 households
Irrigation and Water Resources Management Project	260,000 people	22,390 households
TOTAL	1,550,000 people (*)	138,600 households (*)

N.B. : (*) : Some households in the Northern Zone will benefit from the Roads and Irrigation Projects..

⁷ See Senegal Compact, Annex 1.

⁸ Source: Senegal Compact, Annex 1 1-2. Some people in the Northern Zone are also benefitting from both the Irrigation and Roads Projects

2. MONITORING COMPONENT

2.1. MONITORING STRATEGY

32. The Post-Compact MEP aims to:

- Measure, through performance indicators ("Program Monitoring function"), the results and performance of the Program during and after its implementation to ensure that the objectives and the expected economic gains will be achieved, and;
- Track the results and level of achievement of MCA-Senegal's performance indicators as defined in the different agreements, and report on the achievement of (or failure to achieve) the program objectives, using the ITT.

2.1.1. Objectives and organization

33. The purpose of the Program's post-Compact performance monitoring is to track the results and level of achievement of performance indicators, as defined in the different agreements, and report on the achievement of (or failure to achieve) the program objectives.

34. The main stakeholders of post-Compact Monitoring and Evaluation are:

- Decision makers: The Government of Senegal and the Millennium Challenge Corporation;
- Implementing partners: the implementing partners (AGEROUTE and SAED);
- Partners: other development players, local and administrative authorities, etc.
- Beneficiaries: Direct beneficiaries, the general public and the press.

35. The roles of the key players involved in the implementation of the post-Compact Monitoring and Evaluation Plan are:

- ✚ Implementers of the post-Compact M&E Plan: this group of players (who provide input and facilitate the M&E Plan) includes SAED and AGEROUTE focal points and the MCC focal point from the Support Unit of MCA-Senegal;
- ✚ First level users (primary users of information from the M&E system): this group includes the MCC, the Prime Minister's Office (Support Unit of MCA-Senegal);
- ✚ Second level users: This group includes other partners (ANSD, DEEC), development partners involved in the same intervention zones as MCA-Senegal (World Bank, European Union, GTZ, JICA, etc.), partner projects and programs in the same geographic areas, administrative and local community authorities, professional organizations, and direct beneficiaries (households and enterprises);
- ✚ Third level users: this group includes the beneficiaries, the General Public and the Press.

36. The results and performance of the Program will be monitored through the performance indicators defined in the agreements, and especially on the basis of Annex III of the Compact.

2.1.2. Performance Indicators

37. The Program was monitored during the five years of the Compact, using performance indicators⁹. The next three years will help measure the long-term effects and sustainability.

38. Document 2 "Memorandum on Post-Compact M&E Plan/2015" presents the results and sustainability indicators selected for measuring progress by the Compact, with baseline and target indicators.

39. See Annex V on MCA-S's performance indicator targets.

40. For each performance indicator, a baseline, a target, the methodology and frequency as well as the person in charge of data collection are defined. See Memorandum on Post-Compact MEP/2015 relating to the definition of performance indicators.

41. Through these indicators, program performance can be monitored during the post-Compact period, to ensure achievement of the objectives and economic gains.

⁹ See Annex III. Description of the Monitoring and Evaluation Plan, Senegal Compact

42. For each indicator, a tracking sheet is developed to facilitate its collection, monitoring and use. See Memorandum on Post-Compact MEP/2015.

43. The indicator sheets provide for each indicator:

- The specific definition;
- The origin (or source) of the data;
- The frequency of collection;
- Baselines and targets per period, and;
- Analyses and performance reviews.

44. The table below presents the post-Compact list of indicators.

Table 4 : Post-Compact goal, objective and result indicators

Level	Indicator (Code and title)	Unit	Data disaggregation by ...			
			Sex	Age	Income	Locality/ Project type
Goal	P indicator 1: Rate of variation of beneficiaries' net income drawn from the Irrigation Project	%	YES	NO	YES	NO
Goal	P indicator 2: Change in vehicle operating costs per trip/kilometer for the RN2	US\$	NO	NO	NO	NO
Goal	P indicator 3: Change in vehicle operating costs per trip/kilometer for the RN6	US\$	NO	NO	NO	NO
Irrigation and Water Resources Management Project						
Outcome	IWRM indicator 1: Rice Paddy Production	Tons	NO	NO	NO	YES
Outcome	IWRM indicator 2: Tomato production	Tons	NO	NO	NO	YES
Outcome	IWRM indicator 3: Onion production	Tons	NO	NO	NO	YES
Outcome	IWRM indicator 4: Cropping intensity (Delta)	%	NO	NO	NO	NO
Outcome	IWRM indicator 5: Cropping intensity (Ngalenka)	%	NO	NO	NO	NO
Outcome	IWRM indicator 6: Total area with improved irrigation infrastructure (Delta and Ngalenka)	Ha	NO	NO	NO	YES
Outcome	IWRM indicator 7: Hectares under production across cropping seasons	Ha	NO	NO	NO	YES
Outcome	IWRM indicator 8: Total flow measured (Q) at the Ronkh and G works	Rate	NO	NO	NO	NO
Outcome	IWRM indicator 9: Number of hectares formalized (having a land allocation title and registered)	Ha	NO	NO	NO	YES
Outcome	IWRM indicator 10: : Percentage of land disputes resolved	%	NO	NO	NO	YES
Output	IWRM indicator 11: Conflicts successfully mediated	Number	NO	NO	NO	YES
Output	IWRM indicator 12: : Parcels corrected or incorporated in the land system	Parcels	NO	NO	NO	YES
Output	IWRM indicator 13: Land rights formalized ¹⁰	Number	NO	NO	NO	YES
Output	IWRM indicator 14: Number of land management committees and commissions set up or improved upon	Number	NO	NO	NO	NO
Outcome	IWRM.15: : Total length of main drainage canals and outfalls serviced (raked and/or cleaned out) annually	Number	NO	NO	NO	YES
Outcome	IWRM.16: : Number of pumping equipment serviced annually	Number	NO	NO	NO	YES
ROADS REHABILITATION PROJECT						
Outcome	RRP Indicator 1: Average annual daily traffic (AADT) Richard-Toll – Ndioum	Number	NO	NO	NO	NO
Outcome	RRP Indicator 2: Average annual daily traffic (AADT) Ziguinchor – Tanaff	Number	NO	NO	NO	NO
Outcome	RRP Indicator 3: Average annual daily traffic (AADT) Tanaff – Kolda	Number	NO	NO	NO	NO
Outcome	RRP Indicator 4: Average annual daily traffic (AADT) Kolda – Kounkané	Number	NO	NO	NO	NO
Outcome	RRP Indicator 5: Rate of change in the duration of travel time on RN#2	%	NO	NO	NO	NO
Outcome	RRP Indicator 6: Rate of change in the duration of travel time on RN#6	%	NO	NO	NO	NO
Outcome	RRP Indicator 7: Roughness (RN2)	m/km	NO	NO	NO	NO
Outcome	Indicateur RRP.8: : Roughness (RN6)	m/km	NO	NO	NO	NO

¹⁰ This indicator refers to households, businesses and legal entities holding formalized land rights

Level	Indicator (Code and title)	Unit	Data disaggregation by ...			
			Sex	Age	Income	Locality/ Project type
Outcome	RRP Indicator.9. : Road traffic fatalities	Number	YES	NO	NO	YES
Output	RRP Indicator 10: Kilometers of roads rehabilitated on RN#6	Km	NO	NO	NO	NO
Output	RRP Indicator 11 : Kilometers of roads completed	Km	NO	NO	NO	YES
Outcome	RRP Indicator12. : Percentage of the annual budget mobilized for the road network maintenance with regard to the annual necessary budget (Ratio budget with constraint on the budget without constraint)	%	NO	NO	NO	NO
Outcome	RRP Indicator13. : Percentage of paved roads maintained in good and average condition	%	NO	NO	NO	NO
Outcome	Indicator RRP.14. : The visual state of the road network	%	NO	NO	NO	YES
Outcome	Indicator RRP.15. : The deflection	Number	NO	NO	NO	YES
Outcome	Indicator RRP.16. : Number of gardening plots functional	Number	NO	NO	NO	NO
Outcome	Indicator RRP.17. : Number of borrow-pits rehabilitated	Number	NO	NO	NO	NO

2.2. DATA QUALITY REVIEWS

45. To ensure the accuracy, objectivity and reliability of the data used to measure the performance of MCA-Senegal as well as the sources and methods used to collect data on performance indicators, the Post-Compact M&E plan includes a strategy for data quality evaluation and management. This strategy precisely defines the responsibilities of each entity involved in data collection and information management.

46. Data quality was reviewed in accordance with the procedures and requirements described by MCC's procedures¹¹. The strategy included a schedule of internal and external data quality assessments undertaken with the support of independent consultants. It is a process requiring quality assurance at every level, throughout the chain.

47. The objectives of data quality reviews were to assess the conformity of the monitoring – evaluation data with the standards defined by MCC's M&E procedures. The data were audited on the basis of the following criteria:

- Validity: Do the data satisfactorily represent the desired results?
- Reliability: Are the data collection procedures stable and consistent over time?
- Timeliness: Are the data current and frequently collected?
- Precision: Do the data have an acceptable margin of error?
- Integrity: Are the data free from manipulation?
- Appropriateness: To what extent do the indicators fully portray the results?
- Practicability: Are the data current and frequently collected?

48. The main sources of data in the Post-Compact M&E are:

- (i) Surveys (Households and Businesses, on the roads, etc.);
- (ii) Beneficiary organizations and individuals of the intervention area;
- (iii) Consultants responsible for conducting studies for MCC;
- (iv) Partners (ANSD, SAED, AGEROUTE, Development partners intervening in the same areas, other sources);
- (v) etc.

49. SAED and AGEROUTE are each responsible for the quality of data that they provide. They ensure that the data collection procedures do not include risks for data quality and comply with the basic conditions and factors influencing data quality.

2.3. REPORTING REQUIREMENTS

2.3.1. Post-Compact Annual Report

¹¹ See «M&E Policy» and «Policy on Prevention, Detection and Remediation of Fraud and Corruption». www.mcc.gov

50. The Post-Compact Annual Report shall describe:
- A summary of activities implemented by the government as a follow-on to the Compact and the level of achievement of construction works and additional activities;
 - The status of all works and/or activities originally planned under the Compact that were not completed by CED, including:
 - The closure of worksites and borrow pits
 - Completion of resettlement activities
 - Completion of reforestation activities
 - An update regarding the status of environment and social measures (reforestation, sustaining livelihoods, etc) that were implemented under the compact
 - An update regarding the sustainability and maintenance actions regarding :
 - The Ngalenka perimeter
 - The Irrigation Maintenance Action Plan
 - The ongoing implementation and/or expansion of the Land Tenure Security Activities
 - Routine and periodic maintenance on the roads
 - The status and/or any changes regarding the overloading of trucks on the roads
 - The annual ITT.
51. The Post-Compact Annual Report will be a compilation of the annual reports from SAED and AGEROUTE. It will be prepared by the Supporting Unit for MCA-Senegal or the entity designated by the Prime Minister's Office for that purpose. The report shall be submitted before March 31 of each of the three years following the completion of the Compact.
52. The annual report shall be submitted by e-mail to the MCC Vice-President in the Department of Compact Operations (DCO), with a copy to MCC's Monitoring and Evaluation Expert (VPOperations@mcc.org). The email subject line must include the country name followed by Post Compact Reporting and the report period. For Senegal, for instance, this would read as follows, « Senegal Post Compact Reporting January-December 2016 ».
53. The schedule for collection and use of indicators is as follows:

Table 5 : Schedule for the collection and use of performance indicators

Frequency of collection	Deadline	Entity responsible for action	Summary deadline	Submission to MCC
Annual ITT				
▪ Year # 0: October – December 2015	10 January 2016	M&E Directorate	15 January 2016	20 January 2016
▪ Year # 1: January – December 2016	20 January 2017	CGS in conjunction with SAED and AGEROUTE	31 January 2017	31 March 2017
▪ Year # 2: January – December 2017	20 January 2018		31 January 2018	31 March 2018
▪ Year # 3: January – December 2018	20 January 2019		31 January 2019	31 March 2019

3. EVALUATION COMPONENT

3.1. EVALUATION STRATEGY

54. Evaluation is an essential component of MCA-Senegal Program and is a major focus of MCC's approach. This approach incorporates specific methodologies that can provide guidance on the impact of the programs implemented and attributable to the intervention of the funded projects.

55. The evaluation component of the MCA-S M&E Plan aims to:

- Complete a retrospective analysis (summative evaluation) of results achieved in light of the expected outcomes and determine whether these results are attributable to the intervention;
- Assess the impact of MCA Senegal's projects on the beneficiaries, including vulnerable groups who may be less likely to equally benefit from program activities;

56. The evaluation strategy is based on scientific models with advantages of neutrality, accuracy, objectivity and validity of information. The evaluation methodologies are selected on the basis of the assessment of these criteria and of their costs.

57. The activities of the post-Compact evaluation component should be focused on independent evaluations.

58. The evaluations should also analyze the differences in the project impact disaggregated by gender, age and income.

59. Each evaluation will be based on statistical methods, using data collected through surveys undertaken by MCA contract consultants, and on data collected by MCC consultants during the post-Compact period.

60. The collaboration between the MCA-Senegal monitoring-evaluation team and the impact evaluation teams will be pursued with the post-Compact monitoring-evaluation teams (SAED, AGEROUTE, Supporting Unit for MCA or any other entity designated by the Prime Minister's Office).

3.2. SPECIFIC EVALUATION PLANS

61. Activities of the evaluation component will be focused on:

- i. Independent evaluation: in accordance with the procedures in force, an independent evaluation of project outcomes will be undertaken. This in-depth results-focused evaluation will help measure changes registered at individual level, in the households or in the well-being of the community as a result of the intervention of the Irrigation and Roads projects. MCC is responsible for the selection of one or several independent consulting firms specializing in evaluations to design and carry out the evaluation of both projects.
- ii. Special studies.

62. See table below on specific evaluation plans.

Table7: Summary of Specific Evaluation Plans

Name of evaluation	Surveys concerning	Evaluation period	Type of evaluation	Evaluator	Methodology	Date of Final Report
Evaluation of IWRM Project	• Baseline Survey of IWRM Project	March 2012 – January 2013	Impact	To be determined	Difference-in-difference	Early 2019
	• Mid-term Survey of IWRM Project	• Ngalenka & Delta: Sept-Dec 2016				
	• Final Survey of IWRM Project	• Ngalenka & Delta: June 2017-May 2018				
Evaluation of Roads Project	• Baseline Survey of Roads Project	May - December 2012	Performance	To be determined	HDM-4	End of 2018
	• Counting Survey an OD initial situation	• September 2012				
	• Counting Survey and OD	• Sept.-2015				
	• Counting Surveys	• Regularly through 2018				
	• Additional surveys for analysis of final HDM-4	• 2018				

3.2.1. Impact Evaluation

3.2.1.1. Evaluation of the IWRM Project Impact

63. It is worth noting that the evaluation plan for this project was adopted in 2011 in conjunction with MCC and its consultant, IRIS Center of University of Maryland, for the evaluation. The design is based on the difference-in-difference estimation with matching.

□ Sample selection

64. Since the IWRM Project beneficiaries were selected on a non-random basis, the sampling methodology for the survey should have identified and selected treatment areas (beneficiaries of interventions) as similar as possible to comparison communities (i.e. to represent the counterfactual).

65. The methodology proposed is based on the difference-in-difference (DID) method which compares changes before-after the results between households in the intervention areas (treatment group) and households in comparison zones (comparison group).

66. The key assumption of the difference-in-difference methodology is that the outcome trends between the treatment group and the comparison group should be similar. However, in case the characteristics of the treatment and control groups are highly different, a combination of the difference-in-difference method and the matching estimation is used.

67. The combined difference-in-difference with matching approach is a merger of the difference-in-difference method and matching estimation to compare the changes in the results of households belonging to the treatment group with those of households of the comparison group based on observable characteristics.

□ Survey data collection

68. MCA-Senegal signed an Implementing Entity Agreement with the National Statistics and Demography Agency for the collection of baseline data in the geographic areas of intervention and control of the IWRM Project. The survey data are collected during three visits in the Delta and the Podor region. The three surveys help collect information on households, achievements and results of the three cropping seasons:

- Cold off-season (wave 1: from December 2011 to March 2012);
- Hot off-season (wave 2: from April to July 2012); and
- Wet season (wave 3: from August to November 2012).

69. Prior to the survey, a comprehensive census to collect a set of variables used to match treatment households and control households was carried out.

❑ Household sample selection in the Delta

70. The census carried out in March 2012 in the Delta, in the departments of Saint-Louis and Dagana, identified a total of about 11,600 households surveyed on the basis of the following criteria:

- Age and sex of head of household;
- Household size;
- Number of male and female workers;
- Number of male and female agricultural workers;
- Ethnicity;
- Educational level;
- Socio-administrative status;
- Status of land belonging to head of household;
- Involvement in FO (Farmer Organization);
- Types of roofs, floors, walls

71. These were used as distinct variables in the sample selection of households to be interviewed during the three visits to comply with the difference-in-difference and matching methodology.

72. Thus, 1,637 treatment households and 1,637 control households were drawn, or 25% more than the required sample size. To identify similar control households, the commonly-used matching method, i.e., the propensity score method, was used.

❑ Podor sample selection

73. In the Ngalenka zone (Podor), the census held in March 2012, helped identify 1617 households in the Podor treatment zone and 585 others in the Podor comparison zone. However, in view of the fact that the households are not yet known, all 1617 households of the treatment zone were sampled. By contrast, for the comparison zone, a random sample of 440 households in the Podor comparison zone was selected.

❑ Evaluation questions:

74. Using the conceptual model adopted for the baseline survey, the key research questions to be addressed are:

- Has access to (or use of) irrigation water increased?
- Has there been an increase in hectares under production?
- Has there been an increase in the volume of agricultural production? If so, by how much?
- What is the impact of project activities on the sources and level of household income?
- Does the impact on outcomes vary according to gender, age and income group?
- Do project activities result in better perception of land tenure security?
- Does improved land tenure security encourage farmer investment?

❑ Other Analyses

75. The evaluation of the IWRM project impact will also include gender and other sub-groups analysis (age, socio-economic category, etc.) and that of unintended consequences.

76. The gender and other sub-groups analysis will be done based on beneficiary involvement by examining the distribution of benefits by sub-group (for example gender and income category). This analysis seeks to address the following questions:

- (1). How many people are expected to benefit from increased household incomes as a result of the project?
- (2). What is the ratio of poor beneficiaries?

- (3). How much on average will each individual beneficiary gain from the project?
- (4). For each dollar invested by MCC, how much will be gained by the poor?
- (5). What have been women's experiences and the resulting socio-economic changes, especially in the basin of Ngalenka?

77. The analysis of "unintended consequences" will focus on unforeseen obstacles or on unexpected side effects of the IWRM Project, using quantitative data collected from households, businesses and other stakeholders through the following questions:

- Were there any unintended consequences of the IWRM project? If so, why did they occur?
- Who was affected by any unintended consequences?
- Could any unintended negative consequences have been mitigated? How?

3.2.1.2. Evaluation of the Roads Project Impact

78. For the Roads Rehabilitation Project, the independent evaluation seeks to assess the economic benefits to the Roads Project.

79. At the beginning of the project, MCC and MCA tried to carry out an impact evaluation based on a difference-in-difference methodology. Eventually, it was decided that the method was not the best for assessing all the project benefits, based on the following reasons.

80. The Roads Rehabilitation Project (RRP) aims to increase incomes for numerous households. However, expected benefits for each individual household are not likely to be large enough to be captured by the difference-in-difference method. Furthermore, it would not be possible with the difference-in-difference methodology to capture the full expected benefits for the roads project. There are many road users who do not live nor are based near the road, but who use it regularly. Benefits for these users would not be captured by the difference in difference methodology.

81. A review by MCC of former evaluations, with input from transportation experts, identified the HDM-4 model as the most suitable method for estimating road project benefits (especially for primary roads). Consequently, MCC has decided to use the HDM-4 model for estimating the RRP's final benefits.

82. In using the HDM-4 to estimate the benefits of the Roads Project, the evaluation will include an estimate not only of the end-of-project status, but also a second estimation three years after the end (in 2018) of the project. This second estimation will be supported by repeat traffic counting surveys and other studies required under the model over a three-year period following the end of the Compact. The Roads Rehabilitation Project (RRP) is expected to increase the incomes of numerous households. But, the benefits expected for each individual household would not likely be significant enough to be captured by the difference-in-difference method. Furthermore, in the current context of the RRP, it is not possible with the difference-in-difference method to capture the expected benefits for the treatment groups. In fact, there may be a number of road users who might not be established near the road but who could use it regularly. In this case, benefits for the latter group, in terms of reduction in transport costs would not be captured by the established methodology.

83. The new methodology will address the following questions:

- a. What is the value of the project benefits?
- b. Was the project justified based on cost-benefit analysis?
- c. What was the increase level in traffic on RN2 and RN6?

The final evaluation report is due at the end of 2018.

4. MANAGEMENT AND ADMINISTRATION OF MONITORING AND EVALUATION

4.1. MONITORING AND EVALUATION RESPONSIBILITIES

85. The development of the post-Compact Monitoring and Evaluation Plan by the program staff was based on a participatory approach involving implementing partners (SAED AGEROUTE), other partners and the beneficiaries in accordance with MCC's monitoring and evaluation procedures. The management of the M&E plan will be under the responsibility of the entity to be designated by the Prime Minister's Office, working closely with SAED and AGEROUTE.

86. The management and coordination of all post-Compact monitoring and evaluation activities are under the direct responsibility of the entity designated by the Prime Minister's Office for that purpose. The entity is responsible for the collection, compilation, processing and analysis of activity data and specific indicators.

87. The MCC focal point for monitoring and evaluation will provide technical assistance to the post-Compact monitoring and evaluation team, to facilitate the implementation of specific activities in accordance with existing procedures

88. The main tasks of the Monitoring and Evaluation Directorate are:

- ✦ setting up a monitoring and evaluation system including the collection, processing, analysis, verification/validation and centralization of information on ITT indicators;
- ✦ disseminating information and results related to program performance and impact in order to ensure transparency through the website and/or any other medium;
- ✦ facilitating participation in M&E activities and attracting the interest of different stakeholders directly or indirectly involved in the conduct of activities and the success of the Compact;
- ✦ verifying data quality;
- ✦ managing partnership agreements with governmental entities in the field of monitoring and evaluation;
- ✦ facilitating the work of impact evaluation teams, particularly through mission planning support, coordination of stakeholders' comments on deliverables, and organization of restitution workshops.

89. The Compact Activities Monitoring Unit (USAC) shall perform the following tasks:

- ✦ Collecting and reporting on activity data from other partners in the geographic intervention areas of the projects;
- ✦ External dissemination of the data on MCA-Senegal's indicators, particularly among government agencies;
- ✦ Optimizing experiences/lessons learned from MCA-Senegal's implementation process;
- ✦ Working closely with MCC to update economic rate of return indicators based on field data.

4.1.1. *Monitoring and Evaluation Dissemination system*

90. Disseminating the results of the post-Compact Monitoring and Evaluation Plan is structured around the following products:

- Annual Report, including the Indicator Tracking Table (ITT), which presents the level of periodic and cumulative achievement of the performance indicators;
- Special Reports: These are updates developed upon request, survey reports, and specific studies reports.

4.1.2. Communication Strategy of Post-Compact Monitoring-Evaluation

91. The organization of stakeholder workshops is also planned as part of the Post-Compact M&E Plan to disseminate the results. USAC or the entity designated by the lead Ministry will take on that role.

5. M&E BUDGET

92. The impact evaluation is directly funded by the MCC. MCC will cover the costs for the recruitment of independent evaluators and evaluation-related data collection while the Government of Senegal will be responsible for the collection of monitoring data and for the organization of restitution workshops for these evaluations.



ANNEXES

6. ANNEXES

6.1. ANNEX I: GLOSSARY

Accomplishment: is the physical or no-physical state that results from products and services deriving directly from the implementation of project activities.

Activity: Actions taken or work performed through which inputs, such as funds, technical assistance and other types of resources are mobilized to produce specific outputs. As a general rule, several activities make up a Project and contribute to achieving the Project Objective.

Assumptions: explicit and reasonable suppositions about the behaviors of variables or factors exogenous to the project (background information) likely to have an impact on the progress or success of this project. They are expressed in the form of permissive conditions in the program logic and relating to conditions considered as necessary to fully achieve the set objectives.

Baseline (starting point): the situation before a development action that serves as a reference point against which the progress achieved can be assessed or compared. It is the description of the state in which, prior to the intervention, the project's action zone, the beneficiaries, the main stakeholders are in, as well as the key parameters for the realization, outcome and impact indicators. All this information will serve as a benchmark to measure the progress accomplished.

Baseline survey or baseline study: a survey or study conducted at the start of a project/program and prior to the development intervention in order to obtain information that could establish a reference situation including data on each category of actors and beneficiaries. It will serve as a reference point against which the progress made (results and accomplishments) can be assessed and as an important reference for the final evaluation.

Beneficiary: a person whose standard of living is improved through an increase in income deriving from the economic gains generated by projects financed by MCC.

Common indicator: indicators used by MCC to pool the results of different countries in some sectors and provide an external report on key stakeholders.

Compact – the agreement referred to as *Millennium Challenge Compact*, concluded between the United States, acting through the *Millennium Challenge Corporation*, and the Government of countries benefitting from the assistance of the *Millennium Challenge Account* pursuant to which, the MCC provides this assistance to the country.

Counterfactual situation: the situation or conditions which, according to assumptions, would have occurred for some people or groups of people, in the absence of the MCC program.

Critical condition: condition which belongs to the project environment and which is out of control and outside the responsibility of the project manager.

Outcomes: changes, intended or unintended, that derive directly or indirectly from a development intervention.

Economic Rate of Return (ERR): an analysis of growth at micro-economic level which measures the increases expected in household incomes or the added value of different firms to compare them with the costs linked to income increases. The economic rate of return is expressed in terms of percentage and represents the interest rates for which the discounted net benefits is equal to the net discounted costs.

Efficiency: correlation between the results obtained and the means deployed (human, material, financial, time, etc.).

Effectiveness: the extent to which a project achieves desired changes for its target population.

Entry Into Force: date with effect from which the Compact comes into force, i.e. the beginning of its lifespan. The Compact duration is 5 years.

Evaluation: systematic and objective assessment of an ongoing or completed program, of its development, its implementation and its results. The purpose of the evaluation is to provide responses to specific questions, make

an overall judgment on an operation and draw lessons meant to improve the actions, planning and future decisions. The evaluation is generally meant to determine the efficiency, effectiveness, impact, sustainability and relevance of the objectives of the project or the organization.

Final evaluation: an evaluation performed at the end of the project or of the period of implementation of an action in order to identify the performances, results and impacts in comparison to the baseline and its objectives.

Goal: the ultimate objective of a development action. As far as the Compacts go, the purpose has always been to reduce poverty through economic growth.

Goal indicator: indicators that measure developments in economic growth and poverty reduction observed during and after the program's implementation.

Impact evaluation: a study that appraises the evolution of the income of individuals, households or the community as well as other welfare aspects as a result of the action of a given project or program. The distinctive feature of an impact evaluation is the use of the counterfactual scenario, which identifies what would have become of beneficiaries if the project or program did not exist.

Impact: the effect a Compact is expected to have on the beneficiaries. The impact of MCC Compacts is poverty reduction through economic growth.

Indicator: a quantitative or qualitative variable, which provides simple and reliable means of measuring the performance of a development action.

Inputs: the financial, human and material resources used for development interventions.

Integrated Management System: a system designed to collect, process, and store and disseminate data to help in the management of programs.

Mid-term review: evaluation performed mid-way of the program's intervention period in order to identify the performance and results of the project in relation to the reference situation and the initial objectives.

Relevance: measurement in which the objectives of a project correspond to the priorities of the target group and the policies of borrowers and donors.

Results-based management: a management philosophy and approach that focuses more on the achievement of results with respect to planning, implementation and monitoring-evaluation. It is based on the principle of the commitment made to achieve results and serves as a guide for the definition of activities, the evaluation of means deployed and the management strategy of the project/program. It is meant to compare the expenditure on the activity and the activity of beneficiaries and to ensure traceability and accountability.

Result: the outcome or impact of a development intervention, it is a measurable and describable change that results from the performance of a certain number of activities or derives from a cause-and-effect relationship.

Risk management: comprises the entire processes of the project's risk management planning, identification and analysis, responses as well as its monitoring and control. Most of these processes are updated throughout the project's lifespan. The objectives of risk management are to increase the likelihood and impact of positive events and reduce the likelihood and impact of events unfavorable to the project.

Risks: threat to the internal or external environment, likely to delay or prevent the accomplishment of the project objectives, hamper its timely commencement or continuation. It involves the possibility that an event with undesirable consequences may occur.

Stakeholders: the people and organizations actively involved in the project or program, or whose interests may be positively or negatively impacted by the implementation or completion of the project.

Sustainability: probability that the positive effects of a project or a program continue after the termination of funding.

Target: the result that a specific indicator is expected to achieve at a given time.

6.2. ANNEX II: PROGRAM LOGIC

6.2.1. Logic of the Irrigation and Water Resources Management Project

	Problem	Activity/Sub-Activities	Outputs (Years 1-5) 2010 - 2015	Short-term Outcomes (Year 5) 2015	Medium/Long-term Outcomes (Years 6-10) 2016 - 2020	Impacts (Years 10-20)
Activity in the Delta (\$159.4m)	<ul style="list-style-type: none"> Low agricultural yields Thousands of hectares of land abandoned Low agricultural output Poor quality of irrigation Poor quality of existing drainage infrastructure Insufficient availability of water for irrigation Lack of appropriate drainage system Soil salinity 	<ul style="list-style-type: none"> Construction in the Delta Environmental and social mitigation Social and gender integration 	<ul style="list-style-type: none"> Temporary jobs created 17 water control structures created 149 km of channels rehabilitated 36 km of new channels 8 km of protection dykes built RAP implemented Social and gender activities implemented 	<ul style="list-style-type: none"> Hectares developed (37, 941 ha) Increase in hectares under production (23, 160 ha cultivated) Increase in water flow (65m3 per second) Setting up a satisfactory drainage system (number of ha drained) 	<ul style="list-style-type: none"> Increase in cropping intensity CI Delta, CI Ngalenka Increase in agricultural production: <ul style="list-style-type: none"> - 277,000 ton of paddy rice - 115,000 ton of tomatoes - 130,000 tons of onions Increase in agricultural incomes Enhanced employment opportunities in the agricultural sector Improved access to land Investissement security Repairs and maintenance of infrastructure Contribution to increased investment in the agricultural sector 	<ul style="list-style-type: none"> 268,000 project beneficiaries 35% increase in household incomes Food self-sufficiency /Food security
Activity in Ngalenka (\$159.4m)	<ul style="list-style-type: none"> Lack of appropriate drainage system Soil salinity 	<ul style="list-style-type: none"> Construction of a new 450-hectare irrigated perimeter of cultivable land. 	<ul style="list-style-type: none"> Temporary jobs created 6 km of protection dykes built 25 km of main and secondary channels built 14 km of access roads built 2 pumping stations established 	<ul style="list-style-type: none"> 440 ha under production 	<ul style="list-style-type: none"> Local governance of land resources improved A good grasp of improved land management and tenure security tools Reduction in land conflicts Strengthened technical capacities of local governments and decentralized technical services Land disputes managed and resolved 	<ul style="list-style-type: none"> Women's productivity increased Number of children enrolled in primary schools before age 7 increased Women's empowerment and self-promotion increased
Land Tenure Security Activity (\$3.9 m)	<ul style="list-style-type: none"> Low investment levels due to uncertain ownership rights and to increase in land conflicts because of increased demand for irrigated land as a result of the IWRM Project. Recurring land conflicts Low formalization of land tenure rights Lack of land management tools Lack of knowledge by the players of the land management tools and institutional framework. Judicial system inaccessible 	<ul style="list-style-type: none"> Clarification of the land situation Land allocation and formalization of land titles Establishment and application of land tenure security tools Capacity building Setting up land dispute management committees. 	<ul style="list-style-type: none"> Land property known or land rights clarified 41, 862 ha mapped Land rights formalized (3,440 ha formalized) Land rights of vulnerable groups strengthened 9 Technical support committees strengthened and operational 7 land registers et 2 land registries, POAS, land information system updated, procedures manuals for land allocation developed 600 individuals trained in the use of land tenure security tools 33 Water Users Organizations set up 	<ul style="list-style-type: none"> Local governance of land resources improved A good grasp of improved land management and tenure security tools Reduction in land conflicts Strengthened technical capacities of local governments and decentralized technical services Land disputes managed and resolved 	<ul style="list-style-type: none"> Women's productivity increased Number of children enrolled in primary schools before age 7 increased Women's empowerment and self-promotion increased 	<ul style="list-style-type: none"> Women's productivity increased Number of children enrolled in primary schools before age 7 increased Women's empowerment and self-promotion increased
Social Safeguards Activity (\$1m)	<ul style="list-style-type: none"> The feasibility study has shown that because of day care services in the intervention zones, women will be able to find time to make the most of potential economic opportunities. 	<ul style="list-style-type: none"> Setting up day care centers 	<ul style="list-style-type: none"> 8 day care centers built 8 management committees set up 16 teachers and assistants trained 	<ul style="list-style-type: none"> Number of children attending day care centers increased 	<ul style="list-style-type: none"> Women's productivity increased Number of children enrolled in primary schools before age 7 increased Women's empowerment and self-promotion increased 	<ul style="list-style-type: none"> Women's productivity increased Number of children enrolled in primary schools before age 7 increased Women's empowerment and self-promotion increased

*Figures reported in this program logic have not been updated to correspond to any new targets set in the revised M&E Plan. While the program logic remains the same, the figures may have slightly changed.

6.2.2. Logic of the Roads Rehabilitation Project

	Problem	Activity/Sub-Activities	Outputs (Years 1-5) 2010 - 2015	Short-term Outcomes (Year 5) 2015	Medium/Long-term Outcomes (Years 6-10) 2016 - 2020	Impacts (Years 10-20)
Rehabilitation of RN2	<p>The Roads Rehabilitation Project is designed to increase beneficiaries' access to domestic and international markets thanks to better quality roads and a reduction in travel time and costs. The road sector plays a key role in Senegal. About 99% of goods produced in Senegal are transported by road and 95% of domestic travels are done by road.</p>	<ul style="list-style-type: none"> -Rehabilitation of RN2 - Construction of the Ndoum Bridge 	<ul style="list-style-type: none"> - Construction-related temporary jobs created - 120km of roads rehabilitated on RN2 	<ul style="list-style-type: none"> - Improved quality of roads - Increased traffic on RN2 and RN6 - Reduction of travel times - Reduction of transportation costs - Improved accessibility to basic social services - Improved accessibility to domestic and international markets 	<ul style="list-style-type: none"> - Increased economic opportunities for households - Increased trade flows and opportunities - Increased turnover for businesses 	<ul style="list-style-type: none"> - 260,000 project beneficiaries - Increase in beneficiaries' income/ consumption
		<ul style="list-style-type: none"> - Social and Environmental Mitigation - Social and Gender Integration 	<ul style="list-style-type: none"> - RAPs implemented - Social and gender activities implemented 			
Rehabilitation of RN6		<ul style="list-style-type: none"> - Rehabilitation of RN6 - Construction of Kolda Bridge 	<ul style="list-style-type: none"> - Construction-related temporary jobs created - 256 km of roads rehabilitated on RN6 			
		<ul style="list-style-type: none"> - Social and Environmental Mitigation - Social and Gender Integration 	<ul style="list-style-type: none"> - RAPs implemented - Social and gender activities implemented 			

*Figures reported in this program logic have not been updated to correspond to any new targets set in the revised M&E Plan. While the program logic remains the same, the figures may have slightly changed.

6.3. ANNEX III: ANALYSIS OF POST-COMPACT MONITORING AND EVALUATION STAKEHOLDERS

Key stakeholders (key players)	Objectives pursued or interest in relation to the Compact Monitoring - Evaluation (expressed or not)	Power/capacity (key strengths and weaknesses) in relation to ME	Relational position (objective)	Proposed strategies/actions (for the post-Compact ME)
1 Government of Senegal	Monitoring and Evaluation of Compact implementation Monitoring the contribution to the fight against poverty and to other planning documents or strategies Completion of construction and maintenance of structural infrastructure Capitalizing on the process	Represented by the Support Unit or any other entity that will be designated by the Prime Minister's Office.	Decision-maker, represented by the Support Unit or any other entity that will be designated by the Prime Minister's Office.	<ul style="list-style-type: none"> • <u>Observe</u>: the directives, policy amendments, strategies, other ME mechanisms; • <u>Communicate</u>: formal (correspondences, briefing notes, reports) and informal (restitution of studies, organization of missions, participation in forums/workshops/seminars) on indicators, performance, analyses of MEP; • <u>Satisfy</u>: all identified and new information needs; • <u>Collaborate</u>: direct and formal collaboration
2 Millennium Challenge Corporation MCC	Monitoring and evaluation of Compact implementation; Monitoring Compact performance through the performance indicators referred to in the agreements; Monitoring the consistency of the post-Compact ME&P with the directives.	Establishing the ME procedures; Approval of the post-Compact Monitoring & Evaluation Plan; Ensuring compliance with the MEP, the quality and reliability of ME data; Control and Approval of post-Compact MEP Products	Donor Approval of products from the post-Compact MEP Compact evaluation	<ul style="list-style-type: none"> • <u>Observe</u>: the directives, policy amendments and instructions related to the post-Compact MEP and the products; • <u>Communicate</u>: formal (correspondences, briefing notes, reports) and informal (restitution of studies, organization of missions, participation in forums/workshops/seminars) on indicators, performance, analyses of post-Compact MEP; • <u>Satisfy</u>: all identified and new information needs; • <u>Collaborate</u>: direct, formal and informal collaboration.
3 MCA-Senegal Support Unit or any entity designated by the Prime Minister's Office.	Monitoring and Evaluation of Compact implementation Coordination of post-Compact activities Suivi et Evaluation de la participation des partenaires d'exécution (SAED et AGEROUTE)	Consultation in post-Compact MEP implementation and development Support and advice for implementation and functioning of the post-Compact MEP Intermediation with other M&E mechanisms among development partners	Support and advice for implementation and functioning of the post-Compact MEP.	<ul style="list-style-type: none"> • <u>Observe</u>: the comments and proposals for improving the post-Compact MEP and products; • <u>Communicate</u>: formal (correspondences, briefing notes, reports) and informal (restitution of studies, organization of missions, participation in forums/workshops/seminars) on post-Compact MEP indicators, performance, analyses; • <u>Satisfy</u>: all identified and new information needs; • <u>Collaborate</u>: direct, formal and informal collaboration.
4 Direct beneficiaries (Households and Entreprises in the intervention zone)	Obtaining information on post-Compact activities.	Providing information and data on their assessment of activities being implemented Identification of constraints	Product beneficiaries (information on post-Compact MEP)	<ul style="list-style-type: none"> • <u>Observe</u>: their interests in the data provided (format or type of medium used); • <u>Communicate</u>: formal and informal (restitution, organization of meetings, participation in activities) on post-Compact MEP indicators, performance, and analyses; • <u>Satisfy</u>: all identified and new information needs; • <u>Collaborate</u>: indirect, formal (through means of communication) and informal (personal communication) collaboration.

Key stakeholders (key players)	Objectives pursued or interest in relation to the Compact Monitoring - Evaluation (expressed or not)	Power/capacity (key strengths and weaknesses) in relation to ME	Relational position (objective)	Proposed strategies/actions (for the post-Compact ME)
5 Implementing partners (SAED and AGERROUTE)	Monitoring and Evaluation of Compact Implementation Completion of construction and maintenance of infrastructure	Providing primary and secondary data to the post-Compact MEP; Provision of secondary data to the post-Compact MEP; Informing the ITT on a timely basis.	Intervenes (provision of information) in the data collection process Provision of data and information (internal M&E systems)	<ul style="list-style-type: none"> • <u>Observe</u>: the directives, policy amendments and instructions related to the post-Compact MEP and the products; • <u>Communicate</u>: formal (correspondences, briefing notes, reports) and informal (restitution of studies, organization of missions, participation in forums/workshops/seminars) on post-Compact MEP indicators, performance, and analyses; • <u>Satisfy</u>: all identified and new information needs; if they do not entail additional costs; • <u>Collaborate</u>: direct, formal and informal collaboration among MEP mechanisms; identify principal areas for convergence and synergy.
6 Other partners (ANSD, DEEC, Direction des Routes, DAPSA, etc.)	Exchange of data and sharing information on post-Compact activities.	Provision of secondary data for the post-Compact MEP.	Post-Compact implementation partners.	<ul style="list-style-type: none"> • <u>Observe</u>: their requirements on ME data quality; the observations and proposals for improvement of post-Compact MEP and products; • <u>Communicate</u>: formal (correspondences, briefing notes, reports) and informal (restitution of studies, organization of missions, participation in forums workshops/seminars) on post-Compact MEP indicators, performance, analyses; • <u>Satisfy</u>: all identified and new information needs; • <u>Collaborate</u>: direct, formal and informal collaboration, through a cooperation agreement.
7 Media	Obtaining informations on post-Compact activities and level of performance.	Power of influence, partner in the dissemination of information on the implementation of the Compact Providing information and data based on their assessment of implemented activities.	Power of influence Beneficiaries of post-Compact MEP products (information)	<ul style="list-style-type: none"> • <u>Observe</u>: their interests in the data provided (format or type of medium used), use of data and the publications of articles on the activities ; • <u>Communicate</u>: formal (workshops, organization of visits, providing post-Compact MEP products, workshops to present results) on MEP indicators, performances, analyses; • <u>Satisfy</u>: all identified and new information needs; • <u>Collaborate</u>: direct and formal collaboration.
8 General Public	Obtaining informations on post-Compact activities and level of performance.	Provision of informations and data based on their assessment of activities implemented. Identification of constraints.	Beneficiaries of post-Compact MEP products (information)	<ul style="list-style-type: none"> • <u>Observe</u>: their interests in the data provided (format or type of medium used); • <u>Communicate</u>: formally through the Press, MEP and website productions; • <u>Satisfy</u>: all information need.

6.4. ANNEX V: PERFORMANCE INDICATOR TARGETS

Indicator	Units	Indicator Classification Type	Baseline	Baseline year	Year 1		Year 2		Year 3		Year 4		Year 5		Long Term
					Oct. 2010 - Sept. 2011	Oct. 2011 - Sept. 2012	Oct. 2012 - Sept. 2013	Oct. 2013 - Sept. 2014	Oct. 2014 - Sept. 2015						
PROGRAM															
P indicator 1: Rate of variation of beneficiaries' net income drawn from the Irrigation Project	Percentage	Level	0	2011-12		0									35
P indicator 2: Change in vehicle operating costs per trip/kilometer for the RN2	US\$	Level	0	2010									0.05		N/A
P indicator 3: Change in vehicle operating costs per trip/kilometer for the RN6	US\$	Level	0	2010									0.16		N/A
IRRIGATION AND WATER RESOURCES MANAGEMENT PROJECT															
IWRM indicator 1: Rice Paddy Production (Delta / Ngalenka)	Tons	Level	102,000	2010-11		107,000		107,000		107,000		107,000		111,000	277,000
IWRM indicator 2: Tomato production (Delta and Ngalenka)	Tons	Level	12,700	2010-11		14,200		14,200		14,200		14,200		35,500	115,000
IWRM indicator 3: Onion production (Delta and Ngalenka)	Tons	Level	10,900	2010-11		16,000		16,000		16,000		16,000		40,000	130,000
IWRM indicator 4: Cropping intensity (Delta)	Percentage	Level	60%	2011-12		60%		60%		60%		60%		70%	150%
IWRM indicator 5: Cropping intensity (Ngalenka)	Percentage	Level	20%	2010-11		20%		0%		100%		100%		120%	180%
IWRM indicator 6: Total area with improved irrigation infrastructure (Delta and Ngalenka)	Ha	Level	34,848	2010-11		36,541		37,554		38,381		38,381		38,381	42,721
IWRM indicator 7: Hectares under production across cropping seasons	Ha	Level	21,400	2010-11		20,300		20,300		20,300		20,300		23,600	56,600
IWRM indicator 8: Total flow measured (O) at the Ronkh and G works	Rate	Level	20	2011-12		20		20		20		20		65	N/A
IWRM indicator 9: Number of hectares formalized (having a land allocation title and registered)	Ha	Cumulative	0	2010-11		0		0		0		748		3,440	N/A
IWRM indicator 10: Percentage of land disputes resolved	Percentage	Level (Cumulative)	0	2010-11		0		0		0		30		50	50
IWRM indicator 11: Conflicts successfully mediated	Number	Cumulative	0	2011-12		0		0		0		N/A		N/A	N/A
IWRM indicator 12: Parcels corrected or incorporated in land system	Parcels	Cumulative	0	2011-12		0		5,694		5,787		5,787		5,787	N/A
IWRM indicator 13: Land rights formalized ¹²	Number	Cumulative	0	2011-12		0		0		0		600		2,500	2500

¹² This indicator refers to households, businesses and legal entities holding formalized land rights

Millennium Challenge Account Senegal (MCA-Senegal)

Indicator	Units	Indicator Classification Type	Baseline	Baseline year	Year 1		Year 2		Year 3		Year 4		Year 5		Long Term
					Oct. 2010 - Sept. 2011	9	Oct. 2011 - Sept. 2012	9	Oct. 2012 - Sept. 2013	9	Oct. 2013 - Sept. 2014	9	Oct. 2014 - Sept. 2015	9	
IWRM indicator 14: Number of land management committees and commissions set up or improved upon	Number	Cumulative	0	2010-11	9	9	9	9	9	9	9	9	9	N/A	N/A
Indicator IWRM.15.: Total length of main drainage canals and outfalls serviced (traked and/or cleaned out) annually	Kilometers	Level	116	2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indicator IWRM.16.: Number of pumps serviced annually	Number	Level	115	2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ROADS REHABILITATION PROJECT															
RRP Indicator 1: Average annual daily traffic (AADT) Richard-Toll – Ndioum	Number	Level	1,029	2011-12	1,029	1,029	1,029	1,029	1,029	1,029	1,029	1,029	1,029	1,155	N/A
RRP Indicator 2: Average annual daily traffic (AADT) Ziguinchor – Tanaff	Number	Level	571	2007	571	571	571	571	571	571	571	571	571	963	N/A
RRP Indicator 3: Average annual daily traffic (AADT) Tanaff – Kolda	Number	Level	301	2007	301	301	301	301	301	301	301	301	301	562	N/A
RRP Indicator 4: Average annual daily traffic (AADT) Kolda – Kounkané	Number	Level	798	2007	798	798	798	798	798	798	798	798	798	1,426	N/A
RRP Indicator 5: Rate of change in the duration of travel time on RN#2	Percentage	Level	0	2011-12	0	0	0	0	0	0	0	0	0	-15	-15
RRP Indicator 6: Rate of change in the duration of travel time on RN#6	Percentage	Level	0	2011-12	0	0	0	0	0	0	0	0	0	-50	-50
RRP Indicator 7: Roughness (RN2)	m/km	Level	3.2	2011-12	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.4	N/A
Indicateur RRP.8.: Roughness (RN6)	m/km	Level	13.0	2011-12	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	2.5	N/A
RRP Indicator 9.: Road traffic fatalities	Number	Level	43	2013-14	43	43	43	43	43	43	43	43	43	N/A	N/A
RRP Indicator 10: Kilometers of roads rehabilitated on RN#6	Km	Cumulative	0	2010-11	0	0	0	0	0	0	0	0	0	252	N/A
RRP Indicator 11: Kilometers of roads completed	Km	Cumulative	0	2010-11	0	0	0	0	0	0	0	0	0	372	N/A
Indicator RRP.12.: Percentage of the required annual budget mobilized for road network maintenance	Percentage	Level	Unavailable	2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indicator RRP.13.: Percentage of paved roads maintained	Percentage	Level	Unavailable	2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indicator RRP.14.: The visual state of the road network	Percentage	Level	71	2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indicator RRP.15.: Deflections	Number	Level	RN2 70	2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			RN6 Lot1	N/A											
			RN6 Lot2	68											
			RN6 Lot3	73											

Millennium Challenge Account Senegal (MCA-Senegal)

Indicator	Units	Indicator Classification Type	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	Long Term
					Oct. 2010 - Sept. 2011	Oct. 2011 - Sept. 2012	Oct. 2012 - Sept. 2013	Oct. 2013 - Sept. 2014	Oct. 2014 - Sept. 2015	
Indicator RRP.16 : Number of functional garden plots	Number	Level	0	2015	N/A	N/A	N/A	N/A	N/A	N/A
Indicator RRP.17 : Number of borrow pits rehabilitated	Number	Level	0	2015	N/A	N/A	N/A	N/A	N/A	N/A

6.5. ANNEX VIII: ANNUAL REPORTING FRAMEWORK

6.5.1. Annual Status Report Outline

LETTER HEAD INCLUDING THE NAME OF THE DIRECTORATE OF ORIGIN

- INTRODUCTION
 - o Review of SAED, AGEROUTE annual objectives)
- STATUS OF IMPLEMENTATION OF ANNUAL WORK PLAN
 - ✚ *Product or Result N°..... : "Entitled"*
 - o Annual review and analysis
 - o Summary of planned activities (qualitative objectives :
 - o Accomplishments during the year by activity and task:
 - o Title of activity :
 - Accomplishments
 - Performance analysis
 - Specific problems encountered
 - o Title of activity :
 - Accomplishments
 - Performance analysis
 - Specific problems encountered

Table: Level of achievement of Product/Outcome performance indicators during the post-Compact year

	Indicators	Targets	Accomplishment	Efficiency rate	Comments/ justification of variance
Product/Outcome XX.: "Entitled"	Product/Outcome indicators				
Code as per logical framework and Activity title	Indicators	Targets	Accomplishment	Efficiency rate	
AXX1.	Indicators			....	....
AXX2.	Indicators			....	....
AXX3.	Indicators			....	....
	Indicators			....	....

- o Lessons learned
 - o Analysis of key constraints experienced and lessons learned from implementing the product/outcome.
- PROBLEMS ENCOUNTERED AND SOLUTIONS PROPOSED
 - PROSPECTS
 - o Focus areas of intervention for SAED and AGEROUTE during the next year
 - ANNEXES
 - o Summary table on activity performance level during the year
 - o Table on annual progress against Post-Compact objectives
 - o Etc.

6.6. ANNEX IX: FOCAL POINTS OF POST COMPACT MONITORING AND EVALUATION

First & last names	Responsibility	Implementing Organization	Locality	Telephone	E-mail
Amadou NIANG	M&E Focal Point	SAED	St-Louis	77 511 22 72	Amadou.niang@saed.sn
Mamadou NDAO	M&E Focal Point	AGEROUTE	Dakar	77 333 89 16	mndao@ageroute.sn
Ousmane FAYE	HDM-4 Focal Point	AGEROUTE	Dakar	77 740 13 31	ofaye@ageroute.sn
Toyi BASEI	HDM-4 Assistant Focal Point	AGEROUTE		77 332 49 20	tbasei@ageroute.sn
Mamadou Assane NIANG	M&E Focal Point	USAC	Dakar	77 333 07 96	assaniang@gmail.com

MILLENNIUM CHALLENGE ACCOUNT SÉNÉGAL
(MCA-SENEGAL)



Post-Compact Monitoring and Evaluation Plan

~~~~~

## Memorandum Post-Compact MEP/2015

---

With the support of the:



|                                                     |      |
|-----------------------------------------------------|------|
| N° Version :                                        | N° 1 |
| Date :                                              |      |
| Date d'approbation par le Conseil de Surveillance : |      |
| Date d'approbation par MCC :                        |      |

---

**TABLE OF CONTENTS**


---

|                                                                                                                                |            |
|--------------------------------------------------------------------------------------------------------------------------------|------------|
| ACRONYMS.....                                                                                                                  | 1          |
| DOCUMENTATION .....                                                                                                            | 1          |
| <b>1. PERFORMANCE INDICATORS AND COMPACT TARGETS .....</b>                                                                     | <b>3</b>   |
| 1.1. INDICATOR P.1. RATE OF VARIATION OF BENEFICIARIES' NET INCOME DRAWN FROM THE IRRIGATION PROJECT .....                     | 4          |
| 1.2. INDICATOR P.2. CHANGE IN VEHICLE OPERATING COSTS PER TRIP/KILOMETER FOR THE RN2 .....                                     | 8          |
| 1.3. INDICATOR P.3. CHANGE IN VEHICLE OPERATING COSTS PER TRIP/KILOMETER FOR THE RN6 .....                                     | 11         |
| <b>2. PERFORMANCE INDICATORS AND TARGETS OF THE IRRIGATION PROJECT .....</b>                                                   | <b>14</b>  |
| 2.1. INDICATOR IWRM.1. RICE PADDY PRODUCTION (DELTA / NGALENKA).....                                                           | 15         |
| 2.2. INDICATOR IWRM.2. TOMATO PRODUCTION (DELTA / NGALENKA) .....                                                              | 18         |
| 2.3. INDICATOR IWRM.3. ONION PRODUCTION (DELTA / NGALENKA).....                                                                | 22         |
| 2.4. INDICATOR IWRM.4. CROPPING INTENSITY (DELTA) .....                                                                        | 25         |
| 2.5. INDICATOR IWRM.5. CROPPING INTENSITY (NGALENKA) .....                                                                     | 29         |
| 2.6. INDICATOR IWRM.6. TOTAL AREA WITH IMPROVED IRRIGATION INFRASTRUCTURE (DELTA AND NGALENKA) .....                           | 33         |
| 2.7. INDICATOR IWRM. 7. HECTARES UNDER PRODUCTION ACROSS CROPPING SEASONS (DELTA / NGALENKA) .....                             | 36         |
| 2.8. INDICATOR IWRM.8: TOTAL FLOW MEASURED (Q) AT THE RONKH AND G WORKS .....                                                  | 40         |
| 2.9. INDICATOR IWRM.9. NUMBER OF HECTARES FORMALIZED (HAVING A LAND ALLOCATION TITLE AND REGISTERED) .....                     | 44         |
| 2.10. INDICATOR IWRM.10. PERCENTAGE OF LAND DISPUTES RESOLVED .....                                                            | 48         |
| 2.11. INDICATOR IWRM.11. CONFLICTS SUCCESSFULLY MEDIATED .....                                                                 | 52         |
| 2.12. INDICATOR IWRM.12. PARCELS CORRECTED OR INCORPORATED IN LAND SYSTEM .....                                                | 55         |
| 2.13. INDICATOR IWRM.13. LAND RIGHTS FORMALIZED.....                                                                           | 58         |
| 2.14. INDICATOR IWRM.14. NUMBER OF LAND MANAGEMENT COMMITTEES AND COMMISSIONS SET UP OR IMPROVED UPON .....                    | 61         |
| 2.15. INDICATEUR IWRM.15. TOTAL LENGTH OF MAIN DRAINAGE CANALS AND OUTFALLS SERVICED (RAKED AND/OR CLEANED OUT) ANNUALLY ..... | 64         |
| 2.16. INDICATEUR IWRM.16. NUMBER OF PUMPING EQUIPMENT SERVICED ANNUALLY.....                                                   | 68         |
| <b>3. PERFORMANCE INDICATORS AND TARGETS OF THE ROADS REHABILITATION PROJECT .....</b>                                         | <b>72</b>  |
| 3.1. INDICATOR RRP.1. AVERAGE ANNUAL DAILY TRAFFIC (AADT) RICHARD-TOLL – NDIUOM.....                                           | 73         |
| 3.2. INDICATOR RRP.2. AVERAGE ANNUAL DAILY TRAFFIC (AADT) ZIGUINCHOR – TANAFF.....                                             | 76         |
| 3.3. INDICATOR RRP.3. AVERAGE ANNUAL DAILY TRAFFIC (AADT) TANAFF - KOLDA .....                                                 | 81         |
| 3.4. INDICATOR RRP.4. AVERAGE ANNUAL DAILY TRAFFIC (AADT) KOLDA-KOUNKANÉ .....                                                 | 85         |
| 3.5. INDICATOR RRP.5 RATE OF CHANGE IN THE DURATION OF TRAVEL TIME ON RN#2 .....                                               | 88         |
| 3.6. INDICATOR RRP.6. RATE OF CHANGE IN THE DURATION OF TRAVEL TIME ON THE RN#6 .....                                          | 92         |
| 3.7. INDICATOR RRP.7.ROUGHNESS (RN2) .....                                                                                     | 96         |
| 3.8. INDICATOR RRP.8.ROUGHNESS (RN6) .....                                                                                     | 100        |
| 3.9. INDICATOR RRP.9. ROAD TRAFFIC FATALITIES .....                                                                            | 103        |
| 3.10. INDICATOR RRP.10. KILOMETERS OF REHABILITATED ROADS ON RN#6.....                                                         | 106        |
| 3.11. INDICATOR RRP.11. KILOMETERS OF ROADS COMPLETED.....                                                                     | 110        |
| 3.12. INDICATEUR RRP.12. BUDGET ALLOCATED ANNUALLY TO ROAD NETWORK SERVICING .....                                             | 113        |
| 3.13. INDICATEUR RRP.13. PERCENTAGE OF PAVED ROADS MAINTAINED IN GOOD AND AVERAGE CONDITION .....                              | 116        |
| <b>4. TARGET VALUES OF MCA-SENEGAL'S PERFORMANCE INDICATORS.....</b>                                                           | <b>133</b> |

---

**ACRONYMS**


---

|       |                                           |
|-------|-------------------------------------------|
| IWRM: | Irrigation and Water Resources Management |
| NA:   | Not Applicable                            |
| RRP:  | Roads Rehabilitation Project              |
| TBD:  | To Be Determined                          |

---

**DOCUMENTATION**


---

Guidance on Common Indicator, May 2012, MCC  
Lettre SAED N° 1959-12 du 12-12-2012

Méthode d'estimation des carrés de rendement du Riz  
Méthode d'estimation des rendements des cultures de diversification  
Plan de Travail du Projet Réhabilitation Routes  
Plan de travail du Projet IWRM  
Rapport à mi-parcours de la CNCE et Enquêtes O/D AGEROUTE, Janvier 2013  
Rapport d'Orientation Méthodologique de l'Enquête de référence  
Rapport mesure de débit du 12 Mars 2012" SAED, mars 2012)  
Rapport Plan d'Action de Réinstallation de Ngalenka Rapport PAR Ngalenka (Direction ESA).  
Rapport Technique d'orientation Version Finale de la CNCE de l'AGEROUTE, avril 2012  
Résultats d'enquête Trafic et Origine – Destination – AGEROUTE, Sept. 2012 :  
RN2 Model, MCC  
Statistiques de Campagne 2011 de la SAED  
TD-37 – ERR Indicators – IRI data collection, traffic counts and calculation of VOC and TTC with sensitivity analysis Principe de calcul de l'IRI, AGEROUTE, 2012



1. Performance Indicators and Compact Targets

---

## 1.1. Indicator P.1. Rate of variation of beneficiaries' net income drawn from the Irrigation Project

| INDICATOR BASIC DETAILS                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                             |                      |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------------------|
| Indicator Name                                                | Rates of variation of beneficiaries' net income drawn from the Irrigation Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                             | Version              |
| Common Indicator Number                                       | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Current Indicator Number                                                                                    | N° 03 / Sept. 2015   |
| Level                                                         | Goal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Classification                                                                                              | P.1.                 |
| Detailed Definition                                           | Variation of beneficiaries' net income, in real terms (according to gender), drawn from the Irrigation Project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                             |                      |
| Frequency of Reporting                                        | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Reporting Period Covered                                                                                    | Post-Compact Period  |
| Disaggregation                                                | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | YES                                                                                                         |                      |
|                                                               | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | NO                                                                                                          |                      |
|                                                               | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | YES (Quintile 1 (<1.25 \$/d), Quintile 2 (<2 \$/d), Quintile 3 (between 2 and 3\$/d), Quintile 4 (>4 \$/d)) |                      |
|                                                               | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | NO                                                                                                          |                      |
| INDICATOR JUSTIFICATION DETAILS                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                             |                      |
| Justification for Including Indicator                         | The goal of the MCA-Senegal Compact is to help reduce poverty in Senegal through economic growth by improving agricultural productivity and access to markets and services thanks to investments in developmental infrastructure in the roads and irrigation sectors. Thus, in the IWRM project area, this objective will be assessed by the variation in the beneficiaries' income. Indicator P.1 will therefore provide elements of response with regard to the variation of the populations' income and the cause of this variation; this will help assert or not, whether the program contributed to it or not. |                                                                                                             |                      |
| How does the indicator link to the ERR?                       | The income drawn from irrigation is highly correlated with the production and marketing of products of the irrigated areas. By addressing the factors limiting this production and, primarily the "Water" and "Land or land capital" factors, the program contributes to land tenure security and income increase. Additionally, any increase in income drawn from irrigation will help improve the economic viability of the program's activities.                                                                                                                                                                 |                                                                                                             |                      |
| How does the indicator link to the BA?                        | The increase in income drawn from irrigation will step up the purchasing power of the beneficiary populations and will also impact on the other activities upstream or downstream of the agricultural production.                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                             |                      |
| How does the indicator link to the impact evaluation?         | The project is anticipated to increase the hectares under production and cropping intensity. These factors are expected to lead to an increase in income drawn from irrigation, which will be measured in the evaluation. To measure the impact of the project on income, the evaluation will include measurement in comparison zones in which the program's activities have not been implemented. The comparison between the initial and final situations of the two groups will represent the program's contribution to income variation.                                                                         |                                                                                                             |                      |
| Justification for Disaggregation                              | The indicator shall be disaggregated by gender in order to note the share of the different sexes in the variation of income observed thanks to irrigation. While income variation is assigned to the household, it will be difficult to breakdown the figures according to gender; in this context, the results will be presented in a heading entitled "Unspecified".                                                                                                                                                                                                                                              |                                                                                                             |                      |
| INDICATOR ACQUISITION PLAN                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                             |                      |
| Entity Responsible for Collecting Data                        | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                             |                      |
| Point of Contact Responsible for Collecting the Data at SAED: | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Phone                                                                                                       | 77 511 22 72         |
| Entity Responsible for the collection of primary Data         | PMU-ANSD collected the data for the baseline survey in 2012 through an Implementing Entity Agreement between ANSD and MCA-S. To collect data for the final survey MCA-S will seek the services of a consultant in 2015.                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                             | E-mail               |
|                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                             | Amadou.niang@saed.sn |

|                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                     |            |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <p><b>Detailed description of data collection methodology</b> (including any calculations computed by source)</p> | <p>The survey is conducted using a representative sampling of agricultural producers' households identified in the Irrigation Project's impact zone. During the 3 passages at the end of the identified baseline periods (1/12/2011-31/03/2012; 01/04/2012-31/07/2012; 01/08/2012-30/11/2012). The follow-up survey will be undertaken in 2015.</p> |            |
| <p><b>If survey data, verbatim question(s) posed to respondent</b></p>                                            | <p>Refer to Questionnaire Irrigation household:<br/>                 - Section D3: production per crop<br/>                 - Section D4 : marketing per crop<br/>                 - Section G : Non-agricultural income</p>                                                                                                                        |            |
| <p><b>Detailed description of how data is transmitted from source to USAC</b></p>                                 | <p>Data is kept in the form of data base for the initial survey and the follow-up survey.</p>                                                                                                                                                                                                                                                       |            |
| <p><b>Frequency and timing of data acquisition</b></p>                                                            | <p>Twice: at the start and after project completion</p>                                                                                                                                                                                                                                                                                             |            |
| <p><b>Names of verification sources</b></p>                                                                       | <p><b>Means of verification</b></p>                                                                                                                                                                                                                                                                                                                 |            |
| <p>Base surveys: Report and data bases</p>                                                                        | <p>Pivot table drawn on the data base</p>                                                                                                                                                                                                                                                                                                           |            |
| <p>Final surveys: Report and data bases</p>                                                                       | <p>Pivot table drawn on the data base</p>                                                                                                                                                                                                                                                                                                           |            |
| <p><b>Location of Data Storage</b></p>                                                                            | <p>USAC-Senegal</p>                                                                                                                                                                                                                                                                                                                                 |            |
| <p><b>INDICATOR DATA QUALITY</b></p>                                                                              |                                                                                                                                                                                                                                                                                                                                                     |            |
| <p><b>Date of Data Quality Review</b></p>                                                                         |                                                                                                                                                                                                                                                                                                                                                     |            |
| <p>November 2014</p>                                                                                              |                                                                                                                                                                                                                                                                                                                                                     |            |
| <p><b>Main findings of data quality review</b></p>                                                                | <p>Average Score (out of 4)</p> <p>Recommendations</p>                                                                                                                                                                                                                                                                                              |            |
| <p>1. VALIDITY – Does the data clearly represent the desired results?</p>                                         | <p>3,4</p>                                                                                                                                                                                                                                                                                                                                          | <p>N/A</p> |
| <p>2. RELIABILITY – Are the data collection procedures stable and consistent over time?</p>                       | <p>3,7</p>                                                                                                                                                                                                                                                                                                                                          | <p>N/A</p> |
| <p>3. TIMELINESS- Are the data current and frequently collected?</p>                                              | <p>3,2</p>                                                                                                                                                                                                                                                                                                                                          | <p>N/A</p> |

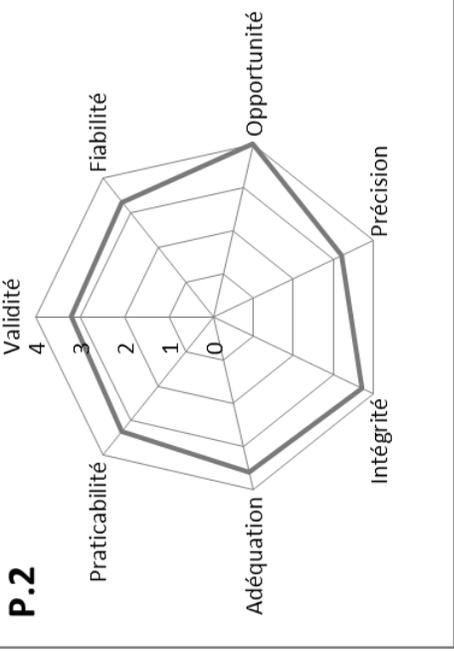
|                                                                                  |                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                        |                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4. PRECISION – Does the data have an acceptable margin of error?                 | 3,6                                                                                                                                                                                                                                                                                                                                                        | N/A                                                                                                                                                                                    |                                                                                                                                                                                                           |
| 5. INTEGRITY- Is the data free from manipulation?                                | 4,0                                                                                                                                                                                                                                                                                                                                                        | N/A                                                                                                                                                                                    |                                                                                                                                                                                                           |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results? | 4,0                                                                                                                                                                                                                                                                                                                                                        | The growth rate of agricultural income would measure the impact of the project more accurately. Otherwise, at the level of the household, consumer spending would be more appropriate. |                                                                                                                                                                                                           |
| 7. PRACTICABILITY- Is the data current and frequently collected?                 | 3,7                                                                                                                                                                                                                                                                                                                                                        | N/A                                                                                                                                                                                    |                                                                                                                                                                                                           |
| <b>Overall assessment</b>                                                        | 3,7                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                        |                                                                                                                                                                                                           |
| <b>Action taken in response to data quality review</b>                           | - Apart from the agricultural income, the survey gathered data on the consumption and assets of households                                                                                                                                                                                                                                                 |                                                                                                                                                                                        |                                                                                                                                                                                                           |
| <b>Known data limitations and significance</b>                                   | Not Applicable                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                        |                                                                                                                                                                                                           |
| <b>Actions taken to address data limitations</b>                                 | Not Applicable                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                        |                                                                                                                                                                                                           |
| <b>INDICATOR BASELINE INFORMATION</b>                                            |                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                        |                                                                                                                                                                                                           |
| <b>Old Baseline</b>                                                              | 0%                                                                                                                                                                                                                                                                                                                                                         | <b>Old Baseline Year</b>                                                                                                                                                               | <b>Source of old Baseline</b>                                                                                                                                                                             |
| <b>New Baseline</b>                                                              | 0%                                                                                                                                                                                                                                                                                                                                                         | <b>New Baseline Year</b>                                                                                                                                                               | <b>Source of New Baseline</b>                                                                                                                                                                             |
| <b>Justification for Baseline Change (if any)</b>                                | The baseline survey initially scheduled in 2010-2011 was delayed following the termination of the Contract with the selected consultant. The survey was entrusted to ANSD through an Implementing Entity Agreement signed in September 2011. The baseline survey was conducted for the December 2011 – November 2012 period, i.e. prior to the works phase |                                                                                                                                                                                        |                                                                                                                                                                                                           |
| <b>INDICATOR TARGET CALCULATIONS</b>                                             |                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                        |                                                                                                                                                                                                           |
|                                                                                  | <b>Target</b>                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                        |                                                                                                                                                                                                           |
| <b>YEAR 1</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                                                                                 | <b>New</b>                                                                                                                                                                             | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                      |
| Oct. 2010 - Sept. 2011                                                           | N/A                                                                                                                                                                                                                                                                                                                                                        | N/A                                                                                                                                                                                    | The baseline survey was finally conducted in the December 2011 – November 2012 period, i.e. prior to the works phase.                                                                                     |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                        |                                                                                                                                                                                                           |
| <b>YEAR 2</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                                                                                 | <b>New</b>                                                                                                                                                                             | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                      |
| Oct 2011 - Sept. 2012                                                            | 0%                                                                                                                                                                                                                                                                                                                                                         | 0%                                                                                                                                                                                     | The baseline survey was conducted in the December 2011 – November 2012 period, i.e. Prior to the works phase. Thus, the Year 2 figure for Oct 2011-Sept 2012 is fixed as the baseline, which would be 0%. |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                        |                                                                                                                                                                                                           |
| <b>YEAR 3</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                                                                                 | <b>New</b>                                                                                                                                                                             | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                      |
| Oct 2012 - Sept. 2013                                                            | N/A                                                                                                                                                                                                                                                                                                                                                        | N/A                                                                                                                                                                                    |                                                                                                                                                                                                           |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                        |                                                                                                                                                                                                           |
| <b>YEAR 4</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                                                                                 | <b>New</b>                                                                                                                                                                             | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                      |
| Oct 2013 - Sept. 2014                                                            | N/A                                                                                                                                                                                                                                                                                                                                                        | N/A                                                                                                                                                                                    |                                                                                                                                                                                                           |

|                                                                            |                                                               |     |     |                                                               |
|----------------------------------------------------------------------------|---------------------------------------------------------------|-----|-----|---------------------------------------------------------------|
| Explanation of assumptions and inputs to target calculations               | YEAR 5                                                        | Old | New | Justification for changes to targets or calculations (if any) |
|                                                                            | Oct 2014 - Sept. 2015                                         | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations               | Long Term Target                                              | Old | New | Justification for changes to targets or calculations (if any) |
|                                                                            |                                                               | 35% | 35% |                                                               |
| Explanation of assumptions and inputs to target calculations               | The 35% target for post-compact change was set in the compact |     |     |                                                               |
| COMMENTS :                                                                 |                                                               |     |     |                                                               |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |                                                               |     |     |                                                               |
| <u>Report on Methodological Orientation of the baseline survey</u>         |                                                               |     |     |                                                               |

1.2. Indicator P.2. Change in vehicle operating costs per trip/kilometer for the RN2

| INDICATOR BASIC DETAILS                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                                |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------|
| Indicator Name                                                           | Change in vehicle operating costs per trip/kilometer for the RN2                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          | Version                        |
| Common Indicator Number                                                  | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Current Indicator Number | All Previous Indicator Numbers |
| Level                                                                    | Goal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Classification           | Unit of Measure                |
| <b>Detailed Definition</b>                                               | Calculated using the HDM-4 model, the change in vehicle operating costs will be calculated and then averaged across vehicle trips on the road as well as by the number of kilometers to arrive at an average change in vehicle operating costs per trip/kilometer                                                                                                                                                                                                                                                                      |                          |                                |
| <b>Frequency of Reporting</b>                                            | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Reporting Period Covered | POST COMPACT                   |
| <b>Disaggregation</b>                                                    | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | NO                       |                                |
|                                                                          | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | NO                       |                                |
|                                                                          | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | NO                       |                                |
|                                                                          | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NO                       |                                |
| INDICATOR JUSTIFICATION DETAILS                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                                |
| <b>Justification for Including Indicator</b>                             | The goal of the MCA-Senegal Compact is to help reduce poverty in Senegal through economic growth by improving agricultural productivity and access to markets and services thanks to investments in developmental infrastructure in the road and irrigation sectors. Thus, in the RRP project area, this goal will be assessed by the rate of variation in the incomes of households. The P2 indicator will therefore provide some answers as to the change in vehicle operating costs on the RN6.                                     |                          |                                |
| <b>How does the indicator link to the ERR?</b>                           | In addition to increasing mobility, the roads facilitate access to services. Thus, by seeking to improve the quality of the network and reduce transportation costs and duration, the program will help reduce the operating costs of vehicles along the rehabilitated roads, which will result in increased traffic of goods and people who are key to the economic benefits, and consequently, by improving the economic viability of program activities                                                                             |                          |                                |
| <b>How does the indicator link to the BA?</b>                            | The improvement of the network's quality and the reduction of transportation duration and costs will be felt by beneficiaries located within a radius of 5 km of the RN to be rehabilitated, through better access to basic social services as well as economic opportunities.                                                                                                                                                                                                                                                         |                          |                                |
| <b>How does the indicator link to the impact evaluation?</b>             | The indicator will determine the increase in the income of beneficiary households of the Roads Rehabilitation Project. The roads project is expected to increase income of household and businesses along the roads. To measure the impact of the project on income, the evaluation will include measurement in comparison zones in which the program's activities have not been implemented. The comparison between the initial and final situations of the two groups will represent the program's contribution to income variation. |                          |                                |
| <b>Justification for Disaggregations</b>                                 | The indicator will not be disaggregated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                                |
| INDICATOR ACQUISITION PLAN                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                                |
| <b>Entity Responsible for Collecting Data</b>                            | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                                |
| <b>Point of Contact Responsible for Collecting the Data at AGEROUTE:</b> | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Phone                    | E-mail                         |
| <b>Entity Responsible for the collection of primary Data</b>             | MCC collected the data for the baseline using the HDM4 Modeling in 2015.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                                |

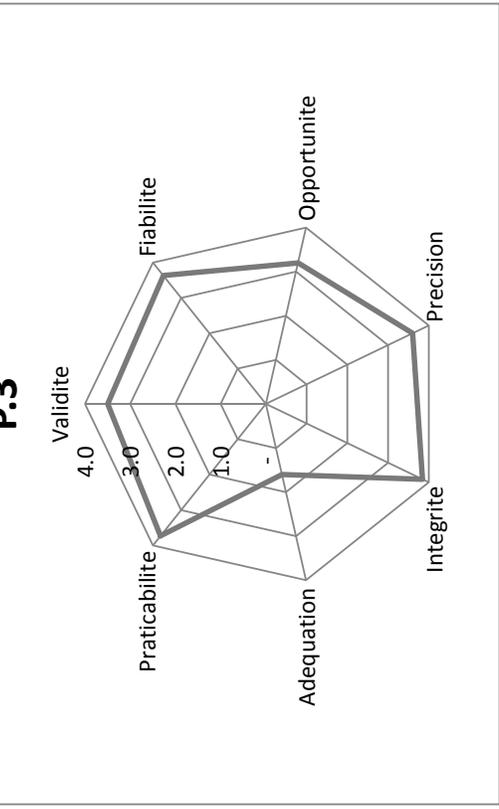
|                                                                                                               |                                                                                                            |                                                                                                                                                                                                                  |                   |
|---------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Detailed description of data collection methodology</b><br>(including any calculations computed by source) |                                                                                                            | The figures will be pulled from the HDM-4 models conducted by MCC and/or its consultants, based on changes in road measures (IRI, deflections, etc) as well as other model parameters (including traffic counts) |                   |
| <b>If survey data, verbatim question(s) posed to respondent</b>                                               |                                                                                                            | Refer to Questionnaire Road Project Household                                                                                                                                                                    |                   |
| <b>Detailed description of how data is transmitted from source to USAC</b>                                    |                                                                                                            | The data are collected by the PMU-AGEROUTE with the support of MCC and transmitted to USAC-S.                                                                                                                    |                   |
| <b>Frequency and timing of data acquisition</b>                                                               |                                                                                                            | Twice: at the end of compact and during the post compact                                                                                                                                                         |                   |
| <b>Names of verification sources</b>                                                                          |                                                                                                            | <b>Means of verification</b>                                                                                                                                                                                     |                   |
| Baseline surveys : Data base                                                                                  |                                                                                                            | Data base analysis table                                                                                                                                                                                         |                   |
| Final surveys: Data base                                                                                      |                                                                                                            | Data base analysis table                                                                                                                                                                                         |                   |
| <b>Location of Data Storage</b>                                                                               |                                                                                                            | USAC-Senegal.                                                                                                                                                                                                    |                   |
| <b>INDICATOR DATA QUALITY</b>                                                                                 |                                                                                                            |                                                                                                                                                                                                                  |                   |
| <b>Date of Data Quality Review</b>                                                                            |                                                                                                            |                                                                                                                                                                                                                  |                   |
| <b>Main findings of data quality review</b>                                                                   |                                                                                                            | Average Score (out of 4)                                                                                                                                                                                         | Recommendations   |
| 1. VALIDITY – Does the data clearly represent the desired results?                                            |                                                                                                            | 3,2                                                                                                                                                                                                              | N/A               |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time?                          |                                                                                                            | 3,3                                                                                                                                                                                                              | N/A               |
| 3. TIMELINESS- Are the data current and frequently collected?                                                 |                                                                                                            | 4.0                                                                                                                                                                                                              | N/A               |
| 4. PRECISION – Does the data have an acceptable margin of error?                                              |                                                                                                            | 3.2                                                                                                                                                                                                              | N/A               |
| 5. INTEGRITY- Is the data free from manipulation?                                                             |                                                                                                            | 3.7                                                                                                                                                                                                              | N/A               |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?                              |                                                                                                            | 3.6                                                                                                                                                                                                              | N/A               |
| 7. PRACTICABILITY- Is the data current and frequently collected?                                              |                                                                                                            | 3.3                                                                                                                                                                                                              | N/A               |
| <b>Overall assessment</b>                                                                                     |                                                                                                            | <b>3,4</b>                                                                                                                                                                                                       |                   |
| <b>Action taken in response to data quality review</b>                                                        |                                                                                                            | - Apart from the agricultural income, the survey gathered data on the consumption and assets of households                                                                                                       |                   |
| <b>Known data limitations and significance</b>                                                                |                                                                                                            | N/A                                                                                                                                                                                                              |                   |
| <b>Actions taken to address data limitations</b>                                                              |                                                                                                            | N/A                                                                                                                                                                                                              |                   |
| <b>INDICATOR BASELINE INFORMATION</b>                                                                         |                                                                                                            |                                                                                                                                                                                                                  |                   |
| <b>Old Baseline</b>                                                                                           | 0                                                                                                          | <b>Old Baseline Year</b>                                                                                                                                                                                         | 2010              |
| <b>New Baseline</b>                                                                                           | 0                                                                                                          | <b>New Baseline Year</b>                                                                                                                                                                                         | 2010              |
| <b>Justification for Baseline Change (if any)</b>                                                             | This indicator was changed to align more directly with the HDM-4 model and the expected economic benefits. |                                                                                                                                                                                                                  |                   |
| <b>INDICATOR TARGET CALCULATIONS</b>                                                                          |                                                                                                            |                                                                                                                                                                                                                  |                   |
|                                                                                                               |                                                                                                            | <b>Source of old Baseline</b>                                                                                                                                                                                    | MCC HDM4 Modeling |
|                                                                                                               |                                                                                                            | <b>Source of New Baseline</b>                                                                                                                                                                                    | MCC HDM4 Modeling |
|                                                                                                               | <b>Target</b>                                                                                              |                                                                                                                                                                                                                  |                   |



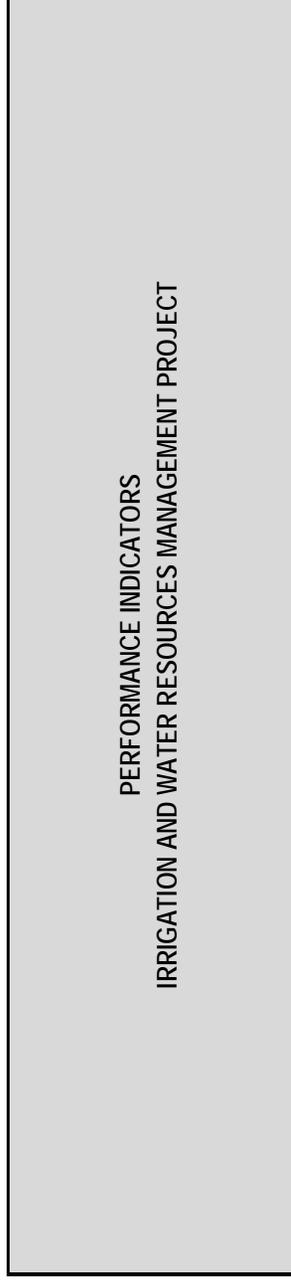
|                                                                            |            |            |                                                                      |                                                                                                                   |
|----------------------------------------------------------------------------|------------|------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>YEAR 1</b>                                                              | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> | <b>This indicator was changed to align more directly with the HDM-4 model and the expected economic benefits.</b> |
| Oct 2010 - Sept. 2011                                                      | N/A        | N/A        |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>YEAR 2</b>                                                              | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> | <b>This indicator was changed to align more directly with the HDM-4 model and the expected economic benefits.</b> |
| Oct 2011 - Sept. 2012                                                      | 0%         | N/A        |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>YEAR 3</b>                                                              | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                                   |
| Oct 2012 - Sept. 2013                                                      | N/A        | N/A        |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>YEAR 4</b>                                                              | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                                   |
| Oct 2013 - Sept. 2014                                                      | N/A        | N/A        |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>YEAR 5</b>                                                              | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> | <b>This target is based on the HDM-4 model completed in 2015.</b>                                                 |
| Oct 2014 - Sept. 2015                                                      | 0.05       | 0.05       |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>Long Term Target</b>                                                    | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                                   |
|                                                                            | 13%        | 13%        |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>COMMENTS :</b>                                                          |            |            |                                                                      |                                                                                                                   |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |            |            |                                                                      |                                                                                                                   |

1.3. Indicator P.3. Change in vehicle operating costs per trip/kilometer for the RN6

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                   |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------|
| Indicator Name                                                                                      | Change in vehicle operating costs per trip/kilometer for the RN6                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          | Version           |
| Common Indicator Number                                                                             | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Current Indicator Number | P.3.              |
| Level                                                                                               | Goal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Classification           | Level             |
| Detailed Definition                                                                                 | Calculated using the HDM-4 model, the change in vehicle operating costs will be calculated and then averaged across vehicle trips on the road as well as by the number of kilometers to arrive at an average change in vehicle operating costs per trip/kilometer                                                                                                                                                                                                                                                                          |                          |                   |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Reporting Period Covered | POST COMPACT      |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | NO                       |                   |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NO                       |                   |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | NO                       |                   |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | NO                       |                   |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                   |
| Justification for Including Indicator                                                               | The goal of the MCA-Senegal Compact is to help reduce poverty in Senegal through economic growth by improving agricultural productivity and access to markets and services thanks to investments in developmental infrastructure in the road and irrigation sectors. Thus, in the RRP project area, this goal will be assessed by the rate of variation in the incomes of households. The P3 indicator will therefore provide some answers as to the change in vehicle operating costs on the RN6.                                         |                          |                   |
| How does the indicator link to the ERR?                                                             | In addition to increasing mobility, the roads facilitate access to services. Thus, by seeking to improve the quality of the network and reduce transportation costs and duration, the program will help reduce the operating costs of vehicles along the rehabilitated roads, which will result in increased traffic of goods and people who are key to the economic benefits, and consequently, by improving the economic viability of program activities                                                                                 |                          |                   |
| How does the indicator link to the BA?                                                              | The improvement of the network's quality and the reduction of transportation duration and costs will be felt by beneficiaries located within a radius of 5 km of the RN to be rehabilitated, through better access to basic social services as well as economic opportunities.                                                                                                                                                                                                                                                             |                          |                   |
| How does the indicator link to the impact evaluation?                                               | The indicator will determine the increase in the income of beneficiary households of the Roads Rehabilitation Project. The roads project is expected to increase income of household and businesses along the roads. To measure the impact of the project on income, the evaluation will include measurement in comparison zones in which the the program's activities have not been implemented. The comparison between the initial and final situations of the two groups will represent the program's contribution to income variation. |                          |                   |
| Justification for Disaggregations                                                                   | The indicator will not be disaggregated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                   |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                   |
| Entity Responsible for Collecting Data                                                              | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                   |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                   | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Phone                    | +221 77 333 89 16 |
| Entity Responsible for the collection of primary Data                                               | MCC collected the data for the baseline using the HDM4 Modeling in 2015.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                   |
| Detailed description of data collection methodology (including any calculations computed by source) | The figures will be pulled from the HDM-4 models conducted by MCC and/or its consultants, based on changes in road measures (IRI, deflections, etc) as well as other model parameters (including traffic counts)                                                                                                                                                                                                                                                                                                                           |                          |                   |

|                                                                                             |                                                                                                                   |                          |                                                                                                      |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------|
| <p><b>If survey data, verbatim question(s) posed to respondent</b></p>                      | <p>Refer to Questionnaire Road Project Household</p>                                                              |                          |                                                                                                      |
| <p><b>Detailed description of how data is transmitted from source to USAC</b></p>           | <p>The data are collected by the PMU-AGEROUTE with the support of MCC and transmitted to USAC-S.</p>              |                          |                                                                                                      |
| <p><b>Frequency and timing of data acquisition</b></p>                                      | <p>Twice: at the end of the Compact and during the post compact</p>                                               |                          |                                                                                                      |
| <p><b>Names of verification sources</b></p>                                                 | <p><b>Means of verification</b></p>                                                                               |                          |                                                                                                      |
| <p>Baseline surveys</p>                                                                     | <p>Data base analysis table</p>                                                                                   |                          |                                                                                                      |
| <p>Final surveys</p>                                                                        | <p>Data base analysis table</p>                                                                                   |                          |                                                                                                      |
| <p><b>Location of Data Storage</b></p>                                                      | <p>USAC-Senegal.</p>                                                                                              |                          |                                                                                                      |
| <p><b>INDICATOR DATA QUALITY</b></p>                                                        |                                                                                                                   |                          |                                                                                                      |
| <p><b>Date of Data Quality Review</b></p>                                                   | <p>November 2014</p>                                                                                              |                          |                                                                                                      |
| <p><b>Main findings of data quality review</b></p>                                          | <p>Average Score (out of 4)</p>                                                                                   | <p>Recommendations</p>   | <p><b>P.3</b></p>  |
| <p>1. VALIDITY – Does the data clearly represent the desired results?</p>                   | <p>N/A</p>                                                                                                        |                          |                                                                                                      |
| <p>2. RELIABILITY – Are the data collection procedures stable and consistent over time?</p> | <p>3,5</p>                                                                                                        |                          |                                                                                                      |
| <p>3. TIMELINESS- Are the data current and frequently collected?</p>                        | <p>3,6</p>                                                                                                        |                          |                                                                                                      |
| <p>4. PRECISION – Does the data have an acceptable margin of error?</p>                     | <p>3,2</p>                                                                                                        |                          |                                                                                                      |
| <p>5. INTEGRITY- Is the data free from manipulation?</p>                                    | <p>3,6</p>                                                                                                        |                          |                                                                                                      |
| <p>6. APPROPRIATENESS – To what extent do the indicators fully portray the results?</p>     | <p>3,8</p>                                                                                                        |                          |                                                                                                      |
| <p>7. PRACTICABILITY- Is the data current and frequently collected?</p>                     | <p>1,6</p>                                                                                                        |                          |                                                                                                      |
| <p><b>Overall assessment</b></p>                                                            | <p>3,7</p>                                                                                                        |                          |                                                                                                      |
| <p><b>Action taken in response to data quality review</b></p>                               | <p>- Apart from the agricultural income, the survey gathered data on the consumption and assets of households</p> |                          |                                                                                                      |
| <p><b>Known data limitations and significance</b></p>                                       | <p>N/A</p>                                                                                                        |                          |                                                                                                      |
| <p><b>Actions taken to address data limitations</b></p>                                     | <p>N/A</p>                                                                                                        |                          |                                                                                                      |
| <p><b>INDICATOR BASELINE INFORMATION</b></p>                                                |                                                                                                                   |                          |                                                                                                      |
| <p>Old Baseline</p>                                                                         | <p>0</p>                                                                                                          | <p>Old Baseline Year</p> | <p>2010</p>                                                                                          |
| <p>New Baseline</p>                                                                         | <p>0</p>                                                                                                          | <p>New Baseline Year</p> | <p>2010</p>                                                                                          |
| <p><b>Justification for Baseline Change (if any)</b></p>                                    | <p>This indicator was changed to align more directly with the HDM-4 model and the expected economic benefits.</p> |                          |                                                                                                      |
| <p><b>INDICATOR TARGET CALCULATIONS</b></p>                                                 |                                                                                                                   |                          |                                                                                                      |
|                                                                                             | <p>Target</p>                                                                                                     |                          |                                                                                                      |

|                                                                            |            |            |                                                                      |                                                                                                                   |
|----------------------------------------------------------------------------|------------|------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>YEAR 1</b>                                                              | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> | <b>This indicator was changed to align more directly with the HDM-4 model and the expected economic benefits.</b> |
| Oct 2010 - Sept. 2011                                                      | N/A        | N/A        |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>YEAR 2</b>                                                              | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> | <b>This indicator was changed to align more directly with the HDM-4 model and the expected economic benefits.</b> |
| Oct 2011 - Sept. 2012                                                      | 0%         | N/A        |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>YEAR 3</b>                                                              | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                                   |
| Oct 2012 - Sept. 2013                                                      | N/A        | N/A        |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>YEAR 4</b>                                                              | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                                   |
| Oct 2013 - Sept. 2014                                                      | N/A        | N/A        |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>YEAR 5</b>                                                              | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> | <b>This target is derived from the HDM-4 model completed in 2015.</b>                                             |
| Oct 2014 - Sept. 2015                                                      | .16        | .16        |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>Long Term Target</b>                                                    | <b>Old</b> | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                                   |
|                                                                            | N/A        | N/A        |                                                                      |                                                                                                                   |
| <b>Explanation of assumptions and inputs to target calculations</b>        |            |            |                                                                      |                                                                                                                   |
| <b>COMMENTS :</b>                                                          |            |            |                                                                      |                                                                                                                   |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |            |            |                                                                      |                                                                                                                   |
|                                                                            |            |            |                                                                      |                                                                                                                   |



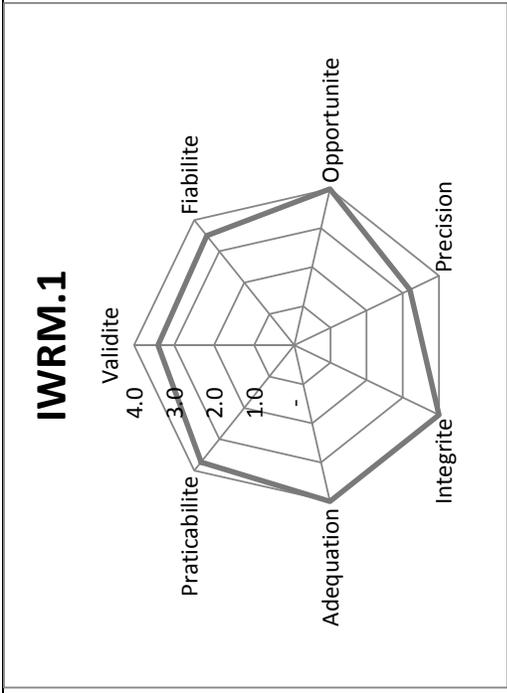
---

2. Performance Indicators and targets of the Irrigation Project

## 2.1. Indicator IWRM.1. Rice Paddy Production (Delta / Ngalenka)

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                                                                |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------|
| Indicator Name                                                                                      | Rice Paddy Production (Delta/ Ngalenka)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          | Version                                                        |
| Common Indicator Number                                                                             | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Current Indicator Number | IWRM.1.                                                        |
| Level                                                                                               | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Classification           | All Previous Indicator Numbers<br>Unit of Measure*             |
| Detailed Definition                                                                                 | Total quantity of paddy rice produced per annum in the project's intervention areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                                                                |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Reporting Period Covered | Post-Compact Period                                            |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | NO                       |                                                                |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NO                       |                                                                |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | NO                       |                                                                |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | YES (Delta / Ngalenka)   |                                                                |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                                                                |
| Justification for Including Indicator                                                               | The indicator provides information on the attainment of the IWRM project objective, which is to increase agricultural production and the productivity of the agricultural sector. Actually, the construction of the water infrastructure, the improvement of the drainage systems and the land tenure security activities will help increase rice production, one of the key crops of the irrigation zones. Such production increase will help assess the progression of production and productivity.                                                                                                                                                                                                                              |                          |                                                                |
| How does the indicator link to the ERR?                                                             | The indicator will provide information on the increase in production resulting in the increase in cultivable hectares, cropping intensity and yields, all of which increase under the with-project case, creating the economic benefits. The ERR was set on the basis of 3 crops (Rice, Tomatoes, Onions).                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                                                |
| How does the indicator link to the BA?                                                              | The increase in rice production resulting from the conduct of activities will have an impact on employment and the allocation of recovered land and/or extension to new beneficiaries. Thus, one expects close to 22,336 beneficiary households i.e. 268,029 people.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                                                                |
| How does the indicator link to the impact evaluation?                                               | The impact evaluation survey lays emphasis on the rice production of households in the processing areas and test zones. The data obtained with test zones may be compared with those obtained in the processing areas with a view to evaluating the impact of infrastructure built in the processing areas.                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                                                                |
| Justification for Disaggregations                                                                   | The data will be disaggregated by locality or zone (Delta and Ngalenka). This disaggregation shows the contribution of each of the components and zones in agricultural production and productivity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                                                                |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                                                                |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                                                                |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Phone                    | 77 511 22 72                                                   |
|                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | E-mail                   | <a href="mailto:Amadou.niang@saed.sn">Amadou.niang@saed.sn</a> |
| Entity Responsible for the collection of primary Data                                               | SAED - Monitoring – Evaluation Unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                                                                |
| Detailed description of data collection methodology (including any calculations computed by source) | Done on the basis of results published by SAED on the yield plots and the situation on the hectares cultivated according to the season (rainy season, cold dry season, and hot dry season).<br>On arrival on the edge of the plot, the Agricultural Adviser makes a rough estimate of the width and length of the plot. Depending on which of these two estimations he is calculating, the Agricultural Adviser randomly draws from his random table 2 numbers (of 1, 2 or 3 figures depending on the estimations made of the length and width). To raise the square, the Agricultural Adviser walks lengthwise counting as many steps as the first number drawn, then, when he gets to his destination, he walks along the plot's |                          |                                                                |

|                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                       | <p>width and takes as many steps as the second number drawn. And he raises the square on the point at which he stops.<br/>Formula = Average yield X total cultivated hectares</p>                                                                                                                                                                                                   |
| <p><b>If survey data, verbatim question(s) posed to respondent</b><br/><b>Detailed description of how data is transmitted from source to USAC</b></p> | <p>These are survey data obtained through the methodology of yield plots installed by SAED<br/>The data is transmitted to MCA-S through official correspondence by SAED. Besides, a mission of the M&amp;E Directorate is scheduled to meet the Monitoring and Evaluation team with a view to collecting all raw data required for the calculation of the indicator.<br/>ANNUAL</p> |
| <p><b>Frequency and timing of data acquisition</b></p>                                                                                                | <p>ANNUAL</p>                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>Names of verification sources</b></p>                                                                                                           | <p><b>Means of verification</b><br/>Annual production statistics<br/>Production Surveys</p>                                                                                                                                                                                                                                                                                         |
| <p>SEAD Annual Report, Letter from SAED</p>                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>SAED Data Base</p>                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>Location of Data Storage</b></p>                                                                                                                | <p>SAED</p>                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>INDICATOR DATA QUALITY</b></p>                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>Date of Data Quality Review</b></p>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>November 2014</p>                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>Main findings of data quality review</b></p>                                                                                                    | <p>Recommendations</p>                                                                                                                                                                                                                                                                                                                                                              |
| <p>1. VALIDITY – Does the data clearly represent the desired results?</p>                                                                             | <p>Information provided by the SAED information system</p>                                                                                                                                                                                                                                                                                                                          |
| <p>Average Score (out of 4)</p>                                                                                                                       | <p>3,4</p>                                                                                                                                                                                                                                                                                                                                                                          |
| <p>2. RELIABILITY – Are the data collection procedures stable and consistent over time?</p>                                                           | <p>None</p>                                                                                                                                                                                                                                                                                                                                                                         |
| <p>3. TIMELINESS- Are the data current and frequently collected?</p>                                                                                  | <p>SAED ME system data</p>                                                                                                                                                                                                                                                                                                                                                          |
| <p>4. PRECISION – Does the data have an acceptable margin of error?</p>                                                                               | <p>Propose to provide information on the margin of error resulting from the use of the yields estimation method</p>                                                                                                                                                                                                                                                                 |
| <p>Average Score (out of 4)</p>                                                                                                                       | <p>3,2</p>                                                                                                                                                                                                                                                                                                                                                                          |



|                                                                                  |                                                                                                                                                                                                                                                                                                                               |                          |                                                                      |                               |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------|-------------------------------|
| 5. INTEGRITY- Is the data free from manipulation?                                | 4,0                                                                                                                                                                                                                                                                                                                           | None                     |                                                                      |                               |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results? | 4,0                                                                                                                                                                                                                                                                                                                           | None                     |                                                                      |                               |
| 7. PRACTICABILITY- Is the data current and frequently collected?                 | 3,7                                                                                                                                                                                                                                                                                                                           | None                     |                                                                      |                               |
| <b>Overall Evaluation</b>                                                        | <b>3,7</b>                                                                                                                                                                                                                                                                                                                    |                          |                                                                      |                               |
| <b>Action taken in response to data quality review</b>                           | - Collection procedure clarified and harmonized with SAED                                                                                                                                                                                                                                                                     |                          |                                                                      |                               |
| <b>Known data limitations and significance</b>                                   | - Margins of error linked to the yield plots specified                                                                                                                                                                                                                                                                        |                          |                                                                      |                               |
| <b>Actions taken to address data limitations</b>                                 | - A sampling of Producers' Organizations is undertaken by SAED. Private producers are not taken into consideration.<br>- MCA-S's requests to SAED to take the locality aspects into consideration (differentiate Delta and Ngalenka) in the sampling device;<br>- Exchanges on the measures taken with regard to date quality |                          |                                                                      |                               |
| <b>INDICATOR BASELINE INFORMATION</b>                                            |                                                                                                                                                                                                                                                                                                                               |                          |                                                                      |                               |
| <b>Old Baseline</b>                                                              | 102 000                                                                                                                                                                                                                                                                                                                       | <b>Old Baseline Year</b> | 2010-2011                                                            | <b>Source of old Baseline</b> |
| <b>New Baseline</b>                                                              | 102 000                                                                                                                                                                                                                                                                                                                       | <b>New Baseline Year</b> | 2010-2011                                                            | <b>Source of New Baseline</b> |
| <b>Justification for Baseline Change (if any)</b>                                | Data Base SAED : Refer to Letter SAED N° 1959-12 du 12-12-2012<br>Data Base SAED : Refer to Letter SAED N° 1959-12 of 12-12-2012                                                                                                                                                                                              |                          |                                                                      |                               |
| <b>INDICATOR TARGET CALCULATIONS</b>                                             |                                                                                                                                                                                                                                                                                                                               |                          |                                                                      |                               |
|                                                                                  | <b>Target</b>                                                                                                                                                                                                                                                                                                                 |                          |                                                                      |                               |
| <b>YEAR 1</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                                                    | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                               |
| Oct 2010 - Sept. 2011                                                            | 102 000                                                                                                                                                                                                                                                                                                                       | 102 000                  |                                                                      |                               |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                                               |                          |                                                                      |                               |
| <b>YEAR 2</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                                                    | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                               |
| Oct 2011 - Sept. 2012                                                            | 107 000                                                                                                                                                                                                                                                                                                                       | 107 000                  |                                                                      |                               |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                                               |                          |                                                                      |                               |
| <b>YEAR 3</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                                                    | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                               |
| Oct 2012 - Sept. 2013                                                            | 107 000                                                                                                                                                                                                                                                                                                                       | 107 000                  |                                                                      |                               |
| <b>Explanation of assumptions and inputs to target calculations</b>              | During year 3, the exploitation of the Ngalenka Basin will come to a halt with the start of works scheduled in Year 1. However, the productions will be pursued in the Delta.                                                                                                                                                 |                          |                                                                      |                               |
| <b>YEAR 4</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                                                    | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                               |
| Oct 2013 - Sept. 2014                                                            | 107 000                                                                                                                                                                                                                                                                                                                       | 107 000                  |                                                                      |                               |
| <b>Explanation of assumptions and inputs to target calculations</b>              | During Year 4, the Ngalenka Basin will be under production and in the Delta, some of the built infrastructure will be operational and will help improve the irrigation system                                                                                                                                                 |                          |                                                                      |                               |

| YEAR 5                                                              |  | Old     | New     | Justification for changes to targets or calculations (if any) |
|---------------------------------------------------------------------|--|---------|---------|---------------------------------------------------------------|
| Oct 2014 - Sept. 2015                                               |  | 111 000 | 111 000 |                                                               |
| Explanation of assumptions and inputs to target calculations        |  |         |         |                                                               |
| Long Term Target                                                    |  | Old     | New     | Justification for changes to targets or calculations (if any) |
|                                                                     |  | 277 000 | 277 000 |                                                               |
| Explanation of assumptions and inputs to target calculations        |  |         |         |                                                               |
| COMMENTS :                                                          |  |         |         |                                                               |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |  |         |         |                                                               |
| <u>Method of estimating rice yield plots</u>                        |  |         |         |                                                               |

## 2.2. Indicator IWRM.2. Tomato production (Delta / Ngalenka)

| INDICATOR BASIC DETAILS                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |         |                                |                     |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------|--------------------------------|---------------------|
| Indicator Name                                        | Tomato production (Delta / Ngalenka)                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |         | Version                        | N° 03 / Sept 2015   |
| Common Indicator Number                               | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Current Indicator Number | IWRM.2. | All Previous Indicator Numbers | IWRM.2.             |
| Level                                                 | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Classification           | Level   | Unit of Measure*               | Tons                |
| Detailed Definition                                   | Total quantity of cold off-season tomatoes produced per year in the project's intervention zones.                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |         |                                |                     |
| Frequency of Reporting                                | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |         | Reporting Period Covered       | Post-Compact Period |
| Disaggregations                                       | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |         |                                |                     |
|                                                       | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |         |                                |                     |
|                                                       | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |         |                                |                     |
|                                                       | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |         |                                |                     |
| INDICATOR JUSTIFICATION DETAILS                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |         |                                |                     |
| Justification for Including Indicator                 | The indicator provides information on the attainment of the IWRM project objective, which is to increase agricultural production and the productivity of the agricultural sector. Actually, the construction of the water infrastructure, the improvement of the drainage systems and the land tenure security activities will help increase tomato production, one of the key crops of the irrigation zones. Such production increase will help assess the increase in agricultural production and productivity. |                          |         |                                |                     |
| How does the indicator link to the ERR?               | The indicator will provide information on the increase in production resulting in the increase in cultivable hectares, cropping intensity and yields. The ERR was set on the basis of 3 crops (Rice, Tomatoes, Onions).                                                                                                                                                                                                                                                                                           |                          |         |                                |                     |
| How does the indicator link to the BA?                | The increase in tomato production resulting from the conduct of activities will have an impact on employment and the allocation of recovered land and/or extension to new beneficiaries. Thus, one expects close to 22,336 beneficiary households i.e. 268,029 people, 35% of who are in quintile 1 (<\$2/j), 42% between \$2 and \$4/d and 23% higher than \$4/d.                                                                                                                                                |                          |         |                                |                     |
| How does the indicator link to the impact evaluation? | The impact evaluation survey lays emphasis on the tomato production of households in the processing areas and test zones. The data obtained with test zones may be compared with those obtained in the processing areas with a view to evaluating the impact of infrastructure built in the processing areas.                                                                                                                                                                                                     |                          |         |                                |                     |

|                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                     |              |
|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------|
| <b>Justification for Disaggregations</b>                                                                   | The data will be disaggregated by zone (Delta and Ngalenka) The disaggregation shows the contribution of each of zones in agricultural production and productivity.                                                                                                                                                                                                                                                                                                                                                    |                                                     |              |
| <b>INDICATOR ACQUISITION PLAN</b>                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                     |              |
| <b>Entity Responsible for Collecting Data</b>                                                              | Irrigation Project Directorate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                     |              |
| <b>Point of Contact Responsible for Collecting the Data at SAED:</b>                                       | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Phone</b>                                        | 77 511 22 72 |
| <b>Entity Responsible for the collection of primary Data</b>                                               | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                     |              |
| <b>Detailed description of data collection methodology (including any calculations computed by source)</b> | Done on the basis of results published by SAED on the yield plots and the situation on the areas cultivated according to the season (cold off-season).<br>It involves conducting a random sampling concerning 10% of plots in the total population of plots in each zone until the surface area to be sampled is attained. This method will thus be applied to the plot whose size is normally between 0.1 and 1ha. The square or rectangle should measure 10m2<br>Formula = Average yield X total cultivated hectares |                                                     |              |
| <b>If survey data, verbatim question(s) posed to respondent</b>                                            | These are survey data obtained through the methodology of yield plots installed by SAED                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                     |              |
| <b>Detailed description of how data is transmitted from source to USAC</b>                                 | The data is transmitted to MCA-S through official correspondence by SAED. Additionally, a mission of the M&E Directorate is scheduled to meet the Monitoring and Evaluation team with a view to collecting all raw data required for the calculation of the indicator.                                                                                                                                                                                                                                                 |                                                     |              |
| <b>Frequency and timing of data acquisition</b>                                                            | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                     |              |
| <b>Names of verification sources</b>                                                                       | <b>Means of verification</b><br>Annual production statistics<br>Production sampling surveys                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                     |              |
| SAED Annual Report, Letter                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                     |              |
| SAED Data Base                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                     |              |
| <b>Location of Data Storage</b>                                                                            | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                     |              |
| <b>INDICATOR DATA QUALITY</b>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                     |              |
| <b>Date of Data Quality Review</b>                                                                         | November 2014                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                     |              |
| <b>Main findings of data quality review</b>                                                                | Average Score (out of)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Recommendations                                     |              |
| 1. VALIDITY – Does the data clearly represent the desired results?                                         | 3,4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Information provided by the SAED information system |              |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time?                       | 3,5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | None                                                |              |

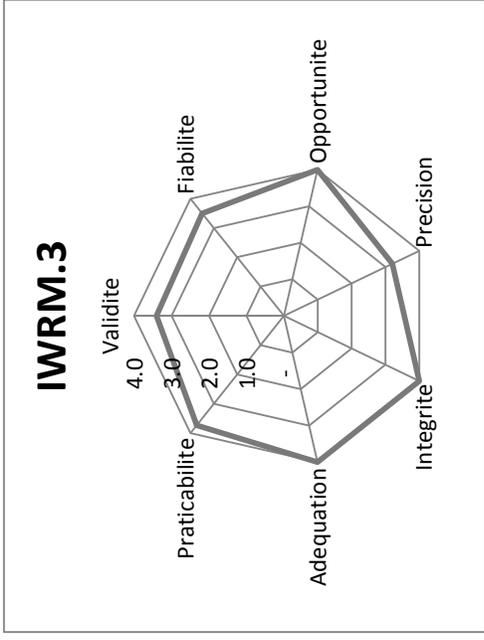
|                                                                                  |                                                                                                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                          |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 3. TIMELINESS- Are the data current and frequently collected?                    | 4,0                                                                                                                                                                                                                             | SAED ME system data                                                                                                                                                                             |                                                                                          |
| 4. PRECISION – Does the data have an acceptable margin of error?                 | 3,2                                                                                                                                                                                                                             | Propose to provide information on the margin of error resulting from the use of the yields estimation method                                                                                    |                                                                                          |
| 5. INTEGRITY- Is the data free from manipulation?                                | 4,0                                                                                                                                                                                                                             | None                                                                                                                                                                                            |                                                                                          |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results? | 4,0                                                                                                                                                                                                                             | None                                                                                                                                                                                            |                                                                                          |
| 7. PRACTICABILITY- Is the data current and frequently collected?                 | 3,7                                                                                                                                                                                                                             | None                                                                                                                                                                                            |                                                                                          |
| <b>Overall assessment</b>                                                        | <b>3,7</b>                                                                                                                                                                                                                      |                                                                                                                                                                                                 |                                                                                          |
| <b>Action taken in response to data quality review</b>                           |                                                                                                                                                                                                                                 | - Collection procedure clarified and harmonized with SAED<br>- Margins of error linked to the yield plots specified                                                                             |                                                                                          |
| <b>Known data limitations and significance</b>                                   |                                                                                                                                                                                                                                 | - A sampling is undertaken by SAED with the Producers Organization. Private producers are not taken into consideration.                                                                         |                                                                                          |
| <b>Actions taken to address data limitations</b>                                 |                                                                                                                                                                                                                                 | - Taking into consideration the locality aspects into consideration (differentiate Delta and Ngalenka) in the sampling device;<br>- Exchanges on the measures taken with regard to data quality |                                                                                          |
| <b>INDICATOR BASELINE INFORMATION</b>                                            |                                                                                                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                          |
| Old Baseline                                                                     | 12 700                                                                                                                                                                                                                          | Old Baseline Year<br>2010-2011                                                                                                                                                                  | Source of old Baseline<br>Compact et and ERR                                             |
| New Baseline                                                                     | 12 700                                                                                                                                                                                                                          | New Baseline Year<br>2010-2011                                                                                                                                                                  | Source of New Baseline<br>Data Base SAED : Refer to Letter SAED N° 1959-12 of 12-12-2012 |
| <b>Justification for Baseline Change (if any)</b>                                | The original baseline of 10,500 (and subsequent targets) were erroneously set based on accepting improper output from the ERR model. The new target is based on SAED values for production the year prior to the compact works. |                                                                                                                                                                                                 |                                                                                          |
| <b>INDICATOR TARGET CALCULATIONS</b>                                             |                                                                                                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                          |
| <b>YEAR 1</b>                                                                    | <b>Target</b>                                                                                                                                                                                                                   |                                                                                                                                                                                                 |                                                                                          |
|                                                                                  | <b>Old</b>                                                                                                                                                                                                                      | <b>New</b>                                                                                                                                                                                      | <b>Justification for changes to targets or calculations (if any)</b>                     |
| Oct 2010 - Sept. 2011                                                            | 12 700                                                                                                                                                                                                                          | 12 700                                                                                                                                                                                          |                                                                                          |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                          |
|                                                                                  | <b>Old</b>                                                                                                                                                                                                                      | <b>New</b>                                                                                                                                                                                      | <b>Justification for changes to targets or calculations (if any)</b>                     |
| <b>YEAR 2</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                      | <b>New</b>                                                                                                                                                                                      |                                                                                          |
| Oct 2011 - Sept. 2012                                                            | 14 200                                                                                                                                                                                                                          | 14 200                                                                                                                                                                                          |                                                                                          |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                          |
|                                                                                  | <b>Old</b>                                                                                                                                                                                                                      | <b>New</b>                                                                                                                                                                                      | <b>Justification for changes to targets or calculations (if any)</b>                     |
| <b>YEAR 3</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                      | <b>New</b>                                                                                                                                                                                      |                                                                                          |
| Oct 2012 - Sept. 2013                                                            | 14 200                                                                                                                                                                                                                          | 14 200                                                                                                                                                                                          |                                                                                          |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                          |
|                                                                                  | <b>Old</b>                                                                                                                                                                                                                      | <b>New</b>                                                                                                                                                                                      | <b>Justification for changes to targets or calculations (if any)</b>                     |
| <b>YEAR 4</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                      | <b>New</b>                                                                                                                                                                                      |                                                                                          |
| Oct 2013 - Sept. 2014                                                            | 14 200                                                                                                                                                                                                                          | 14 200                                                                                                                                                                                          |                                                                                          |

|                                                                            |         |         |                                                               |  |
|----------------------------------------------------------------------------|---------|---------|---------------------------------------------------------------|--|
| Explanation of assumptions and inputs to target calculations               |         |         |                                                               |  |
| YEAR 5                                                                     | Old     | New     | Justification for changes to targets or calculations (if any) |  |
| Oct 2014 - Sept. 2015                                                      | 35 500  | 35 500  |                                                               |  |
| Explanation of assumptions and inputs to target calculations               |         |         |                                                               |  |
| Long Term Target                                                           | Old     | New     | Justification for changes to targets or calculations (if any) |  |
|                                                                            | 115 000 | 115 000 |                                                               |  |
| Explanation of assumptions and inputs to target calculations               |         |         |                                                               |  |
| COMMENTS                                                                   |         |         |                                                               |  |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |         |         |                                                               |  |
| <u>Method of estimating yields of diversification crops</u>                |         |         |                                                               |  |

## 2.3. Indicator IWRM.3. Onion production (Delta / Ngalenka)

| INDICATOR BASIC DETAILS                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                |                     |        |                      |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------|--------|----------------------|
| Indicator Name                                                | Onion production (Delta / Ngalenka)                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Version                        | N° 03 /Sept 2015    |        |                      |
| Common Indicator Number                                       | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | All Previous Indicator Numbers | IWRM.3.             |        |                      |
| Level                                                         | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Unit of Measure*               | Tons                |        |                      |
| Detailed Definition                                           | Total quantity of cold off-season onions produced per annum in the project's intervention areas.                                                                                                                                                                                                                                                                                                                                                                                                      |                                |                     |        |                      |
| Frequency of Reporting                                        | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Reporting Period Covered       | Post-Compact Period |        |                      |
| Disaggregations                                               | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NO                             |                     |        |                      |
|                                                               | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | NO                             |                     |        |                      |
|                                                               | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NO                             |                     |        |                      |
|                                                               | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | YES (Delta / Ngalenka)         |                     |        |                      |
| INDICATOR JUSTIFICATION DETAILS                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                |                     |        |                      |
| Justification for Including Indicator                         | The indicator provides information on the attainment of the IWRM project objective which is to increase agricultural production and the productivity of the agricultural sector. Actually, the construction of the water infrastructure, the improvement of the drainage systems and the land tenure security activities will help increase onion production, one of the key crops of the irrigation zones. Such production increase will help assess the progression of production and productivity. |                                |                     |        |                      |
| How does the indicator link to the ERR?                       | The indicator will provide information on the increase in production resulting in the increase in cultivable hectares, cropping intensity and yields. The ERR was set on the basis of 3 crops (Rice, Tomatoes, Onions).                                                                                                                                                                                                                                                                               |                                |                     |        |                      |
| How does the indicator link to the BA?                        | The increase in onion production resulting from the conduct of activities will have an impact on employment and the allocation of recovered land and/or extension to new beneficiaries. Thus, one expects close to 22,336 beneficiary households i.e. 268,029 people, 35% of whom are in quintile 1 (<\$2/d), 42% between \$2 and \$4/d and 23% higher than \$4/d.                                                                                                                                    |                                |                     |        |                      |
| How does the indicator link to the impact evaluation?         | The impact evaluation survey lays emphasis on the onion production of households in the processing areas and test zones. The data obtained with test zones may be compared with those obtained in the processing areas with a view to evaluating the impact of infrastructure built in the processing areas.                                                                                                                                                                                          |                                |                     |        |                      |
| Justification for Disaggregations                             | The data will be disaggregated by zone (Delta and Ngalenka). The disaggregation shows the contribution of each of the zones in agricultural production and productivity.                                                                                                                                                                                                                                                                                                                              |                                |                     |        |                      |
| INDICATOR ACQUISITION PLAN                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                |                     |        |                      |
| Entity Responsible for Collecting Data                        | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                |                     |        |                      |
| Point of Contact Responsible for Collecting the Data at SAED: | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Phone                          | 77 511 22 72        | E-mail | Amadou.niang@saed.sn |
| Entity Responsible for the collection of primary Data         | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                |                     |        |                      |

|                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <p><b>Detailed description of data collection methodology</b><br/>(including any calculations computed by source)</p> | <p>Done on the basis of results published by SAED on the yield plots and the situation on the areas cultivated according to the season (cold off-season).<br/>It involves conducting a random sampling concerning 10% of plots in the total population of plots in each zone until the surface area to be sampled is attained. This method will thus be applied to the plot whose size is normally between 0.1 and 1 ha. The square or rectangle should measure 10m<sup>2</sup>. However, for the purpose of representativeness, the following spectra will be used:</p> <ul style="list-style-type: none"> <li>▪ 0.10 – 0.5 ha : 1 square or rectangle</li> <li>▪ More than 0.5 ha : 2 squares or rectangles</li> </ul> <p>Formula = Average yield X total cultivable hectares</p> <p>These are survey data obtained through the methodology of yield plots installed by SAED</p> <p>The data is transmitted to MCA-S through official correspondence by SAED. Besides, a mission of the M&amp;E Directorate is scheduled to meet the Monitoring and Evaluation team with a view to collecting all raw data required for the calculation of the indicator.</p> |                                                                                |
| <p><b>If survey data, verbatim question(s) posed to respondent</b></p>                                                | <p>ANNUAL</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                |
| <p><b>Detailed description of how data is transmitted from source to USAC</b></p>                                     | <p>ANNUAL</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                |
| <p><b>Frequency and timing of data acquisition</b></p>                                                                | <p>ANNUAL</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                |
| <p><b>Names of verification sources</b></p>                                                                           | <p><b>Means of verification</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                |
| <p>SAED Annual Report, Letter</p>                                                                                     | <p>Annual production statistics</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                |
| <p>SAED Data Base</p>                                                                                                 | <p>Production sampling surveys</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                |
| <p><b>Location of Data Storage</b></p>                                                                                | <p>SAED</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                |
| <p><b>INDICATOR DATA QUALITY</b></p>                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                |
| <p><b>Date of Data Quality Review</b></p>                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                |
| <p><b>Main findings of data quality review</b></p>                                                                    | <p>Average Score<br/>(out of 4)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>November 2014</p>                                                           |
| <p>1. VALIDITY – Does the data clearly represent the desired results?</p>                                             | <p>3,4</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Recommendations<br/>Information provided by the SAED information system</p> |
| <p>2. RELIABILITY – Are the data collection procedures stable and consistent over time?</p>                           | <p>3.5</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>None</p>                                                                    |



|                                                                                  |            |                                                                                                                                                                                                                                                                                                                                                              |                                                                                           |
|----------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 3. TIMELINESS- Are the data current and frequently collected?                    | 4,0        | SAED ME system data                                                                                                                                                                                                                                                                                                                                          |                                                                                           |
| 4. PRECISION – Does the data have an acceptable margin of error?                 | 3,2        | Propose to provide information on the margin of error resulting from the use of the yields estimation method                                                                                                                                                                                                                                                 |                                                                                           |
| 5. INTEGRITY- Is the data free from manipulation?                                | 4,0        | None                                                                                                                                                                                                                                                                                                                                                         |                                                                                           |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results? | 4,0        | None                                                                                                                                                                                                                                                                                                                                                         |                                                                                           |
| 7. PRACTICABILITY- Is the data current and frequently collected?                 | 3,7        | None                                                                                                                                                                                                                                                                                                                                                         |                                                                                           |
| <b>Overall assessment</b>                                                        | <b>3,7</b> |                                                                                                                                                                                                                                                                                                                                                              |                                                                                           |
| <b>Action taken in response to data quality review</b>                           |            | <ul style="list-style-type: none"> <li>- Collection procedure clarified and harmonized with SAED</li> <li>- Disaggregation by gender and in the absence of disaggregated data, inform the heading "Unspecified"</li> <li>- A sampling is undertaken by SAED with the Producers' Organization. Private producers are not taken into consideration.</li> </ul> |                                                                                           |
| <b>Known data limitations and significance</b>                                   |            | <ul style="list-style-type: none"> <li>- Integration of locality aspects (differentiate Delta and Ngalenka) in the SAED sampling system;</li> <li>- Exchanges on the measures taken with regard to data quality</li> </ul>                                                                                                                                   |                                                                                           |
| <b>Actions taken to address data limitations</b>                                 |            |                                                                                                                                                                                                                                                                                                                                                              |                                                                                           |
| <b>INDICATOR BASELINE INFORMATION</b>                                            |            |                                                                                                                                                                                                                                                                                                                                                              |                                                                                           |
| Old Baseline                                                                     | 10 900     | Old Baseline Year                                                                                                                                                                                                                                                                                                                                            | 2010-2011                                                                                 |
| New Baseline                                                                     | 10 900     | New Baseline Year                                                                                                                                                                                                                                                                                                                                            | 2010-2011                                                                                 |
| Justification for Baseline Change (if any)                                       |            | Source of old Baseline                                                                                                                                                                                                                                                                                                                                       | Compact et and ERR<br>SAED Data Base : Refer to Letter from SAED N° 1959-12 du 12-12-2012 |
| <b>INDICATOR TARGET CALCULATIONS</b>                                             |            |                                                                                                                                                                                                                                                                                                                                                              |                                                                                           |
|                                                                                  | Target     |                                                                                                                                                                                                                                                                                                                                                              |                                                                                           |
| YEAR 1                                                                           | Old        | New                                                                                                                                                                                                                                                                                                                                                          | Justification for changes to targets or calculations (if any)                             |
| Oct 2010 - Sept. 2011                                                            | 10 900     | 10 900                                                                                                                                                                                                                                                                                                                                                       | ▪                                                                                         |
| Explanation of assumptions and inputs to target calculations                     |            |                                                                                                                                                                                                                                                                                                                                                              |                                                                                           |
| YEAR 2                                                                           | Old        | New                                                                                                                                                                                                                                                                                                                                                          | Justification for changes to targets or calculations (if any)                             |
| Oct 2011 - Sept. 2012                                                            | 16 000     | 16 000                                                                                                                                                                                                                                                                                                                                                       |                                                                                           |
| Explanation of assumptions and inputs to target calculations                     |            |                                                                                                                                                                                                                                                                                                                                                              |                                                                                           |
| YEAR 3                                                                           | Old        | New                                                                                                                                                                                                                                                                                                                                                          | Justification for changes to targets or calculations (if any)                             |
| Oct 2012 - Sept. 2013                                                            | 16 000     | 16 000                                                                                                                                                                                                                                                                                                                                                       |                                                                                           |
| Explanation of assumptions and inputs to target calculations                     |            |                                                                                                                                                                                                                                                                                                                                                              |                                                                                           |
| YEAR 4                                                                           | Old        | New                                                                                                                                                                                                                                                                                                                                                          | Justification for changes to targets or calculations (if any)                             |
| Oct 2013 - Sept. 2014                                                            | 16 000     | 16 000                                                                                                                                                                                                                                                                                                                                                       |                                                                                           |

|                                                                            |        |         |         |                                                               |
|----------------------------------------------------------------------------|--------|---------|---------|---------------------------------------------------------------|
| Explanation of assumptions and inputs to target calculations               | YEAR 5 | Old     | New     | Justification for changes to targets or calculations (if any) |
| Oct 2014 - Sept. 2015                                                      |        | 40 000  | 40 000  |                                                               |
| Explanation of assumptions and inputs to target calculations               |        |         |         |                                                               |
| Long Term Target                                                           |        | Old     | New     | Justification for changes to targets or calculations (if any) |
|                                                                            |        | 130 000 | 130 000 |                                                               |
| Explanation of assumptions and inputs to target calculations               |        |         |         |                                                               |
| COMMENTS                                                                   |        |         |         |                                                               |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |        |         |         |                                                               |
| Méthode d'estimation des rendements des cultures de diversification        |        |         |         |                                                               |

#### 2.4. Indicator IWRM.4. Cropping intensity (Delta)

|                                         |                                                                                                                                                                                                                                                                                                                                                                                    |                          |                          |                                |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------------|
| <b>INDICATOR BASIC DETAILS</b>          |                                                                                                                                                                                                                                                                                                                                                                                    |                          |                          |                                |
| Indicator Name                          | Cropping intensity (Delta)                                                                                                                                                                                                                                                                                                                                                         |                          | Version                  |                                |
| Common Indicator Number                 | Not Applicable                                                                                                                                                                                                                                                                                                                                                                     | Current Indicator Number | IWRM.4.                  | All Previous Indicator Numbers |
| Level                                   | Outcome                                                                                                                                                                                                                                                                                                                                                                            | Classification           | Level                    | Unit of Measure*               |
| Detailed Definition                     | Cropping intensity in irrigated areas of the Delta is calculated on the basis of the formula: Total number of hectares cultivated per year / Total number of cultivable hectares. The cultivable land represents the entire surface area that can be cultivated (reported by SAED as « superficie exploitable »)                                                                   |                          |                          |                                |
| Frequency of Reporting                  | ANNUAL                                                                                                                                                                                                                                                                                                                                                                             |                          | Reporting Period Covered | Post-Compact Period            |
| Disaggregations                         | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                 |                          | NO                       |                                |
|                                         | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                    |                          | NO                       |                                |
|                                         | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                 |                          | NO                       |                                |
|                                         | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                               |                          | NO                       |                                |
| <b>INDICATOR JUSTIFICATION DETAILS</b>  |                                                                                                                                                                                                                                                                                                                                                                                    |                          |                          |                                |
| Justification for Including Indicator   | The indicator will provide information on the achievement of the IWRM project objective consisting in increasing agricultural production and the productivity of the agricultural sector. The development of cropping intensity will constitute a result that will help assess the progression in hectares under production.                                                       |                          |                          |                                |
| How does the indicator link to the ERR? | The indicator will provide information on Cropping Intensity, which is the ratio of hectares under production over cultivable areas. This ratio will make it possible to accurately report the increase in productivity and thus the ERR. Moreover, the CI will be a decisive factor to show the increase in available water quantities and the efficiency of the drainage system. |                          |                          |                                |
| How does the indicator link to the BA?  | Not Applicable                                                                                                                                                                                                                                                                                                                                                                     |                          |                          |                                |

|                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |              |        |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|--------|
| <b>How does the indicator link to the impact evaluation?</b>                                               | The impact evaluation survey shows the CI trend in comparison and control zones. The data obtained with control zones may be compared with those in the comparison zones in order to evaluate the impact of infrastructure built in the comparison zones.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |        |
| <b>Justification for Disaggregations</b>                                                                   | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |              |        |
| <b>INDICATOR ACQUISITION PLAN</b>                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |              |        |
| <b>Entity Responsible for Collecting Data</b>                                                              | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |              |        |
| <b>Point of Contact Responsible for Collecting the Data at SAED:</b>                                       | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Phone           | 77 511 22 72 | E-mail |
| <b>Entity Responsible for the collection of primary Data</b>                                               | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |              |        |
| <b>Detailed description of data collection methodology</b> (including any calculations computed by source) | <p>The collection of data on the total cultivated areas in the irrigated land and per season (rainy season, dry season, hot dry season). The data collected come from the following sources :</p> <ul style="list-style-type: none"> <li>▪ Satellite images taken in the middle of the cycle (for different farming seasons);</li> <li>▪ Results of field surveys (conducted by the remote sensing team) and specific studies (socio-land studies)</li> <li>▪ Various mapping means recovered in digital form (soil maps, drawing plans of works, etc.);</li> <li>▪ socio-economic data base (developments / development actors);</li> </ul> <p>Data on the total cultivated areas concerning the rainy season is collected by mobilizing SAED's field structure, in each Delegation, under the responsibility of the Monitoring-Evaluation Office (BSE). For each Development Unit (UMV), the type of crops and cultivated areas as well as the PO growing them will be registered. The collected data on areas sown during the rainy season, after verification by the heads of sectors, are entered by the Monitoring and Evaluation Office.</p> <p>Numerator (1) = total cultivated areas for all seasons<br/> Denominator (2) = cultivable land surfaces in the Delta ["superficie exploitable" in the SAED database]<br/> Cropping Intensity = (1) / (2)</p> |                 |              |        |
| <b>If survey data, verbatim question(s) posed to respondent</b>                                            | These are survey data obtained by SAED on the total cultivated areas in the irrigated land. The data collection on the total cultivated areas concerns the three seasons of the year.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |              |        |
| <b>Detailed description of how data is transmitted from source to USAC</b>                                 | The data is transmitted to SAED through MCA-S's official correspondence. Besides, a mission of the M&E Directorate is scheduled to meet the Monitoring and Evaluation team with a view to collecting all raw data required for the calculation of the indicator.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |              |        |
| <b>Frequency and timing of data acquisition</b>                                                            | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |              |        |
| <b>Names of verification sources</b>                                                                       | <b>Means of verification</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |              |        |
| Rapport Annuel SAED, lettre SAED                                                                           | Statistiques sur les superficies cultivables et cultivées dans le Ngalenka                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |              |        |
| Base de Données SAED                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |              |        |
| <b>Location of Data Storage</b>                                                                            | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |              |        |
| <b>INDICATOR DATA QUALITY</b>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |              |        |
| <b>Date of Data Quality Review</b>                                                                         | November 2014                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |              |        |
| <b>Main findings of data quality review</b>                                                                | Average Score (out of 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Recommendations |              |        |

|                                                                                             |                                                                                                     |                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. VALIDITY – Does the data clearly represent the desired results?</p>                   | <p>Information provided by SAED information system Indicator to reposition as impact indicator.</p> | <p><b>IWRM.4</b></p> <p>Validite: 4.0<br/>         Fiabilite: 4.0<br/>         Opportunitite: 4.0<br/>         Precision: 4.0<br/>         Integrite: 4.0<br/>         Adequation: 4.0<br/>         Praticabilite: 4.0</p> |
| <p>2. RELIABILITY – Are the data collection procedures stable and consistent over time?</p> | <p>4,0</p>                                                                                          | <p>N/A</p>                                                                                                                                                                                                                 |
| <p>3. TIMELINESS- Are the data current and frequently collected?</p>                        | <p>4,0</p>                                                                                          | <p>SAED ME system data</p>                                                                                                                                                                                                 |
| <p>4. PRECISION – Does the data have an acceptable margin of error?</p>                     | <p>4,0</p>                                                                                          | <p>N/A</p>                                                                                                                                                                                                                 |
| <p>5. INTEGRITY- Is the data free from manipulation?</p>                                    | <p>4,0</p>                                                                                          | <p>N/A</p>                                                                                                                                                                                                                 |
| <p>6. APPROPRIATENESS – To what extent do the indicators fully portray the results?</p>     | <p>4,0</p>                                                                                          | <p>N/A</p>                                                                                                                                                                                                                 |
| <p>7. PRACTICABILITY- Is the data current and frequently collected?</p>                     | <p>3,7</p>                                                                                          | <p>N/A</p>                                                                                                                                                                                                                 |
| <p><b>Overall assessment</b></p>                                                            | <p><b>4,0</b></p>                                                                                   |                                                                                                                                                                                                                            |
| <p><b>Action taken in response to data quality review</b></p>                               |                                                                                                     | <p>- Procédure et méthodologie de collecte précisée et harmonisée avec la SAED</p>                                                                                                                                         |
| <p><b>Known data limitations and significance</b></p>                                       |                                                                                                     | <p>Not Applicable</p>                                                                                                                                                                                                      |
| <p><b>Actions taken to address data limitations</b></p>                                     |                                                                                                     | <p>Not Applicable</p>                                                                                                                                                                                                      |
| <p><b>INDICATOR BASELINE INFORMATION</b></p>                                                |                                                                                                     |                                                                                                                                                                                                                            |
| <p><b>Old Baseline</b></p>                                                                  | <p>0,6</p>                                                                                          | <p>SAED Data Base: Refer To Letter SAED N° 1959-12 of 12-12-2012</p>                                                                                                                                                       |
| <p><b>New Baseline</b></p>                                                                  | <p>60%</p>                                                                                          | <p>SAED Data Base: Refer To Letter SAED N° 1959-12 of 12-12-2012</p>                                                                                                                                                       |

|                                                                            |                                                                      |               |            |                                                                      |
|----------------------------------------------------------------------------|----------------------------------------------------------------------|---------------|------------|----------------------------------------------------------------------|
| Justification for Baseline Change (if any)                                 | MCC has requested that the indicator be reformulated as a percentage |               |            |                                                                      |
| <b>INDICATOR TARGET CALCULATIONS</b>                                       |                                                                      |               |            |                                                                      |
|                                                                            |                                                                      | <b>Target</b> |            |                                                                      |
|                                                                            |                                                                      | <b>Old</b>    | <b>New</b> |                                                                      |
| <b>YEAR 1</b>                                                              |                                                                      | 0,6           | 60%        | MCC has requested that the indicator be reformulated as a percentage |
| Oct 2010 - Sept. 2011                                                      |                                                                      |               |            |                                                                      |
| Explanation of assumptions and inputs to target calculations               |                                                                      |               |            |                                                                      |
| <b>YEAR 2</b>                                                              |                                                                      | <b>Old</b>    | <b>New</b> | MCC has requested that the indicator be reformulated as a percentage |
| Oct 2011 - Sept. 2012                                                      |                                                                      | 0,6           | 60%        |                                                                      |
| Explanation of assumptions and inputs to target calculations               |                                                                      |               |            |                                                                      |
| <b>YEAR 3</b>                                                              |                                                                      | <b>Old</b>    | <b>New</b> | MCC has requested that the indicator be reformulated as a percentage |
| Oct 2012 - Sept. 2013                                                      |                                                                      | 0,6           | 60%        |                                                                      |
| Explanation of assumptions and inputs to target calculations               |                                                                      |               |            |                                                                      |
| <b>YEAR 4</b>                                                              |                                                                      | <b>Old</b>    | <b>New</b> | MCC has requested that the indicator be reformulated as a percentage |
| Oct 2013 - Sept. 2014                                                      |                                                                      | 0,6           | 60%        |                                                                      |
| Explanation of assumptions and inputs to target calculations               |                                                                      |               |            |                                                                      |
| <b>YEAR 5</b>                                                              |                                                                      | <b>Old</b>    | <b>New</b> | MCC has requested that the indicator be reformulated as a percentage |
| Oct 2014 - Sept. 2015                                                      |                                                                      | 0,7           | 70%        |                                                                      |
| Explanation of assumptions and inputs to target calculations               |                                                                      |               |            |                                                                      |
| <b>Long Term Target</b>                                                    |                                                                      | <b>Old</b>    | <b>New</b> | MCC has requested that the indicator be reformulated as a percentage |
|                                                                            |                                                                      | 1,5           | 150%       |                                                                      |
| Explanation of assumptions and inputs to target calculations               |                                                                      |               |            |                                                                      |
| <b>COMMENTS</b>                                                            |                                                                      |               |            |                                                                      |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |                                                                      |               |            |                                                                      |
|                                                                            |                                                                      |               |            |                                                                      |

## 2.5. Indicator IWRM.5. Cropping Intensity (Ngalenka)

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                                                                |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------|
| Indicator Name                                                                                      | Cropping Intensity (Ngalenka)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          | Version                                                        |
| Common Indicator Number                                                                             | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Current Indicator Number | IWRM.5.                                                        |
| Level                                                                                               | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Classification           | Level                                                          |
| Detailed Definition                                                                                 | The cropping intensity in the Ngalenka irrigated areas is calculated according to the following formula: Total number of hectares cultivated per year / Total number of cultivable hectares. The cultivable land represents the all the land that can be cultivated. For Ngalenka, this refers to the eventual 450 ha covered by the perimeter, even during years 1 – 3.                                                                                                                                                                                                   |                          |                                                                |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Reporting Period Covered | Post-Compact Period                                            |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | NO                       |                                                                |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NO                       |                                                                |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | NO                       |                                                                |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | NO                       |                                                                |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                                                                |
| Justification for Including Indicator                                                               | The indicator provides information on the attainment of the IWRM project objective which is to increase agricultural production and the productivity of the agricultural sector. The trend of the cropping intensity will constitute a result that will help assess the progression of hectares under production.                                                                                                                                                                                                                                                          |                          |                                                                |
| How does the indicator link to the ERR?                                                             | The indicator will provide information on the Cropping Intensity, which is the ratio between the hectares under production/ and the cultivable areas. This relationship accurately reflects the increase in productivity and thus of the ERR. Thus, the CI will be a decisive factor in showing the increase in the quantities of water available and the efficiency of the drainage system.                                                                                                                                                                               |                          |                                                                |
| How does the indicator link to the BA?                                                              | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                                                                |
| How does the indicator link to the impact evaluation?                                               | The impact evaluation survey shows the CI trends in the processing and test zones. The data obtained with test zones may be compared with those obtained in the processing areas with a view to evaluating the impact of infrastructure built in the processing areas.                                                                                                                                                                                                                                                                                                     |                          |                                                                |
| Justification for Disaggregations                                                                   | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                                                                |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                                                                |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |                                                                |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Phone                    | 77 511 22 72                                                   |
|                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | E-mail                   | <a href="mailto:Amadou.niang@saed.sn">Amadou.niang@saed.sn</a> |
| Entity Responsible for the collection of primary Data                                               | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |                                                                |
| Detailed description of data collection methodology (including any calculations computed by source) | <p>The collection of data on the total cultivated areas in the irrigated perimeters and per season (rainy season, dry season, hot dry season). The data collected come from the following sources :</p> <ul style="list-style-type: none"> <li>▪ Satellite images taken in the middle of the cycle (for different farming seasons);</li> <li>▪ Results of field surveys (conducted by the remote sensing team ) and specific studies (socio-land studies)</li> <li>▪ Various mapping means recovered in digital form (soil maps, drawing plans of works, etc.);</li> </ul> |                          |                                                                |

|                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                             | <ul style="list-style-type: none"> <li>socio-economic data base (developments / development actors);</li> </ul> <p>Data on the total cultivated areas concerning the rainy season is collected by mobilizing SAED's field structure, in each Delegation, under the responsibility of the Monitoring-Evaluation Office (BSE), For each Development Unit (UMV), the type of crops and cultivated areas as well as the PO growing them will be registered. The collected data on areas sown during the rainy season, after verification by the heads of sectors, are entered by the Monitoring and Evaluation Office.</p> <p>Numerator (1) = total cultivated areas for all seasons<br/>         Denominator (2) = cultivable land surfaces in the Ngalenka<br/>         Cropping Intensity = (1) / (2)</p> <p>These are survey data obtained by SAED on the total cultivated areas in the irrigated land.</p> |
| <p><b>If survey data, verbatim question(s) posed to respondent</b></p>                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>Detailed description of how data is transmitted from source to USAC</b></p>           | <p>The data is transmitted to SAED through MCA-S's official correspondence. Besides, a mission of the M&amp;E Directorate is scheduled to meet the Monitoring and Evaluation team with a view to collecting all raw data required for the calculation of the indicator.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>Frequency and timing of data acquisition</b></p>                                      | <p>ANNUAL</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>Names of verification sources</b></p>                                                 | <p><b>Means of verification</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>SEAD Annual Report</p>                                                                   | <p>Statistics on cultivable and cultivated land in the Delta</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p>SAED Data Base</p>                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>Location of Data Storage</b></p>                                                      | <p>SAED</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>INDICATOR DATA QUALITY</b></p>                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>Date of Data Quality Review</b></p>                                                   | <p>November 2014</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>Main findings of data quality review</b></p>                                          | <div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>Average Score<br/>(out of 4)</p> </div> <div style="flex: 1; text-align: center;"> <p>Recommendations</p> </div> </div> <div style="text-align: center; margin-top: 20px;"> <p><b>IWRM.5</b></p> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>1. VALIDITY – Does the data clearly represent the desired results?</p>                   | <p>4,0</p> <p>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p>2. RELIABILITY – Are the data collection procedures stable and consistent over time?</p> | <p>4,0</p> <p>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

|                                                                                  |                                                                           |                          |                                                                      |                                                                                                |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 3. TIMELINESS- Are the data current and frequently collected?                    | 4,0                                                                       | N/A                      |                                                                      |                                                                                                |
| 4. PRECISION – Does the data have an acceptable margin of error?                 | 4,0                                                                       | N/A                      |                                                                      |                                                                                                |
| 5. INTEGRITY- Is the data free from manipulation?                                | 4,0                                                                       | N/A                      |                                                                      |                                                                                                |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results? | 4,0                                                                       | N/A                      |                                                                      |                                                                                                |
| 7. PRACTICABILITY- Is the data current and frequently collected?                 | 3,7                                                                       | N/A                      |                                                                      |                                                                                                |
| <b>Overall assessment</b>                                                        | <b>4,0</b>                                                                |                          |                                                                      |                                                                                                |
| <b>Action taken in response to data quality review</b>                           | - Collection procedure and methodology clarified and harmonized with SAED |                          |                                                                      |                                                                                                |
| <b>Known data limitations and significance</b>                                   | Not Applicable                                                            |                          |                                                                      |                                                                                                |
| <b>Actions taken to address data limitations</b>                                 | Not Applicable                                                            |                          |                                                                      |                                                                                                |
| <b>INDICATOR BASELINE INFORMATION</b>                                            |                                                                           |                          |                                                                      |                                                                                                |
| <b>Old Baseline</b>                                                              | 0,2                                                                       | <b>Old Baseline Year</b> | 2010-2011                                                            | <b>Source of old Baseline</b><br>SAED Data Base: Refer To Letter SAED N° 1959-12 of 12-12-2012 |
| <b>New Baseline</b>                                                              | 20%                                                                       | <b>New Baseline Year</b> | 2010-2011                                                            | <b>Source of New Baseline</b><br>SAED Data Base: Refer To Letter SAED N° 1959-12 of 12-12-2012 |
| <b>Justification for Baseline Change (if any)</b>                                | MCC has requested that the indicator be reformulated as a percentage      |                          |                                                                      |                                                                                                |
| <b>INDICATOR TARGET CALCULATIONS</b>                                             |                                                                           |                          |                                                                      |                                                                                                |
|                                                                                  | <b>Target</b>                                                             |                          |                                                                      |                                                                                                |
| <b>YEAR 1</b>                                                                    | <b>Old</b>                                                                | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                |
| Oct 2010 - Sept. 2011                                                            | 0,2                                                                       | 20%                      | MCC has requested that the indicator be reformulated as a percentage |                                                                                                |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                           |                          |                                                                      |                                                                                                |
| <b>YEAR 2</b>                                                                    | <b>Old</b>                                                                | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                |
| Oct 2011 - Sept. 2012                                                            | 0,2                                                                       | 20%                      | MCC has requested that the indicator be reformulated as a percentage |                                                                                                |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                           |                          |                                                                      |                                                                                                |
| <b>YEAR 3</b>                                                                    | <b>Old</b>                                                                | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                |
| Oct 2012 - Sept. 2013                                                            | 0,0                                                                       | 0%                       | MCC has requested that the indicator be reformulated as a percentage |                                                                                                |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                           |                          |                                                                      |                                                                                                |
| <b>YEAR 4</b>                                                                    | <b>Old</b>                                                                | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                |
| Oct 2013 - Sept. 2014                                                            | 1,0                                                                       | 100%                     | MCC has requested that the indicator be reformulated as a percentage |                                                                                                |

|                                                                                                 |     |      |                                                               |                                                                                                                                    |
|-------------------------------------------------------------------------------------------------|-----|------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Explanation of assumptions and inputs to target calculations<br>YEAR 5<br>Oct 2014 - Sept. 2015 | Old | New  | Justification for changes to targets or calculations (if any) | MCC has requested that the indicator be reformulated as a percentage                                                               |
|                                                                                                 | 1.2 | 120% |                                                               |                                                                                                                                    |
| Explanation of assumptions and inputs to target calculations<br>Long Term Target                | Old | New  | Justification for changes to targets or calculations (if any) | This figure is given by SAED based on agricultural potential. MCC has requested that the indicator be reformulated as a percentage |
|                                                                                                 | TBD | 180% |                                                               |                                                                                                                                    |
| Explanation of assumptions and inputs to target calculations                                    |     |      |                                                               |                                                                                                                                    |
| COMMENTS                                                                                        |     |      |                                                               |                                                                                                                                    |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)                             |     |      |                                                               |                                                                                                                                    |
|                                                                                                 |     |      |                                                               |                                                                                                                                    |
|                                                                                                 |     |      |                                                               |                                                                                                                                    |

## 2.6. Indicator IWRM.6. Total area with improved irrigation infrastructure (Delta and Ngalenka)

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                      |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------|
| Indicator Name                                                                                      | Total area with improved irrigation infrastructure (Delta and Ngalenka)                                                                                                                                                                                                                                                                                                                                                                                     |                          | Version              |
| Common Indicator Number                                                                             | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                              | Current Indicator Number | IWRM.6.              |
| Level                                                                                               | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Classification           | Level                |
| Detailed Definition                                                                                 | Total number of hectares that are supplied with complete systems for improved irrigation (land that has access to irrigation water flows, has been properly leveled) The improved irrigation areas include those that were already improved prior to the MCC project and those that are added via irrigation extensions that are supplied by the system that is being rehabilitated through the compact. This is reported by SAED as "superficie aménagée". |                          |                      |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Reporting Period Covered | Post-Compact Period  |
| Disaggregations                                                                                     | By gender (YES/NO) NO                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |                      |
|                                                                                                     | By age (YES/NO) NO                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                      |
|                                                                                                     | By income (YES/NO) NO                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |                      |
|                                                                                                     | By locality (YES/NO) YES (Delta / Ngalenka)                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                      |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                      |
| Justification for Including Indicator                                                               | The indicator aims to capture the objective of the IWRM project to increase the land area that is under production. The completion of irrigation works under the project will increase the availability of water, improve drainage and reduce salinization, and encourage the extension of improved irrigation infrastructure (either by other organizations or by individuals) into new areas.                                                             |                          |                      |
| How does the indicator link to the ERR?                                                             | The indicator does not directly affect the economics, but constrains total production in a given season. If the indicator does not increase over time, then the increase in cultivated area will also eventually be limited                                                                                                                                                                                                                                 |                          |                      |
| How does the indicator link to the BA?                                                              | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                      |
| How does the indicator link to the impact evaluation?                                               | Not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                      |
| Justification for Disaggregations                                                                   | The data should be disaggregated by locality (Delta/Ngalenka)                                                                                                                                                                                                                                                                                                                                                                                               |                          |                      |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                      |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                      |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                                                                                                                | Phone                    | 77 511 22 72         |
|                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                             | E-mail                   | Amadou.niang@saed.sn |
| Entity Responsible for the collection of primary Data                                               | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                      |
| Detailed description of data collection methodology (including any calculations computed by source) | The data will be collected based on the SIG from the Implementing Entity for Irrigation and from SAED (including disaggregation by locality). The data will be taken from SAED's statistics on the agriculture campaigns and from maps                                                                                                                                                                                                                      |                          |                      |
| If survey data, verbatim question(s) posed to respondent                                            | Not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                      |
| Detailed description of how data is transmitted from source to USAC                                 | The data are communicated via official correspondence from SAED to the MCA-S. Additionally, missions by the M&E Directorate are periodically planned to collect and verify the data provided by SAED.                                                                                                                                                                                                                                                       |                          |                      |

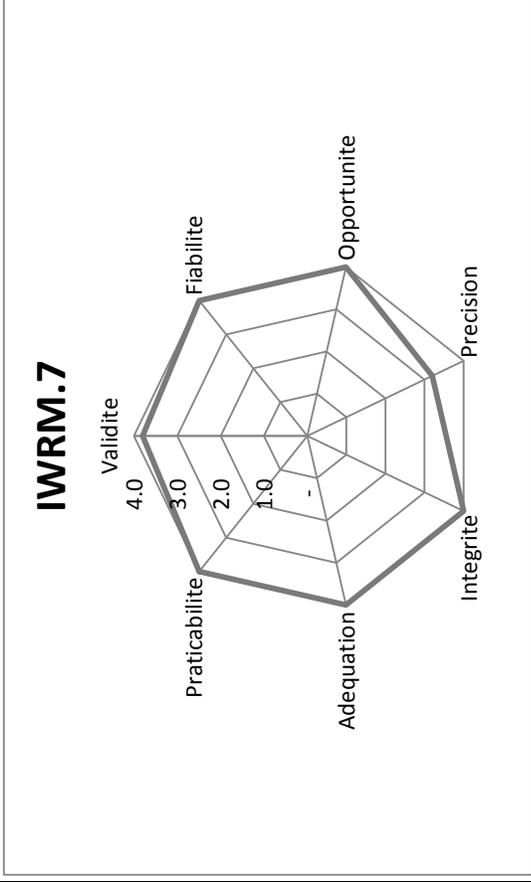
|                                                                                      |                                                                                                                                                                                        |                 |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>Frequency and timing of data acquisition</b>                                      | QUARTERLY                                                                                                                                                                              |                 |
| <b>Names of verification sources</b>                                                 | <b>Means of verification</b>                                                                                                                                                           |                 |
| SEAD Annual Report                                                                   | Report from the PMU-Irrigation, SAED Agricultural Campaign Statistics, Maps                                                                                                            |                 |
| SAED Data Base                                                                       |                                                                                                                                                                                        |                 |
| <b>Location of Data Storage</b>                                                      | SAED                                                                                                                                                                                   |                 |
| <b>INDICATOR DATA QUALITY</b>                                                        |                                                                                                                                                                                        |                 |
| <b>Date of Data Quality Review</b>                                                   | November 2014                                                                                                                                                                          |                 |
| <b>Main findings of data quality review</b>                                          | <p><b>IWRM.6</b></p> <p>Validite 4.0<br/>         Fiabilite 3.0<br/>         Opportunité 3.0<br/>         Integrite 3.0<br/>         Adequation 3.0<br/>         Praticabilite 3.0</p> |                 |
|                                                                                      | Average Score (out of 4)                                                                                                                                                               | Recommendations |
| 1. VALIDITY – Does the data clearly represent the desired results?                   | 3,8                                                                                                                                                                                    | N/A             |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? | 4,0                                                                                                                                                                                    | N/A             |
| 3. TIMELINESS- Are the data current and frequently collected?                        | 4,0                                                                                                                                                                                    | N/A             |
| 4. PRECISION – Does the data have an acceptable margin of error?                     | 4,0                                                                                                                                                                                    | N/A             |
| 5. INTEGRITY- Is the data free from manipulation?                                    | 4,0                                                                                                                                                                                    | N/A             |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?     | 1,7                                                                                                                                                                                    | N/A             |
| 7. PRACTICABILITY- Is the data current and frequently collected?                     | 4,0                                                                                                                                                                                    | N/A             |
| <b>Overall assessment</b>                                                            | 3,6                                                                                                                                                                                    |                 |
| <b>Action taken in response to data quality review</b>                               | - Collection procedure and methodology clarified and harmonized with SAED                                                                                                              |                 |
| <b>Known data limitations and significance</b>                                       | Not Applicable                                                                                                                                                                         |                 |

| Actions taken to address data limitations                                  |                                                                                                                                                                                                                                                                                                                                         | Not Applicable         |                                                               |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------|
| <b>INDICATOR BASELINE INFORMATION</b>                                      |                                                                                                                                                                                                                                                                                                                                         |                        |                                                               |
| Old Baseline                                                               | 34 848                                                                                                                                                                                                                                                                                                                                  | Old Baseline Year      | 2010-2011                                                     |
| New Baseline                                                               | 34 848                                                                                                                                                                                                                                                                                                                                  | New Baseline Year      | 2010-2011                                                     |
| Justification for Baseline Change (if any)                                 |                                                                                                                                                                                                                                                                                                                                         | Source of old Baseline | ERR/SAED database                                             |
|                                                                            |                                                                                                                                                                                                                                                                                                                                         | Source of New Baseline | ERR/SAED database                                             |
| <b>INDICATOR TARGET CALCULATIONS</b>                                       |                                                                                                                                                                                                                                                                                                                                         |                        |                                                               |
|                                                                            | Target                                                                                                                                                                                                                                                                                                                                  |                        |                                                               |
| YEAR 1                                                                     | Old                                                                                                                                                                                                                                                                                                                                     | New                    | Justification for changes to targets or calculations (if any) |
| Oct 2010 - Sept. 2011                                                      | 34,848                                                                                                                                                                                                                                                                                                                                  | 34,848                 | Delta : 34 802 ha<br>Ngalenka : 46 ha                         |
| Explanation of assumptions and inputs to target calculations               |                                                                                                                                                                                                                                                                                                                                         |                        |                                                               |
| YEAR 2                                                                     | Old                                                                                                                                                                                                                                                                                                                                     | New                    | Justification for changes to targets or calculations (if any) |
| Oct 2011 - Sept. 2012                                                      | 36,541                                                                                                                                                                                                                                                                                                                                  | 36,541                 | Delta : 36 495 ha<br>Ngalenka : 46 ha                         |
| Explanation of assumptions and inputs to target calculations               |                                                                                                                                                                                                                                                                                                                                         |                        |                                                               |
| YEAR 3                                                                     | Old                                                                                                                                                                                                                                                                                                                                     | New                    | Justification for changes to targets or calculations (if any) |
| Oct 2012 - Sept. 2013                                                      | 37,554                                                                                                                                                                                                                                                                                                                                  | 37,554                 | Delta : 37 502 ha<br>Ngalenka : 52 ha                         |
| Explanation of assumptions and inputs to target calculations               |                                                                                                                                                                                                                                                                                                                                         |                        |                                                               |
| YEAR 4                                                                     | Old                                                                                                                                                                                                                                                                                                                                     | New                    | Justification for changes to targets or calculations (if any) |
| Oct 2013 - Sept. 2014                                                      | 38,381                                                                                                                                                                                                                                                                                                                                  | 38,381                 | Delta : 37 941 ha<br>Ngalenka : 440 ha                        |
| Explanation of assumptions and inputs to target calculations               |                                                                                                                                                                                                                                                                                                                                         |                        |                                                               |
| YEAR 5                                                                     | Old                                                                                                                                                                                                                                                                                                                                     | New                    | Justification for changes to targets or calculations (if any) |
| Oct 2014 - Sept. 2015                                                      | 38,381                                                                                                                                                                                                                                                                                                                                  | 38,381                 | Delta : 37 941 ha<br>Ngalenka : 440 ha                        |
| Explanation of assumptions and inputs to target calculations               |                                                                                                                                                                                                                                                                                                                                         |                        |                                                               |
| Long Term Target                                                           | Old                                                                                                                                                                                                                                                                                                                                     | New                    | Justification for changes to targets or calculations (if any) |
|                                                                            | 42,721                                                                                                                                                                                                                                                                                                                                  | 42,721                 |                                                               |
| Explanation of assumptions and inputs to target calculations               |                                                                                                                                                                                                                                                                                                                                         |                        |                                                               |
| COMMENTS                                                                   | This indicator replaces the former "Potentially Irrigable Land Area (Delta/Ngalenka)" because, as the former had been collected in practice by SAED, it was not going to allow us to see any change over time. This indicator provides a better appreciation of the increase in improved irrigation as a result of Compact investments. |                        |                                                               |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |                                                                                                                                                                                                                                                                                                                                         |                        |                                                               |

## 2.7. Indicator IWRM. 7. Hectares under production across cropping seasons (Delta / Ngalenka)

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                          |                                |                                                                |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------------|----------------------------------------------------------------|
| Indicator Name                                                                                      | Hectares under production across cropping seasons (Delta / Ngalenka)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          | Version                  | N° 02 03 / Sept 2015           |                                                                |
| Common Indicator Number                                                                             | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Current Indicator Number | IWRM.7                   | All Previous Indicator Numbers | IWRM.8.                                                        |
| Level                                                                                               | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Classification           | Level                    | Unit of Measure*               | Hectares                                                       |
| Detailed Definition                                                                                 | Total number of hectares devoted to agricultural production with the irrigation and drainage systems supported by the MCC in the Delta and Ngalenka. Each hectare will be counted once for each cropping season in which it is under production (thus, the same hectare could be counted up to three times per year)                                                                                                                                                                                                                                                              |                          |                          |                                |                                                                |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          | Reporting Period Covered | Post-Compact Period            |                                                                |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | NO                       |                                |                                                                |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          | NO                       |                                |                                                                |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | NO                       |                                |                                                                |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          | YES (Delta / Ngalenka)   |                                |                                                                |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                          |                                |                                                                |
| Justification for Including Indicator                                                               | The indicator provides information on the attainment of the IWRM project objective, which is to increase hectares under production. The development of hectares under production in the irrigated areas will constitute a result that will help assess the progression of cropping intensity.                                                                                                                                                                                                                                                                                     |                          |                          |                                |                                                                |
| How does the indicator link to the ERR?                                                             | It is on the basis of the Hectares under production assumptions (i.e., total cultivated area across seasons), which were captured in the economic model.)                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                          |                                |                                                                |
| How does the indicator link to the BA?                                                              | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                          |                                |                                                                |
| How does the indicator link to the impact evaluation?                                               | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                          |                                |                                                                |
| Justification for Disaggregations                                                                   | The data should be disaggregated by locality.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                          |                                |                                                                |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                          |                                |                                                                |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                          |                                |                                                                |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Phone                    | 77 511 22 72             | E-mail                         | <a href="mailto:Amadou.niang@saed.sn">Amadou.niang@saed.sn</a> |
| Entity Responsible for the collection of primary Data                                               | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                          |                                |                                                                |
| Detailed description of data collection methodology (including any calculations computed by source) | Data on the total cultivated areas concerning the rainy season is collected by mobilizing SAED's field structure, in each Delegation, under the responsibility of the Monitoring-Evaluation Office (BSE). For each Development Unit (UMV), the type of crops and cultivated areas as well as the PO growing them will be registered. The collected data on areas sown during the rainy season, after verification by the heads of sectors, are entered by the Monitoring and Evaluation Office. Data collection concerns the Dry hot and cold seasons as well as the rainy season |                          |                          |                                |                                                                |
| If survey data, verbatim question(s) posed to respondent                                            | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                          |                                |                                                                |

|                                                                                      |  |                                                                                                                                                                                                                                                                  |  |
|--------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Detailed description of how data is transmitted from source to USAC</b>           |  | The data is transmitted to SAED through MCA-S's official correspondence. Besides, a mission of the M&E Directorate is scheduled to meet the Monitoring and Evaluation team with a view to collecting all raw data required for the calculation of the indicator. |  |
| <b>Frequency and timing of data acquisition</b>                                      |  | ANNUAL                                                                                                                                                                                                                                                           |  |
| <b>Names of verification sources</b>                                                 |  | <b>Means of verification</b>                                                                                                                                                                                                                                     |  |
| SEAD Annual Report                                                                   |  | Report PMU Irrigation, SAED harvest statistics, Maps                                                                                                                                                                                                             |  |
| SAED Data Base                                                                       |  |                                                                                                                                                                                                                                                                  |  |
| Annual Report IWRM project                                                           |  |                                                                                                                                                                                                                                                                  |  |
| <b>Location of Data Storage</b>                                                      |  | SAED                                                                                                                                                                                                                                                             |  |
| <b>INDICATOR DATA QUALITY</b>                                                        |  |                                                                                                                                                                                                                                                                  |  |
| <b>Date of Data Quality Review</b>                                                   |  |                                                                                                                                                                                                                                                                  |  |
| <b>Main findings of data quality review</b>                                          |  | November 2014                                                                                                                                                                                                                                                    |  |
| Average Score (out of 4)                                                             |  | Recommendations                                                                                                                                                                                                                                                  |  |
| 1. VALIDITY – Does the data clearly represent the desired results?                   |  | 3,8                                                                                                                                                                                                                                                              |  |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? |  | 4,0                                                                                                                                                                                                                                                              |  |
| 3. TIMELINESS- Are the data current and frequently collected?                        |  | 4,0                                                                                                                                                                                                                                                              |  |
| 4. PRECISION – Does the data have an acceptable margin of error?                     |  | 3,2                                                                                                                                                                                                                                                              |  |
| 5. INTEGRITY- Is the data free from manipulation?                                    |  | 4,0                                                                                                                                                                                                                                                              |  |
|                                                                                      |  | N/A                                                                                                                                                                                                                                                              |  |



|                                                                                  |                                                                                                                                                        |                          |                                                                      |                                                  |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------|--------------------------------------------------|
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results? | 4,0                                                                                                                                                    | N/A                      |                                                                      |                                                  |
| 7. PRACTICABILITY- Is the data current and frequently collected?                 | 4,0                                                                                                                                                    | N/A                      |                                                                      |                                                  |
| <b>Overall assessment</b>                                                        | <b>3,9</b>                                                                                                                                             |                          |                                                                      |                                                  |
| <b>Action taken in response to data quality review</b>                           | - Collection procedure clarified and harmonized with SAED<br>- The indicator is disaggregated by locality                                              |                          |                                                                      |                                                  |
| <b>Known data limitations and significance</b>                                   | Not Applicable                                                                                                                                         |                          |                                                                      |                                                  |
| <b>Actions taken to address data limitations</b>                                 | Not Applicable                                                                                                                                         |                          |                                                                      |                                                  |
| <b>INDICATOR BASELINE INFORMATION</b>                                            |                                                                                                                                                        |                          |                                                                      |                                                  |
| <b>Old Baseline</b>                                                              | 21,400                                                                                                                                                 | <b>Old Baseline Year</b> | 2010-2011                                                            | <b>Source of old Baseline</b><br>Data Bases SAED |
| <b>New Baseline</b>                                                              | 21,400                                                                                                                                                 | <b>New Baseline Year</b> | 2010-2011                                                            | <b>Source of New Baseline</b><br>Data Bases SAED |
| <b>Justification for Baseline Change (if any)</b>                                | The original baseline and targets were based on area under management, while the current definition is based on cultivated area summed across seasons. |                          |                                                                      |                                                  |
| <b>INDICATOR TARGET CALCULATIONS</b>                                             |                                                                                                                                                        |                          |                                                                      |                                                  |
|                                                                                  | <b>Target</b>                                                                                                                                          |                          |                                                                      |                                                  |
| <b>YEAR 1</b>                                                                    | <b>Old</b>                                                                                                                                             | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                                                  |
| Oct 2010 - Sept. 2011                                                            | 20,300                                                                                                                                                 | 20,300                   |                                                                      |                                                  |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                        |                          |                                                                      |                                                  |
| <b>YEAR 2</b>                                                                    | <b>Old</b>                                                                                                                                             | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                                                  |
| Oct 2011 - Sept. 2012                                                            | 20,300                                                                                                                                                 | 20,300                   |                                                                      |                                                  |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                        |                          |                                                                      |                                                  |
| <b>YEAR 3</b>                                                                    | <b>Old</b>                                                                                                                                             | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                                                  |
| Oct 2012 - Sept. 2013                                                            | 20,300                                                                                                                                                 | 20,300                   |                                                                      |                                                  |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                        |                          |                                                                      |                                                  |
| <b>YEAR 4</b>                                                                    | <b>Old</b>                                                                                                                                             | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                                                  |
| Oct 2013 - Sept. 2014                                                            | 20,300                                                                                                                                                 | 20,300                   |                                                                      |                                                  |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                        |                          |                                                                      |                                                  |
| <b>YEAR 5</b>                                                                    | <b>Old</b>                                                                                                                                             | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                                                  |
| Oct 2014 - Sept. 2015                                                            | 23,600                                                                                                                                                 | 23,600                   |                                                                      |                                                  |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                        |                          |                                                                      |                                                  |
| <b>Long Term Target</b>                                                          | <b>Old</b>                                                                                                                                             | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b> |                                                  |
|                                                                                  | 56,600                                                                                                                                                 | 56,600                   |                                                                      |                                                  |

|                                                                     |  |
|---------------------------------------------------------------------|--|
| Explanation of assumptions and inputs to target calculations        |  |
| COMMENTS                                                            |  |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |  |
|                                                                     |  |

2.8. Indicator IWRM.8: Total flow measured (Q) at the Ronkh and G works

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                             |                          |                      |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------|
| Indicator Name                                                                                      | Total flow measured (Q) at the Ronkh and G works                                                                                                                                                                                                                                            |                          | Version              |
| Common Indicator Number                                                                             | Not Applicable                                                                                                                                                                                                                                                                              | Current Indicator Number | IWRM.8               |
| Level                                                                                               | Outcome                                                                                                                                                                                                                                                                                     | Classification           | Level                |
| Detailed Definition                                                                                 | Volume of water flowing in the network of hydraulic systems per unit of time from the Ronkh and G works. Expressed in m3/s and measured in the off-season (Diana on the coast of 2.20m).                                                                                                    |                          |                      |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                      | Reporting Period Covered | Post-Compact Period  |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                          |                          | NO                   |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                             |                          | NO                   |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                          |                          | NO                   |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                        |                          | NO                   |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                             |                          |                      |
| Justification for Including Indicator                                                               | The indicator provides information on the G and Ronkh works outflows. The increase in the Ronkh and G outflows will constitute a result that will help increase the irrigable or cultivable hectares. This increase also reflects the improvement of water availability for irrigated land. |                          |                      |
| How does the indicator link to the ERR?                                                             | The increase in flow rate is a water availability measurement element; which guarantees an increase in water availability                                                                                                                                                                   |                          |                      |
| How does the indicator link to the BA?                                                              | The flow increase facilitates water access to more beneficiaries                                                                                                                                                                                                                            |                          |                      |
| How does the indicator link to the impact evaluation?                                               | Not Applicable                                                                                                                                                                                                                                                                              |                          |                      |
| Justification for Disaggregations                                                                   | Not Applicable                                                                                                                                                                                                                                                                              |                          |                      |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                             |                          |                      |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                                                                                                        |                          |                      |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                                                                                                | Phone                    | 77 511 22 72         |
|                                                                                                     |                                                                                                                                                                                                                                                                                             | E-mail                   | Amadou.niang@saed.sn |
| Entity Responsible for the collection of primary Data                                               | SAED                                                                                                                                                                                                                                                                                        |                          |                      |
| Detailed description of data collection methodology (including any calculations computed by source) | Use data from the PMU Irrigation report. Water flow measurements will be calculated using the water flow meters to be installed by the Compact.                                                                                                                                             |                          |                      |
| If survey data, verbatim question(s) posed to respondent                                            | SAED harvest statistics<br>Maps                                                                                                                                                                                                                                                             |                          |                      |
| Detailed description of how data is transmitted from source to USAC                                 | The data is transmitted to SAED through MCA-S's official correspondence. Besides, a mission of the M&E Directorate is scheduled to meet the Monitoring and Evaluation team with a view to collecting all raw data required for the calculation of the indicator.                            |                          |                      |
| Frequency and timing of data acquisition                                                            | ANNUAL                                                                                                                                                                                                                                                                                      |                          |                      |

| Names of verification sources                                                        |                          | Means of verification                                                                                                                           |  |
|--------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SEAD Annual Report                                                                   |                          | Report PMU Irrigation, SAED harvest statistics, Maps                                                                                            |  |
| SEAD Annual Report                                                                   |                          | Rapport PMU Irrigation, Rapport sur les Indicators                                                                                              |  |
| Flow measurement Report                                                              |                          | SAED Data Base                                                                                                                                  |  |
| Location of Data Storage                                                             |                          | SAED                                                                                                                                            |  |
| <b>INDICATOR DATA QUALITY</b>                                                        |                          |                                                                                                                                                 |  |
| Date of Data Quality Review                                                          |                          | November 2014                                                                                                                                   |  |
| Main findings of data quality review                                                 |                          | Recommendations                                                                                                                                 |  |
|                                                                                      | Average Score (out of 4) | <p><b>IWRM.8</b></p> <p>Validite: 3.7<br/>Opportunite: 4.0<br/>Precision: 4.0<br/>Integrite: 4.0<br/>Adequation: 4.0<br/>Praticabilite: 4.0</p> |  |
| 1. VALIDITY – Does the data clearly represent the desired results?                   | 3,7                      | N/A                                                                                                                                             |  |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? | 4,0                      | N/A                                                                                                                                             |  |
| 3. TIMELINESS- Are the data current and frequently collected?                        | 4,0                      | N/A                                                                                                                                             |  |
| 4. PRECISION – Does the data have an acceptable margin of error?                     | 4,0                      | N/A                                                                                                                                             |  |
| 5. INTEGRITY- Is the data free from manipulation?                                    | 4,0                      | N/A                                                                                                                                             |  |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?     | 4,0                      | N/A                                                                                                                                             |  |

|                                                                  |                                                                                                                                        |                   |                                                               |                        |                                |  |  |  |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------|------------------------|--------------------------------|--|--|--|
| 7. PRACTICABILITY- Is the data current and frequently collected? | 3,7                                                                                                                                    | N/A               |                                                               |                        |                                |  |  |  |
| Overall assessment                                               | 3,9                                                                                                                                    |                   |                                                               |                        |                                |  |  |  |
| Action taken in response to data quality review                  | Not Applicable                                                                                                                         |                   |                                                               |                        |                                |  |  |  |
| Known data limitations and significance                          | Not Applicable                                                                                                                         |                   |                                                               |                        |                                |  |  |  |
| Actions taken to address data limitations                        | Not Applicable                                                                                                                         |                   |                                                               |                        |                                |  |  |  |
| <b>INDICATOR BASELINE INFORMATION</b>                            |                                                                                                                                        |                   |                                                               |                        |                                |  |  |  |
| Old Baseline                                                     | 20                                                                                                                                     | Old Baseline Year | 2010 - 2011                                                   | Source of old Baseline | SAED flow measurement campaign |  |  |  |
| New Baseline                                                     | 20                                                                                                                                     | New Baseline Year | 2011-2012                                                     | Source of New Baseline | SAED flow measurement campaign |  |  |  |
| Justification for Baseline Change (if any)                       | Implementation of the Program to Improve Water Availability (PDMAS) resulted in an increase in flows before the start of Compact works |                   |                                                               |                        |                                |  |  |  |
| <b>INDICATOR TARGET CALCULATIONS</b>                             |                                                                                                                                        |                   |                                                               |                        |                                |  |  |  |
|                                                                  | Target                                                                                                                                 |                   |                                                               |                        |                                |  |  |  |
| YEAR 1                                                           | Old                                                                                                                                    | New               | Justification for changes to targets or calculations (if any) |                        |                                |  |  |  |
| Oct 2010 - Sept. 2011                                            | 20                                                                                                                                     | 20                |                                                               |                        |                                |  |  |  |
| Explanation of assumptions and inputs to target calculations     |                                                                                                                                        |                   |                                                               |                        |                                |  |  |  |
| YEAR 2                                                           | Old                                                                                                                                    | New               | Justification for changes to targets or calculations (if any) |                        |                                |  |  |  |
| Oct 2011 - Sept. 2012                                            | 20                                                                                                                                     | 20                |                                                               |                        |                                |  |  |  |
| Explanation of assumptions and inputs to target calculations     |                                                                                                                                        |                   |                                                               |                        |                                |  |  |  |
| YEAR 3                                                           | Old                                                                                                                                    | New               | Justification for changes to targets or calculations (if any) |                        |                                |  |  |  |
| Oct 2012 - Sept. 2013                                            | 20                                                                                                                                     | 20                |                                                               |                        |                                |  |  |  |
| Explanation of assumptions and inputs to target calculations     |                                                                                                                                        |                   |                                                               |                        |                                |  |  |  |
| YEAR 4                                                           | Old                                                                                                                                    | New               | Justification for changes to targets or calculations (if any) |                        |                                |  |  |  |
| Oct 2013 - Sept. 2014                                            | 20                                                                                                                                     | 20                |                                                               |                        |                                |  |  |  |
| Explanation of assumptions and inputs to target calculations     |                                                                                                                                        |                   |                                                               |                        |                                |  |  |  |
| YEAR 5                                                           | Old                                                                                                                                    | New               | Justification for changes to targets or calculations (if any) |                        |                                |  |  |  |
| Oct 2014 - Sept. 2015                                            | 65                                                                                                                                     | 65                |                                                               |                        |                                |  |  |  |
| Explanation of assumptions and inputs to target calculations     |                                                                                                                                        |                   |                                                               |                        |                                |  |  |  |
| Long Term Target                                                 | Old                                                                                                                                    | New               | Justification for changes to targets or calculations (if any) |                        |                                |  |  |  |
|                                                                  | 65                                                                                                                                     | N/A               |                                                               |                        |                                |  |  |  |

|                                                                                                                                                            |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Explanation of assumptions and inputs to target calculations</b>                                                                                        |  |
| <b>COMMENTS</b>                                                                                                                                            |  |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b>                                                                                 |  |
| NB : Measurements for the baseline year made in 12 <sup>th</sup> March, 2012 (Refer To " <u>Rapport mesure de débit du 12 Mars 2012</u> " SAED, mars 2012) |  |

## 2.9. Indicator IWRM.9. Number of hectares formalized (having a land allocation title and registered)

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                  |                          |                                |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------|
| Indicator Name                                                                                      | Number of hectares formalized (having a land allocation title and registered)                                                                                                                                                                    |                          | Version                        |
| Common Indicator Number                                                                             | Not Applicable                                                                                                                                                                                                                                   | IWRM.9                   | All Previous Indicator Numbers |
| Level                                                                                               | Outcome                                                                                                                                                                                                                                          | Cumulative               | Unit of Measure                |
| Detailed Definition                                                                                 | Number of hectares of rural land that were officially recognized through the issuance of a land allocation title by the Local Authorities in the project's intervention areas.                                                                   |                          |                                |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                           | Reporting Period Covered | Post-Compact Period            |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                               | NO                       |                                |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                  | NO                       |                                |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                               | NO                       |                                |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                             | YES (Delta / Podor)      |                                |
| Comments about the Disaggregation                                                                   |                                                                                                                                                                                                                                                  |                          |                                |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                  |                          |                                |
| Justification for Including Indicator                                                               | Land tenure security activities will help ensure new allocations or the regularization of existing ones and of their registration. The registration of plots will thus improve land management and, in particular, to formalize land use rights. |                          |                                |
| How does the indicator link to the ERR?                                                             | Not Applicable                                                                                                                                                                                                                                   |                          |                                |
| How does the indicator link to the BA?                                                              | The indicator indicates the number of beneficiaries of new allocations or regularizations for the land tenure security activity                                                                                                                  |                          |                                |
| How does the indicator link to the impact evaluation?                                               | Not Applicable                                                                                                                                                                                                                                   |                          |                                |
| Justification for Disaggregations                                                                   | The indicator will be disaggregated by locality (Delta / Podor)                                                                                                                                                                                  |                          |                                |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                  |                          |                                |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                                                             |                          |                                |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                                                     | Phone                    | E-mail                         |
|                                                                                                     |                                                                                                                                                                                                                                                  | 77 511 22 72             | Amadou.niang@saed.sn           |
| Entity Responsible for the collection of primary Data                                               | SAED                                                                                                                                                                                                                                             |                          |                                |
| Detailed description of data collection methodology (including any calculations computed by source) | Use reports of the PMU Irrigation, of the Consultant responsible for land tenure security. Counting on the basis of land registers and land allocation titles issued                                                                             |                          |                                |
| If survey data, verbatim question(s) posed to respondent                                            |                                                                                                                                                                                                                                                  |                          |                                |
| Detailed description of how data is transmitted from source to USAC                                 | The data is transmitted by the Land and Institutional Reforms Directorate                                                                                                                                                                        |                          |                                |
| Frequency and timing of data acquisition                                                            | QUARTERLY                                                                                                                                                                                                                                        |                          |                                |

| Names of verification sources                                                        |  | Means of verification                             |      |
|--------------------------------------------------------------------------------------|--|---------------------------------------------------|------|
| F&RI Directorate                                                                     |  | Report F&RI Directorate                           |      |
| Local Governments                                                                    |  | Land Registers (Local Governments)                |      |
| Location of Data Storage                                                             |  | USAC (Land and Institutional Reforms Directorate) |      |
| <b>INDICATOR DATA QUALITY</b>                                                        |  | November 2014                                     |      |
| <b>Date of Data Quality Review</b>                                                   |  |                                                   |      |
| <b>Main findings of data quality review</b>                                          |  |                                                   |      |
| 1. VALIDITY – Does the data clearly represent the desired results?                   |  | Average Score (out of 4)                          | 3,6  |
|                                                                                      |  | Recommendations                                   | None |
|                                                                                      |  |                                                   |      |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? |  | Average Score (out of 4)                          | 3,6  |
| 3. TIMELINESS- Are the data current and frequently collected?                        |  | Average Score (out of 4)                          | 3,7  |
| 4. PRECISION – Does the data have an acceptable margin of error?                     |  | Average Score (out of 4)                          | 4,0  |
| 5. INTEGRITY- Is the data free from manipulation?                                    |  | Average Score (out of 4)                          | 4,0  |

|                                                                                  |            |                   |                                                               |                        |
|----------------------------------------------------------------------------------|------------|-------------------|---------------------------------------------------------------|------------------------|
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results? | 4,0        | None              |                                                               |                        |
| 7. PRACTICABILITY- Is the data current and frequently collected?                 | 4,0        | None              |                                                               |                        |
| <b>Overall assessment</b>                                                        | <b>3,8</b> |                   |                                                               |                        |
| <b>Action taken in response to data quality review</b>                           |            | Not Applicable    |                                                               |                        |
| <b>Known data limitations and significance</b>                                   |            | Not Applicable    |                                                               |                        |
| <b>Actions taken to address data limitations</b>                                 |            | Not Applicable    |                                                               |                        |
| <b>INDICATOR BASELINE INFORMATION</b>                                            |            |                   |                                                               |                        |
| Old Baseline                                                                     | 0          | Old Baseline Year | 2010-2011                                                     | Source of old Baseline |
| New Baseline                                                                     | 0          | New Baseline Year | 2010-2011                                                     | Source of New Baseline |
| Justification for Baseline Change (if any)                                       |            |                   |                                                               |                        |
| <b>INDICATOR TARGET CALCULATIONS</b>                                             |            |                   |                                                               |                        |
|                                                                                  | Target     |                   |                                                               |                        |
| <b>YEAR 1</b>                                                                    | Old        | New               | Justification for changes to targets or calculations (if any) |                        |
| Oct 2010 - Sept. 2011                                                            | 0          | 0                 |                                                               |                        |
| Explanation of assumptions and inputs to target calculations                     |            |                   |                                                               |                        |
| <b>YEAR 2</b>                                                                    | Old        | New               | Justification for changes to targets or calculations (if any) |                        |
| Oct 2011 - Sept. 2012                                                            | 0          | 0                 |                                                               |                        |
| Explanation of assumptions and inputs to target calculations                     |            |                   |                                                               |                        |
| <b>YEAR 3</b>                                                                    | Old        | New               | Justification for changes to targets or calculations (if any) |                        |
| Oct 2012 - Sept. 2013                                                            | 0          | 0                 |                                                               |                        |
| Explanation of assumptions and inputs to target calculations                     |            |                   |                                                               |                        |
| <b>YEAR 4</b>                                                                    | Old        | New               | Justification for changes to targets or calculations (if any) |                        |
| Oct 2013 - Sept. 2014                                                            | 748        | 748               |                                                               |                        |
| Explanation of assumptions and inputs to target calculations                     |            |                   |                                                               |                        |
| <b>YEAR 5</b>                                                                    | Old        | New               | Justification for changes to targets or calculations (if any) |                        |
| Oct 2014 - Sept. 2015                                                            | 3 440      | 3 440             |                                                               |                        |
| Explanation of assumptions and inputs to target calculations                     |            |                   |                                                               |                        |
| <b>Long Term Target</b>                                                          | Old        | New               | Justification for changes to targets or calculations (if any) |                        |
|                                                                                  | N/A        | N/A               |                                                               |                        |

|                                                                     |  |
|---------------------------------------------------------------------|--|
| Explanation of assumptions and inputs to target calculations        |  |
| COMMENTS                                                            |  |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |  |
|                                                                     |  |

## 2.10. Indicator IWRM.10. Percentage of land disputes resolved

| INDICATOR BASIC DETAILS                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                    |                          |                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|
| Indicator Name                                                                                                                                                                                                                                                                                                                                                                           | Percentage of land disputes resolved                                                                                                                                                                                                               |                          | Version                  |
| Common Indicator Number                                                                                                                                                                                                                                                                                                                                                                  | Not Applicable                                                                                                                                                                                                                                     | Current Indicator Number | IWRM.10                  |
| Level                                                                                                                                                                                                                                                                                                                                                                                    | Outcome                                                                                                                                                                                                                                            | Classification           | Level (Cumulative)       |
| Detailed Definition                                                                                                                                                                                                                                                                                                                                                                      | Ratio of land disputes resolved at the level of land dispute resolution commissions, mediation and land settlement commissions in the town or municipal council, for all of the land disputes registered by these land conflict resolution bodies. |                          |                          |
| Frequency of Reporting                                                                                                                                                                                                                                                                                                                                                                   | ANNUAL                                                                                                                                                                                                                                             |                          | Reporting Period Covered |
| Disaggregations                                                                                                                                                                                                                                                                                                                                                                          | By gender (YES/NO)                                                                                                                                                                                                                                 |                          | NO                       |
|                                                                                                                                                                                                                                                                                                                                                                                          | By age (YES/NO)                                                                                                                                                                                                                                    |                          | NO                       |
|                                                                                                                                                                                                                                                                                                                                                                                          | By income (YES/NO)                                                                                                                                                                                                                                 |                          | NO                       |
|                                                                                                                                                                                                                                                                                                                                                                                          | By locality (YES/NO)                                                                                                                                                                                                                               |                          | YES (Delta / Podor)      |
| Comments about the Disaggregation                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                    |                          |                          |
| INDICATOR JUSTIFICATION DETAILS                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                    |                          |                          |
| Justification for Including Indicator                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                    |                          |                          |
| The "Land Tenure Security" activity will help institute and strengthen the capacities of mediation bodies. It will also put in place dispute management instruments. This indicator will help measure the scope of instruments put in place and activities covering the bodies by assessing whether disputes are resolved or not; in accordance with the regulatory provisions in force. |                                                                                                                                                                                                                                                    |                          |                          |
| How does the indicator link to the ERR?                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                    |                          |                          |
| Not Applicable                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                    |                          |                          |
| How does the indicator link to the BA?                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                    |                          |                          |
| Not Applicable                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                    |                          |                          |
| How does the indicator link to the impact evaluation?                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                    |                          |                          |
| Not Applicable                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                    |                          |                          |
| Justification for Disaggregations                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                    |                          |                          |
| The indicator will be disaggregated by locality (Delta / Podor)                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                    |                          |                          |
| INDICATOR ACQUISITION PLAN                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                    |                          |                          |
| Entity Responsible for Collecting Data                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                    |                          |                          |
| SAED                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                    |                          |                          |
| Point of Contact Responsible for Collecting the Data at SAED:                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                    |                          |                          |
| Amadou NIANG                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                    | Phone                    | 77 511 22 72             |
| SAED                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                    | E-mail                   | Amadou.niang@saed.sn     |
| Entity Responsible for the collection of primary Data                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                    |                          |                          |
| SAED                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                    |                          |                          |
| Detailed description of data collection methodology (including any calculations computed by source)                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                    |                          |                          |
| Collecting data on disputes on the basis of registers managed by the consultant and commissions responsible for dispute resolution.                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                    |                          |                          |
| "Percentage of land disputes resolved" = (Number of disputes resolved) x 100 / (Number of disputes registered).                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                    |                          |                          |
| If survey data, verbatim question(s) posed to respondent                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |                          |                          |
| Not Applicable                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                    |                          |                          |
| Detailed description of how data is transmitted from source to USAC                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                    |                          |                          |
| The data is transmitted by the Land and Institutional Reforms Directorate                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                    |                          |                          |
| Frequency and timing of data acquisition                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |                          |                          |
| QUARTERLY                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                    |                          |                          |
| Names of verification sources                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                    |                          |                          |
| Means of verification                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                    |                          |                          |
| Report F&RI Directorate                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                    |                          |                          |
| Local Governments                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                    |                          |                          |
| Land Registers (Local Governments)                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                    |                          |                          |
| F&RI Directorate                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                    |                          |                          |
| Dispute monitoring sheet                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                    |                          |                          |

| Location of Data Storage                                                             |                          | USAC (Land and Institutional Reforms Directorate) |  |
|--------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------|--|
| INDICATOR DATA QUALITY                                                               |                          |                                                   |  |
| Date of Data Quality Review                                                          |                          | June 2013                                         |  |
| Main findings of data quality review                                                 | Average Score (out of 4) | Recommendations                                   |  |
|                                                                                      |                          |                                                   |  |
| 1. VALIDITY – Does the data clearly represent the desired results?                   | 3,6                      | N/A                                               |  |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? | 4,0                      | N/A                                               |  |
| 3. TIMELINESS- Are the data current and frequently collected?                        | 3,2                      | N/A                                               |  |
| 4. PRECISION – Does the data have an acceptable margin of error?                     | 3,0                      | N/A                                               |  |
| 5. INTEGRITY- Is the data free from manipulation?                                    | 4,0                      | N/A                                               |  |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?     | 2,4                      | N/A                                               |  |
| 7. PRACTICABILITY- Is the data current and frequently collected?                     | 2,7                      | N/A                                               |  |

|                                                                            |                                                                                                                                  |                        |                                                               |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------|
| Overall assessment                                                         | 3.3                                                                                                                              |                        |                                                               |
| Action taken in response to data quality review                            | Not Applicable                                                                                                                   |                        |                                                               |
| Known data limitations and significance                                    | Not Applicable                                                                                                                   |                        |                                                               |
| Actions taken to address data limitations                                  | Not Applicable                                                                                                                   |                        |                                                               |
| <b>INDICATOR BASELINE INFORMATION</b>                                      |                                                                                                                                  |                        |                                                               |
| Old Baseline                                                               | 0%                                                                                                                               | Old Baseline Year      | 2010 - 2011                                                   |
| New Baseline                                                               | 0%                                                                                                                               | New Baseline Year      | 2010 - 2011                                                   |
| Justification for Baseline Change (if any)                                 |                                                                                                                                  | Source of old Baseline | DFRI Work Plan                                                |
|                                                                            |                                                                                                                                  | Source of New Baseline | DFRI Work Plan                                                |
| <b>INDICATOR TARGET CALCULATIONS</b>                                       |                                                                                                                                  |                        |                                                               |
|                                                                            | Target                                                                                                                           |                        |                                                               |
| <b>YEAR 1</b>                                                              | Old                                                                                                                              | New                    | Justification for changes to targets or calculations (if any) |
| Oct 2010 - Sept. 2011                                                      | 0%                                                                                                                               | 0%                     |                                                               |
| Explanation of assumptions and inputs to target calculations               |                                                                                                                                  |                        |                                                               |
| <b>YEAR 2</b>                                                              | Old                                                                                                                              | New                    | Justification for changes to targets or calculations (if any) |
| Oct 2011 - Sept. 2012                                                      | 0%                                                                                                                               | 0%                     |                                                               |
| Explanation of assumptions and inputs to target calculations               |                                                                                                                                  |                        |                                                               |
| <b>YEAR 3</b>                                                              | Old                                                                                                                              | New                    | Justification for changes to targets or calculations (if any) |
| Oct 2012 - Sept. 2013                                                      | 0%                                                                                                                               | 0%                     |                                                               |
| Explanation of assumptions and inputs to target calculations               | The Land Tenure Security implementation activities will start in year 3 but dispute resolution will effectively start in year 4. |                        |                                                               |
| <b>YEAR 4</b>                                                              | Old                                                                                                                              | New                    | Justification for changes to targets or calculations (if any) |
| Oct 2013 - Sept. 2014                                                      | 30%                                                                                                                              | 30%                    |                                                               |
| Explanation of assumptions and inputs to target calculations               |                                                                                                                                  |                        |                                                               |
| <b>YEAR 5</b>                                                              | Old                                                                                                                              | New                    | Justification for changes to targets or calculations (if any) |
| Oct 2014 - Sept. 2015                                                      | 50%                                                                                                                              | 50%                    |                                                               |
| Explanation of assumptions and inputs to target calculations               |                                                                                                                                  |                        |                                                               |
| <b>Long Term Target</b>                                                    | Old                                                                                                                              | New                    | Justification for changes to targets or calculations (if any) |
|                                                                            | 50%                                                                                                                              | 50%                    |                                                               |
| Explanation of assumptions and inputs to target calculations               |                                                                                                                                  |                        |                                                               |
| COMMENTS                                                                   |                                                                                                                                  |                        |                                                               |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |                                                                                                                                  |                        |                                                               |
|                                                                            |                                                                                                                                  |                        |                                                               |



2.11. Indicator IWRM.11. Conflicts successfully mediated

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                        |                          |                     |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|
| Indicator Name                                                                                      | Conflicts successfully mediated                                                                                                                                                                                                                                                        |                          | Version             |
| Common Indicator Number                                                                             | (L-4)                                                                                                                                                                                                                                                                                  | Current Indicator Number | IWRM.11             |
| Level                                                                                               | Output                                                                                                                                                                                                                                                                                 | Classification           | Cumulative          |
| Detailed Definition                                                                                 | The number of disputed land and property rights cases that have been resolved by local authorities, contractors, mediators or courts with compact support                                                                                                                              |                          |                     |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                 | Reporting Period Covered | Post-Compact Period |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                     |                          | NO                  |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                        |                          | NO                  |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                     |                          | NO                  |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                   |                          | YES (Delta / Podor) |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                        |                          |                     |
| Justification for Including Indicator                                                               | It is an indicator proposed on the list of common indicators. See "Guidance on Common Indicator, May 2012" MCC. The indicator will help assess the efficiency of dispute resolution bodies, which have received land management tools and benefited from capacity building activities. |                          |                     |
| How does the indicator link to the ERR?                                                             | Not Applicable                                                                                                                                                                                                                                                                         |                          |                     |
| How does the indicator link to the BA?                                                              | Dispute resolution will help secure investments in the areas                                                                                                                                                                                                                           |                          |                     |
| How does the indicator link to the impact evaluation?                                               | Not Applicable                                                                                                                                                                                                                                                                         |                          |                     |
| Justification for Disaggregations                                                                   | The indicator will be disaggregated by locality (Delta / Podor)                                                                                                                                                                                                                        |                          |                     |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                        |                          |                     |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                                                                                                   |                          |                     |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                                                                                           | Phone                    | 77 511 22 72        |
| Entity Responsible for the collection of primary Data                                               | SAED                                                                                                                                                                                                                                                                                   |                          |                     |
| Detailed description of data collection methodology (including any calculations computed by source) | Count the number of disputes resolved by the mediation commissions and the Ombudsman in the Irrigation Project zone                                                                                                                                                                    |                          |                     |
| If survey data, verbatim question(s) posed to respondent                                            | Not Applicable                                                                                                                                                                                                                                                                         |                          |                     |
| Detailed description of how data is transmitted from source to USAC                                 | The data is transmitted by the Land and Institutional Reforms Directorate on the basis of dispute follow-up sheets and registers of disputes established in Local Communities.                                                                                                         |                          |                     |
| Frequency and timing of data acquisition                                                            | QUARTERLY                                                                                                                                                                                                                                                                              |                          |                     |
| Names of verification sources                                                                       |                                                                                                                                                                                                                                                                                        |                          |                     |
| Report F&R Directorate                                                                              | Means of verification                                                                                                                                                                                                                                                                  |                          |                     |
| Report Consultant in charge of implementing land tenure security                                    | Tables of indicators and register                                                                                                                                                                                                                                                      |                          |                     |
|                                                                                                     | Tables of indicators and register                                                                                                                                                                                                                                                      |                          |                     |

| PMU Irrigation Reports                                                               |                 | Tables of indicators and register                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Land and Institutional Reforms Directorate                                           |                 |                                                                                                                                                                                                                                                                                                                                    |
| INDICATOR DATA QUALITY                                                               |                 |                                                                                                                                                                                                                                                                                                                                    |
| Date of Data Quality Review                                                          |                 |                                                                                                                                                                                                                                                                                                                                    |
| Main findings of data quality review                                                 |                 |                                                                                                                                                                                                                                                                                                                                    |
| Average Score (out of 4)                                                             | Recommendations |                                                                                                                                                                                                                                                                                                                                    |
| N/A                                                                                  |                 |                                                                                                                                                                                                                                                                                                                                    |
|                                                                                      |                 | <p><b>IWRM.11</b></p> <p>A radar chart with six axes: Validite (4.0), Praticabilite (3.0), Adequation (2.0), Integrite (2.0), Precision (3.0), and Opportunit e (3.0). The chart shows a score of 4.0 for Validite, 3.0 for Praticabilite, 2.0 for Adequation, 2.0 for Integrite, 3.0 for Precision, and 3.0 for Opportunit e.</p> |
| 1. VALIDITY – Does the data clearly represent the desired results?                   | 2,4             |                                                                                                                                                                                                                                                                                                                                    |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? | 3,6             |                                                                                                                                                                                                                                                                                                                                    |
| 3. TIMELINESS- Are the data current and frequently collected?                        | 3,2             |                                                                                                                                                                                                                                                                                                                                    |
| 4. PRECISION – Does the data have an acceptable margin of error?                     | 3,0             |                                                                                                                                                                                                                                                                                                                                    |
| 5. INTEGRITY - Is the data free from manipulation?                                   | 2,0             |                                                                                                                                                                                                                                                                                                                                    |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?     | 3,9             |                                                                                                                                                                                                                                                                                                                                    |
| 7. PRACTICABILITY- Is the data current and frequently collected?                     | 4,0             |                                                                                                                                                                                                                                                                                                                                    |
| <b>Overall assessment</b>                                                            | <b>3,1</b>      |                                                                                                                                                                                                                                                                                                                                    |
| Action taken in response to data quality review                                      | Not Applicable  |                                                                                                                                                                                                                                                                                                                                    |
| Known data limitations and significance                                              | Not Applicable  |                                                                                                                                                                                                                                                                                                                                    |
| Actions taken to address data limitations                                            | Not Applicable  |                                                                                                                                                                                                                                                                                                                                    |
| <b>INDICATOR BASELINE INFORMATION</b>                                                |                 |                                                                                                                                                                                                                                                                                                                                    |
| Old Baseline                                                                         | 0               | DFRI Work plan and Registers of Land Disputes                                                                                                                                                                                                                                                                                      |
| New Baseline                                                                         | 0               | DFRI Work plan and Registers of Land Disputes                                                                                                                                                                                                                                                                                      |

| Justification for Baseline Change (if any)                          |                       | Target |     | Justification for changes to targets or calculations (if any) |
|---------------------------------------------------------------------|-----------------------|--------|-----|---------------------------------------------------------------|
| INDICATOR                                                           | TARGET CALCULATIONS   | Old    | New |                                                               |
|                                                                     | YEAR 1                | N/A    | N/A |                                                               |
|                                                                     | Oct 2010 - Sept. 2011 |        |     |                                                               |
| Explanation of assumptions and inputs to target calculations        |                       |        |     |                                                               |
|                                                                     | YEAR 2                | Old    | New | Justification for changes to targets or calculations (if any) |
|                                                                     | Oct 2011 - Sept. 2012 | 0      | 0   |                                                               |
| Explanation of assumptions and inputs to target calculations        |                       |        |     |                                                               |
|                                                                     | YEAR 3                | Old    | New | Justification for changes to targets or calculations (if any) |
|                                                                     | Oct 2012 - Sept. 2013 | 0      | 0   |                                                               |
| Explanation of assumptions and inputs to target calculations        |                       |        |     |                                                               |
|                                                                     | YEAR 4                | Old    | New | Justification for changes to targets or calculations (if any) |
|                                                                     | Oct 2013 - Sept. 2014 | N/A    | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations        |                       |        |     |                                                               |
|                                                                     | YEAR 5                | Old    | New | Justification for changes to targets or calculations (if any) |
|                                                                     | Oct 2014 - Sept. 2015 | N/A    | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations        |                       |        |     |                                                               |
|                                                                     | Long Term Target      | Old    | New | Justification for changes to targets or calculations (if any) |
|                                                                     |                       | N/A    | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations        |                       |        |     |                                                               |
| COMMENTS                                                            |                       |        |     |                                                               |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |                       |        |     |                                                               |

## 2.12. Indicator IWRM.12. Parcels corrected or incorporated in land system

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                    |                          |                      |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------|
| Indicator Name                                                                                      | Parcels corrected or incorporated in land system                                                                                                                                                                   |                          | Version              |
| Common Indicator Number                                                                             | (L-5)                                                                                                                                                                                                              | Current Indicator Number | IWRM.12              |
| Level                                                                                               | Output                                                                                                                                                                                                             | Classification           | Cumulative           |
| Detailed Definition                                                                                 | The number of parcels with relevant parcel information corrected or newly incorporated into an official land information system (whether a system for the property registry, cadaster or an integrated system)     |                          |                      |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                             | Reporting Period Covered | Post-Compact Period  |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                 |                          | NO                   |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                    |                          | NO                   |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                 |                          | NO                   |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                               |                          | YES (Delta / Podor)  |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                    |                          |                      |
| Justification for Including Indicator                                                               | It is an indicator proposed on the list of common indicators. See "Guidance on Common Indicator, May 2012" MCC. The indicator will disclose the number of plots integrated into the land information system (SIF). |                          |                      |
| How does the indicator link to the ERR?                                                             | Not Applicable                                                                                                                                                                                                     |                          |                      |
| How does the indicator link to the BA?                                                              | Not Applicable                                                                                                                                                                                                     |                          |                      |
| How does the indicator link to the impact evaluation?                                               | Not Applicable                                                                                                                                                                                                     |                          |                      |
| Justification for Disaggregations                                                                   | The indicator will be disaggregated by locality (Delta / Podor)                                                                                                                                                    |                          |                      |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                    |                          |                      |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                               |                          |                      |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                       | Phone                    | 77 511 22 72         |
|                                                                                                     |                                                                                                                                                                                                                    | E-mail                   | Amadou.niang@saed.sn |
| Entity Responsible for the collection of primary Data                                               | SAED                                                                                                                                                                                                               |                          |                      |
| Detailed description of data collection methodology (including any calculations computed by source) | Count the number of plots integrated into the land information system or GIS by the project supporters reviewing the plot boundaries, rectified property rights, plots with newly formalized rights.               |                          |                      |
| If survey data, verbatim question(s) posed to respondent                                            | Not Applicable                                                                                                                                                                                                     |                          |                      |
| Detailed description of how data is transmitted from source to USAC                                 | The data provided by the Consultant in charge of land tenure security is transmitted by the Land and Institutional Reforms Directorate                                                                             |                          |                      |
| Frequency and timing of data acquisition                                                            | QUARTERLY                                                                                                                                                                                                          |                          |                      |
| Names of verification sources                                                                       |                                                                                                                                                                                                                    |                          |                      |
| Report F&R Directorate                                                                              | Means of verification                                                                                                                                                                                              |                          |                      |
| Report Consultant in charge of implementing land tenure security                                    | Tables of indicators and register                                                                                                                                                                                  |                          |                      |
| PMU Irrigation Reports                                                                              | Tables of indicators and register                                                                                                                                                                                  |                          |                      |

Land and Institutional Reforms Directorate

|                                                                                      |                             |                               |
|--------------------------------------------------------------------------------------|-----------------------------|-------------------------------|
| <b>Location of Data Storage</b>                                                      |                             |                               |
| <b>INDICATOR DATA QUALITY</b>                                                        |                             |                               |
| <b>Date of Data Quality Review</b>                                                   |                             |                               |
| <b>Main findings of data quality review</b>                                          |                             |                               |
|                                                                                      | Average Score<br>(out of 4) | Recommendations               |
|                                                                                      |                             | N/A                           |
|                                                                                      |                             |                               |
| 1. VALIDITY – Does the data clearly represent the desired results?                   | 3,6                         | N/A                           |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? | 3,6                         | N/A                           |
| 3. TIMELINESS- Are the data current and frequently collected?                        | 3,5                         | N/A                           |
| 4. PRECISION – Does the data have an acceptable margin of error?                     | 4,0                         | N/A                           |
| 5. INTEGRITY- Is the data free from manipulation?                                    | 4,0                         | N/A                           |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?     | 4,0                         | N/A                           |
| 7. PRACTICABILITY- Is the data current and frequently collected?                     | 4,0                         | N/A                           |
| <b>Overall assessment</b>                                                            | <b>3,8</b>                  |                               |
| <b>Action taken in response to data quality review</b>                               | Not Applicable              |                               |
| <b>Known data limitations and significance</b>                                       | Not Applicable              |                               |
| <b>Actions taken to address data limitations</b>                                     | Not Applicable              |                               |
| <b>INDICATOR BASELINE INFORMATION</b>                                                |                             |                               |
| <b>Old Baseline</b>                                                                  | <b>Old Baseline Year</b>    | <b>Source of old Baseline</b> |
| 0                                                                                    | 2011-2012                   | DFRI Work Plan                |
| <b>New Baseline</b>                                                                  | <b>New Baseline Year</b>    | <b>Source of New Baseline</b> |
| 0                                                                                    | 2011-2012                   | DFRI Work Plan                |
| <b>Justification for Baseline Change (if any)</b>                                    |                             |                               |

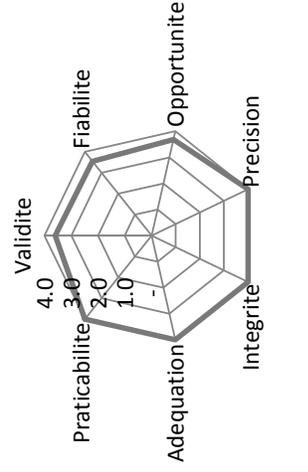
| INDICATOR TARGET CALCULATIONS                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Target |  | Justification for changes to targets or calculations (if any) |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--|---------------------------------------------------------------|
|                                                                            | Old                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | New    |  |                                                               |
| <b>YEAR 1</b>                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |  |                                                               |
| Oct 2010 - Sept. 2011                                                      | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | N/A    |  |                                                               |
| <b>Explanation of assumptions and inputs to target calculations</b>        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |  |                                                               |
| <b>YEAR 2</b>                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |  |                                                               |
| Oct 2011 - Sept. 2012                                                      | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0      |  |                                                               |
| <b>Explanation of assumptions and inputs to target calculations</b>        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |  |                                                               |
| <b>YEAR 3</b>                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |  |                                                               |
| Oct 2012 - Sept. 2013                                                      | 5 694                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5 694  |  |                                                               |
| <b>Explanation of assumptions and inputs to target calculations</b>        | This includes : Delta (5520 parcels) and Podor including 174 parcels in Ngalenka                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |  |                                                               |
| <b>YEAR 4</b>                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |  |                                                               |
| Oct 2013 - Sept. 2014                                                      | 5 787                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5 787  |  |                                                               |
| <b>Explanation of assumptions and inputs to target calculations</b>        | This includes : Delta (5580 parcels) and Podor (207 parcels)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |        |  |                                                               |
| <b>YEAR 5</b>                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |  |                                                               |
| Oct 2014 - Sept. 2015                                                      | 5 787                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5 787  |  |                                                               |
| <b>Explanation of assumptions and inputs to target calculations</b>        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |  |                                                               |
| <b>Long Term Target</b>                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |  |                                                               |
| <b>Explanation of assumptions and inputs to target calculations</b>        | Old                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | New    |  | Justification for changes to targets or calculations (if any) |
|                                                                            | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | N/A    |  |                                                               |
| <b>COMMENTS</b>                                                            | Note: For Ngalenka (Podor), 174 plots are currently occupied by EIG affected by the project (PAPs). The remaining area, i.e. about 366 ha will be subdivided into 33 development units distributed among 33 EIGs. For the Delta, 5520 plots are currently surveyed and integrated into the land data base. In this part, new allocations of about 3000 ha, i.e. about 60 plots of 50 ha are envisaged because the zone is primarily meant to be occupied by farmer organizations which farm around large areas (major development activities). |        |  |                                                               |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |  |                                                               |

## 2.13. Indicator IWRM.13. Land rights formalized

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                              |                          |                      |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------|
| Indicator Name                                                                                      | Land rights formalized                                                                                                                                                                                                                                                                                                                                       |                          | Version              |
| Common Indicator Number                                                                             | (L-6)                                                                                                                                                                                                                                                                                                                                                        | Current Indicator Number | IWRM.13              |
| Level                                                                                               | Output                                                                                                                                                                                                                                                                                                                                                       | Classification           | Cumulative           |
| Detailed Definition                                                                                 | The number of household, commercial and other legal entities (e.g. NGOs, churches, hospitals) receiving formal recognition of ownership and/or use rights through certificates, titles, leases, or other recorded documentation by government institutions or traditional authorities at national or local levels.                                           |                          |                      |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                       | Reporting Period Covered | Post-Compact Period  |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                           |                          | NO                   |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                              |                          | NO                   |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                           |                          | NO                   |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                         |                          | YES (Delta / Podor)  |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                              |                          |                      |
| Justification for Including Indicator                                                               | The indicator makes it possible to enumerate the number of households by locality that have benefitted from the formal recognition of ownership rights and/or the use of certificates, titles, leases or other documents registered with government or local institutions or traditional authorities with the support of bodies strengthened by the project. |                          |                      |
| How does the indicator link to the ERR?                                                             | Not Applicable                                                                                                                                                                                                                                                                                                                                               |                          |                      |
| How does the indicator link to the BA?                                                              | Not Applicable                                                                                                                                                                                                                                                                                                                                               |                          |                      |
| How does the indicator link to the impact evaluation?                                               | Not Applicable                                                                                                                                                                                                                                                                                                                                               |                          |                      |
| Justification for Disaggregations                                                                   | The data will be presented by locality (Delta / Podor)                                                                                                                                                                                                                                                                                                       |                          |                      |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                              |                          |                      |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                                                                                                                                                                         |                          |                      |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                 | Phone                    | 77 511 22 72         |
|                                                                                                     |                                                                                                                                                                                                                                                                                                                                                              | E-mail                   | Amadou.niang@saed.sn |
| Entity Responsible for the collection of primary Data                                               | SAED                                                                                                                                                                                                                                                                                                                                                         |                          |                      |
| Detailed description of data collection methodology (including any calculations computed by source) | Count the number of households that have benefitted from the formal recognition of ownership rights and/or the use of certificates, titles, leases or other documents.                                                                                                                                                                                       |                          |                      |
| If survey data, verbatim question(s) posed to respondent                                            | Not Applicable                                                                                                                                                                                                                                                                                                                                               |                          |                      |
| Detailed description of how data is transmitted from source to USAC                                 | The data is transmitted by the Land and Institutional Reforms Directorate                                                                                                                                                                                                                                                                                    |                          |                      |
| Frequency and timing of data acquisition                                                            | QUARTERLY                                                                                                                                                                                                                                                                                                                                                    |                          |                      |
| Names of verification sources                                                                       | Means of verification                                                                                                                                                                                                                                                                                                                                        |                          |                      |
| Report F&RI Directorate                                                                             | Tables of indicators and register                                                                                                                                                                                                                                                                                                                            |                          |                      |

|                                                                                      |   |                                            |                |
|--------------------------------------------------------------------------------------|---|--------------------------------------------|----------------|
| Report Consultant in charge of implementing land tenure security                     |   | Tables of indicators and register          |                |
| PMU Irrigation Reports                                                               |   | Tables of indicators and register          |                |
| Location of Data Storage                                                             |   | Land and Institutional Reforms Directorate |                |
| <b>INDICATOR DATA QUALITY</b>                                                        |   |                                            |                |
| Date of Data Quality Review                                                          |   | N/A                                        |                |
| Main findings of data quality review                                                 |   | Average Score (out of 4)                   |                |
| 1. VALIDITY – Does the data clearly represent the desired results?                   |   | N/A                                        |                |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? |   | N/A                                        |                |
| 3. TIMELINESS- Are the data current and frequently collected?                        |   | N/A                                        |                |
| 4. PRECISION – Does the data have an acceptable margin of error?                     |   | N/A                                        |                |
| 5. INTEGRITY- Is the data free from manipulation?                                    |   | N/A                                        |                |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?     |   | N/A                                        |                |
| 7. PRACTICABILITY- Is the data current and frequently collected?                     |   | N/A                                        |                |
| <b>Overall assessment</b>                                                            |   | <b>3,8</b>                                 |                |
| <b>Action taken in response to data quality review</b>                               |   | Not Applicable                             |                |
| <b>Known data limitations and significance</b>                                       |   | Not Applicable                             |                |
| <b>Actions taken to address data limitations</b>                                     |   | Not Applicable                             |                |
| <b>INDICATOR BASELINE INFORMATION</b>                                                |   |                                            |                |
| Old Baseline                                                                         | 0 | Old Baseline Year                          | 2011-2012      |
| New Baseline                                                                         | 0 | New Baseline Year                          | 2011-2012      |
| Justification for Baseline Change (if any)                                           |   | Source of old Baseline                     | DFRI Work Plan |
|                                                                                      |   | Source of New Baseline                     | DFRI Work Plan |

**IWRM.13**



| INDICATOR TARGET CALCULATIONS                                              |                                                               |             |
|----------------------------------------------------------------------------|---------------------------------------------------------------|-------------|
|                                                                            | Target                                                        |             |
|                                                                            | Old                                                           | New         |
| <b>YEAR 1</b>                                                              |                                                               |             |
| Oct 2010 - Sept. 2011                                                      | N/A                                                           | N/A         |
| Explanation of assumptions and inputs to target calculations               | Justification for changes to targets or calculations (if any) |             |
| <b>YEAR 2</b>                                                              |                                                               |             |
| Oct 2011 - Sept. 2012                                                      | Old<br>0                                                      | New<br>0    |
| Explanation of assumptions and inputs to target calculations               | Justification for changes to targets or calculations (if any) |             |
| <b>YEAR 3</b>                                                              |                                                               |             |
| Oct 2012 - Sept. 2013                                                      | Old<br>0                                                      | New<br>0    |
| Explanation of assumptions and inputs to target calculations               | Justification for changes to targets or calculations (if any) |             |
| <b>YEAR 4</b>                                                              |                                                               |             |
| Oct 2013 - Sept. 2014                                                      | Old<br>600                                                    | New<br>600  |
| Explanation of assumptions and inputs to target calculations               | Justification for changes to targets or calculations (if any) |             |
| <b>YEAR 5</b>                                                              |                                                               |             |
| Oct 2014 - Sept. 2015                                                      | Old<br>2500                                                   | New<br>2500 |
| Explanation of assumptions and inputs to target calculations               | Justification for changes to targets or calculations (if any) |             |
| <b>Long Term Target</b>                                                    |                                                               |             |
|                                                                            | Old<br>2500                                                   | New<br>2500 |
| Explanation of assumptions and inputs to target calculations               | Justification for changes to targets or calculations (if any) |             |
| <b>COMMENTS</b>                                                            |                                                               |             |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |                                                               |             |
|                                                                            |                                                               |             |

## 2.14. Indicator IWRM.14. Number of land management committees and commissions set up or improved upon

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                 |                          |                                |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------|
| Indicator Name                                                                                      | Number of land management committees and commissions set up or improved upon.                                                                                                                                                                                                                                                                                   |                          | Version                        |
| Common Indicator Number                                                                             | Not Applicable                                                                                                                                                                                                                                                                                                                                                  | IWRM.14                  | All Previous Indicator Numbers |
| Level                                                                                               | Output                                                                                                                                                                                                                                                                                                                                                          | Cumulative               | Unit of Measure*               |
| Detailed Definition                                                                                 | Count the number of technical committees in support of land tenure security and dispute mediation commissions set up by prefectural order                                                                                                                                                                                                                       |                          |                                |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                          | Reporting Period Covered | Post-Compact Period            |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                              | NO                       |                                |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                 | NO                       |                                |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                              | NO                       |                                |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                            | NO                       |                                |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                 |                          |                                |
| Justification for Including Indicator                                                               | Technical committees in support of land tenure security and dispute mediation commissions are set up in the different Local Communities to facilitate the implementation of land tenure security activities. These committees take a very active part in training and mediation activities but especially in the allocation of land in their local communities. |                          |                                |
| How does the indicator link to the ERR?                                                             | Not Applicable                                                                                                                                                                                                                                                                                                                                                  |                          |                                |
| How does the indicator link to the BA?                                                              | Not Applicable                                                                                                                                                                                                                                                                                                                                                  |                          |                                |
| How does the indicator link to the impact evaluation?                                               | Not Applicable                                                                                                                                                                                                                                                                                                                                                  |                          |                                |
| Justification for Disaggregations                                                                   | Not Applicable                                                                                                                                                                                                                                                                                                                                                  |                          |                                |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                 |                          |                                |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                                                                                                                                                                            |                          |                                |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                    | Phone                    | 77 511 22 72                   |
|                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                 | E-mail                   | Amadou.niang@saed.sn           |
| Entity Responsible for the collection of primary Data                                               | SAED                                                                                                                                                                                                                                                                                                                                                            |                          |                                |
| Detailed description of data collection methodology (including any calculations computed by source) | Count the number of committees and commissions supported by the consultant in charge of implementing land tenure security in the Irrigation Project zone                                                                                                                                                                                                        |                          |                                |
| If survey data, verbatim question(s) posed to respondent                                            | Not Applicable                                                                                                                                                                                                                                                                                                                                                  |                          |                                |
| Detailed description of how data is transmitted from source to USAC                                 | The data is transmitted by the Consultant responsible for implementing land tenure security through the DFRI form                                                                                                                                                                                                                                               |                          |                                |
| Frequency and timing of data acquisition                                                            | ANNUAL                                                                                                                                                                                                                                                                                                                                                          |                          |                                |
| Names of verification sources                                                                       | Means of verification                                                                                                                                                                                                                                                                                                                                           |                          |                                |
| Report of the consultant in charge of implementing land tenure security                             | Prefectural Order                                                                                                                                                                                                                                                                                                                                               |                          |                                |

|                                                                                      |                          |                                            |                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------|--------------------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PMU Irrigation Reports                                                               |                          | Table of indicators                        |                                                                                                                                                                                                                                                                               |
| DFRI Report                                                                          |                          | Table of indicators                        |                                                                                                                                                                                                                                                                               |
| Location of Data Storage                                                             |                          | Land and Institutional Reforms Directorate |                                                                                                                                                                                                                                                                               |
| <b>INDICATOR DATA QUALITY</b>                                                        |                          |                                            |                                                                                                                                                                                                                                                                               |
| Date of Data Quality Review                                                          |                          |                                            |                                                                                                                                                                                                                                                                               |
| Main findings of data quality review                                                 |                          |                                            |                                                                                                                                                                                                                                                                               |
|                                                                                      | Average Score (out of 3) | Recommendations                            | <p><b>IWRM.14</b></p> <p>A radar chart with six axes: Validite, Fiabilité, Opportunite, Integrite, Adequation, and Praticabilite. The axes are labeled with scores 1.0, 2.0, 3.0, and 4.0. The chart shows a score of 4.0 for Validite, and 3.0 for all other categories.</p> |
| 1. VALIDITY – Does the data clearly represent the desired results?                   | 4,0                      | N/A                                        |                                                                                                                                                                                                                                                                               |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? | 3,5                      | N/A                                        |                                                                                                                                                                                                                                                                               |
| 3. TIMELINESS- Are the data current and frequently collected?                        | 4,0                      | N/A                                        |                                                                                                                                                                                                                                                                               |
| 4. PRECISION – Does the data have an acceptable margin of error?                     | 4,0                      | N/A                                        |                                                                                                                                                                                                                                                                               |
| 5. INTEGRITY- Is the data free from manipulation?                                    | 4,0                      | N/A                                        |                                                                                                                                                                                                                                                                               |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?     | 4,0                      | N/A                                        |                                                                                                                                                                                                                                                                               |
| 7. PRACTICABILITY- Is the data current and frequently collected?                     | 4,0                      | N/A                                        |                                                                                                                                                                                                                                                                               |
| <b>Overall assessment</b>                                                            |                          | 3,9                                        |                                                                                                                                                                                                                                                                               |
| Action taken in response to data quality review                                      |                          | Not Applicable                             |                                                                                                                                                                                                                                                                               |
| Known data limitations and significance                                              |                          | Not Applicable                             |                                                                                                                                                                                                                                                                               |
| Actions taken to address data limitations                                            |                          | Not Applicable                             |                                                                                                                                                                                                                                                                               |
| <b>INDICATOR BASELINE INFORMATION</b>                                                |                          |                                            |                                                                                                                                                                                                                                                                               |
| Old Baseline                                                                         | 0                        | Old Baseline Year                          | 2010-2011                                                                                                                                                                                                                                                                     |
| New Baseline                                                                         | 0                        | New Baseline Year                          | 2010-2011                                                                                                                                                                                                                                                                     |
| Justification for Baseline Change (if any)                                           |                          | Source of old Baseline                     | Compact, initial source not available                                                                                                                                                                                                                                         |
|                                                                                      |                          | Source of New Baseline                     | Work Plan of the FRI Directorate                                                                                                                                                                                                                                              |

| INDICATOR TARGET CALCULATIONS                                              |     | Target |  | Justification for changes to targets or calculations (if any) |
|----------------------------------------------------------------------------|-----|--------|--|---------------------------------------------------------------|
|                                                                            | Old | New    |  |                                                               |
| <b>YEAR 1</b>                                                              |     |        |  |                                                               |
|                                                                            | 1   | 9      |  |                                                               |
| Explanation of assumptions and inputs to target calculations               |     |        |  |                                                               |
| <b>YEAR 2</b>                                                              |     |        |  |                                                               |
|                                                                            | 9   | 9      |  |                                                               |
| Explanation of assumptions and inputs to target calculations               |     |        |  |                                                               |
| <b>YEAR 3</b>                                                              |     |        |  |                                                               |
|                                                                            | 9   | 9      |  |                                                               |
| Explanation of assumptions and inputs to target calculations               |     |        |  |                                                               |
| <b>YEAR 4</b>                                                              |     |        |  |                                                               |
|                                                                            | 9   | 9      |  |                                                               |
| Explanation of assumptions and inputs to target calculations               |     |        |  |                                                               |
| <b>YEAR 5</b>                                                              |     |        |  |                                                               |
|                                                                            | 9   | 9      |  |                                                               |
| Explanation of assumptions and inputs to target calculations               |     |        |  |                                                               |
| <b>Long Term Target</b>                                                    |     |        |  |                                                               |
|                                                                            | N/A | N/A    |  |                                                               |
| Explanation of assumptions and inputs to target calculations               |     |        |  |                                                               |
| <b>COMMENTS</b>                                                            |     |        |  |                                                               |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |     |        |  |                                                               |
|                                                                            |     |        |  |                                                               |
|                                                                            |     |        |  |                                                               |

2.15. Indicator IWRM.15. Total length of main drainage canals and outfalls serviced (raked and/or cleaned out) annually

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                        |                                |                      |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------|--------------------------------|----------------------|
| Indicator Name                                                                                      | Total length of main drainage canals and outfalls serviced (raked and/or cleaned out) annually                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                        | Version                        | N° 04 / Oct. 2015    |
| Common Indicator Number                                                                             | Non Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Current Indicator Number | IWRM.15.               | All Previous Indicator Numbers | New Indicator        |
| Niveau                                                                                              | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Classification           | Level                  | Unit of Measure*               | Km                   |
| Detailed Definition                                                                                 | Measuring of the number of kilometers of drainage canals raked (weeded out) and cleaned out                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                        |                                |                      |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Reporting Period Covered | Post-Compact Period    |                                |                      |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          | NO                     |                                |                      |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          | NO                     |                                |                      |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          | NO                     |                                |                      |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | YES (Delta / Ngalenka) |                                |                      |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                        |                                |                      |
| Justification for Including Indicator                                                               | The indicator provides information on the achievement of the objective of the IWRM project which is to increase agricultural production and productivity in the agricultural sector. Indeed, maintaining up to par infrastructures and canals and drains functionality by weeds and leafs raking and cleaning it out will greatly contribute in the effectiveness of the water infrastructure and thus will increase productivity and agricultural production in the Delta and the Ngalenka region. |                          |                        |                                |                      |
| How does the indicator link to the ERR?                                                             | The indicator will provide information on weeds and leafs raking and the overall cleaning activities developed in order to maintain the optimal functioning of the canals and drains. The indicator acts thusly as a factor in assessing the sustainability of the investments made to ensure availability of water in the plots of agricultural production.                                                                                                                                        |                          |                        |                                |                      |
| How does the indicator link to the BA?                                                              | Maintenance works on the canals and drains will help provide steady supply of draining water for the beneficiaries.                                                                                                                                                                                                                                                                                                                                                                                 |                          |                        |                                |                      |
| How does the indicator link to the impact evaluation?                                               | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                        |                                |                      |
| Justification for Disaggregations                                                                   | The data will be disaggregated by area (Delta et Ngalenka).                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                        |                                |                      |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                        |                                |                      |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                        |                                |                      |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Phone                    | 77 511 22 72           | E-mail                         | Amadou.niang@saed.sn |
| Entity Responsible for the collection of primary Data                                               | SAED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                        |                                |                      |
| Detailed description of data collection methodology (including any calculations computed by source) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                        |                                |                      |
| If survey data, verbatim question(s) posed to respondent                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                        |                                |                      |
| Detailed description of how data is transmitted from source to USAC                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                        |                                |                      |
| Frequency and timing of data acquisition                                                            | YEARLY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                        |                                |                      |

| Names of verification sources                                                                                                                      |                                 | Means of verification                        |                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------|----------------------------------------------|
| <ul style="list-style-type: none"> <li>Mission Reports from DAM (Direction Autonome de la Maintenance)</li> <li>Works contracted sheets</li> </ul> |                                 | Final reports and Minutes of works reception | Final reports and Minutes of works reception |
| Location of Data Storage                                                                                                                           |                                 | SAED                                         |                                              |
| <b>INDICATOR DATA QUALITY</b>                                                                                                                      |                                 |                                              |                                              |
| Date of Data Quality Review                                                                                                                        |                                 |                                              |                                              |
| Main findings of data quality review                                                                                                               |                                 |                                              |                                              |
|                                                                                                                                                    | Average score (on a scale of 3) | October 2015<br>Recommendations              | <p><b>IWRM. 15</b></p>                       |
| 1. VALIDITÉ - Les données représentent-elles le résultat désiré de façon satisfaisante?                                                            | TBD                             |                                              |                                              |
| 2. FIABILITÉ - Les procédures de collecte des données sont-elles stables et consistantes dans le temps ?                                           | TBD                             |                                              |                                              |
| 3. OPPORTUNITÉ - Les données sont-elles actuelles et fréquemment collectées?                                                                       | TBD                             |                                              |                                              |
| 4. PRÉCISION - Les données ont-elles une marge d'erreur acceptable?                                                                                | TBD                             |                                              |                                              |
| 5. INTÉGRITÉ- Les données sont-elles exemptes de manipulations?                                                                                    | TBD                             |                                              |                                              |

|                                                                                            |     |                   |                                                               |
|--------------------------------------------------------------------------------------------|-----|-------------------|---------------------------------------------------------------|
| 6. ADÉQUATION - Dans quelle mesure les indicateurs caractérisent pleinement les résultats? | TBD |                   |                                                               |
| 7. PRACTICABILITÉ - Les données sont-elles actuelles et fréquemment collectées?            | TBD |                   |                                                               |
| Évaluation Globale                                                                         | TBD |                   |                                                               |
| Action taken in response to data quality review                                            |     |                   |                                                               |
| Known data limitations and significance                                                    |     |                   |                                                               |
| Actions taken to address data limitations                                                  |     |                   |                                                               |
| <b>INDICATOR BASELINE INFORMATION</b>                                                      |     |                   |                                                               |
| Old Baseline                                                                               | N/A | Old Baseline Year | N/A                                                           |
| New Baseline                                                                               | 116 | New Baseline Year | 2015                                                          |
| Justification for Baseline Change (if any)                                                 |     |                   |                                                               |
| <b>INDICATOR TARGET CALCULATIONS</b>                                                       |     |                   |                                                               |
|                                                                                            |     | Target            |                                                               |
|                                                                                            |     | Old               | New                                                           |
| YEAR 1                                                                                     |     | N/A               | N/A                                                           |
| Oct 2010 - Sept. 2011                                                                      |     |                   | Justification for changes to targets or calculations (if any) |
| Explanation of assumptions and inputs to target calculations                               |     |                   |                                                               |
| YEAR 2                                                                                     |     | Old               | New                                                           |
| Oct 2011 - Sept. 2012                                                                      |     | N/A               | N/A                                                           |
| Explanation of assumptions and inputs to target calculations                               |     |                   | Justification for changes to targets or calculations (if any) |
| YEAR 3                                                                                     |     | Old               | New                                                           |
| Oct 2012 - Sept. 2013                                                                      |     | N/A               | N/A                                                           |
| Explanation of assumptions and inputs to target calculations                               |     |                   | Justification for changes to targets or calculations (if any) |
| YEAR 4                                                                                     |     | Old               | New                                                           |
| Oct 2013 - Sept. 2014                                                                      |     | N/A               | N/A                                                           |
| Explanation of assumptions and inputs to target calculations                               |     |                   | Justification for changes to targets or calculations (if any) |
| YEAR 5                                                                                     |     | Old               | New                                                           |
| Oct 2014 - Sept. 2015                                                                      |     | N/A               | N/A                                                           |
| Explanation of assumptions and inputs to target calculations                               |     |                   | Justification for changes to targets or calculations (if any) |

|                                                                     |     |     |                                                               |
|---------------------------------------------------------------------|-----|-----|---------------------------------------------------------------|
| Explanation of assumptions and inputs to target calculations        | Old | New | Justification for changes to targets or calculations (if any) |
| Post-Compact Target                                                 | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations        |     |     |                                                               |
| COMMENTS                                                            |     |     |                                                               |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |     |     |                                                               |

## 2.16. Indicator IWRM.16. Number of pumps serviced annually

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                     |                                |                      |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|--------------------------------|----------------------|
| Indicator Name                                                                                      | Number of pumps serviced annually                                                                                                                                                                                                                                                                                                                                                                |                          | Version             |                                |                      |
| Common Indicator Number                                                                             | Non Applicable                                                                                                                                                                                                                                                                                                                                                                                   | Current Indicator Number | IWRM.16.            | All Previous Indicator Numbers | N° 04 / Oct. 2015    |
| Niveau                                                                                              | Outcome                                                                                                                                                                                                                                                                                                                                                                                          | Classification           | Level               | Unit of Measure*               | New Indicator Number |
| Detailed Definition                                                                                 | Measuring of the number of serviced pumping equipment                                                                                                                                                                                                                                                                                                                                            |                          |                     |                                |                      |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                           | Reporting Period Covered | Post-Compact Period |                                |                      |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                               | NO                       |                     |                                |                      |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                  | NO                       |                     |                                |                      |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                               | NO                       |                     |                                |                      |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                             | YES (Delta / Ngalenka)   |                     |                                |                      |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                     |                                |                      |
| Justification for Including Indicator                                                               | The indicator provides information on the achievement of the IWRM project which is to increase agricultural production and productivity in the agricultural sector. Indeed, the number of pumping equipment serviced will greatly contribute to the efficiency of the hydraulic infrastructures and thus increase productivity and agricultural production in the Delta and the Ngalenka region. |                          |                     |                                |                      |
| How does the indicator link to the ERR?                                                             | The indicator will provide information on the activities related to the servicing of pumping equipments which ensures operationality of the canals and drains. The indicator is an assessment tool for the sustainability of the investments made for water availability in agricultural production plots.                                                                                       |                          |                     |                                |                      |
| How does the indicator link to the BA?                                                              | The servicing works on the canals and drains help ensure an optimal operation of the water infrastructure for the beneficiaries.                                                                                                                                                                                                                                                                 |                          |                     |                                |                      |
| How does the indicator link to the impact evaluation?                                               | N/A                                                                                                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                      |
| Justification for Disaggregations                                                                   | The data will be disaggregated by area (Delta et Ngalenka).                                                                                                                                                                                                                                                                                                                                      |                          |                     |                                |                      |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                     |                                |                      |
| Entity Responsible for Collecting Data                                                              | SAED                                                                                                                                                                                                                                                                                                                                                                                             |                          |                     |                                |                      |
| Point of Contact Responsible for Collecting the Data at SAED:                                       | Amadou NIANG                                                                                                                                                                                                                                                                                                                                                                                     | Phone                    | 77 511 22 72        | E-mail                         | Amadou.niang@saed.sn |
| Entity Responsible for the collection of primary Data                                               | SAED                                                                                                                                                                                                                                                                                                                                                                                             |                          |                     |                                |                      |
| Detailed description of data collection methodology (including any calculations computed by source) |                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                     |                                |                      |
| If survey data, verbatim question(s) posed to respondent                                            |                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                     |                                |                      |
| Detailed description of how data is transmitted from source to USAC                                 |                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                     |                                |                      |
| Frequency and timing of data acquisition                                                            | YEARLY                                                                                                                                                                                                                                                                                                                                                                                           |                          |                     |                                |                      |
| Names of verification sources                                                                       | Means of verification                                                                                                                                                                                                                                                                                                                                                                            |                          |                     |                                |                      |
| • Rapports de missions de la DAM                                                                    | Final reports and Minutes of works reception<br>Final reports and Minutes of works reception                                                                                                                                                                                                                                                                                                     |                          |                     |                                |                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------|
| <ul style="list-style-type: none"> <li>Works contracted sheets</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                 |
| <b>Location of Data Storage</b><br><b>INDICATOR DATA QUALITY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | SAED            |
| <b>Date of Data Quality Review</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | October 2015    |
| <b>Main findings of data quality review</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | Recommendations |
| Average score (on a scale of 3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                 |
| 1. VALIDITÉ - Les données représentent-elles le résultat désiré de façon satisfaisante?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | TBD             |
| 2. FIABILITÉ - Les procédures de collecte des données sont-elles stables et consistantes dans le temps ?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | TBD             |
| 3. OPPORTUNITÉ - Les données sont-elles actuelles et fréquemment collectées?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | TBD             |
| 4. PRÉCISION - Les données ont-elles une marge d'erreur acceptable?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | TBD             |
| 5. INTÉGRITÉ- Les données sont-elles exemptes de manipulations?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | TBD             |
| 6. ADEQUATION - Dans quelle mesure les indicateurs caractérisent pleinement les résultats?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | TBD             |
| <p>The figure is a radar chart titled 'IWRM. 16' used for data quality assessment. It features six axes representing different quality dimensions: Validite, Fiabilite, Opportunité, Integrite, Adequation, and Praticabilite. The chart has three concentric rings, with the outermost ring labeled '3.0', the middle ring labeled '2.0', and the innermost ring labeled '1.0'. The current data points are plotted on these rings, showing scores for each dimension: Validite (approx. 1.5), Fiabilite (approx. 1.5), Opportunité (approx. 1.5), Integrite (approx. 1.5), Adequation (approx. 1.5), and Praticabilite (approx. 1.5).</p> |  |                 |

|                                                                                 |        |                   |                                                               |
|---------------------------------------------------------------------------------|--------|-------------------|---------------------------------------------------------------|
| 7. PRACTICABILITÉ - Les données sont-elles actuelles et fréquemment collectées? | TBD    |                   |                                                               |
| Évaluation Globale                                                              | TBD    |                   |                                                               |
| Action taken in response to data quality review                                 |        |                   |                                                               |
| Known data limitations and significance                                         |        |                   |                                                               |
| Actions taken to address data limitations                                       |        |                   |                                                               |
| <b>INDICATOR BASELINE INFORMATION</b>                                           |        |                   |                                                               |
| Old Baseline                                                                    | N/A    | Old Baseline Year | N/A                                                           |
| New Baseline                                                                    | 115    | New Baseline Year | 2015                                                          |
| Justification for Baseline Change (if any)                                      |        |                   |                                                               |
| <b>INDICATOR TARGET CALCULATIONS</b>                                            |        |                   |                                                               |
|                                                                                 | Target |                   |                                                               |
|                                                                                 | Old    | New               | Justification for changes to targets or calculations (if any) |
| <b>YEAR 1</b>                                                                   |        |                   |                                                               |
| Oct 2010 - Sept. 2011                                                           | N/A    | N/A               |                                                               |
| Explanation of assumptions and inputs to target calculations                    |        |                   |                                                               |
| <b>YEAR 2</b>                                                                   |        |                   |                                                               |
| Oct 2011 - Sept. 2012                                                           | N/A    | N/A               |                                                               |
| Explanation of assumptions and inputs to target calculations                    |        |                   |                                                               |
| <b>YEAR 3</b>                                                                   |        |                   |                                                               |
| Oct 2012 - Sept. 2013                                                           | N/A    | N/A               |                                                               |
| Explanation of assumptions and inputs to target calculations                    |        |                   |                                                               |
| <b>YEAR 4</b>                                                                   |        |                   |                                                               |
| Oct 2013 - Sept. 2014                                                           | N/A    | N/A               |                                                               |
| Explanation of assumptions and inputs to target calculations                    |        |                   |                                                               |
| <b>YEAR 5</b>                                                                   |        |                   |                                                               |
| Oct 2014 - Sept. 2015                                                           | N/A    | N/A               |                                                               |
| Explanation of assumptions and inputs to target calculations                    |        |                   |                                                               |
| <b>Post-Compact Target</b>                                                      |        |                   |                                                               |
| Explanation of assumptions and inputs to target calculations                    | Old    | New               | Justification for changes to targets or calculations (if any) |
|                                                                                 | N/A    | N/A               |                                                               |
| <b>COMMENTS</b>                                                                 |        |                   |                                                               |

**SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)**



3. Performance indicators and targets of the Roads Rehabilitation Project

---

3.1. Indicator RRP.1. Average annual daily traffic (AADT) Richard-Toll – Ndioum

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                                                          |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------|
| Indicator Name                                                                                      | Average annual daily traffic (AADT) Richard-Toll – Ndioum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Version                  | N° 03 / Sept 2015                                        |
| Common Indicator Number                                                                             | R-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | RRP.1.                   | All Previous Indicator Numbers                           |
| Level                                                                                               | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Classification           | Unit of Measure*                                         |
| Detailed Definition                                                                                 | The average number and type of vehicles per day, averaged over different times (day and night) and over different seasons to arrive at an annualized daily average                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                                          |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Reporting Period Covered | Post-Compact Period                                      |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | NO                       |                                                          |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NO                       |                                                          |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | NO                       |                                                          |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | NO                       |                                                          |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                                                          |
| Justification for Including Indicator                                                               | RN2 Richard Toll - Ndioum (around 120 km) and the Ndioum Bridge will be built by the Compact. The rehabilitation of this stretch will impact on traffic in this Northern part of Senegal by facilitating travelling to the Region of Matam but also to the other parts of the Republic of Mauritania and that of Mali.                                                                                                                                                                                                                                                                     |                          |                                                          |
| How does the indicator link to the ERR?                                                             | The increase in traffic on this road will help reduce the costs and duration of travels and promote the transportation and export of products from the irrigated zones along River Senegal and those with the Republics of Mauritania and Mali.                                                                                                                                                                                                                                                                                                                                            |                          |                                                          |
| How does the indicator link to the BA?                                                              | The rehabilitated RN2 Richard Toll - Ndioum (around 120 km) and Ndioum Bridge will benefit about 21, 000 households or 251,000 people in year 20. About 9,290 households, i.e. 111,500 people currently live within a radius of 5km on either side of RN#2. The rehabilitation of this road will help increase trade but also reduce the costs and duration of travels and daily consumption by 7% for people with less than \$2 a day, by 10% for those having between \$2 and \$4 and by 20% for those with more than \$4.                                                               |                          |                                                          |
| How does the indicator link to the impact evaluation?                                               | The indicator will show the traffic trends between the pre-works period and post-works period. The cost and duration of travels and the trade in agricultural products will be affected, as will access to basic social services for the populations living within a radius of less than 5 kilometers on either side of the road.                                                                                                                                                                                                                                                          |                          |                                                          |
| Justification for Disaggregations                                                                   | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                                                          |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                                                          |
| Entity Responsible for Collecting Data                                                              | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                                                          |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                   | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Phone                    | +221 77 333 89 16                                        |
|                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | E-mail                   | <a href="mailto:mndao@ageroute.sn">mndao@ageroute.sn</a> |
| Entity Responsible for the collection of primary Data                                               | AGEROUTE (2012) and Consultant to be selected by MCA-S (2015)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                                                          |
| Detailed description of data collection methodology (including any calculations computed by source) | The indicator will be collected during the collection campaign of representative week in the month at the counting stations selected rationally based on whether there is local traffic or not. The count should distinguish between passenger traffic and cargo traffic and take into account the different silhouettes considered in the CNCE conducted by AGEROUTE. An estimation of potential induced traffic (generated and diverted) may be made by using statistical data (available at ANSD), the analysis of competing routes and the development programs planned for this zone. |                          |                                                          |

|                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                             | <p>The count is done on each post, by teams of three to four people with at least a 12th grade level of education, working in shifts throughout the day and using a count form designed and tested beforehand. Team members will be selected after prior training and full-scale tests.</p> <p>The calculation formula applied is : <math>T_{ij}^{ajustés} = a + b \cdot T_{ij}^{observés}</math></p> <p><math>T_{ij}</math> being the traffic between the origin <math>i</math> and the destination <math>j</math> and <math>a, b</math> being calibration constants</p> <p>The indicator will be collected in the field through manual counting with no respondents. The data is collected per vehicle type and by traffic hour.</p> <p>Data is transmitted in the form of data bases and analysis report presenting the results for the concerned section</p> <p>Data will be obtained twice: at the commencement and at the end of the Compact.</p> |
| <p><b>If survey data, verbatim question(s) posed to respondent</b></p>                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Detailed description of how data is transmitted from source to USAC</b></p>           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Frequency and timing of data acquisition</b></p>                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Names of verification sources</b></p>                                                 | <p><b>Means of verification :</b><br/>Data base, analysis report, cross-tabulations<br/>Data base, analysis report, cross-tabulations<br/>AGEROUTE and USAC-Senegal</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p>National Road Traffic Counting Campaign and Origin / Destination Survey/ AGEROUTE</p>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>Counting and Origin / Destination Survey in 2015</p>                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Location of Data Storage</b></p>                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>INDICATOR DATA QUALITY</b></p>                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Date of Data Quality Review</b></p>                                                   | <p>November 2014</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>Main findings of data quality review</b></p>                                          | <div style="text-align: center;"> <p><b>RRP.1</b></p> </div> <p>Recommendations</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>1. VALIDITY – Does the data clearly represent the desired results?</p>                   | <p>Average Score (out of 4)</p> <p>3,2</p> <p>Ensure time consistency of estimation methods; Take nocturnal counting into account</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>2. RELIABILITY – Are the data collection procedures stable and consistent over time?</p> | <p>3,3</p> <p>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

|                                                                                  |                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3. TIMELINESS- Are the data current and frequently collected?                    |                                                                                                    | 4,0                      | N/A                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                              |
| 4. PRECISION – Does the data have an acceptable margin of error?                 |                                                                                                    | 3,2                      | N/A                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                              |
| 5. INTEGRITY- Is the data free from manipulation?                                |                                                                                                    | 3,7                      | N/A                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                              |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results? |                                                                                                    | 3,6                      | N/A                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                              |
| 7. PRACTICABILITY- Is the data current and frequently collected?                 |                                                                                                    | 3,3                      | N/A                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                              |
| <b>Overall assessment</b>                                                        |                                                                                                    | <b>3,5</b>               |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
| <b>Action taken in response to data quality review</b>                           |                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                           | - Collection procedure clarified and harmonized with AGEROUTE and incorporating nocturnal counting                                                                                                                                                                                           |
| <b>Known data limitations and significance</b>                                   |                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                           | - The key limitation concerns the clarification of data in the light of the daily, weekly, monthly and seasonal variability of data                                                                                                                                                          |
| <b>Actions taken to address data limitations</b>                                 |                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                           | The monthly variability constraint that will be lifted on the assumption that during the month, the weeks and days reoccur in exactly the same way. The seasonal variability constraint will be lifted by integrating an extra-seasonal factor based on fuel consumption (super and diesel). |
| <b>INDICATOR BASELINE INFORMATION</b>                                            |                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
| <b>Old Baseline</b>                                                              | 1029                                                                                               | <b>Old Baseline Year</b> | 2011 - 2012                                                                                                                                                                                                                                                                                                                                                                                               | <b>Source of old Baseline</b><br>Resultis Survey on Traffic and Origin– Destination – AGEROUTE, Sept. 2012 : Report CNCE Surveys and O/D Surveys AGEROUTE 2012                                                                                                                               |
| <b>New Baseline</b>                                                              | 1 029                                                                                              | <b>New Baseline Year</b> | 2011 - 2012                                                                                                                                                                                                                                                                                                                                                                                               | <b>Source of New Baseline</b><br>Resultis Survey on Traffic and Origin– Destination – AGEROUTE, Sept. 2012 : Report CNCE Surveys and O/D Surveys AGEROUTE 2012                                                                                                                               |
| <b>Justification for Baseline Change (if any)</b>                                | The Count and O/D Survey was finally conducted by AGEROUTE in 2012 at sections of RNRN2 and RNRN6. |                          |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
| <b>INDICATOR TARGET CALCULATIONS</b>                                             |                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
|                                                                                  |                                                                                                    | <b>Target</b>            |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
| <b>YEAR 1</b>                                                                    | <b>Old</b>                                                                                         | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |
| Oct 2010 - Sept. 2011                                                            | N/A                                                                                                | N/A                      | The annual survey scheduled by AGEROUTE in 2010-2011 did not take place.                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                              |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
| <b>YEAR 2</b>                                                                    | <b>Old</b>                                                                                         | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |
| Oct 2011 - Sept. 2012                                                            | 1 029                                                                                              | 1 029                    | The survey conducted from 24 to 29 September 2012 by AGEROUTE for this stretch with post N° 621 situated at the exit of Dagana gives an AADT of 1029 vehicles/day. Source: Mid-term report. National Road Count and Origin / Destination Survey Campaign on all the classified road networks of Senegal, January 2013. Refer To Resultis Survey on Traffic and Origin– Destination – AGEROUTE, Sept. 2012 |                                                                                                                                                                                                                                                                                              |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
| <b>YEAR 3</b>                                                                    | <b>Old</b>                                                                                         | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |
| Oct 2012 - Sept. 2013                                                            | N/A                                                                                                | N/A                      | AGEROUTE will now conduct annual surveys but the roads being rehabilitated with MCC funds will not be included                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                              |

|                                                              |  |                                                                                     |       |                                                               |                                                                                                                                                                                               |
|--------------------------------------------------------------|--|-------------------------------------------------------------------------------------|-------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Explanation of assumptions and inputs to target calculations |  | Old                                                                                 | New   | Justification for changes to targets or calculations (if any) | AGEROUTE will now conduct annual surveys but the roads being rehabilitated with MCC funds will not be included                                                                                |
| YEAR 4<br>Oct 2013 - Sept. 2014                              |  | N/A                                                                                 | N/A   |                                                               |                                                                                                                                                                                               |
| Explanation of assumptions and inputs to target calculations |  | Old                                                                                 | New   | Justification for changes to targets or calculations (if any) | The survey in year 5 will be conducted by MCA-S according to the same methodology as the one used by AGEROUTE in 2012. Updated target based on 3.5% growth rate from the measured 2012 value. |
| YEAR 5<br>Oct 2014 - Sept. 2015                              |  | 1 140                                                                               | 1 116 |                                                               |                                                                                                                                                                                               |
| Explanation of assumptions and inputs to target calculations |  | Old                                                                                 | New   | Justification for changes to targets or calculations (if any) | Based on ERR estimation, 2015                                                                                                                                                                 |
| Long Term Target                                             |  | N/A                                                                                 | 2029  |                                                               |                                                                                                                                                                                               |
| Explanation of assumptions and inputs to target calculations |  | COMMENTS                                                                            |       |                                                               |                                                                                                                                                                                               |
| COMMENTS                                                     |  | SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)                 |       |                                                               |                                                                                                                                                                                               |
| COMMENTS                                                     |  | Rapport à mi-parcours de la CNCE et Enquêtes O/D AGEROUTE, Janvier 2013             |       |                                                               |                                                                                                                                                                                               |
| COMMENTS                                                     |  | Rapport Technique d'orientation Version Finale de la CNCE de l'AGEROUTE, avril 2012 |       |                                                               |                                                                                                                                                                                               |
| COMMENTS                                                     |  | RN2 Model [to be provided by MCC]                                                   |       |                                                               |                                                                                                                                                                                               |

### 3.2. Indicator RRP.2. Average annual daily traffic (AADT) Ziguinchor – Tanaff

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                     |                                |        |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|--------------------------------|--------|
| INDICATOR BASIC DETAILS               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                     |                                |        |
| Indicator Name                        | Average annual daily traffic (AADT) Ziguinchor – Tanaff                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          | Version             | N° 03 / Sept 2015              |        |
| Common Indicator Number               | (R-10)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Current Indicator Number | RRP.2               | All Previous Indicator Numbers | RRP.2. |
| Level                                 | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Classification           | Level               | Unit of Measure                | Number |
| Detailed Definition                   | The average number and type of vehicles per day, averaged over different times (day and night) and over different seasons to arrive at an annualized daily average                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                     |                                |        |
| Frequency of Reporting                | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Reporting Period Covered | Post-Compact Period |                                |        |
| Disaggregations                       | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NO                       |                     |                                |        |
|                                       | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | NO                       |                     |                                |        |
|                                       | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NO                       |                     |                                |        |
|                                       | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | NO                       |                     |                                |        |
| INDICATOR JUSTIFICATION DETAILS       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                     |                                |        |
| Justification for Including Indicator | Lot 1 of RN6 Ziguinchor - Tanaff (116 km) will be rehabilitated by the Compact. The rehabilitation of this section will impact on traffic in this Southern part of Senegal by facilitating travelling to the Regions of Ziguinchor and Sedhiou and promoting trade with the Republics of Guinea and Guinea Bissau. RN#6 is also a strategic road that facilitates the transportation of local agricultural products and other goods and services from Casamance to other Senegalese cities, without having to go through Gambia. RN#6 is the only national land access to and from Casamance. |                          |                     |                                |        |

|                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                                           |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------|
| <b>How does the indicator link to the ERR?</b>                                                             | The increase in traffic on this section will help reduce the cost and duration of travels and promote the transportation and export of local agricultural products and other goods and services from Casamance to other Senegalese cities, without having to go through Gambia. RN#6 is the only national land access to and from Casamance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                           |
| <b>How does the indicator link to the BA?</b>                                                              | The rehabilitation of RN6 Ziguinchor - Kounkané (around 256 km) and of the Kolda Bridge will benefit close to 120,000 households or 1,277,000 people in year 20. About 44,000 households, i.e. 474,000 people currently live within a radius of 5km on either side of RN#6. The rehabilitation of this road will help increase trade but also reduce the costs and duration of travels and daily consumption by 75% for people with less than \$2 a day, by 21% for those having between \$2 and \$4 and by 4% for those with more than \$4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                           |
| <b>How does the indicator link to the impact evaluation?</b>                                               | The indicator will show the traffic trends between the pre-works period and post-works period. The cost and duration of travels and the trade in agricultural products will be affected, as will access to basic social services for the populations living within a radius of less than 5 kilometers on either side of the road.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                                                                           |
| <b>Justification for Disaggregations</b>                                                                   | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                                                                           |
| <b>INDICATOR ACQUISITION PLAN</b>                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                                           |
| <b>Entity Responsible for Collecting Data</b>                                                              | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                                                                           |
| <b>Point of Contact Responsible for Collecting the Data at AGEROUTE:</b>                                   | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | +221 77 333 89 16 | <b>E-mail</b><br><a href="mailto:mndao@ageroute.sn">mndao@ageroute.sn</a> |
| <b>Entity Responsible for the collection of primary Data</b>                                               | AGEROUTE (2012) and Consultant to be selected by MCA-S (2015)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                                                                           |
| <b>Detailed description of data collection methodology</b> (including any calculations computed by source) | The indicator will be collected during the collecting campaigns of a representative week at the counting stations chosen rationally because of the presence or otherwise of local traffic. In fact, closer to urban centers, because of the risk involved in counting local domestic traffic, there is a tendency to over-estimate the exchange traffic on this section. Further from the urban centers, because of the dwindling local traffic, the tendency is to under-estimate. Besides, the monthly variability constraint that will be lifted on the assumption that during the month, the weeks and days reoccur in exactly the same way. The seasonal variability constraint will be lifted by integrating an extra-seasonal factor based on fuel consumption (super and diesel).                                                                                                                                                                                                                                                                                                                   |                   |                                                                           |
| <b>If survey data, verbatim question(s) posed to respondent</b>                                            | The indicator will be collected at the end of the field survey by manual counting, and thus with no respondent. The data is collected by type of vehicle and the time of day.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                                                                           |
| <b>Detailed description of how data is transmitted from source to USAC</b>                                 | The indicator will be collected during the collection campaign of representative week in the month at the counting stations selected rationally based on whether there is local traffic or not. The count should distinguish between passenger traffic and cargo traffic and take into account the different silhouettes considered in the CNCE conducted by AGEROUTE. An estimation of potential induced traffic (generated and derivative) may be made by using statistical data (available at ANSD), the analysis of competing routes and the development programs planned for this zone.<br>The count is done on each post, by teams of three to four people with at least a 12th grade level of education, working in shifts throughout the day and using a count form designed and tested beforehand. Team members will be selected after prior training and a full-scale tests.<br>The calculation formula applied is :<br>$T_{ij}^{ajustés} = a + b \cdot T_{ij}^{observés}$<br>$T_{ij}$ being the traffic between the origin $i$ and the destination $j$ and $a$ , $b$ being calibration constants |                   |                                                                           |
| <b>Frequency and timing of data acquisition</b>                                                            | The data will be classified by year and made available no later than March of that year for the traffic data of the preceding year.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                                                                           |
| <b>Names of verification sources</b>                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                                           |
| National Road Traffic Counting Campaign and Origin / Destination Survey/ AGEROUTE                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                                           |
| Counting and Origin / Destination Survey in 2015                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                                           |
| <b>Means of verification</b>                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                                           |
| Data base, analysis report, cross-tabulations                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                                           |
| Data base, analysis report, cross-tabulations                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                                           |

| Location of Data Storage                                                             |                             | AGEROUTE and USAC-Senegal                                                           |                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INDICATOR DATA QUALITY                                                               |                             |                                                                                     |                                                                                                                                                                                                                                                                                                |
| Date of Data Quality Review                                                          |                             | June 2013                                                                           |                                                                                                                                                                                                                                                                                                |
| <b>Main findings of data quality review</b>                                          | Average Score<br>(out of 4) | Recommendations                                                                     | <p><b>RRP.2</b></p> <p>Validite: 4.0<br/>Fiabilité: 2.0<br/>Opportunite<br/>Precision<br/>Integrite<br/>Adequation<br/>Praticabilite</p>                                                                                                                                                       |
| 1. VALIDITY – Does the data clearly represent the desired results?                   | 3,2                         | Ensure time consistency of estimation methods; Take nocturnal counting into account |                                                                                                                                                                                                                                                                                                |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? | 3,3                         | N/A                                                                                 |                                                                                                                                                                                                                                                                                                |
| 3. TIMELINESS- Are the data current and frequently collected?                        | 4,0                         | N/A                                                                                 |                                                                                                                                                                                                                                                                                                |
| 4. PRECISION – Does the data have an acceptable margin of error?                     | 3,2                         | N/A                                                                                 |                                                                                                                                                                                                                                                                                                |
| 5. INTEGRITY- Is the data free from manipulation?                                    | 3,7                         | N/A                                                                                 |                                                                                                                                                                                                                                                                                                |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?     | 3,0                         | N/A                                                                                 |                                                                                                                                                                                                                                                                                                |
| 7. PRACTICABILITY- Is the data current and frequently collected?                     | 3,3                         | N/A                                                                                 |                                                                                                                                                                                                                                                                                                |
| <b>Overall assessment</b>                                                            | <b>3,4</b>                  |                                                                                     |                                                                                                                                                                                                                                                                                                |
| <b>Action taken in response to data quality review</b>                               |                             |                                                                                     | - Collection procedure clarified and harmonized with AGEROUTE and incorporating nocturnal counting                                                                                                                                                                                             |
| <b>Known data limitations and significance</b>                                       |                             |                                                                                     | - The key limitation concerns the clarification of data in the light of the daily, weekly, monthly and seasonal variability of data                                                                                                                                                            |
| <b>Actions taken to address data limitations</b>                                     |                             |                                                                                     | - The monthly variability constraint that will be lifted on the assumption that during the month, the weeks and days reoccur in exactly the same way. The seasonal variability constraint will be lifted by integrating an extra-seasonal factor based on fuel consumption (super and diesel). |

| INDICATOR BASELINE INFORMATION             |                                                                                                                                                                                |                   |                                                                                                                                                                                                                                              |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Old Baseline                               | 181                                                                                                                                                                            | Old Baseline Year | 2011 - 2012                                                                                                                                                                                                                                  |
| New Baseline                               | 571                                                                                                                                                                            | New Baseline Year | 2007                                                                                                                                                                                                                                         |
| Justification for Baseline Change (if any) | MCC recalculated the ERR on the basis of the original Due Diligence study (2008) study due to concerns about the 2012 AGEROUTE study                                           |                   |                                                                                                                                                                                                                                              |
| Source of old Baseline                     | Refer To Results Survey on Traffic and Origin– Destination – AGEROUTE, Sept. 2012 ; Report CNCE Surveys and O/D Surveys AGEROUTE 2012                                          |                   |                                                                                                                                                                                                                                              |
| Source of New Baseline                     | Due Diligence study (2008)                                                                                                                                                     |                   |                                                                                                                                                                                                                                              |
| INDICATOR TARGET CALCULATIONS              |                                                                                                                                                                                |                   |                                                                                                                                                                                                                                              |
| YEAR 1                                     | Target                                                                                                                                                                         |                   | Justification for changes to targets or calculations (if any)                                                                                                                                                                                |
|                                            | Old                                                                                                                                                                            | New               |                                                                                                                                                                                                                                              |
| Oct 2010 - Sept. 2011                      | N/A                                                                                                                                                                            | N/A               | The annual survey scheduled by AGEROUTE in 2010-2011 did not take place.                                                                                                                                                                     |
| YEAR 2                                     | Target                                                                                                                                                                         |                   | Justification for changes to targets or calculations (if any)                                                                                                                                                                                |
|                                            | Old                                                                                                                                                                            | New               |                                                                                                                                                                                                                                              |
| Oct 2011 - Sept. 2012                      | 181                                                                                                                                                                            | 571               | Observations on the road placed the 2012 study in doubt, AGEROUTE was unable to provide any details on how the study was done (who was sent, length of counts, methodology, etc.). Reverting to due diligence counts as last reliable count. |
| YEAR 3                                     | Target                                                                                                                                                                         |                   | Justification for changes to targets or calculations (if any)                                                                                                                                                                                |
|                                            | Old                                                                                                                                                                            | New               |                                                                                                                                                                                                                                              |
| Oct 2012 - Sept. 2013                      | N/A                                                                                                                                                                            | N/A               | A traffic count survey is not planned for 2013                                                                                                                                                                                               |
| YEAR 4                                     | Target                                                                                                                                                                         |                   | Justification for changes to targets or calculations (if any)                                                                                                                                                                                |
|                                            | Old                                                                                                                                                                            | New               |                                                                                                                                                                                                                                              |
| Oct 2013 - Sept. 2014                      | N/A                                                                                                                                                                            | N/A               | A traffic count survey is not planned for 2014                                                                                                                                                                                               |
| YEAR 5                                     | Target                                                                                                                                                                         |                   | Justification for changes to targets or calculations (if any)                                                                                                                                                                                |
|                                            | Old                                                                                                                                                                            | New               |                                                                                                                                                                                                                                              |
| Oct 2014 - Sept. 2015                      | 680                                                                                                                                                                            | 963               | HDM4 modeled predictions                                                                                                                                                                                                                     |
| Long Term Target                           | Target                                                                                                                                                                         |                   | Justification for changes to targets or calculations (if any)                                                                                                                                                                                |
|                                            | Old                                                                                                                                                                            | New               |                                                                                                                                                                                                                                              |
|                                            | N/A                                                                                                                                                                            | 1501              | HDM4 modeled predictions                                                                                                                                                                                                                     |
| COMMENTS                                   |                                                                                                                                                                                |                   |                                                                                                                                                                                                                                              |
|                                            | MCC and MCA are considering the implications of the low traffic counts and delays in road project for end-of-compact targets, but have not set new targets as of this M&E Plan |                   |                                                                                                                                                                                                                                              |

**SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)**

Rapport Technique d'orientation Version Finale de la CNCE de l'AGEROUTE, avril 2012

Rapport à mi-parcours de la CNCE et Enquêtes O/D AGEROUTE, Janvier 2013

## 3.3. Indicator RRP.3. Average annual daily traffic (AADT) Tanaff - Kolda

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                                                          |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------|
| Indicator Name                                                                                      | Average annual daily traffic (AADT) Tanaff - Kolda                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          | Version                                                  |
| Common Indicator Number                                                                             | (R-10)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Current Indicator Number | All Previous Indicator Numbers                           |
| Level                                                                                               | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Classification           | Unit of Measure                                          |
| Detailed Definition                                                                                 | The average number and type of vehicles per day, averaged over different times (day and night) and over different seasons to arrive at an annualized daily average                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                                                          |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Reporting Period Covered | Post-Compact Period                                      |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          | NO                                                       |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          | NO                                                       |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          | NO                                                       |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          | NO                                                       |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                                                          |
| Justification for Including Indicator                                                               | Lot 2 of RN6 Tanaff - Kolda (72 km) and the Kolda Bridge will be rehabilitated by the Compact. The rehabilitation of this section will impact on traffic in this Southern part of Senegal by facilitating travelling to the Region of Ziguinchor and Sedhiou and within the City of Kolda. It will also foster trade with the Republics of Guinea and Guinea Bissau. RN#6 is also a strategic road that facilitates the transportation of local agricultural products and other goods and services from Casamance to other cities of Senegal, without having to go through Gambia. RN#6 is the only national land access to and from Casamance. |                          |                                                          |
| How does the indicator link to the ERR?                                                             | The increase in traffic on this section will help reduce the cost and duration of travels and promote the transportation and export of local agricultural products and other goods and services from Casamance to other Senegalese cities, without having to go through Gambia. RN#6 is the only national land access to and from Casamance.                                                                                                                                                                                                                                                                                                    |                          |                                                          |
| How does the indicator link to the BA?                                                              | The rehabilitation of RN6 Ziguinchor - Kounkané (around 256 km) and of the Kolda Bridge will benefit close to 120,000 households or 1,277,000 people in year 20. About 44,000 households, i.e. 474,000 people currently live within a radius of 5km on either side of RN#2. The rehabilitation of this road will help increase trade but also reduce the costs and duration of travels and daily consumption by 75% for people with less than \$2 a day, by 21% for those having between \$2 and \$4 and by 4% for those with more than \$4.                                                                                                    |                          |                                                          |
| How does the indicator link to the impact evaluation?                                               | The indicator will show the traffic trends between the pre-works period and post-works period. The cost and duration of travels and the trade in agricultural products will be affected, as will access to basic social services for the populations living within a radius of less than 5 kilometers on either side of the road.                                                                                                                                                                                                                                                                                                               |                          |                                                          |
| Justification for Disaggregations                                                                   | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                                                          |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                                                          |
| Entity Responsible for Collecting Data                                                              | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                                                          |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                   | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Phone                    | +221 77 333 89 16                                        |
|                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | E-mail                   | <a href="mailto:mndao@ageroute.sn">mndao@ageroute.sn</a> |
| Entity Responsible for the collection of primary Data                                               | AGEROUTE (2012) and the Consultant selected by MCA-S (2015)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                                                          |
| Detailed description of data collection methodology (including any calculations computed by source) | The indicator will be collected during the collection campaign of representative week in the month at the counting stations selected rationally based on whether there is local traffic or not. The count should distinguish between passenger traffic and cargo traffic and take into account the different silhouettes considered in the CNCE conducted by AGEROUTE. An estimation of potential induced traffic (generated and derivative) may be made by using statistical data (available at ANSD), the analysis of competing routes and the development programs planned for this zone.                                                    |                          |                                                          |

|                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                             | <p>The count is done on each post, by teams of three to four people with at least a 12th grade level of education, working in shifts throughout the day and using a count form designed and tested beforehand. Team members will be selected after prior training and full-scale tests.</p> <p>The calculation formula applied is : <math>T_{ij}^{ajustés} = a + b \cdot T_{ij}^{observés}</math></p> <p><math>T_{ij}</math> being the traffic between the origin i and the destination j and a, b being calibration constants.</p> |
| <p><b>If survey data, verbatim question(s) posed to respondent</b></p>                      | <p>The indicator will be collected at the end of the field survey by manual counting, and thus with no respondent. The data is collected by type of vehicle and the time of day.</p>                                                                                                                                                                                                                                                                                                                                                |
| <p><b>Detailed description of how data is transmitted from source to USAC</b></p>           | <p>The data is transmitted in the form of data base and analysis report showing the findings for the section under study.</p>                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>Frequency and timing of data acquisition</b></p>                                      | <p>The data will be classified by year and made available no later than March of that year for the traffic data of the preceding year.</p>                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>Names of verification sources</b></p>                                                 | <p><b>Means of verification :</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>National Road Traffic Counting Campaign and Origin / Destination Survey/ AGEROUTE</p>    | <p>Data base, analysis report, cross-tabulations</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p>Counting and Origin / Destination Survey in 2015</p>                                     | <p>Data base, analysis report, cross-tabulations</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p><b>Location of Data Storage</b></p>                                                      | <p>AGEROUTE and USAC-Senegal</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>INDICATOR DATA QUALITY</b></p>                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>Date of Data Quality Review</b></p>                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>November 2014</p>                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>Main findings of data quality review</b></p>                                          | <div style="text-align: center;"> <p><b>RRP.3</b></p> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p>1. VALIDITY – Does the data clearly represent the desired results?</p>                   | <p style="text-align: center;">Average Score<br/>(out of 3)</p> <p style="text-align: center;">Recommendations</p> <p>Ensure time consistency of estimation methods; Take nocturnal counting into account</p>                                                                                                                                                                                                                                                                                                                       |
| <p>2. RELIABILITY – Are the data collection procedures stable and consistent over time?</p> | <p style="text-align: center;">3,2</p> <p style="text-align: center;">3,3</p> <p style="text-align: center;">N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                |

|                                                                                  |                                                                                                                                                                                                                                                                                                |                          |                                                                      |                                                                                                                     |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 3. TIMELINESS- Are the data current and frequently collected?                    | 4,0                                                                                                                                                                                                                                                                                            | N/A                      |                                                                      |                                                                                                                     |
| 4. PRECISION – Does the data have an acceptable margin of error?                 | 3,2                                                                                                                                                                                                                                                                                            | N/A                      |                                                                      |                                                                                                                     |
| 5. INTEGRITY- Is the data free from manipulation?                                | 3,7                                                                                                                                                                                                                                                                                            | N/A                      |                                                                      |                                                                                                                     |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results? | 3,0                                                                                                                                                                                                                                                                                            | N/A                      |                                                                      |                                                                                                                     |
| 7. PRACTICABILITY- Is the data current and frequently collected?                 | 3,3                                                                                                                                                                                                                                                                                            | N/A                      |                                                                      |                                                                                                                     |
| <b>Overall assessment</b>                                                        | 3,2                                                                                                                                                                                                                                                                                            |                          |                                                                      |                                                                                                                     |
| <b>Action taken in response to data quality review</b>                           | - Collection procedure clarified and harmonized with AGEROUTE and incorporating nocturnal counting                                                                                                                                                                                             |                          |                                                                      |                                                                                                                     |
| <b>Known data limitations and significance</b>                                   | - The key limitation concerns the clarification of data in the light of the daily, weekly, monthly and seasonal variability of data                                                                                                                                                            |                          |                                                                      |                                                                                                                     |
| <b>Actions taken to address data limitations</b>                                 | - The monthly variability constraint that will be lifted on the assumption that during the month, the weeks and days reoccur in exactly the same way. The seasonal variability constraint will be lifted by integrating an extra-seasonal factor based on fuel consumption (super and diesel). |                          |                                                                      |                                                                                                                     |
| <b>INDICATOR BASELINE INFORMATION</b>                                            |                                                                                                                                                                                                                                                                                                |                          |                                                                      |                                                                                                                     |
| <b>Old Baseline</b>                                                              | 23                                                                                                                                                                                                                                                                                             | <b>Old Baseline Year</b> | 2011-2012                                                            | <b>Source of old Baseline</b><br>Refer To Results Survey on Traffic and Origin– Destination – AGEROUTE. Sept. 2012. |
| <b>New Baseline</b>                                                              | 301                                                                                                                                                                                                                                                                                            | <b>New Baseline Year</b> | 2007                                                                 | <b>Source of New Baseline</b><br>Report CNCE Surveys and O/D Surveys AGEROUTE 2012<br>Due Diligence study (2008)    |
| <b>Justification for Baseline Change (if any)</b>                                | MCC recalculated the ERR on the basis of the original Due Diligence study (2008) study due to concerns about the 2012 AGEROUTE study                                                                                                                                                           |                          |                                                                      |                                                                                                                     |
| <b>INDICATOR TARGET CALCULATIONS</b>                                             |                                                                                                                                                                                                                                                                                                |                          |                                                                      |                                                                                                                     |
| <b>YEAR 1</b>                                                                    | <b>Target</b>                                                                                                                                                                                                                                                                                  |                          | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                                     |
|                                                                                  | <b>Old</b>                                                                                                                                                                                                                                                                                     | <b>New</b>               |                                                                      |                                                                                                                     |
| Oct 2010 - Sept. 2011                                                            | N/A                                                                                                                                                                                                                                                                                            | N/A                      |                                                                      |                                                                                                                     |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                |                          |                                                                      |                                                                                                                     |
|                                                                                  | <b>YEAR 2</b>                                                                                                                                                                                                                                                                                  | <b>Old</b>               | <b>New</b>                                                           | <b>Justification for changes to targets or calculations (if any)</b>                                                |
| Oct 2011 - Sept. 2012                                                            | 23                                                                                                                                                                                                                                                                                             | 301                      |                                                                      | The updated economic modeling does not provide an estimated traffic count for Year 2.                               |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                |                          |                                                                      |                                                                                                                     |
|                                                                                  | <b>YEAR 3</b>                                                                                                                                                                                                                                                                                  | <b>Old</b>               | <b>New</b>                                                           | <b>Justification for changes to targets or calculations (if any)</b>                                                |
| Oct 2012 - Sept. 2013                                                            | N/A                                                                                                                                                                                                                                                                                            | N/A                      |                                                                      | A traffic count survey is not planned for 2013                                                                      |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                |                          |                                                                      |                                                                                                                     |
|                                                                                  | <b>YEAR 4</b>                                                                                                                                                                                                                                                                                  | <b>Old</b>               | <b>New</b>                                                           | <b>Justification for changes to targets or calculations (if any)</b>                                                |
| Oct 2013 - Sept. 2014                                                            | N/A                                                                                                                                                                                                                                                                                            | N/A                      |                                                                      | A traffic count survey is not planned for 2014                                                                      |

|                                                                                  |                                                                                                                                                                                |     |                                                               |                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Explanation of assumptions and inputs to target calculations<br>YEAR 5           | Old                                                                                                                                                                            | New | Justification for changes to targets or calculations (if any) | Observations on the road placed the 2012 study in doubt, AGEROUTE was unable to provide any details on how the study was done (who was sent, length of counts, methodology, etc.). Reverting to due diligence counts as last reliable count. |
|                                                                                  | 1490                                                                                                                                                                           | 562 |                                                               |                                                                                                                                                                                                                                              |
| Explanation of assumptions and inputs to target calculations<br>Long Term Target | Old                                                                                                                                                                            | New | Justification for changes to targets or calculations (if any) | Based on economic modeling, 2015                                                                                                                                                                                                             |
|                                                                                  | N/A                                                                                                                                                                            | 849 |                                                               |                                                                                                                                                                                                                                              |
| Explanation of assumptions and inputs to target calculations                     | MCC and MCA are considering the implications of the low traffic counts and delays in road project for end-of-compact targets, but have not set new targets as of this M&E Plan |     |                                                               |                                                                                                                                                                                                                                              |
| <b>COMMENTS</b>                                                                  | <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b>                                                                                                     |     |                                                               |                                                                                                                                                                                                                                              |
|                                                                                  | Rapport Technique d'orientation Version Finale de la CNCE de l'AGEROUTE, avril 2012                                                                                            |     |                                                               |                                                                                                                                                                                                                                              |
|                                                                                  | Rapport à mi-parcours de la CNCE et Enquêtes O/D AGEROUTE, Janvier 2013                                                                                                        |     |                                                               |                                                                                                                                                                                                                                              |

## 3.4. Indicator RRP.4. Average annual daily traffic (AADT) Kolda-Kouankané

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                                                          |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|--------------------------------|----------------------------------------------------------|
| Indicator Name                                                                                      | Average annual daily traffic (AADT) Kolda-Kouankané                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          | Version             | N° 03 /Sept. 2015              |                                                          |
| Common Indicator Number                                                                             | (R-10)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Current Indicator Number | RRP.4.              | All Previous Indicator Numbers | RRP.4.                                                   |
| Level                                                                                               | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Classification           | Level               | Unit of Measure                | Number                                                   |
| Detailed Definition                                                                                 | The average number and type of vehicles per day, averaged over different times (day and night) and over different seasons to arrive at an annualized daily average                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |                     |                                |                                                          |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Reporting Period Covered | Post-Compact Period |                                |                                                          |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          | NO                  |                                |                                                          |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          | NO                  |                                |                                                          |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          | NO                  |                                |                                                          |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          | NO                  |                                |                                                          |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                                                          |
| Justification for Including Indicator                                                               | Lot 3 of RN6 Kolda - Kouankané (64 km) will be rehabilitated by the Compact. The rehabilitation of this section will impact on traffic in this Southern part of Senegal by facilitating travelling to the Region of Ziguinchor and Sedhiou and promoting trade with the Republics of Guinea and Guinea Bissau. RN#6 is also a strategic road that facilitates the transportation of local agricultural products and other goods and services from Casamance to other cities of Senegal, without having to go through Gambia. RN#6 is the only national land access to and from Casamance.    |                          |                     |                                |                                                          |
| How does the indicator link to the ERR?                                                             | The increase in traffic on this section will help reduce the cost and duration of travels and promote the transportation and export of local agricultural products and other goods and services from Casamance to other Senegalese cities, without having to go through Gambia. RN#6 is the only national land access to and from Casamance. The economic rate of return is 12.3% over a period of 20 years.                                                                                                                                                                                 |                          |                     |                                |                                                          |
| How does the indicator link to the BA?                                                              | The rehabilitation of RN6 Ziguinchor - Kouankané (around 256 km) and of the Kolda Bridge will benefit close to 120,000 households or 1, 277, 000 people in year 20. About 44,000 households, i.e. 474,000 people currently live within a radius of 5km on either side of RN#6. The rehabilitation of this road will help increase trade but also reduce the costs and duration of travels and daily consumption by 75% for people with less than \$2 a day, by 21% for those having between \$2 and \$4 and by 4% for those with more than \$4.                                              |                          |                     |                                |                                                          |
| How does the indicator link to the impact evaluation?                                               | The indicator will show the traffic trends between the pre-works period and post-works period. The cost and duration of travels and the trade in agricultural products will be affected, as will access to basic social services for the populations living within a radius of less than 5 kilometers on either side of the road.                                                                                                                                                                                                                                                            |                          |                     |                                |                                                          |
| Justification for Disaggregations                                                                   | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                     |                                |                                                          |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                                                          |
| Entity Responsible for Collecting Data                                                              | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                     |                                |                                                          |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                   | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Phone                    | +221 77 333 89 16   | E-mail                         | <a href="mailto:mndao@ageroute.sn">mndao@ageroute.sn</a> |
| Entity Responsible for the collection of primary Data                                               | AGEROUTE (2012) and Consultant to be selected by MCA-S (2015)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     |                                |                                                          |
| Detailed description of data collection methodology (including any calculations computed by source) | The indicator will be collected during the collection campaign of representative week in the month at the counting stations selected rationally based on whether there is local traffic or not. The count should distinguish between passenger traffic and cargo traffic and take into account the different silhouettes considered in the CNCE conducted by AGEROUTE. An estimation of potential induced traffic (generated and derivative) may be made by using statistical data (available at ANSD), the analysis of competing routes and the development programs planned for this zone. |                          |                     |                                |                                                          |

|                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                           | <p>The count is done on each post, by teams of three to four people with at least a 12th grade level of education, working in shifts throughout the day and using a count form designed and tested beforehand. Team members will be selected after prior training and full-scale tests.</p> <p>The calculation formula applied is :<br/> <math display="block">T_{ij}^{ajustés} = a + b \cdot T_{ij}^{observés}</math>                     T<sub>ij</sub> being the traffic between the origin i and the destination j and a, b being calibration constants.</p> <p>The indicator will be collected at the end of the field survey by manual counting, and thus with no respondent. The data is collected by type of vehicle and the time of day.</p> <p>The data is transmitted in the form of data base and analysis report showing the findings for the section under study.</p> <p>Two measurements will be made: at the commencement (before the works in 2012) and at the end of the Compact.</p> |
| <p><b>If survey data, verbatim question(s) posed to respondent</b></p>                                                                    | <p><b>Means of verification</b></p> <p>Data base, analysis report, cross-tabulations<br/>                     Data base, analysis report, cross-tabulations</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Detailed description of how data is transmitted from source to USAC</b></p>                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Frequency and timing of data acquisition</b></p>                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Names of verification sources</b></p>                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>National Road Traffic Counting Campaign and Origin / Destination Survey/ AGEROUTE Counting and Origin / Destination Survey in 2015</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Location of Data Storage</b></p>                                                                                                    | <p>AGEROUTE and USAC-Senegal</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>INDICATOR DATA QUALITY</b></p>                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Date of Data Quality Review</b></p>                                                                                                 | <p>November 2014</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>Main findings of data quality review</b></p>                                                                                        | <p style="text-align: center;"><b>RRP.4</b></p> <p style="text-align: center;">Recommendations</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p>1. VALIDITY – Does the data clearly represent the desired results?</p>                                                                 | <p>Average Score (out of 4)</p> <p>3,2</p> <p>Ensure time consistency of estimation methods; Take the nocturnal counting into account</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>2. RELIABILITY – Are the data collection procedures stable and consistent over time?</p>                                               | <p>3,3</p> <p>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>3. TIMELINESS- Are the data current and frequently collected?</p>                                                                      | <p>4,0</p> <p>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

|                                                                                  |                                                                                                                                                                                                                                                                                                |                          |                                                                                |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------|
| 4. PRECISION – Does the data have an acceptable margin of error?                 | 3.2                                                                                                                                                                                                                                                                                            | N/A                      |                                                                                |
| 5. INTEGRITY- Is the data free from manipulation?                                | 3.7                                                                                                                                                                                                                                                                                            | N/A                      |                                                                                |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results? | 3.0                                                                                                                                                                                                                                                                                            | N/A                      |                                                                                |
| 7. PRACTICABILITY- Is the data current and frequently collected?                 | 3.3                                                                                                                                                                                                                                                                                            | N/A                      |                                                                                |
| <b>Overall assessment</b>                                                        | <b>3.4</b>                                                                                                                                                                                                                                                                                     |                          |                                                                                |
| <b>Action taken in response to data quality review</b>                           | - Collection procedure clarified and harmonized with AGEROUTE and incorporating nocturnal counting                                                                                                                                                                                             |                          |                                                                                |
| <b>Known data limitations and significance</b>                                   | - The key limitation concerns the clarification of data in the light of the daily, weekly, monthly and seasonal variability of data                                                                                                                                                            |                          |                                                                                |
| <b>Actions taken to address data limitations</b>                                 | - The monthly variability constraint that will be lifted on the assumption that during the month, the weeks and days reoccur in exactly the same way. The seasonal variability constraint will be lifted by integrating an extra-seasonal factor based on fuel consumption (super and diesel). |                          |                                                                                |
| <b>INDICATOR BASELINE INFORMATION</b>                                            |                                                                                                                                                                                                                                                                                                |                          |                                                                                |
| <b>Old Baseline</b>                                                              | 716                                                                                                                                                                                                                                                                                            | <b>Old Baseline Year</b> | 2011-2012                                                                      |
| <b>New Baseline</b>                                                              | 798                                                                                                                                                                                                                                                                                            | <b>New Baseline Year</b> | 2007                                                                           |
| <b>Justification for Baseline Change (if any)</b>                                | MCC recalculated the ERR on the basis of the original Due Diligence study (2008) study due to concerns about the 2012 AGEROUTE study                                                                                                                                                           |                          |                                                                                |
| <b>INDICATOR TARGET CALCULATIONS</b>                                             |                                                                                                                                                                                                                                                                                                |                          |                                                                                |
|                                                                                  | <b>Target</b>                                                                                                                                                                                                                                                                                  |                          |                                                                                |
| <b>YEAR 1</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                     | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b>           |
| Oct 2010 - Sept. 2011                                                            | N/A                                                                                                                                                                                                                                                                                            | N/A                      | The annual survey scheduled by AGEROUTE in 2010-2011 did not take place.       |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                |                          |                                                                                |
| <b>YEAR 2</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                     | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b>           |
| Oct 2011 - Sept. 2012                                                            | 716                                                                                                                                                                                                                                                                                            | 798                      | Updated economic model does not include an estimated traffic count for Year 2. |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                |                          |                                                                                |
| <b>YEAR 3</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                     | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b>           |
| Oct 2012 - Sept. 2013                                                            | N/A                                                                                                                                                                                                                                                                                            | N/A                      | A traffic count survey is not planned for 2013                                 |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                |                          |                                                                                |
| <b>YEAR 4</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                     | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b>           |
| Oct 2013 - Sept. 2014                                                            | N/A                                                                                                                                                                                                                                                                                            | N/A                      | A traffic count survey is not planned for 2014                                 |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                                                                                                                                                                                                                                                                |                          |                                                                                |
| <b>YEAR 5</b>                                                                    | <b>Old</b>                                                                                                                                                                                                                                                                                     | <b>New</b>               |                                                                                |

|                                                                                                                                                                                         |      |            |                                                               |                                                                      |                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------|---------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oct 2014 - Sept. 2015                                                                                                                                                                   | 1850 | 1426       | Justification for changes to targets or calculations (if any) |                                                                      | Observations on the road placed the 2012 study in doubt, AGEROUTE was unable to provide any details on how the study was done (who was sent, length of counts, methodology, etc.). Reverting to due diligence counts as last reliable count. |
| <b>Explanation of assumptions and inputs to target calculations</b>                                                                                                                     |      |            |                                                               |                                                                      |                                                                                                                                                                                                                                              |
| <b>Long Term Target</b>                                                                                                                                                                 |      | <b>Old</b> | <b>New</b>                                                    | <b>Justification for changes to targets or calculations (if any)</b> |                                                                                                                                                                                                                                              |
|                                                                                                                                                                                         |      | N/A        | 2095                                                          | Based on the ERR model                                               |                                                                                                                                                                                                                                              |
| <b>Explanation of assumptions and inputs to target calculations</b>                                                                                                                     |      |            |                                                               |                                                                      |                                                                                                                                                                                                                                              |
| COMMENTS MCC and MCA are considering the implications of the low traffic counts and delays in road project for end-of-compact targets, but have not set new targets as of this M&E Plan |      |            |                                                               |                                                                      |                                                                                                                                                                                                                                              |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b>                                                                                                              |      |            |                                                               |                                                                      |                                                                                                                                                                                                                                              |
| Rapport Technique d'orientation Version Finale de la CNCE de l'AGEROUTE, avril 2012                                                                                                     |      |            |                                                               |                                                                      |                                                                                                                                                                                                                                              |
| Rapport à mi-parcours de la CNCE et Enquêtes O/D AGEROUTE, Janvier 2013                                                                                                                 |      |            |                                                               |                                                                      |                                                                                                                                                                                                                                              |

3.5. Indicator RRP.5 Rate of change in the duration of travel time on RN#2

| INDICATOR BASIC DETAILS                               |                                                                                                                                                                                                                                                                                                                                                                             |                          |                     |                                |                    |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|--------------------------------|--------------------|
| Indicator Name                                        | Rate of change in the duration of travel time on RN#2                                                                                                                                                                                                                                                                                                                       |                          | Version             |                                | N° 03 / Sept. 2015 |
| Common Indicator Number                               | Not Applicable                                                                                                                                                                                                                                                                                                                                                              | Current Indicator Number | RRP.5.              | All Previous Indicator Numbers | RRP.5.             |
| Level                                                 | Outcome                                                                                                                                                                                                                                                                                                                                                                     | Classification           | Level               | Unit of Measure*               | Percentage         |
| Detailed Definition                                   | Rate of reduction of travel time on RN#2. Travel time will be estimated in terms of percentage of reduction or increase of the travel duration in view of the differences in routes and the difficulty to express it in time (hours, minutes)                                                                                                                               |                          |                     |                                |                    |
| Frequency of Reporting                                | ANNUAL                                                                                                                                                                                                                                                                                                                                                                      | Reporting Period Covered | Post-Compact Period |                                |                    |
| Disaggregations                                       | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                          | NO                       |                     |                                |                    |
|                                                       | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                             | NO                       |                     |                                |                    |
|                                                       | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                          | NO                       |                     |                                |                    |
|                                                       | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                        | NO                       |                     |                                |                    |
| INDICATOR JUSTIFICATION DETAILS                       |                                                                                                                                                                                                                                                                                                                                                                             |                          |                     |                                |                    |
| Justification for Including Indicator                 | The indicator provides information on the reduction of travel time resulting from the improvement of the quality of rehabilitated roads. Actually, with the degree of degradation of RM2 Richard Toll - Ndioum, travel time increases. However, after the rehabilitation of the NR, the beneficiaries will have their journeys improved because of the reduction in travel. |                          |                     |                                |                    |
| How does the indicator link to the ERR?               | Not Applicable                                                                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                    |
| How does the indicator link to the BA?                | Not Applicable                                                                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                    |
| How does the indicator link to the impact evaluation? | Not Applicable                                                                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                    |
| Justification for Disaggregations                     | Not Applicable                                                                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                    |

|                                                                                                                                                                                                                                                                                                                                         |  |                       |                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------|-------------------|
| <b>INDICATOR ACQUISITION PLAN</b>                                                                                                                                                                                                                                                                                                       |  |                       |                   |
| Entity Responsible for Collecting Data                                                                                                                                                                                                                                                                                                  |  |                       |                   |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                                                                                                                                                                                                                                                       |  | Phone                 | E-mail            |
| Mamadou NDAO                                                                                                                                                                                                                                                                                                                            |  | +221 77 333 89 16     | mndao@ageroute.sn |
| Entity Responsible for the collection of primary Data                                                                                                                                                                                                                                                                                   |  |                       |                   |
| MCA-S in 2012 and 2015                                                                                                                                                                                                                                                                                                                  |  |                       |                   |
| Detailed description of data collection methodology (including any calculations computed by source)                                                                                                                                                                                                                                     |  |                       |                   |
| Calculation of Rate of change of travel time. Done using data from investigation (CNCE AGEROUTE 2012) and final (MCA -S Year 5). Made from the survey of travel time conducted by the MCA- S AGEROUTE on demand in 2012 at the CNCE. in 2015), MCA will conduct the same survey of travel time (see methodology course time / AGEROUTE) |  |                       |                   |
| If survey data, verbatim question(s) posed to respondent                                                                                                                                                                                                                                                                                |  |                       |                   |
| Cf travel time surveys                                                                                                                                                                                                                                                                                                                  |  |                       |                   |
| Detailed description of how data is transmitted from source to USAC                                                                                                                                                                                                                                                                     |  |                       |                   |
| Frequency and timing of data acquisition                                                                                                                                                                                                                                                                                                |  |                       |                   |
| Twice: Years 2 (2012) and 5 (2015)                                                                                                                                                                                                                                                                                                      |  |                       |                   |
| Names of verification sources                                                                                                                                                                                                                                                                                                           |  |                       |                   |
| Origin and Destination Survey interpretation Report and travel time survey 2012                                                                                                                                                                                                                                                         |  | Means of verification |                   |
| Origin and Destination Survey interpretation Report and travel time survey in year 5                                                                                                                                                                                                                                                    |  | CNCE of AGEROUTE 2012 |                   |
| Location of Data Storage                                                                                                                                                                                                                                                                                                                |  | USAC-Senegal.         |                   |
| INDICATOR DATA QUALITY                                                                                                                                                                                                                                                                                                                  |  |                       |                   |
| Date of Data Quality Review                                                                                                                                                                                                                                                                                                             |  |                       |                   |
| November 2014                                                                                                                                                                                                                                                                                                                           |  |                       |                   |
| Average Score (out of 4)                                                                                                                                                                                                                                                                                                                |  | Recommendations       |                   |
| Main findings of data quality review                                                                                                                                                                                                                                                                                                    |  |                       |                   |

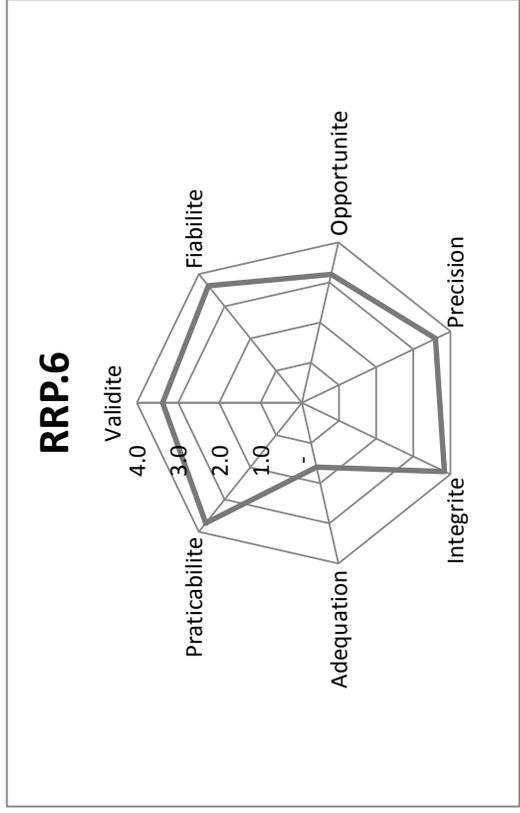
|                                                                                      |                                                                                                                                                                            |                          |                                                                                                 |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------|
| 1. VALIDITY – Does the data clearly represent the desired results?                   | 3,4                                                                                                                                                                        | N/A                      |                                                                                                 |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? | 3,6                                                                                                                                                                        | N/A                      |                                                                                                 |
| 3. TIMELINESS- Are the data current and frequently collected?                        | 3,2                                                                                                                                                                        | N/A                      |                                                                                                 |
| 4. PRECISION – Does the data have an acceptable margin of error?                     | 3,6                                                                                                                                                                        | N/A                      |                                                                                                 |
| 5. INTEGRITY- Is the data free from manipulation?                                    | 3,8                                                                                                                                                                        | N/A                      |                                                                                                 |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?     | 1,6                                                                                                                                                                        | N/A                      |                                                                                                 |
| 7. PRACTICABILITY- Is the data current and frequently collected?                     | 3,7                                                                                                                                                                        | N/A                      |                                                                                                 |
| <b>Overall assessment</b>                                                            | <b>3,3</b>                                                                                                                                                                 |                          |                                                                                                 |
| <b>Action taken in response to data quality review</b>                               | - Collection procedure clarified and harmonized with AGEROUTE                                                                                                              |                          |                                                                                                 |
| <b>Known data limitations and significance</b>                                       | -                                                                                                                                                                          |                          |                                                                                                 |
| <b>Actions taken to address data limitations</b>                                     | Not Applicable                                                                                                                                                             |                          |                                                                                                 |
| <b>INDICATOR BASELINE INFORMATION</b>                                                |                                                                                                                                                                            |                          |                                                                                                 |
| <b>Old Baseline</b>                                                                  | 0%                                                                                                                                                                         | <b>Old Baseline Year</b> | 2011-2012                                                                                       |
| <b>New Baseline</b>                                                                  | 0%                                                                                                                                                                         | <b>New Baseline Year</b> | 2011-2012                                                                                       |
| <b>Justification for Baseline Change (if any)</b>                                    | The baseline year is 2011-2012 during which the Origin / Destination study was undertaken by AGEROUTE on the sections whose rehabilitation will be financed with MCC funds |                          |                                                                                                 |
| <b>INDICATOR TARGET CALCULATIONS</b>                                                 |                                                                                                                                                                            |                          |                                                                                                 |
| <b>YEAR 1</b><br>Oct 2010 - Sept. 2011                                               | <b>Target</b>                                                                                                                                                              |                          | <b>Justification for changes to targets or calculations (if any)</b>                            |
|                                                                                      | <b>Old</b>                                                                                                                                                                 | <b>New</b>               |                                                                                                 |
|                                                                                      | N/A                                                                                                                                                                        | N/A                      | The baseline survey of the Roads Rehabilitation Project was conducted in 2012 for RN#2 and RN#6 |
| <b>Explanation of assumptions and inputs to target calculations</b>                  |                                                                                                                                                                            |                          |                                                                                                 |
| <b>YEAR 2</b><br>Oct 2011 - Sept. 2012                                               | <b>Old</b>                                                                                                                                                                 | <b>New</b>               | <b>Justification for changes to targets or calculations (if any)</b>                            |
|                                                                                      | 0%                                                                                                                                                                         | 0%                       |                                                                                                 |
| <b>Explanation of assumptions and inputs to target calculations</b>                  |                                                                                                                                                                            |                          |                                                                                                 |
| <b>YEAR 3</b>                                                                        | <b>Old</b>                                                                                                                                                                 | <b>New</b>               |                                                                                                 |
|                                                                                      |                                                                                                                                                                            |                          |                                                                                                 |

|                                                                     |      |      |                                                               |
|---------------------------------------------------------------------|------|------|---------------------------------------------------------------|
| Oct 2012 - Sept. 2013                                               | N/A  | N/A  | Justification for changes to targets or calculations (if any) |
| Explanation of assumptions and inputs to target calculations        |      |      |                                                               |
| YEAR 4                                                              | Old  | New  | Justification for changes to targets or calculations (if any) |
| Oct 2013 - Sept. 2014                                               | N/A  | N/A  |                                                               |
| Explanation of assumptions and inputs to target calculations        |      |      |                                                               |
| YEAR 5                                                              | Old  | New  | Justification for changes to targets or calculations (if any) |
| Oct 2014 - Sept. 2015                                               | -15% | -15% |                                                               |
| Explanation of assumptions and inputs to target calculations        |      |      |                                                               |
| Long Term Target                                                    | Old  | New  | Justification for changes to targets or calculations (if any) |
|                                                                     | -15% | -15% |                                                               |
| Explanation of assumptions and inputs to target calculations        |      |      |                                                               |
| COMMENTS                                                            |      |      |                                                               |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |      |      |                                                               |
|                                                                     |      |      |                                                               |

## 3.6. Indicator RRP.6. Rate of change in the duration of travel time on the RN#6

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                            |                          |                     |                                |                                                            |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|--------------------------------|------------------------------------------------------------|
| Indicator Name                                                                                      | Rate of change in the duration of travel time on the RN#6                                                                                                                                                                                                                                                                                                                                  |                          | Version             | N° 03 / Sept 2015              |                                                            |
| Common Indicator Number                                                                             | Not Applicable                                                                                                                                                                                                                                                                                                                                                                             | Current Indicator Number | RRP.6.              | All Previous Indicator Numbers | RRP.6.                                                     |
| Level                                                                                               | Outcome                                                                                                                                                                                                                                                                                                                                                                                    | Classification           | Level               | Unit of Measure*               | Percentage                                                 |
| Detailed Definition                                                                                 | Rate of reduction of travel time on RN#6. Travel time will be estimated in terms of percentage of reduction or increase of the travel duration                                                                                                                                                                                                                                             |                          |                     |                                |                                                            |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                     | Reporting Period Covered | Post-Compact Period |                                |                                                            |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                         | NO                       |                     |                                |                                                            |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                            | NO                       |                     |                                |                                                            |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                         | NO                       |                     |                                |                                                            |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                       | NO                       |                     |                                |                                                            |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                            |                          |                     |                                |                                                            |
| Justification for Including Indicator                                                               | The indicator provides information on the reduction of travel time resulting from the improvement of the quality of rehabilitated roads. Actually, with the degree of degradation of RN6 Ziguinchor – Kounkané, travel time increases. However, after the rehabilitation of the RN6, the beneficiaries will have their conditions of movement improved because of the reduction in travel. |                          |                     |                                |                                                            |
| How does the indicator link to the ERR?                                                             | Not Applicable                                                                                                                                                                                                                                                                                                                                                                             |                          |                     |                                |                                                            |
| How does the indicator link to the BA?                                                              | Not Applicable                                                                                                                                                                                                                                                                                                                                                                             |                          |                     |                                |                                                            |
| How does the indicator link to the impact evaluation?                                               | Not Applicable                                                                                                                                                                                                                                                                                                                                                                             |                          |                     |                                |                                                            |
| Justification for Disaggregations                                                                   | Not Applicable                                                                                                                                                                                                                                                                                                                                                                             |                          |                     |                                |                                                            |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                            |                          |                     |                                |                                                            |
| Entity Responsible for Collecting Data                                                              | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                   |                          |                     |                                |                                                            |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                   | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                               | Phone                    | +221 77 333 89 16   | E-mail                         | <a href="mailto:mndaou@ageroute.sn">mndaou@ageroute.sn</a> |
| Entity Responsible for the collection of primary Data                                               | MCA-S in 2012 and 2015                                                                                                                                                                                                                                                                                                                                                                     |                          |                     |                                |                                                            |
| Detailed description of data collection methodology (including any calculations computed by source) | Done using data from investigation (CNCE AGEROUTE 2012) and final (MCA -S Year 5). Made from the survey of travel time conducted by the MCA- S AGEROUTE on demand in 2012 at the CNCE. in 2015), MCA will conduct the same survey of travel time (see methodology course time / AGEROUTE)                                                                                                  |                          |                     |                                |                                                            |
| If survey data, verbatim question(s) posed to respondent                                            |                                                                                                                                                                                                                                                                                                                                                                                            |                          |                     |                                |                                                            |
| Detailed description of how data is transmitted from source to USAC                                 |                                                                                                                                                                                                                                                                                                                                                                                            |                          |                     |                                |                                                            |
| Frequency and timing of data acquisition                                                            | Twice: Years 2 and 5                                                                                                                                                                                                                                                                                                                                                                       |                          |                     |                                |                                                            |
| Names of verification sources                                                                       | Means of verification                                                                                                                                                                                                                                                                                                                                                                      |                          |                     |                                |                                                            |

|                                                                                      |                          |                           |
|--------------------------------------------------------------------------------------|--------------------------|---------------------------|
| Origin and Destination Survey interpretation Report and survey data base             |                          | CNCE of AGEROUTE 2012     |
| Origin and Destination Survey interpretation Report and survey data base in year 5   |                          | MCA-Senegal.              |
| Location of Data Storage                                                             |                          | AGEROUTE and USAC-Senegal |
| <b>INDICATOR DATA QUALITY</b>                                                        |                          |                           |
| Date of Data Quality Review                                                          |                          |                           |
| November 2014                                                                        |                          |                           |
| <b>Main findings of data quality review</b>                                          | Average Score (out of 4) | Recommendations           |
| 1. VALIDITY – Does the data clearly represent the desired results?                   | 3,4                      | None                      |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? | 3,6                      | None                      |
| 3. TIMELINESS- Are the data current and frequently collected?                        | 3,2                      | None                      |
| 4. PRECISION – Does the data have an acceptable margin of error?                     | 3,6                      | None                      |
| 5. INTEGRITY- Is the data free from manipulation?                                    | 3,8                      | None                      |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?     | 1,6                      | None                      |
| 7. PRACTICABILITY- Is the data current and frequently collected?                     | 3,7                      | None                      |
| <b>Overall assessment</b>                                                            | <b>3,3</b>               |                           |

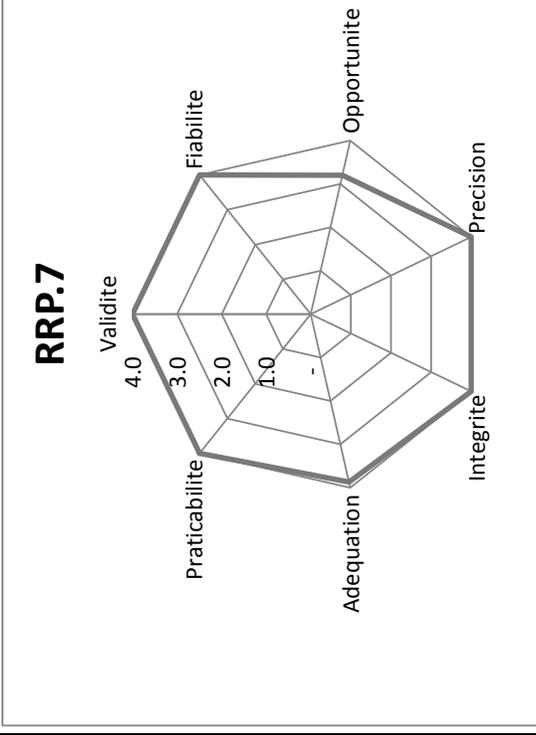


|                                                              |    |                                                                                                                                                                             |                                                                                                                                                                                                         |
|--------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action taken in response to data quality review              |    | - Collection procedure clarified and harmonized with AGEROUTE                                                                                                               |                                                                                                                                                                                                         |
| Known data limitations and significance                      |    | Not Applicable                                                                                                                                                              |                                                                                                                                                                                                         |
| Actions taken to address data limitations                    |    | Not Applicable                                                                                                                                                              |                                                                                                                                                                                                         |
| <b>INDICATOR BASELINE INFORMATION</b>                        |    |                                                                                                                                                                             |                                                                                                                                                                                                         |
| Old Baseline                                                 | 0% | Old Baseline Year                                                                                                                                                           | 2011-2012<br>Source of old Baseline<br>Data Bases and Report of Baseline Surveys of the Roads Rehabilitation Project done in 2012                                                                       |
| New Baseline                                                 | 0% | New Baseline Year                                                                                                                                                           | 2011-2012<br>Source of New Baseline<br>Data Bases and Report of Baseline Surveys of the Roads Rehabilitation Project done in 2012<br>Origin and Destination Survey Report and database survey in year 5 |
| Justification for Baseline Change (if any)                   |    | The baseline year is 2011-2012 during which the Origin / Destination study was undertaken by AGEROUTE on the sections whose rehabilitation will be financed with MCC funds. |                                                                                                                                                                                                         |
| <b>INDICATOR TARGET CALCULATIONS</b>                         |    |                                                                                                                                                                             |                                                                                                                                                                                                         |
|                                                              |    | <b>Target</b>                                                                                                                                                               |                                                                                                                                                                                                         |
| <b>YEAR 1</b>                                                |    | <b>Old</b>                                                                                                                                                                  | <b>New</b>                                                                                                                                                                                              |
| Oct 2010 - Sept. 2011                                        |    | N/A                                                                                                                                                                         | N/A                                                                                                                                                                                                     |
| Explanation of assumptions and inputs to target calculations |    | Justification for changes to targets or calculations (if any)                                                                                                               |                                                                                                                                                                                                         |
| <b>YEAR 2</b>                                                |    | <b>Old</b>                                                                                                                                                                  | <b>New</b>                                                                                                                                                                                              |
| Oct 2011 - Sept. 2012                                        |    | 0%                                                                                                                                                                          | 0%                                                                                                                                                                                                      |
| Explanation of assumptions and inputs to target calculations |    | Justification for changes to targets or calculations (if any)                                                                                                               |                                                                                                                                                                                                         |
| <b>YEAR 3</b>                                                |    | <b>Old</b>                                                                                                                                                                  | <b>New</b>                                                                                                                                                                                              |
| Oct 2012 - Sept. 2013                                        |    | N/A                                                                                                                                                                         | N/A                                                                                                                                                                                                     |
| Explanation of assumptions and inputs to target calculations |    | Justification for changes to targets or calculations (if any)                                                                                                               |                                                                                                                                                                                                         |
| <b>YEAR 4</b>                                                |    | <b>Old</b>                                                                                                                                                                  | <b>New</b>                                                                                                                                                                                              |
| Oct 2013 - Sept. 2014                                        |    | N/A                                                                                                                                                                         | N/A                                                                                                                                                                                                     |
| Explanation of assumptions and inputs to target calculations |    | Justification for changes to targets or calculations (if any)                                                                                                               |                                                                                                                                                                                                         |
| <b>YEAR 5</b>                                                |    | <b>Old</b>                                                                                                                                                                  | <b>New</b>                                                                                                                                                                                              |
| Oct 2014 - Sept. 2015                                        |    | -50%                                                                                                                                                                        | -50%                                                                                                                                                                                                    |
| Explanation of assumptions and inputs to target calculations |    | Justification for changes to targets or calculations (if any)                                                                                                               |                                                                                                                                                                                                         |
| <b>Long Term Target</b>                                      |    | <b>Old</b>                                                                                                                                                                  | <b>New</b>                                                                                                                                                                                              |
|                                                              |    | -50%                                                                                                                                                                        | -50%                                                                                                                                                                                                    |
| Explanation of assumptions and inputs to target calculations |    | Justification for changes to targets or calculations (if any)                                                                                                               |                                                                                                                                                                                                         |

|                                                                            |  |
|----------------------------------------------------------------------------|--|
| <b>COMMENTS</b>                                                            |  |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |  |

## 3.7. Indicator RRP.7.Roughness (RN2)

| INDICATOR BASIC DETAILS                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                 |                     |
|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------|
| Indicator Name                                                                                                | Roughness (RN2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Version                         | N° 03 / Sept 2015   |
| Common Indicator Number                                                                                       | (R-9)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | All Previous Indicator Numbers  | RRP.7.              |
| Level                                                                                                         | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Unit of Measure*                | m/km                |
| <b>Detailed Definition</b>                                                                                    | The measure of the roughness of the road surface, in meters of height per kilometer of distance traveled (this instance of the indicator relates to the RN2 in Senegal)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                     |
| <b>Frequency of Reporting</b>                                                                                 | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Reporting Period Covered</b> | Post-Compact Period |
| <b>Disaggregations</b>                                                                                        | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                 | NO                  |
|                                                                                                               | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                 | NO                  |
|                                                                                                               | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                 | NO                  |
|                                                                                                               | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                 | NO                  |
| INDICATOR JUSTIFICATION DETAILS                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                 |                     |
| <b>Justification for Including Indicator</b>                                                                  | Roughness is an indicator used to measure road quality. It calculates the travel suspension of a car when it covers a kilometer of road at a speed of 80 km/h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                 |                     |
| <b>How does the indicator link to the ERR?</b>                                                                | The quality of the road has a significant impact on the use of the road and thus on the traffic. The latter is strongly correlated with profitability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |                     |
| <b>How does the indicator link to the BA?</b>                                                                 | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                 |                     |
| <b>How does the indicator link to the impact evaluation?</b>                                                  | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                 |                     |
| <b>Justification for Disaggregations</b>                                                                      | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                 |                     |
| INDICATOR ACQUISITION PLAN                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                 |                     |
| <b>Entity Responsible for Collecting Data</b>                                                                 | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |                     |
| <b>Point of Contact Responsible for Collecting the Data at AGEROUTE:</b>                                      | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Phone</b>                    | +221 77 333 89 16   |
| <b>Entity Responsible for the collection of primary Data</b>                                                  | AGEROUTE in 2012 ; Firm and Engineer RN2 in 2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                 |                     |
| <b>Detailed description of data collection methodology</b><br>(including any calculations computed by source) | There is need to distinguish between the Roughness measurements made on the basis of the progression of works and which facilitates the acceptance of the surfacing works and the Roughness measurements to be made during the provisional delivery and which will help characterize the initial state of the pavement. To ensure that these measurements are completely accurate, the calibration of high-performance measurement devices on the control road segments at least 500 long, will be made. Surveys will be conducted on these control sections (or calibration instruments like the Dipstick used) to determine the Roughness before measuring it with the help of the high-performance instrument in order to calibrate them. The use of Roughness values along each of the road segments of RN2 will help define the initial state of the road. This Roughness value will be compared to the one measured by AGEROUTE after the works are completed to determine the improvement due to the rehabilitation project. It will then be compared with the periodic measurements to be done by AGEROUTE to judiciously define the maintenance program: Refer to Roughness calculation principle extract of: Roughness measurement campaign on the classified road network, Rapport de phase, Phase Report AGEROUTE /MSILAB 2012. |                                 |                     |
| <b>If survey data, verbatim question(s) posed to respondent</b>                                               | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                 |                     |

|                                                                                   |                                                                                                                                  |                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Detailed description of how data is transmitted from source to USAC</b></p> | <p>The data will be provided by the enterprise in charge of construction and by the Engineer in charge of works supervision.</p> |                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
| <p><b>Frequency and timing of data acquisition</b></p>                            | <p>Twice: Before the works (2012) and after the works (2015)</p>                                                                 |                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
| <p><b>Names of verification sources</b></p>                                       | <p><b>Means of verification</b></p>                                                                                              |                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
| <p>Report of the Roads Rehabilitation Firm</p>                                    | <p>Table of indicators, Roughness measurement data</p>                                                                           |                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
| <p>Report of the Engineer in charge of supervision</p>                            | <p>Table of indicators, Roughness measurement data</p>                                                                           |                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
| <p>PMU AGEROUTE Report</p>                                                        | <p>Table of indicators, Roughness measurement data</p>                                                                           |                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
| <p><b>Location of Data Storage</b></p>                                            | <p>AGEROUTE and USAC-Senegal</p>                                                                                                 |                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
| <p><b>INDICATOR DATA QUALITY</b></p>                                              |                                                                                                                                  |                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
| <p><b>Date of Data Quality Review</b></p>                                         | <p>November 2014</p>                                                                                                             |                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
| <p><b>Main findings of data quality review</b></p>                                | <p>Average Score (out of 4)</p>                                                                                                  | <p>Recommendations</p>                                                                                                                                                        |  <p><b>RRP.7</b></p> <p>Validite<br/>4.0<br/>3.0<br/>2.0<br/>1.0<br/>-</p> <p>Practicabilite<br/>Fiabilite<br/>Opportunite<br/>Precision<br/>Integrite<br/>Adequation</p> |
| <p>1. VALIDITY – Does the data clearly represent the desired results?</p>         | <p>4,0</p>                                                                                                                       | <p>Incentives to ensure that construction firms upgrade the roads to expected Roughness standards trigger hopes that this indicator and its data will be of good quality.</p> |                                                                                                                                                                                                                                                             |

|                                                                                                                                                                                                 |            |                                                               |                                                                                                                                                                                                                                                                                         |                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time?                                                                                                            |            | 4,0                                                           | N/A                                                                                                                                                                                                                                                                                     |                               |
| 3. TIMELINESS- Are the data current and frequently collected?                                                                                                                                   |            | 3,2                                                           | N/A                                                                                                                                                                                                                                                                                     |                               |
| 4. PRECISION – Does the data have an acceptable margin of error?                                                                                                                                |            | 4,0                                                           | N/A                                                                                                                                                                                                                                                                                     |                               |
| 5. INTEGRITY- Is the data free from manipulation?                                                                                                                                               |            | 4,0                                                           | N/A                                                                                                                                                                                                                                                                                     |                               |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?                                                                                                                |            | 3,9                                                           | N/A                                                                                                                                                                                                                                                                                     |                               |
| 7. PRACTICABILITY- Is the data current and frequently collected?                                                                                                                                |            | 4,0                                                           | N/A                                                                                                                                                                                                                                                                                     |                               |
| <b>Overall assessment</b>                                                                                                                                                                       |            | <b>3,9</b>                                                    |                                                                                                                                                                                                                                                                                         |                               |
| <b>Action taken in response to data quality review</b>                                                                                                                                          |            | - Collection procedure clarified and harmonized with AGEROUTE |                                                                                                                                                                                                                                                                                         |                               |
| <b>Known data limitations and significance</b>                                                                                                                                                  |            | Not Applicable                                                |                                                                                                                                                                                                                                                                                         |                               |
| <b>Actions taken to address data limitations</b>                                                                                                                                                |            | Not Applicable                                                |                                                                                                                                                                                                                                                                                         |                               |
| <b>INDICATOR BASELINE INFORMATION</b>                                                                                                                                                           |            |                                                               |                                                                                                                                                                                                                                                                                         |                               |
| <b>Old Baseline</b>                                                                                                                                                                             | 3.2        | <b>Old Baseline Year</b>                                      | 2011-2012                                                                                                                                                                                                                                                                               | <b>Source of old Baseline</b> |
| <b>New Baseline</b>                                                                                                                                                                             | 3.2        | <b>New Baseline Year</b>                                      | 2011-2012                                                                                                                                                                                                                                                                               | <b>Source of New Baseline</b> |
| <b>Justification for Baseline Change (if any)</b>                                                                                                                                               |            |                                                               |                                                                                                                                                                                                                                                                                         |                               |
| Compact, initial source not available<br>MCC Report, October 2012 : ID-37 – ERR Indicators – Roughness data collection, traffic counts and calculation of VOC and TTC with sensitivity analysis |            |                                                               |                                                                                                                                                                                                                                                                                         |                               |
| <b>INDICATOR TARGET CALCULATIONS</b>                                                                                                                                                            |            |                                                               |                                                                                                                                                                                                                                                                                         |                               |
| <b>Target</b>                                                                                                                                                                                   |            |                                                               |                                                                                                                                                                                                                                                                                         |                               |
| <b>YEAR 1</b>                                                                                                                                                                                   | <b>Old</b> | <b>New</b>                                                    | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                                                                                                    |                               |
| Oct 2010 - Sept. 2011                                                                                                                                                                           | N/A        | N/A                                                           | The Roughness measurement study was not done in 2010-2011                                                                                                                                                                                                                               |                               |
| <b>Explanation of assumptions and inputs to target calculations</b>                                                                                                                             |            |                                                               |                                                                                                                                                                                                                                                                                         |                               |
| <b>YEAR 2</b>                                                                                                                                                                                   | <b>Old</b> | <b>New</b>                                                    | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                                                                                                    |                               |
| Oct 2011 - Sept. 2012                                                                                                                                                                           | 3.2        | 3.2                                                           | The MCC Report, October 2012 (ID-37 – ERR Indicators – Roughness data collection, traffic counts and calculation of VOC and TTC with sensitivity analysis) gives an Roughness of 9.4 (for 5.6 km or 5%), of 4.0 (for 4 km or 4%) and 2.8 (for 103.6 km or 91%), i.e. an average of 3.2. |                               |
| <b>Explanation of assumptions and inputs to target calculations</b>                                                                                                                             |            |                                                               |                                                                                                                                                                                                                                                                                         |                               |
| <b>YEAR 3</b>                                                                                                                                                                                   | <b>Old</b> | <b>New</b>                                                    | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                                                                                                    |                               |
| Oct 2012 - Sept. 2013                                                                                                                                                                           | N/A        | N/A                                                           | New measurements of the Roughness will not be taken until the end of the compact                                                                                                                                                                                                        |                               |
| <b>Explanation of assumptions and inputs to target calculations</b>                                                                                                                             |            |                                                               |                                                                                                                                                                                                                                                                                         |                               |
| <b>YEAR 4</b>                                                                                                                                                                                   | <b>Old</b> | <b>New</b>                                                    | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                                                                                                    |                               |
|                                                                                                                                                                                                 |            |                                                               | New measurements of the Roughness will not be taken until the end of the compact                                                                                                                                                                                                        |                               |

|                                                                                                                                                        |     |     |                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|---------------------------------------------------------------|
| Oct 2013 - Sept. 2014                                                                                                                                  | N/A | N/A | Justification for changes to targets or calculations (if any) |
| Explanation of assumptions and inputs to target calculations                                                                                           |     |     |                                                               |
| YEAR 5                                                                                                                                                 | Old | New | Justification for changes to targets or calculations (if any) |
| Oct 2014 - Sept. 2015                                                                                                                                  | 2.4 | 2.4 |                                                               |
| Explanation of assumptions and inputs to target calculations                                                                                           |     |     |                                                               |
| Long Term Target                                                                                                                                       | Old | New | Justification for changes to targets or calculations (if any) |
|                                                                                                                                                        | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations                                                                                           |     |     |                                                               |
| COMMENTS                                                                                                                                               |     |     |                                                               |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b>                                                                             |     |     |                                                               |
| Roughness Calculation : Roughness Principle Calculation, AGEROUTE, 2012                                                                                |     |     |                                                               |
| MCC Report, October 2012 (TD-37 – ERR Indicators – Roughness data collection, traffic counts and calculation of VOC and TTC with sensitivity analysis) |     |     |                                                               |

## 3.8. Indicator RRP.8.Roughness (RN6)

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                     |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|
| Indicator Name                                                                                      | Roughness (RN6)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Version                  | N° 03 / Sept 2015   |
| Common Indicator Number                                                                             | (R-9)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Current Indicator Number | RRP.8.              |
| Level                                                                                               | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Classification           | Level               |
| Detailed Definition                                                                                 | The measure of the roughness of the road surface, in meters of height per kilometer of distance traveled (this instance of the indicator relates to the RN6 in Senegal)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                     |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Reporting Period Covered | Post-Compact Period |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          | NO                  |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          | NO                  |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          | NO                  |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          | NO                  |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                     |
| Justification for Including Indicator                                                               | Roughness is an indicator used to measure road quality. It calculates the travel suspension of a car when it covers a kilometer of road at a speed of 80 km/h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                     |
| How does the indicator link to the ERR?                                                             | The quality of the road has a significant impact on the use of the road and thus on the traffic. The latter is strongly correlated with profitability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |                     |
| How does the indicator link to the BA?                                                              | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                     |
| How does the indicator link to the impact evaluation?                                               | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                     |
| Justification for Disaggregations                                                                   | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                     |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                     |
| Entity Responsible for Collecting Data                                                              | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                     |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                   | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Phone                    | +221 77 333 89 16   |
| Entity Responsible for the collection of primary Data                                               | AGEROUTE in 2012 ; Engineer and Firm RN6 in 2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | E-mail                   | mndao@ageroute.sn   |
| Detailed description of data collection methodology (including any calculations computed by source) | <p>There is need to distinguish between the Roughness measurements made on the basis of the progression of works and which facilitates the acceptance of the surfacing works and the Roughness measurements to be made during the provisional delivery and which will help characterize the initial state of the pavement. To ensure that these measurements are completely accurate, the calibration of high-performance measurement devices on the control road segments at least 500 long, will be made. Surveys will be conducted on these control sections (or calibration instruments like the Dipstick used) to determine the Roughness before measuring it with the help of the high-performance instrument in order to calibrate them.</p> <p>The use of Roughness values along each of the road segments of RN6 will help define the initial state of the road. This Roughness value will be compared to the one measured after the works are completed to determine the improvement caused by the rehabilitation project. It will then be compared with the periodic measurements to be done by AGEROUTE to judiciously define the maintenance program: Refer to Roughness calculation principle extract of: Roughness measurement campaign on the classified road network, Rapport de phase, Phase Report AGEROUTE /MSILAB 2012.</p> |                          |                     |

|                                                                                      |                                                                                                                                           |                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| If survey data, verbatim question(s) posed to respondent                             | Not Applicable                                                                                                                            |                                                                                                                                                                                                      |
| Detailed description of how data is transmitted from source to USAC                  | The data will be provided by the enterprise in charge of construction and by the engineer in charge of supervision of road rehabilitation |                                                                                                                                                                                                      |
| Frequency and timing of data acquisition                                             | Twice : Before the works began (2012) and after the works are completed (2015)                                                            |                                                                                                                                                                                                      |
| Names of verification sources                                                        | <b>Means of verification</b>                                                                                                              |                                                                                                                                                                                                      |
| Report of the Roads Rehabilitation Firm                                              | Table of indicators, Roughness measurement data                                                                                           |                                                                                                                                                                                                      |
| Report of the Engineer in charge of supervision                                      | Table of indicators, Roughness measurement data                                                                                           |                                                                                                                                                                                                      |
| PMU AGEROUTE Report                                                                  | Table of indicators, Roughness measurement data                                                                                           |                                                                                                                                                                                                      |
| Location of Data Storage                                                             | AGEROUTE and USAC-Senegal                                                                                                                 |                                                                                                                                                                                                      |
| <b>INDICATOR DATA QUALITY</b>                                                        |                                                                                                                                           |                                                                                                                                                                                                      |
| Date of Data Quality Review                                                          | November 2014                                                                                                                             |                                                                                                                                                                                                      |
| <b>Main findings of data quality review</b>                                          | Average Score (out of 4)                                                                                                                  | <p><b>RRP.8</b></p>                                                                                                                                                                                  |
| 1. VALIDITY – Does the data clearly represent the desired results?                   | 4,0                                                                                                                                       | <p>Recommendations</p> <p>Incentives to ensure that construction firms upgrade the roads to expected Roughness standards trigger hopes that this indicator and its data will be of good quality.</p> |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time? | 4,0                                                                                                                                       | N/A                                                                                                                                                                                                  |
| 3. TIMELINESS- Are the data current and frequently collected?                        | 3,2                                                                                                                                       | N/A                                                                                                                                                                                                  |
| 4. PRECISION – Does the data have an acceptable margin of error?                     | 4,0                                                                                                                                       | N/A                                                                                                                                                                                                  |

|                                                                                  |                                                               |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
|----------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5. INTEGRITY- Is the data free from manipulation?                                | 4,0                                                           | N/A                      |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results? | 3,9                                                           | N/A                      |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| 7. PRACTICABILITY- Is the data current and frequently collected?                 | 4,0                                                           | N/A                      |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>Overall assessment</b>                                                        | <b>3,9</b>                                                    |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>Action taken in response to data quality review</b>                           | - Collection procedure clarified and harmonized with AGEROUTE |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>Known data limitations and significance</b>                                   | Not Applicable                                                |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>Actions taken to address data limitations</b>                                 | Not Applicable                                                |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>INDICATOR BASELINE INFORMATION</b>                                            |                                                               |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>Old Baseline</b>                                                              | 13                                                            | <b>Old Baseline Year</b> | 2011-2012                                                                                                                                                                                                                                       | <b>Source of old Baseline</b><br>Compact, initial source not available                                                                                                                  |
| <b>New Baseline</b>                                                              | 13                                                            | <b>New Baseline Year</b> | 2011-2012                                                                                                                                                                                                                                       | <b>Source of New Baseline</b><br>MCC Report, October 2012 : TD-37 – ERR Indicators – Roughness data collection, traffic counts and calculation of VOC and TTC with sensitivity analysis |
| <b>Justification for Baseline Change (if any)</b>                                |                                                               |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>INDICATOR TARGET CALCULATIONS</b>                                             |                                                               |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>YEAR 1</b>                                                                    | <b>Target</b>                                                 |                          | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                                                            |                                                                                                                                                                                         |
|                                                                                  | <b>Old</b>                                                    | <b>New</b>               |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| Oct 2010 - Sept. 2011                                                            | N/A                                                           | N/A                      | The Roughness measurement study was not done in 2010-2011                                                                                                                                                                                       |                                                                                                                                                                                         |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                               |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>YEAR 2</b>                                                                    | <b>Target</b>                                                 |                          | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                                                            |                                                                                                                                                                                         |
|                                                                                  | <b>Old</b>                                                    | <b>New</b>               |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| Oct 2011 - Sept. 2012                                                            | 13                                                            | 13                       | MCC Report, October 2012 (TD-37 – ERR Indicators – Roughness data collection, traffic counts and calculation of VOC and TTC with sensitivity analysis) gives an IRI of 5 for Zone I, 13 for Zone II and 21 for Zone III, i.e. an average of 13. |                                                                                                                                                                                         |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                               |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>YEAR 3</b>                                                                    | <b>Target</b>                                                 |                          | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                                                            |                                                                                                                                                                                         |
|                                                                                  | <b>Old</b>                                                    | <b>New</b>               |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| Oct 2012 - Sept. 2013                                                            | N/A                                                           | N/A                      | The Roughness will not be calculated in 2013                                                                                                                                                                                                    |                                                                                                                                                                                         |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                               |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>YEAR 4</b>                                                                    | <b>Target</b>                                                 |                          | <b>Justification for changes to targets or calculations (if any)</b>                                                                                                                                                                            |                                                                                                                                                                                         |
|                                                                                  | <b>Old</b>                                                    | <b>New</b>               |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| Oct 2013 - Sept. 2014                                                            | N/A                                                           | N/A                      | The Roughness will not be calculated in 2014                                                                                                                                                                                                    |                                                                                                                                                                                         |
| <b>Explanation of assumptions and inputs to target calculations</b>              |                                                               |                          |                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |

|                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                            |            |                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------|
| <b>YEAR 5</b>                                                                                                                                          | <b>Old</b>                                                                                                                                                                                                                                                                                                                                 | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b>   |
| Oct 2014 - Sept. 2015                                                                                                                                  | 2.5                                                                                                                                                                                                                                                                                                                                        | 2.5        | The Compact estimates a final Roughness for the RN6 to be 2.5, not 2.4 |
| <b>Explanation of assumptions and inputs to target calculations</b>                                                                                    |                                                                                                                                                                                                                                                                                                                                            |            |                                                                        |
| <b>Long Term Target</b>                                                                                                                                | <b>Old</b>                                                                                                                                                                                                                                                                                                                                 | <b>New</b> | <b>Justification for changes to targets or calculations (if any)</b>   |
|                                                                                                                                                        | N/A                                                                                                                                                                                                                                                                                                                                        | N/A        |                                                                        |
| <b>Explanation of assumptions and inputs to target calculations</b>                                                                                    |                                                                                                                                                                                                                                                                                                                                            |            |                                                                        |
| <b>COMMENTS</b>                                                                                                                                        | Zone I : Lot 1: 20,9 km (17,2% of Lot 1), Lot 2: 41,4 km (57,1% of Lot 2), Lot 3: 18,3 km (19,7% of Lot 3)<br>Zone II : Lot 1: 56,6 km (48,6% of Lot 1), Lot 2: 31,0 km (42,8% of Lot 2) et Lot 3: 72,2 km (77,8% of Lot 3)<br>Zone III : Lot 1 : 39,9 km (34,2% of Lot 1), Lot 2: 0,1 km (0,1% of Lot 2) et Lot 3: 2,3 km (2,5% of Lot 3) |            |                                                                        |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b>                                                                             |                                                                                                                                                                                                                                                                                                                                            |            |                                                                        |
| IRI Calculation Method : Roughness_calculation_principle_AGEROUTE_2012                                                                                 |                                                                                                                                                                                                                                                                                                                                            |            |                                                                        |
| MCC Report, October 2012 (TD-37 – ERR Indicators – Roughness data collection, traffic counts and calculation of VOC and TTC with sensitivity analysis) |                                                                                                                                                                                                                                                                                                                                            |            |                                                                        |

### 3.9. Indicator RRP.9. Road Traffic Fatalities

| INDICATOR BASIC DETAILS                               |                                                                                                                                                                                                                                                    |                          |                     |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|
| Indicator Name                                        | Road Traffic Fatalities                                                                                                                                                                                                                            |                          | Version             |
| Common Indicator Number                               | (R-11)                                                                                                                                                                                                                                             | Current Indicator Number | RRP.9.              |
| Level                                                 | Outcome                                                                                                                                                                                                                                            | Classification           | Level               |
| Detailed Definition                                   | The number of road traffic fatalities per year on roads constructed, rehabilitated or improved with MCC funding                                                                                                                                    |                          |                     |
| Frequency of Reporting                                | ANNUAL                                                                                                                                                                                                                                             | Reporting Period Covered | Post-Compact Period |
| Disaggregations                                       | By gender (YES/NO)                                                                                                                                                                                                                                 | YES                      |                     |
|                                                       | By age (YES/NO)                                                                                                                                                                                                                                    | NO                       |                     |
|                                                       | By income (YES/NO)                                                                                                                                                                                                                                 | NO                       |                     |
|                                                       | By locality (YES/NO)                                                                                                                                                                                                                               | YES (RN2/RN6)            |                     |
| INDICATOR JUSTIFICATION DETAILS                       |                                                                                                                                                                                                                                                    |                          |                     |
| Justification for Including Indicator                 | The indicator provides information on number of people who lost their lives in accidents that occurred on RN2 and RN6 sections to be rehabilitated by the Compact. This is a new indicator proposed by the Guidance on Common Indicator, May 2012. |                          |                     |
| How does the indicator link to the ERR?               | Not Applicable                                                                                                                                                                                                                                     |                          |                     |
| How does the indicator link to the BA?                | Not Applicable                                                                                                                                                                                                                                     |                          |                     |
| How does the indicator link to the impact evaluation? | Not Applicable                                                                                                                                                                                                                                     |                          |                     |
| Justification for Disaggregations                     | The data will be disaggregated locality (RN2 and RN6).                                                                                                                                                                                             |                          |                     |
| INDICATOR ACQUISITION PLAN                            |                                                                                                                                                                                                                                                    |                          |                     |
| Entity Responsible for Collecting Data                | AGEROUTE                                                                                                                                                                                                                                           |                          |                     |

|                                                                                                               |                                                                                                                                                                                                                                                                                                             |              |                          |                 |                                                          |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------|-----------------|----------------------------------------------------------|
| <b>Point of Contact Responsible for Collecting the Data at AGEROUTE:</b>                                      | Mamadou NDAO                                                                                                                                                                                                                                                                                                | <b>Phone</b> | +221 77 333 89 16        | <b>E-mail</b>   | <a href="mailto:mmdao@ageroute.sn">mmdao@ageroute.sn</a> |
| <b>Entity Responsible for the collection of primary Data</b>                                                  | Gendarmerie Brigade and Police Station of Saint Louis                                                                                                                                                                                                                                                       |              |                          |                 |                                                          |
| <b>Detailed description of data collection methodology</b><br>(including any calculations computed by source) | Using data on accidents that occurred on RN#2 (Richard Toll-Ndioum) and RN6 (Ziguinchor – Kounkane) provided by the Gendarmerie Brigade and the Police Station of Saint Louis, Ziguinchor, Sedhiou and Kolda summarized by the Road Transport Directorate.                                                  |              |                          |                 |                                                          |
| <b>If survey data, verbatim question(s) posed to respondent</b>                                               | Not Applicable                                                                                                                                                                                                                                                                                              |              |                          |                 |                                                          |
| <b>Detailed description of how data is transmitted from source to USAC</b>                                    | The data is transmitted by official correspondence officielle from the Brigade de Gendarmerie, the Commissariat de Police, and also from the Direction des Transports Terrestres at MCA-S. Additionally, a mission from the M&E Directorate will collect the raw data necessary to calculate the indicator. |              |                          |                 |                                                          |
| <b>Frequency and timing of data acquisition</b>                                                               | QUARTERLY                                                                                                                                                                                                                                                                                                   |              |                          |                 |                                                          |
| <b>Names of verification sources</b>                                                                          | <b>Means of verification</b>                                                                                                                                                                                                                                                                                |              |                          |                 |                                                          |
| Letter of the RTD, the Gendarmerie and Police Station of Saint Louis                                          | Letter and statistics of the RTD, the Gendarmerie Brigade and Police Station of Saint Louis, Ziguinchor and Kolda.                                                                                                                                                                                          |              |                          |                 |                                                          |
| MCA-S Report                                                                                                  | Table of indicators, monitoring data base                                                                                                                                                                                                                                                                   |              |                          |                 |                                                          |
| <b>Location of Data Storage</b>                                                                               | Land Transport Directorate and USAC-Senegal                                                                                                                                                                                                                                                                 |              |                          |                 |                                                          |
| <b>INDICATOR DATA QUALITY</b>                                                                                 |                                                                                                                                                                                                                                                                                                             |              |                          |                 |                                                          |
| <b>Date of Data Quality Review</b>                                                                            | N/A                                                                                                                                                                                                                                                                                                         |              |                          |                 |                                                          |
| <b>Main findings of data quality review</b>                                                                   |                                                                                                                                                                                                                                                                                                             |              | Average Score (out of 4) | Recommendations | <p><b>RRP.9</b></p>                                      |
| 1. VALIDITY – Does the data clearly represent the desired results?                                            |                                                                                                                                                                                                                                                                                                             |              | 2,8                      | N/A             |                                                          |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time?                          |                                                                                                                                                                                                                                                                                                             |              | 2,7                      | N/A             |                                                          |
| 3. TIMELINESS- Are the data current and frequently collected?                                                 |                                                                                                                                                                                                                                                                                                             |              | 2,4                      | N/A             |                                                          |
| 4. PRECISION – Does the data have an acceptable margin of error?                                              |                                                                                                                                                                                                                                                                                                             |              | 1,0                      | N/A             |                                                          |
| 5. INTEGRITY- Is the data free from manipulation?                                                             |                                                                                                                                                                                                                                                                                                             |              | 3,0                      | N/A             |                                                          |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?                              |                                                                                                                                                                                                                                                                                                             |              | 2,4                      | N/A             |                                                          |
| 7. PRACTICABILITY- Is the data current and frequently collected?                                              |                                                                                                                                                                                                                                                                                                             |              | 2,7                      | N/A             |                                                          |

|                                                                            |                        |                                                                                                                                                                      |                        |
|----------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Overall assessment                                                         |                        | 2,4                                                                                                                                                                  |                        |
| Action taken in response to data quality review                            |                        |                                                                                                                                                                      |                        |
| Not Applicable                                                             |                        |                                                                                                                                                                      |                        |
| Known data limitations and significance                                    |                        |                                                                                                                                                                      |                        |
| Not Applicable                                                             |                        |                                                                                                                                                                      |                        |
| Actions taken to address data limitations                                  |                        |                                                                                                                                                                      |                        |
| Not Applicable                                                             |                        |                                                                                                                                                                      |                        |
| <b>INDICATOR BASELINE INFORMATION</b>                                      |                        |                                                                                                                                                                      |                        |
| Old Baseline                                                               | Not Applicable         | 2012-2013                                                                                                                                                            | Source of old Baseline |
| New Baseline                                                               | 43                     | 2013-2014                                                                                                                                                            | Source of New Baseline |
| Justification for Baseline Change (if any)                                 |                        | Road Transport Directorate's Data Base on accidents<br>Letter and statistics of DTT, the Gendarmerie Brigade and the St. Louis Police Station , Ziguinchor and Kolda |                        |
| <b>INDICATOR TARGET CALCULATIONS</b>                                       |                        |                                                                                                                                                                      |                        |
| YEAR 1                                                                     | Oct. 2010 - Sept. 2011 | Target                                                                                                                                                               |                        |
|                                                                            |                        | Old                                                                                                                                                                  | New                    |
|                                                                            |                        | N/A                                                                                                                                                                  | N/A                    |
| Justification for changes to targets or calculations (if any)              |                        |                                                                                                                                                                      |                        |
| YEAR 2                                                                     | Oct. 2011 - Sept. 2012 | Target                                                                                                                                                               |                        |
|                                                                            |                        | Old                                                                                                                                                                  | New                    |
|                                                                            |                        | N/A                                                                                                                                                                  | N/A                    |
| Justification for changes to targets or calculations (if any)              |                        |                                                                                                                                                                      |                        |
| YEAR 3                                                                     | Oct. 2012 - Sept. 2013 | Target                                                                                                                                                               |                        |
|                                                                            |                        | Old                                                                                                                                                                  | New                    |
|                                                                            |                        | N/A                                                                                                                                                                  | N/A                    |
| Justification for changes to targets or calculations (if any)              |                        |                                                                                                                                                                      |                        |
| YEAR 4                                                                     | Oct. 2013 - Sept. 2014 | Target                                                                                                                                                               |                        |
|                                                                            |                        | Old                                                                                                                                                                  | New                    |
|                                                                            |                        | N/A                                                                                                                                                                  | N/A                    |
| Justification for changes to targets or calculations (if any)              |                        |                                                                                                                                                                      |                        |
| YEAR 5                                                                     | Oct. 2014 - Sept. 2015 | Target                                                                                                                                                               |                        |
|                                                                            |                        | Old                                                                                                                                                                  | New                    |
|                                                                            |                        | N/A                                                                                                                                                                  | N/A                    |
| Justification for changes to targets or calculations (if any)              |                        |                                                                                                                                                                      |                        |
| Long Term Target                                                           |                        |                                                                                                                                                                      |                        |
|                                                                            |                        | Old                                                                                                                                                                  | New                    |
|                                                                            |                        | N/A                                                                                                                                                                  | N/A                    |
| Justification for changes to targets or calculations (if any)              |                        |                                                                                                                                                                      |                        |
| Explanation of assumptions and inputs to target calculations               |                        |                                                                                                                                                                      |                        |
| New Indicator                                                              |                        |                                                                                                                                                                      |                        |
| <b>COMMENTS</b>                                                            |                        |                                                                                                                                                                      |                        |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |                        |                                                                                                                                                                      |                        |

## 3.10. Indicator RRP.10. Kilometers of rehabilitated roads on RN#6

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                             |                          |                               |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|
| Indicator Name                                                                                      | Kilometers of rehabilitated roads on RN#6                                                                                                                                                                                                                   |                          | Version                       |
| Common Indicator Number                                                                             | Not Applicable                                                                                                                                                                                                                                              | Current Indicator Number | RRP.10                        |
| Level                                                                                               | Output                                                                                                                                                                                                                                                      | Classification           | RRP.10/ RRP.11.<br>Kilometers |
| Detailed Definition                                                                                 | Total number of km of rehabilitated roads which have been provisionally accepted.                                                                                                                                                                           |                          |                               |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                      | Reporting Period Covered | Post-Compact Period           |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                          |                          | NO                            |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                             |                          | NO                            |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                          |                          | NO                            |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                        |                          | NO                            |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                             |                          |                               |
| Justification for Including Indicator                                                               | The indicator provides information on the length in km of roads rehabilitated with Compact funds and which have been provisionally accepted. It makes it possible to note whether the result concerning the rehabilitation of RN2 has been achieved or not. |                          |                               |
| How does the indicator link to the ERR?                                                             | The ERR is calculated on the basis of the assumption that the objective of 256 km of RN6 will be achieved. The indicator will help confirm whether this assumption has been met.                                                                            |                          |                               |
| How does the indicator link to the BA?                                                              | Not Applicable                                                                                                                                                                                                                                              |                          |                               |
| How does the indicator link to the impact evaluation?                                               | Not Applicable                                                                                                                                                                                                                                              |                          |                               |
| Justification for Disaggregations                                                                   | Not Applicable                                                                                                                                                                                                                                              |                          |                               |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                             |                          |                               |
| Entity Responsible for Collecting Data                                                              | AGEROUTE                                                                                                                                                                                                                                                    |                          |                               |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                   | Mamadou NDAO                                                                                                                                                                                                                                                | Phone                    | +221 77 333 89 16             |
| Entity Responsible for the collection of primary Data                                               | Office of the Engineer in charge of supervising the works on RN6                                                                                                                                                                                            |                          |                               |
| Detailed description of data collection methodology (including any calculations computed by source) | Use data provided by PMU Roads, the consultant in charge of supervision and the minutes of provisional and final acceptance                                                                                                                                 |                          |                               |
| If survey data, verbatim question(s) posed to respondent                                            | Not Applicable                                                                                                                                                                                                                                              |                          |                               |
| Detailed description of how data is transmitted from source to USAC                                 | The data is transmitted by the Roads Project Directorate with the minutes of acceptance of the concerned roads attached in annex.                                                                                                                           |                          |                               |
| Frequency and timing of data acquisition                                                            | Only once: at the end of the works                                                                                                                                                                                                                          |                          |                               |
| Names of verification sources                                                                       | Means of verification                                                                                                                                                                                                                                       |                          |                               |
| AGEROUTE Annual Report                                                                              | Table of indicators                                                                                                                                                                                                                                         |                          |                               |
| Report of the Engineer in charge of supervision                                                     | Minutes of acceptance                                                                                                                                                                                                                                       |                          |                               |

Location of Data Storage | AGEROUTE and USAC-Senegal (PRR Directorate)

INDICATOR DATA QUALITY

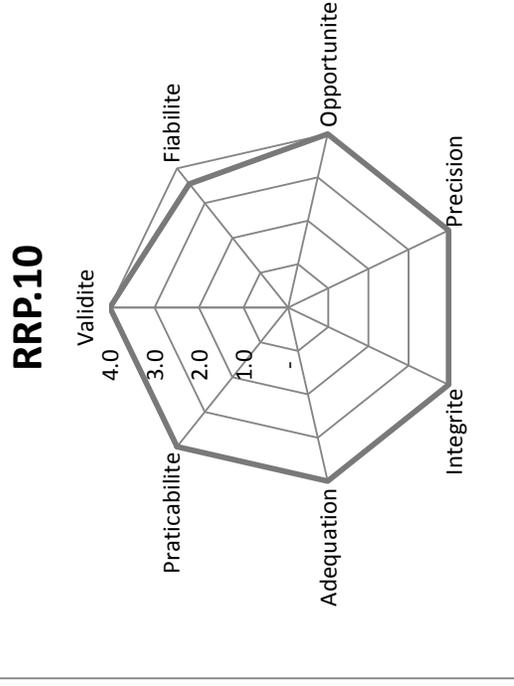
Date of Data Quality Review

November 2014

**Main findings of data quality review**

Average Score (out of 4)

Recommendations



1. VALIDITY – Does the data clearly represent the desired results?

4,0  
Use other intermediate for road works. Ex: Percentage of upgrades complete (%), Percentage of civil works completed (%) at (i) sub-base; (ii) base; (iii) surfacing; and (iv) drainage stages.

2. RELIABILITY – Are the data collection procedures stable and consistent over time?

3,6

3. TIMELINESS- Are the data current and frequently collected?

4,0

4. PRECISION – Does the data have an acceptable margin of error?

4,0

5. INTEGRITY - Is the data free from manipulation?

4,0

6. APPROPRIATENESS – To what extent do the indicators fully portray the results?

4,0

7. PRACTICABILITY- Is the data current and frequently collected?

4,0

|                                                                            |                |                   |           |                                                               |
|----------------------------------------------------------------------------|----------------|-------------------|-----------|---------------------------------------------------------------|
| Overall assessment                                                         | 3,9            |                   |           |                                                               |
| Action taken in response to data quality review                            | Not Applicable |                   |           |                                                               |
| Known data limitations and significance                                    | Not Applicable |                   |           |                                                               |
| Actions taken to address data limitations                                  | Not Applicable |                   |           |                                                               |
| <b>INDICATOR BASELINE INFORMATION</b>                                      |                |                   |           |                                                               |
| Old Baseline                                                               | 0              | Old Baseline Year | 2010-2011 | Roads Rehabilitation Project Work Plan                        |
| New Baseline                                                               | 0              | New Baseline Year | 2010-2011 | Roads Rehabilitation Project Work Plan                        |
| Justification for Baseline Change (if any)                                 |                |                   |           |                                                               |
| <b>INDICATOR TARGET CALCULATIONS</b>                                       |                |                   |           |                                                               |
|                                                                            |                | Target            |           |                                                               |
|                                                                            |                | Old               | New       |                                                               |
| <b>YEAR 1</b>                                                              |                |                   |           | Justification for changes to targets or calculations (if any) |
| Oct 2010 - Sept. 2011                                                      | 0              | 0                 | 0         |                                                               |
| Explanation of assumptions and inputs to target calculations               |                |                   |           |                                                               |
| <b>YEAR 2</b>                                                              |                |                   |           | Justification for changes to targets or calculations (if any) |
| Oct 2011 - Sept. 2012                                                      | 0              | 0                 | 0         |                                                               |
| Explanation of assumptions and inputs to target calculations               |                |                   |           |                                                               |
| <b>YEAR 3</b>                                                              |                |                   |           | Justification for changes to targets or calculations (if any) |
| Oct 2012 - Sept. 2013                                                      | 0              | 0                 | 0         |                                                               |
| Explanation of assumptions and inputs to target calculations               |                |                   |           |                                                               |
| <b>YEAR 4</b>                                                              |                |                   |           | Justification for changes to targets or calculations (if any) |
| Oct 2013 - Sept. 2014                                                      | 0              | 0                 | 0         |                                                               |
| Explanation of assumptions and inputs to target calculations               |                |                   |           |                                                               |
| <b>YEAR 5</b>                                                              |                |                   |           | Justification for changes to targets or calculations (if any) |
| Oct 2014 - Sept. 2015                                                      | 252            | 252               | 252       |                                                               |
| Explanation of assumptions and inputs to target calculations               |                |                   |           |                                                               |
| <b>Long Term Target</b>                                                    |                |                   |           | Justification for changes to targets or calculations (if any) |
|                                                                            | N/A            | N/A               | N/A       |                                                               |
| Explanation of assumptions and inputs to target calculations               |                |                   |           |                                                               |
| <b>COMMENTS</b>                                                            |                |                   |           |                                                               |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |                |                   |           |                                                               |
|                                                                            |                |                   |           |                                                               |



## 3.11. Indicator RRP.11. Kilometers of roads completed

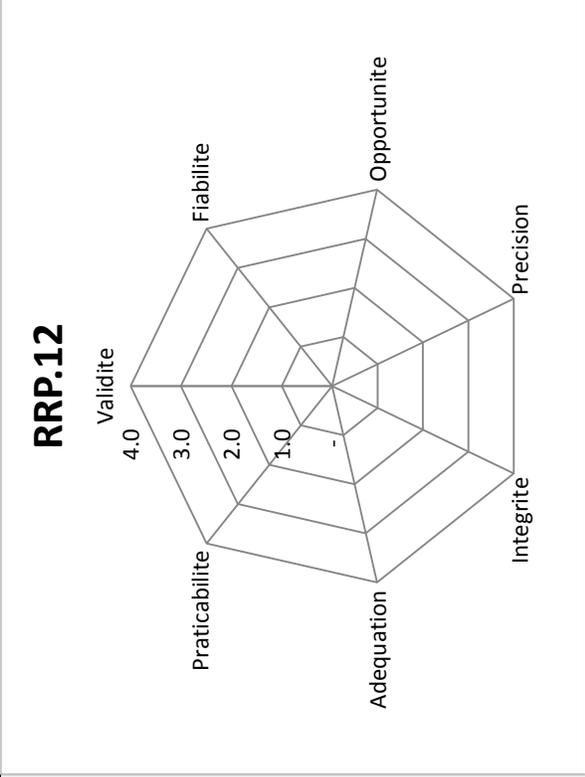
| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                                                          |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|--------------------------------|----------------------------------------------------------|
| Indicator Name                                                                                      | Kilometers of roads completed                                                                                                                                                                                                                                                                                |                          | Version             | N° 03 / Sept 2015              |                                                          |
| Common Indicator Number                                                                             | (R-8)                                                                                                                                                                                                                                                                                                        | Current Indicator Number | RRP.11              | All Previous Indicator Numbers | RRP.19/ RRP.21                                           |
| Level                                                                                               | Output                                                                                                                                                                                                                                                                                                       | Classification           | Cumulative          | Unit of Measure*               | Kilometers                                               |
| Detailed Definition                                                                                 | The length of roads in kilometers on which construction of new roads or reconstruction, rehabilitation, resurfacing or upgrading of existing roads is complete (certificates handed over and approved)                                                                                                       |                          |                     |                                |                                                          |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                       | Reporting Period Covered | Post-Compact Period |                                |                                                          |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                           | NO                       |                     |                                |                                                          |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                                                                                              | NO                       |                     |                                |                                                          |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                                                                                           | NO                       |                     |                                |                                                          |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                                                                                         | YES (RN2 / RN6)          |                     |                                |                                                          |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                                                          |
| Justification for Including Indicator                                                               | The indicator provides information on the length in kilometers on which the construction of RN#2 and RN#6 ends (certificates submitted and approved, provisional and final acceptance made). It is an indicator proposed on the list of common indicators. See "Guidance on Common Indicator, May 2012" MCC. |                          |                     |                                |                                                          |
| How does the indicator link to the ERR?                                                             | Not Applicable                                                                                                                                                                                                                                                                                               |                          |                     |                                |                                                          |
| How does the indicator link to the BA?                                                              | Not Applicable                                                                                                                                                                                                                                                                                               |                          |                     |                                |                                                          |
| How does the indicator link to the impact evaluation?                                               | Not Applicable                                                                                                                                                                                                                                                                                               |                          |                     |                                |                                                          |
| Justification for Disaggregations                                                                   | Not Applicable                                                                                                                                                                                                                                                                                               |                          |                     |                                |                                                          |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                                                          |
| Entity Responsible for Collecting Data                                                              | AGEROUTE                                                                                                                                                                                                                                                                                                     |                          |                     |                                |                                                          |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                   | Mamadou NDAO                                                                                                                                                                                                                                                                                                 | Phone                    | +221 77 333 89 16   | E-mail                         | <a href="mailto:mndao@ageroute.sn">mndao@ageroute.sn</a> |
| Entity Responsible for the collection of primary Data                                               | Engineers' Firms in charge of supervising RN2 and RN6 rehabilitation works                                                                                                                                                                                                                                   |                          |                     |                                |                                                          |
| Detailed description of data collection methodology (including any calculations computed by source) | Counting the km of RN#2 and RN#6 roads provisionally or finally accepted                                                                                                                                                                                                                                     |                          |                     |                                |                                                          |
| If survey data, verbatim question(s) posed to respondent                                            | Not Applicable                                                                                                                                                                                                                                                                                               |                          |                     |                                |                                                          |
| Detailed description of how data is transmitted from source to USAC                                 | The data is transmitted by the PRR through the annual and quarterly reports. Besides, the MED meets the RRP to collect all the raw data required to calculate the indicator.                                                                                                                                 |                          |                     |                                |                                                          |
| Frequency and timing of data acquisition                                                            | QUARTERLY                                                                                                                                                                                                                                                                                                    |                          |                     |                                |                                                          |
| Names of verification sources                                                                       |                                                                                                                                                                                                                                                                                                              |                          |                     | Means of verification          |                                                          |

|                                                                                                 |                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRR quarterly and annual reports                                                                | Table of indicators                                                                                                                                                          |
| PMU-AGEROUTE quarterly and annual reports                                                       | Table of indicators                                                                                                                                                          |
| Monthly and quarterly reports of the engineer in charge of supervising the rehabilitation works | Table of indicators                                                                                                                                                          |
| Location of Data Storage                                                                        | Roads Rehabilitation Project Directorate, PMU-AGEROUTE, Supervision Consultant                                                                                               |
| <b>INDICATOR DATA QUALITY</b>                                                                   |                                                                                                                                                                              |
| Date of Data Quality Review                                                                     | N/A                                                                                                                                                                          |
| <b>Main findings of data quality review</b>                                                     | <p style="text-align: center;">Average Score (out of 4)</p> <p style="text-align: center;">Recommendations</p> <div style="text-align: center;"> <p><b>RRP.11</b></p> </div> |
| 1. VALIDITY – Does the data clearly represent the desired results?                              | 4,0                                                                                                                                                                          |
| 2. RELIABILITY – Are the data collection procedures stable and consistent over time?            | N/A                                                                                                                                                                          |
| 3. TIMELINESS- Are the data current and frequently collected?                                   | 4,0                                                                                                                                                                          |
| 4. PRECISION – Does the data have an acceptable margin of error?                                | 4,0                                                                                                                                                                          |
| 5. INTEGRITY - Is the data free from manipulation?                                              | 4,0                                                                                                                                                                          |
| 6. APPROPRIATENESS – To what extent do the indicators fully portray the results?                | 4,0                                                                                                                                                                          |
| 7. PRACTICABILITY- Is the data current and frequently collected?                                | 4,0                                                                                                                                                                          |
| <b>Overall assessment</b>                                                                       | <b>3,9</b>                                                                                                                                                                   |
| <b>Action taken in response to data quality review</b>                                          | Not Applicable                                                                                                                                                               |
| <b>Known data limitations and significance</b>                                                  | Not Applicable                                                                                                                                                               |
| <b>Actions taken to address data limitations</b>                                                | Not Applicable                                                                                                                                                               |
| <b>INDICATOR BASELINE INFORMATION</b>                                                           |                                                                                                                                                                              |

| Old Baseline                                                        | 0      | Old Baseline Year | 2010-2011                                                     | Source of old Baseline | Roads Rehabilitation Project Work Plan |
|---------------------------------------------------------------------|--------|-------------------|---------------------------------------------------------------|------------------------|----------------------------------------|
| New Baseline                                                        | 0      | New Baseline Year | 2010-2011                                                     | Source of New Baseline | Roads Rehabilitation Project Work Plan |
| Justification for Baseline Change (if any)                          |        |                   |                                                               |                        |                                        |
| New Indicator                                                       |        |                   |                                                               |                        |                                        |
| <b>INDICATOR TARGET CALCULATIONS</b>                                |        |                   |                                                               |                        |                                        |
| YEAR 1                                                              | Target |                   | Justification for changes to targets or calculations (if any) |                        |                                        |
|                                                                     | Old    | New               |                                                               |                        |                                        |
| Oct 2010 - Sept. 2011                                               | 0      | 0                 |                                                               |                        |                                        |
| Explanation of assumptions and inputs to target calculations        |        |                   |                                                               |                        |                                        |
| YEAR 2                                                              | Target |                   | Justification for changes to targets or calculations (if any) |                        |                                        |
|                                                                     | Old    | New               |                                                               |                        |                                        |
| Oct 2011 - Sept. 2012                                               | 0      | 0                 |                                                               |                        |                                        |
| Explanation of assumptions and inputs to target calculations        |        |                   |                                                               |                        |                                        |
| YEAR 3                                                              | Target |                   | Justification for changes to targets or calculations (if any) |                        |                                        |
|                                                                     | Old    | New               |                                                               |                        |                                        |
| Oct 2012 - Sept. 2013                                               | 12     | 12                |                                                               |                        |                                        |
| Explanation of assumptions and inputs to target calculations        |        |                   |                                                               |                        |                                        |
| YEAR 4                                                              | Target |                   | Justification for changes to targets or calculations (if any) |                        |                                        |
|                                                                     | Old    | New               |                                                               |                        |                                        |
| Oct 2013 - Sept. 2014                                               | 234    | 234               |                                                               |                        |                                        |
| Explanation of assumptions and inputs to target calculations        |        |                   |                                                               |                        |                                        |
| YEAR 5                                                              | Target |                   | Justification for changes to targets or calculations (if any) |                        |                                        |
|                                                                     | Old    | New               |                                                               |                        |                                        |
| Oct 2014 - Sept. 2015                                               | 372    | 372               |                                                               |                        |                                        |
| Explanation of assumptions and inputs to target calculations        |        |                   |                                                               |                        |                                        |
| Long Term Target                                                    |        |                   |                                                               |                        |                                        |
|                                                                     | Old    | New               | Justification for changes to targets or calculations (if any) |                        |                                        |
|                                                                     | N/A    | N/A               |                                                               |                        |                                        |
| Explanation of assumptions and inputs to target calculations        |        |                   |                                                               |                        |                                        |
| COMMENTS                                                            |        |                   |                                                               |                        |                                        |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |        |                   |                                                               |                        |                                        |

## 3.12. Indicator RRP.12. Percentage of the required annual budget mobilized for road network maintenance

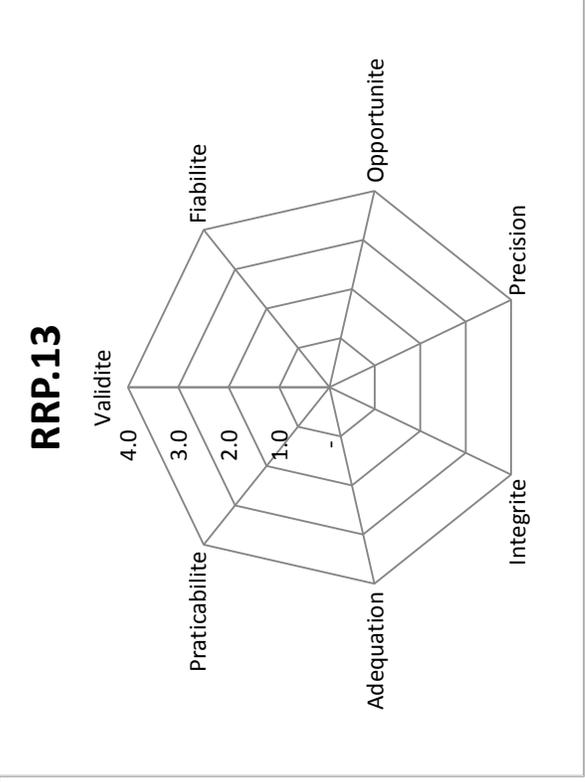
| INDICATOR BASIC DETAILS                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                       |                          |                     |                                |                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|--------------------------------|--------------------|
| Indicator Name                                                                                                                                                   | Percentage of the required annual budget mobilized for road network maintenance                                                                                                                                                                                                                                                                                                       |                          | Version             | N° 04 / Oct. 2015              |                    |
| Common Indicator Number                                                                                                                                          | Not Applicable                                                                                                                                                                                                                                                                                                                                                                        | Current Indicator Number | RRP.12.             | All Previous Indicator Numbers | New Indicator      |
| Niveau                                                                                                                                                           | Outcome                                                                                                                                                                                                                                                                                                                                                                               | Classification           | Level               | Unit of Measure*               | Percentage         |
| Detailed Definition                                                                                                                                              | Percentage of the budget required for annual maintenance that is actually provided to AGEROUTE. This is calculated by dividing "budget with constraint" and the "budget without constraint."                                                                                                                                                                                          |                          |                     |                                |                    |
| Frequency of Reporting                                                                                                                                           | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                | Reporting Period Covered | Post-Compact Period |                                |                    |
| Disaggregations                                                                                                                                                  | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                    | NO                       |                     |                                |                    |
|                                                                                                                                                                  | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                       | NO                       |                     |                                |                    |
|                                                                                                                                                                  | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                    | NO                       |                     |                                |                    |
|                                                                                                                                                                  | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                  | NO                       |                     |                                |                    |
| INDICATOR JUSTIFICATION DETAILS                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                       |                          |                     |                                |                    |
| Justification for Including Indicator                                                                                                                            | The indicator will allow showing the part of the annual budget really mobilized by FERA and dedicated to the maintenance of the road network with regard to the annual projected budget necessary for the whole road network. As such, it will allow measuring the effort displayed by the Senegalese State to face the degradation of the road network with regard to the real need. |                          |                     |                                |                    |
| How does the indicator link to the ERR?                                                                                                                          | N/A                                                                                                                                                                                                                                                                                                                                                                                   |                          |                     |                                |                    |
| How does the indicator link to the BA?                                                                                                                           | N/A                                                                                                                                                                                                                                                                                                                                                                                   |                          |                     |                                |                    |
| How does the indicator link to the impact evaluation?                                                                                                            | N/A                                                                                                                                                                                                                                                                                                                                                                                   |                          |                     |                                |                    |
| Justification for Disaggregations                                                                                                                                | N/A                                                                                                                                                                                                                                                                                                                                                                                   |                          |                     |                                |                    |
| INDICATOR ACQUISITION PLAN                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                       |                          |                     |                                |                    |
| Entity Responsible for Collecting Data                                                                                                                           | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                    |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                                                                                | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                          | Phone                    | +221 77 333 89 16   | E-mail                         | mndaou@ageroute.sn |
| Entity Responsible for the collection of primary Data                                                                                                            | AGEROUTE and Consultant selected by MCC                                                                                                                                                                                                                                                                                                                                               |                          |                     |                                |                    |
| Detailed description of data collection methodology (including any calculations computed by source)                                                              | The indicator will be collected annually, on the occasion of the vote on the budget for road maintenance and possibly during the budgetary adjustments                                                                                                                                                                                                                                |                          |                     |                                |                    |
| If survey data, verbatim question(s) posed to respondent                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                       |                          |                     |                                |                    |
| Detailed description of how data is transmitted from source to USAC                                                                                              | Check the availability of financial resources to ensure the implementation of the maintenance and sustainability program of completed road infrastructure.                                                                                                                                                                                                                            |                          |                     |                                |                    |
| Frequency and timing of data acquisition                                                                                                                         | YEARLY                                                                                                                                                                                                                                                                                                                                                                                |                          |                     |                                |                    |
| Names of verification sources                                                                                                                                    | <b>Means of verification</b>                                                                                                                                                                                                                                                                                                                                                          |                          |                     |                                |                    |
| <ul style="list-style-type: none"> <li>• Reports from AGEROUTE</li> <li>• Report of the maintenance and sustainability program of road infrastructure</li> </ul> | Budget Consolidé d'Investissement (BCI)                                                                                                                                                                                                                                                                                                                                               |                          |                     |                                |                    |
|                                                                                                                                                                  | Taxe sur les produits pétroliers (TSPP)                                                                                                                                                                                                                                                                                                                                               |                          |                     |                                |                    |
|                                                                                                                                                                  | Taxe d'usage sur la route (TUR)                                                                                                                                                                                                                                                                                                                                                       |                          |                     |                                |                    |
| Location of Data Storage                                                                                                                                         | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                              |                          |                     |                                |                    |
| INDICATOR DATA QUALITY                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                       |                          |                     |                                |                    |

| Date of Data Quality Review                                                                              |                                 |                 |
|----------------------------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Main findings of data quality review                                                                     | Average score (on a scale of 4) | Recommendations |
| <p>1. VALIDITÉ - Les données représentent-elles le résultat désiré de façon satisfaisante?</p>           | TBD                             |                 |
|  <p><b>RRP.12</b></p>   |                                 |                 |
| 2. FIABILITÉ - Les procédures de collecte des données sont-elles stables et consistantes dans le temps ? | TBD                             |                 |
| 3. OPPORTUNITÉ - Les données sont-elles actuelles et fréquemment collectées?                             | TBD                             |                 |
| 4. PRÉCISION - Les données ont-elles une marge d'erreur acceptable?                                      | TBD                             |                 |
| 5. INTÉGRITÉ - Les données sont-elles exemptes de manipulations?                                         | TBD                             |                 |
| 6. ADÉQUATION - Dans quelle mesure les indicateurs caractérisent pleinement les résultats?               | TBD                             |                 |
| 7. PRACTICABILITÉ - Les données sont-elles actuelles et fréquemment collectées?                          | TBD                             |                 |
| <b>Évaluation Globale</b>                                                                                | TBD                             |                 |
| <b>Action taken in response to data quality review</b>                                                   | Non Applicable                  |                 |
| <b>Known data limitations and significance</b>                                                           | Non Applicable                  |                 |
| <b>Actions taken to address data limitations</b>                                                         | Non Applicable                  |                 |
| <b>INDICATOR BASELINE INFORMATION</b>                                                                    |                                 |                 |

| Old Baseline                                                        | N/A         | Old Baseline Year | 2015                                                          | Source of old Baseline | AGEROUTE work plan |
|---------------------------------------------------------------------|-------------|-------------------|---------------------------------------------------------------|------------------------|--------------------|
| New Baseline                                                        | Unavailable | New Baseline Year | 2015                                                          | Source of New Baseline | AGEROUTE work plan |
| Justification for Baseline Change (if any)                          |             |                   |                                                               |                        |                    |
| New indicator                                                       |             |                   |                                                               |                        |                    |
| INDICATOR TARGET CALCULATIONS                                       |             |                   |                                                               |                        |                    |
| YEAR 1                                                              | Target      |                   | Justification for changes to targets or calculations (if any) |                        |                    |
|                                                                     | Old         | New               |                                                               |                        |                    |
| Oct 2010 - Sept. 2011                                               | N/A         | N/A               |                                                               |                        |                    |
| Explanation of assumptions and inputs to target calculations        |             |                   |                                                               |                        |                    |
| YEAR 2                                                              | Old         | New               | Justification for changes to targets or calculations (if any) |                        |                    |
| Oct 2011 - Sept. 2012                                               | N/A         | N/A               |                                                               |                        |                    |
| Explanation of assumptions and inputs to target calculations        |             |                   |                                                               |                        |                    |
| YEAR 3                                                              | Old         | New               | Justification for changes to targets or calculations (if any) |                        |                    |
| Oct 2012 - Sept. 2013                                               | N/A         | N/A               |                                                               |                        |                    |
| Explanation of assumptions and inputs to target calculations        |             |                   |                                                               |                        |                    |
| YEAR 4                                                              | Old         | New               | Justification for changes to targets or calculations (if any) |                        |                    |
| Oct 2013 - Sept. 2014                                               | N/A         | N/A               |                                                               |                        |                    |
| Explanation of assumptions and inputs to target calculations        |             |                   |                                                               |                        |                    |
| YEAR 5                                                              | Old         | New               | Justification for changes to targets or calculations (if any) |                        |                    |
| Oct 2014 - Sept. 2015                                               | N/A         | N/A               |                                                               |                        |                    |
| Explanation of assumptions and inputs to target calculations        |             |                   |                                                               |                        |                    |
| Cible post compact                                                  | Old         | New               |                                                               |                        |                    |
|                                                                     | N/A         | N/A               |                                                               |                        |                    |
| Explanation of assumptions and inputs to target calculations        |             |                   |                                                               |                        |                    |
| COMMENTS                                                            |             |                   |                                                               |                        |                    |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |             |                   |                                                               |                        |                    |
|                                                                     |             |                   |                                                               |                        |                    |

## 3.13. Indicator RRP.13. Percentage of paved roads maintained

| INDICATOR BASIC DETAILS                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |                     |                                |                   |
|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------|--------------------------------|-------------------|
| Indicator Name                                                                                             | Percentage of paved roads maintained                                                                                                                                                                                                                                                                                                                                                                 |                                 | Version             | N° 04 / Oct. 2015              |                   |
| Common Indicator Number                                                                                    | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                       | Current Indicator Number        | RRP.13.             | All Previous Indicator Numbers | New Indicator     |
| Niveau                                                                                                     | Outcome                                                                                                                                                                                                                                                                                                                                                                                              | Classification                  | Level               | Unit of Measure*               | Percentage        |
| <b>Detailed Definition</b>                                                                                 | The percentage of paved roads maintained in good and average condition based on the framework for the implementation of the maintenance and sustainability program of completed road infrastructure.                                                                                                                                                                                                 |                                 |                     |                                |                   |
| <b>Frequency of Reporting</b>                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                               | <b>Reporting Period Covered</b> | Post-Compact Period |                                |                   |
| <b>Disaggregations</b>                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                   | NO                              |                     |                                |                   |
|                                                                                                            | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                      | NO                              |                     |                                |                   |
|                                                                                                            | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                   | NO                              |                     |                                |                   |
|                                                                                                            | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                 | NO                              |                     |                                |                   |
| <b>INDICATOR JUSTIFICATION DETAILS</b>                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |                     |                                |                   |
| <b>Justification for Including Indicator</b>                                                               | The indicator informs on the effort made in order to maintain the quality of rehabilitated roads. The State of Senegal is implementing a maintenance and sustainability program of road infrastructure carried out so that to maintain a satisfactory level of road service throughout the territory. The indicator provides information on the level of road service (poor, average and acceptable) |                                 |                     |                                |                   |
| <b>How does the indicator link to the ERR?</b>                                                             | N/A                                                                                                                                                                                                                                                                                                                                                                                                  |                                 |                     |                                |                   |
| <b>How does the indicator link to the BA?</b>                                                              | N/A                                                                                                                                                                                                                                                                                                                                                                                                  |                                 |                     |                                |                   |
| <b>How does the indicator link to the impact evaluation?</b>                                               | N/A                                                                                                                                                                                                                                                                                                                                                                                                  |                                 |                     |                                |                   |
| <b>Justification for Disaggregations</b>                                                                   | N/A                                                                                                                                                                                                                                                                                                                                                                                                  |                                 |                     |                                |                   |
| <b>INDICATOR ACQUISITION PLAN</b>                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |                     |                                |                   |
| <b>Entity Responsible for Collecting Data</b>                                                              | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                             |                                 |                     |                                |                   |
| <b>Point of Contact Responsible for Collecting the Data at AGEROUTE:</b>                                   | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                                         | <b>Phone</b>                    | +221 77 333 89 16   | <b>E-mail</b>                  | mndao@ageroute.sn |
| <b>Entity Responsible for the collection of primary Data</b>                                               | AGEROUTE and a Consultant selected by MCC                                                                                                                                                                                                                                                                                                                                                            |                                 |                     |                                |                   |
| <b>Detailed description of data collection methodology (including any calculations computed by source)</b> | The indicator will be collected annually on the basis of summary inspections in the framework of the implementation of the maintenance and sustainability program of completed road infrastructures.                                                                                                                                                                                                 |                                 |                     |                                |                   |
| <b>If survey data, verbatim question(s) posed to respondent</b>                                            |                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |                     |                                |                   |
| <b>Detailed description of how data is transmitted from source to USAC</b>                                 | Check the availability of financial resources to ensure the implementation of the maintenance and sustainability program of completed road infrastructures.                                                                                                                                                                                                                                          |                                 |                     |                                |                   |
| <b>Frequency and timing of data acquisition</b>                                                            | YEARLY                                                                                                                                                                                                                                                                                                                                                                                               |                                 |                     |                                |                   |
| <b>Names of verification sources</b>                                                                       | <b>Means of verification</b>                                                                                                                                                                                                                                                                                                                                                                         |                                 |                     |                                |                   |
| • Reports from AGEROUTE                                                                                    | Budget Consolidé d'Investissement (BCI)                                                                                                                                                                                                                                                                                                                                                              |                                 |                     |                                |                   |
| • Report of the maintenance and sustainability program of road infrastructure                              | Taxe sur les produits pétroliers (TSPP)                                                                                                                                                                                                                                                                                                                                                              |                                 |                     |                                |                   |
|                                                                                                            | Taxe d'usage sur la rote (TUR)                                                                                                                                                                                                                                                                                                                                                                       |                                 |                     |                                |                   |

| Location of Data Storage                                                                                 |                                 | AGEROUTE        |                                                                                   |
|----------------------------------------------------------------------------------------------------------|---------------------------------|-----------------|-----------------------------------------------------------------------------------|
| INDICATOR DATA QUALITY                                                                                   |                                 |                 |                                                                                   |
| Date of Data Quality Review                                                                              |                                 |                 |                                                                                   |
|                                                                                                          |                                 | N/A             |                                                                                   |
| <b>Main findings of data quality review</b>                                                              | Average score (on a scale of 4) | Recommendations |  |
| 1. VALIDITÉ - Les données représentent-elles le résultat désiré de façon satisfaisante?                  | TBD                             |                 |                                                                                   |
| 2. FIABILITÉ - Les procédures de collecte des données sont-elles stables et consistantes dans le temps ? | TBD                             |                 |                                                                                   |
| 3. OPPORTUNITÉ - Les données sont-elles actuelles et fréquemment collectées?                             | TBD                             |                 |                                                                                   |
| 4. PRÉCISION - Les données ont-elles une marge d'erreur acceptable?                                      | TBD                             |                 |                                                                                   |
| 5. INTÉGRITÉ- Les données sont-elles exemptes de manipulations?                                          | TBD                             |                 |                                                                                   |
| 6. ADEQUATION - Dans quelle mesure les indicateurs caractérisent pleinement les résultats?               | TBD                             |                 |                                                                                   |
| 7. PRATICABILITÉ - Les données sont-elles actuelles et fréquemment collectées?                           | TBD                             |                 |                                                                                   |
| <b>Évaluation Globale</b>                                                                                | TBD                             |                 |                                                                                   |

|                                                                     |             |                                                               |      |
|---------------------------------------------------------------------|-------------|---------------------------------------------------------------|------|
| Action taken in response to data quality review                     |             | Non Applicable                                                |      |
| Known data limitations and significance                             |             | Non Applicable                                                |      |
| Actions taken to address data limitations                           |             | Non Applicable                                                |      |
| <b>INDICATOR BASELINE INFORMATION</b>                               |             |                                                               |      |
| Old Baseline                                                        | N/A         | Old Baseline Year                                             | 2015 |
| New Baseline                                                        | Unavailable | New Baseline Year                                             | 2015 |
| Justification for Baseline Change (if any)                          |             | New indicator                                                 |      |
| <b>INDICATOR TARGET CALCULATIONS</b>                                |             |                                                               |      |
|                                                                     |             | Target                                                        |      |
| YEAR 1                                                              |             | Old                                                           | New  |
| Oct 2010 - Sept. 2011                                               |             | N/A                                                           | N/A  |
| Explanation of assumptions and inputs to target calculations        |             | Justification for changes to targets or calculations (if any) |      |
| YEAR 2                                                              |             | Old                                                           | New  |
| Oct 2011 - Sept. 2012                                               |             | N/A                                                           | N/A  |
| Explanation of assumptions and inputs to target calculations        |             | Justification for changes to targets or calculations (if any) |      |
| YEAR 3                                                              |             | Old                                                           | New  |
| Oct 2012 - Sept. 2013                                               |             | N/A                                                           | N/A  |
| Explanation of assumptions and inputs to target calculations        |             | Justification for changes to targets or calculations (if any) |      |
| YEAR 4                                                              |             | Old                                                           | New  |
| Oct 2013 - Sept. 2014                                               |             | N/A                                                           | N/A  |
| Explanation of assumptions and inputs to target calculations        |             | Justification for changes to targets or calculations (if any) |      |
| YEAR 5                                                              |             | Old                                                           | New  |
| Oct 2014 - Sept. 2015                                               |             | N/A                                                           | N/A  |
| Explanation of assumptions and inputs to target calculations        |             | Justification for changes to targets or calculations (if any) |      |
| Cible post compact                                                  |             | Old                                                           | New  |
|                                                                     |             | N/A                                                           | N/A  |
| Explanation of assumptions and inputs to target calculations        |             |                                                               |      |
| <b>COMMENTS</b>                                                     |             |                                                               |      |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |             |                                                               |      |

|  |
|--|
|  |
|--|

## 3.14. Indicator RRP. 14. The visual state of the road network

| INDICATOR BASIC DETAILS                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------|
| Indicator Name                                                                                                                                                   | The visual state of the road network                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | Version                                 |
| Common Indicator Number                                                                                                                                          | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Current Indicator Number | RRP.14.                                 |
| Niveau                                                                                                                                                           | Outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Classification           | Level                                   |
| Detailed Definition                                                                                                                                              | It is an indicator of roads status measured by categorical ratings (bad, average and good) of the national road network. The indicator is expressed as the percentage of good and average roads within the network.                                                                                                                                                                                                                                                                                                 |                          |                                         |
| Frequency of Reporting                                                                                                                                           | ANNUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Reporting Period Covered | Post-Compact Period                     |
| Disaggregations                                                                                                                                                  | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | NO                       |                                         |
|                                                                                                                                                                  | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | NO                       |                                         |
|                                                                                                                                                                  | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | NO                       |                                         |
|                                                                                                                                                                  | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | YES (RN2/RN6)            |                                         |
| INDICATOR JUSTIFICATION DETAILS                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                                         |
| Justification for Including Indicator                                                                                                                            | The indicator gives an appreciation of the quality of rehabilitated road. Senegalese State implements the Program of Maintenance and the Sustainability of the road infrastructure realized with the aim of maintaining a level of road service satisfying the whole territory. The indicator informs about the level of the road service (bad, average and good) on rehabilitated sections on the RN2 and RN6. Besides, it will allow following the impact of the budget assigned to the road network maintenance. |                          |                                         |
| How does the indicator link to the ERR?                                                                                                                          | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                                         |
| How does the indicator link to the BA?                                                                                                                           | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                                         |
| How does the indicator link to the impact evaluation?                                                                                                            | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                                         |
| Justification for Disaggregations                                                                                                                                | The indicator can be disaggregated by locality (RN2/RN6), and also by Lot in the RN6                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                                         |
| INDICATOR ACQUISITION PLAN                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                                         |
| Entity Responsible for Collecting Data                                                                                                                           | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                                         |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                                                                                | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Phone                    | +221 77 333 89 16                       |
| Entity Responsible for the collection of primary Data                                                                                                            | AGEROUTE and a Consultant selected by MCC                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |                                         |
| Detailed description of data collection methodology (including any calculations computed by source)                                                              | The indicator will be collected annually on the basis of summary inspections in the framework of the implementation of the maintenance and sustainability program of completed road infrastructures.                                                                                                                                                                                                                                                                                                                |                          |                                         |
| If survey data, verbatim question(s) posed to respondent                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                                         |
| Detailed description of how data is transmitted from source to USAC                                                                                              | Check the availability of financial resources to ensure the implementation of the maintenance and sustainability program of completed road infrastructures.                                                                                                                                                                                                                                                                                                                                                         |                          |                                         |
| Frequency and timing of data acquisition                                                                                                                         | YEARLY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                                         |
| Names of verification sources                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                                         |
| <ul style="list-style-type: none"> <li>• Reports from AGEROUTE</li> <li>• Report of the maintenance and sustainability program of road infrastructure</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          | Means of verification                   |
|                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          | Budget Consolidé d'Investissement (BCI) |

|                                                                                                          |     |                                         |                                                               |
|----------------------------------------------------------------------------------------------------------|-----|-----------------------------------------|---------------------------------------------------------------|
|                                                                                                          |     | Taxe sur les produits pétroliers (TSPP) |                                                               |
|                                                                                                          |     | Taxe d'usage sur la rote (TUR)          |                                                               |
| <b>Location of Data Storage</b>                                                                          |     | AGEROUTE                                |                                                               |
| <b>INDICATOR DATA QUALITY</b>                                                                            |     |                                         |                                                               |
| <b>Date of Data Quality Review</b>                                                                       |     | N/A                                     |                                                               |
| <b>Main findings of data quality review</b>                                                              |     | Average score<br>(on a scale of 4)      | Recommendations                                               |
| 1. VALIDITÉ - Les données représentent-elles le résultat désiré de façon satisfaisante?                  |     | TBD                                     |                                                               |
| 2. FIABILITÉ - Les procédures de collecte des données sont-elles stables et consistantes dans le temps ? |     | TBD                                     |                                                               |
| 3. OPPORTUNITÉ - Les données sont-elles actuelles et fréquemment collectées?                             |     | TBD                                     |                                                               |
| 4. PRÉCISION - Les données ont-elles une marge d'erreur acceptable?                                      |     | TBD                                     |                                                               |
| 5. INTÉGRITÉ- Les données sont-elles exemptes de manipulations?                                          |     | TBD                                     |                                                               |
| 6. ADEQUATION - Dans quelle mesure les indicateurs caractérisent pleinement les résultats?               |     | TBD                                     |                                                               |
| 7. PRATICABILITÉ - Les données sont-elles actuelles et fréquemment collectées?                           |     | TBD                                     |                                                               |
| <b>Évaluation Globale</b>                                                                                |     | TBD                                     |                                                               |
| <b>Action taken in response to data quality review</b>                                                   |     | Non Applicable                          |                                                               |
| <b>Known data limitations and significance</b>                                                           |     | Non Applicable                          |                                                               |
| <b>Actions taken to address data limitations</b>                                                         |     | Non Applicable                          |                                                               |
| <b>INDICATOR BASELINE INFORMATION</b>                                                                    |     |                                         |                                                               |
| Old Baseline                                                                                             | N/A | Old Baseline Year                       | 2015                                                          |
| New Baseline                                                                                             | 71  | New Baseline Year                       | 2015                                                          |
| Justification for Baseline Change (if any)                                                               |     | New indicator                           |                                                               |
|                                                                                                          |     | Source of old Baseline                  | AGEROUTE work plan                                            |
|                                                                                                          |     | Source of New Baseline                  | AGEROUTE work plan                                            |
| <b>INDICATOR TARGET CALCULATIONS</b>                                                                     |     |                                         |                                                               |
|                                                                                                          |     | Target                                  |                                                               |
| <b>YEAR 1</b>                                                                                            |     | Old                                     | Justification for changes to targets or calculations (if any) |
| Oct 2010 - Sept. 2011                                                                                    |     | New                                     |                                                               |
|                                                                                                          |     | N/A                                     |                                                               |
| <b>Explanation of assumptions and inputs to target calculations</b>                                      |     |                                         |                                                               |
| <b>YEAR 2</b>                                                                                            |     | Old                                     | Justification for changes to targets or calculations (if any) |
| Oct 2011 - Sept. 2012                                                                                    |     | New                                     |                                                               |
|                                                                                                          |     | N/A                                     |                                                               |

|                                                                     |                                 |     |     |                                                               |
|---------------------------------------------------------------------|---------------------------------|-----|-----|---------------------------------------------------------------|
| Explanation of assumptions and inputs to target calculations        | YEAR 3<br>Oct 2012 - Sept. 2013 | Old | New | Justification for changes to targets or calculations (if any) |
|                                                                     |                                 | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations        | YEAR 4<br>Oct 2013 - Sept. 2014 | Old | New | Justification for changes to targets or calculations (if any) |
|                                                                     |                                 | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations        | YEAR 5<br>Oct 2014 - Sept. 2015 | Old | New | Justification for changes to targets or calculations (if any) |
|                                                                     |                                 | N/A | N/A |                                                               |
| Cible post compact                                                  |                                 | Old | New |                                                               |
|                                                                     |                                 | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations        |                                 |     |     |                                                               |
| COMMENTS                                                            |                                 |     |     |                                                               |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |                                 |     |     |                                                               |

## 3.15. Indicator RRP.15. Deflections

| INDICATOR BASIC DETAILS                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------|
| Indicator Name                                                                                                                                                   | Deflections                                                                                                                                                                                                                                                                                                                                                                               |                                       | Version                        |
| Common Indicator Number                                                                                                                                          | Not Applicable                                                                                                                                                                                                                                                                                                                                                                            | Current Indicator Number              | All Previous Indicator Numbers |
| Niveau                                                                                                                                                           | Outcome                                                                                                                                                                                                                                                                                                                                                                                   | Classification                        | Unit of Measure*               |
| Detailed Definition                                                                                                                                              | It is an indicator of roads structural strength measured with falling-weight deflectometer or similar (FWD, APF, etc.). Deflections values are expressed in terms of hundredths of millimeters and are given as the maximum (ie worst) value for the road section. The road design specified that deflections must be below 90/100 mm.                                                    |                                       |                                |
| Frequency of Reporting                                                                                                                                           | EVERY FIVE YEARS                                                                                                                                                                                                                                                                                                                                                                          | Reporting Period Covered              | Post-Compact Period            |
| Disaggregations                                                                                                                                                  | By gender (YES/NO)                                                                                                                                                                                                                                                                                                                                                                        | NO                                    |                                |
|                                                                                                                                                                  | By age (YES/NO)                                                                                                                                                                                                                                                                                                                                                                           | NO                                    |                                |
|                                                                                                                                                                  | By income (YES/NO)                                                                                                                                                                                                                                                                                                                                                                        | NO                                    |                                |
|                                                                                                                                                                  | By locality (YES/NO)                                                                                                                                                                                                                                                                                                                                                                      | YES (RN2/RN6 Lot1/RN6 Lot2/RN6 Lot13) |                                |
| INDICATOR JUSTIFICATION DETAILS quality                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                                |
| Justification for Including Indicator                                                                                                                            | The indicator gives an appreciation of the structure strength of the rehabilitated road. Senegalese State implements the Program of Maintenance and the Sustainability of the road infrastructures realized with the aim of maintaining a level of road service satisfying on the whole territory. Thus, this indicator is combined with other indicators to determine maintenance needs. |                                       |                                |
| How does the indicator link to the ERR?                                                                                                                          | N/A                                                                                                                                                                                                                                                                                                                                                                                       |                                       |                                |
| How does the indicator link to the BA?                                                                                                                           | N/A                                                                                                                                                                                                                                                                                                                                                                                       |                                       |                                |
| How does the indicator link to the impact evaluation?                                                                                                            | N/A                                                                                                                                                                                                                                                                                                                                                                                       |                                       |                                |
| Justification for Disaggregations                                                                                                                                | The indicator can be disaggregated by locality (RN2/RN6), and also by Lot in the RN6                                                                                                                                                                                                                                                                                                      |                                       |                                |
| INDICATOR ACQUISITION PLAN                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                                |
| Entity Responsible for Collecting Data                                                                                                                           | AGEROUTE                                                                                                                                                                                                                                                                                                                                                                                  |                                       |                                |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                                                                                | Mamadou NDAO                                                                                                                                                                                                                                                                                                                                                                              | Phone                                 | +221 77 333 89 16              |
| Entity Responsible for the collection of primary Data                                                                                                            | AGEROUTE and a Consultant selected by MCC                                                                                                                                                                                                                                                                                                                                                 |                                       |                                |
| Detailed description of data collection methodology (including any calculations computed by source)                                                              | The indicator will be collected every five years to inform the maintenance and sustainability program of the road network.                                                                                                                                                                                                                                                                |                                       |                                |
| If survey data, verbatim question(s) posed to respondent                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                                |
| Detailed description of how data is transmitted from source to USAC                                                                                              | AGEROUTE is responsible for sharing the data.                                                                                                                                                                                                                                                                                                                                             |                                       |                                |
| Frequency and timing of data acquisition                                                                                                                         | EVERY FIVE YEARS                                                                                                                                                                                                                                                                                                                                                                          |                                       |                                |
| Names of verification sources                                                                                                                                    | Means of verification                                                                                                                                                                                                                                                                                                                                                                     |                                       |                                |
| <ul style="list-style-type: none"> <li>• Reports from AGEROUTE</li> <li>• Report of the maintenance and sustainability program of road infrastructure</li> </ul> | Deflection measurements                                                                                                                                                                                                                                                                                                                                                                   |                                       |                                |
|                                                                                                                                                                  | Deflection measurements                                                                                                                                                                                                                                                                                                                                                                   |                                       |                                |

| Location of Data Storage                                                                                 |          | AGERROUTE                                                                                |                 |
|----------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------|-----------------|
| INDICATOR DATA QUALITY                                                                                   |          |                                                                                          |                 |
| Date of Data Quality Review                                                                              |          |                                                                                          |                 |
|                                                                                                          |          | Average score<br>(on a scale of 4)                                                       | Recommendations |
| <b>Main findings of data quality review</b>                                                              |          | N/A                                                                                      |                 |
| 1. VALIDITÉ - Les données représentent-elles le résultat désiré de façon satisfaisante?                  |          | TBD                                                                                      |                 |
| 2. FIABILITÉ - Les procédures de collecte des données sont-elles stables et consistantes dans le temps ? |          | TBD                                                                                      |                 |
| 3. OPPORTUNITÉ - Les données sont-elles actuelles et fréquemment collectées?                             |          | TBD                                                                                      |                 |
| 4. PRÉCISION - Les données ont-elles une marge d'erreur acceptable?                                      |          | TBD                                                                                      |                 |
| 5. INTÉGRITÉ- Les données sont-elles exemptes de manipulations?                                          |          | TBD                                                                                      |                 |
| 6. ADEQUATION - Dans quelle mesure les indicateurs caractérisent pleinement les résultats?               |          | TBD                                                                                      |                 |
| 7. PRATICABILITÉ - Les données sont-elles actuelles et fréquemment collectées?                           |          | TBD                                                                                      |                 |
| <b>Evaluation Globale</b>                                                                                |          | TBD                                                                                      |                 |
| <b>Action taken in response to data quality review</b>                                                   |          | Non Applicable                                                                           |                 |
| <b>Known data limitations and significance</b>                                                           |          | Non Applicable                                                                           |                 |
| <b>Actions taken to address data limitations</b>                                                         |          | Non Applicable                                                                           |                 |
| INDICATOR BASELINE INFORMATION                                                                           |          |                                                                                          |                 |
| Old Baseline                                                                                             | N/A      | Old Baseline Year                                                                        | 2015            |
| New Baseline                                                                                             | RN2      | New Baseline Year                                                                        | 2015            |
|                                                                                                          | RN6 Lot1 |                                                                                          |                 |
|                                                                                                          | RN6 Lot2 |                                                                                          |                 |
|                                                                                                          | RN6 Lot3 |                                                                                          |                 |
| <b>Justification for Baseline Change (if any)</b>                                                        |          | New indicator                                                                            |                 |
| INDICATOR TARGET CALCULATIONS                                                                            |          |                                                                                          |                 |
|                                                                                                          |          | Target                                                                                   |                 |
| <b>YEAR 1</b>                                                                                            |          | Old                                                                                      | New             |
| Oct 2010 - Sept. 2011                                                                                    |          | N/A                                                                                      | N/A             |
| <b>Explanation of assumptions and inputs to target calculations</b>                                      |          | Justification for changes to targets or calculations (if any)                            |                 |
|                                                                                                          |          | AGERROUTE Deflection report : RN6 Lot 1 was not yet completed as of the Compact End Date |                 |

| YEAR 2                                                              | Old        | New        | Justification for changes to targets or calculations (if any) |
|---------------------------------------------------------------------|------------|------------|---------------------------------------------------------------|
| Oct 2011 - Sept. 2012                                               | N/A        | N/A        |                                                               |
| Explanation of assumptions and inputs to target calculations        |            |            |                                                               |
| YEAR 3                                                              | Old        | New        | Justification for changes to targets or calculations (if any) |
| Oct 2012 - Sept. 2013                                               | N/A        | N/A        |                                                               |
| Explanation of assumptions and inputs to target calculations        |            |            |                                                               |
| YEAR 4                                                              | Old        | New        | Justification for changes to targets or calculations (if any) |
| Oct 2013 - Sept. 2014                                               | N/A        | N/A        |                                                               |
| Explanation of assumptions and inputs to target calculations        |            |            |                                                               |
| YEAR 5                                                              | Old        | New        | Justification for changes to targets or calculations (if any) |
| Oct 2014 - Sept. 2015                                               | N/A        | N/A        |                                                               |
| Explanation of assumptions and inputs to target calculations        |            |            |                                                               |
| Cible post compact                                                  | Old<br>N/A | New<br>N/A |                                                               |
| Explanation of assumptions and inputs to target calculations        |            |            |                                                               |
| COMMENTS                                                            |            |            |                                                               |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |            |            |                                                               |

## 3.16. Indicator RRP.16. Number of functioning garden plots

| INDICATOR BASIC DETAILS                                                                                    |                                                                                                                                                                                                                                                                                                          |                                 |                     |                                |                      |
|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------|--------------------------------|----------------------|
| Indicator Name                                                                                             | Number of functioning garden plots                                                                                                                                                                                                                                                                       |                                 | Version             |                                |                      |
| Common Indicator Number                                                                                    | Not Applicable                                                                                                                                                                                                                                                                                           | Current Indicator Number        | RRP.16.             | All Previous Indicator Numbers | N° 04 / Oct. 2015    |
| Niveau                                                                                                     | Outcome                                                                                                                                                                                                                                                                                                  | Classification                  | Level               | Unit of Measure*               | New Indicator Number |
| <b>Detailed Definition</b>                                                                                 | The indicator will measure the functionality of the gardening plots. To be considered functional, at least half of the plot must be planted at least once per year.                                                                                                                                      |                                 |                     |                                |                      |
| <b>Frequency of Reporting</b>                                                                              | ANNUAL                                                                                                                                                                                                                                                                                                   | <b>Reporting Period Covered</b> | Post-Compact Period |                                |                      |
| <b>Disaggregations</b>                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                                                                                       | NO                              |                     |                                |                      |
|                                                                                                            | By age (YES/NO)                                                                                                                                                                                                                                                                                          | NO                              |                     |                                |                      |
|                                                                                                            | By income (YES/NO)                                                                                                                                                                                                                                                                                       | NO                              |                     |                                |                      |
|                                                                                                            | By locality (YES/NO)                                                                                                                                                                                                                                                                                     | NO                              |                     |                                |                      |
| <b>INDICATOR JUSTIFICATION DETAILS</b>                                                                     |                                                                                                                                                                                                                                                                                                          |                                 |                     |                                |                      |
| <b>Justification for Including Indicator</b>                                                               | The indicator gives an appreciation of the functionality of the garden plots. The gardening plots that are not functional may suffer from two problems: either the works were not finished or there is the problem with operation (water availability, lack of technical support, lack of inputs, etc.). |                                 |                     |                                |                      |
| <b>How does the indicator link to the ERR?</b>                                                             | N/A                                                                                                                                                                                                                                                                                                      |                                 |                     |                                |                      |
| <b>How does the indicator link to the BA?</b>                                                              | N/A                                                                                                                                                                                                                                                                                                      |                                 |                     |                                |                      |
| <b>How does the indicator link to the impact evaluation?</b>                                               | N/A                                                                                                                                                                                                                                                                                                      |                                 |                     |                                |                      |
| <b>Justification for Disaggregations</b>                                                                   | N/A                                                                                                                                                                                                                                                                                                      |                                 |                     |                                |                      |
| <b>INDICATOR ACQUISITION PLAN</b>                                                                          |                                                                                                                                                                                                                                                                                                          |                                 |                     |                                |                      |
| <b>Entity Responsible for Collecting Data</b>                                                              | USAC                                                                                                                                                                                                                                                                                                     |                                 |                     |                                |                      |
| <b>Point of Contact Responsible for Collecting the Data at AGERROUTE:</b>                                  | Mamadou Assane NIANG                                                                                                                                                                                                                                                                                     | <b>Phone</b>                    | +221 77 333 07 96   | <b>E-mail</b>                  | assaniang@gmail.com  |
| <b>Entity Responsible for the collection of primary Data</b>                                               | USAC                                                                                                                                                                                                                                                                                                     |                                 |                     |                                |                      |
| <b>Detailed description of data collection methodology (including any calculations computed by source)</b> | The indicator will be collected annually by USAC.                                                                                                                                                                                                                                                        |                                 |                     |                                |                      |
| <b>If survey data, verbatim question(s) posed to respondent</b>                                            |                                                                                                                                                                                                                                                                                                          |                                 |                     |                                |                      |
| <b>Detailed description of how data is transmitted from source to MCA</b>                                  | USAC will fill out the ITT                                                                                                                                                                                                                                                                               |                                 |                     |                                |                      |
| <b>Frequency and timing of data acquisition</b>                                                            | YEARLY                                                                                                                                                                                                                                                                                                   |                                 |                     |                                |                      |
| <b>Names of verification sources</b>                                                                       | <b>Means of verification</b>                                                                                                                                                                                                                                                                             |                                 |                     |                                |                      |
| • Reports from USAC                                                                                        | Number of gardening plots functional                                                                                                                                                                                                                                                                     |                                 |                     |                                |                      |
| <b>Location of Data Storage</b>                                                                            | USAC                                                                                                                                                                                                                                                                                                     |                                 |                     |                                |                      |

| INDICATOR DATA QUALITY                                                                                   |                       | N/A                                |                                                               |
|----------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------|---------------------------------------------------------------|
| Date of Data Quality Review                                                                              |                       | Average score<br>(on a scale of 4) | Recommendations                                               |
| <b>Main findings of data quality review</b>                                                              |                       |                                    |                                                               |
| 1. VALIDITÉ - Les données représentent-elles le résultat désiré de façon satisfaisante?                  |                       | TBD                                |                                                               |
| 2. FIABILITÉ - Les procédures de collecte des données sont-elles stables et consistantes dans le temps ? |                       | TBD                                |                                                               |
| 3. OPPORTUNITÉ - Les données sont-elles actuelles et fréquemment collectées?                             |                       | TBD                                |                                                               |
| 4. PRÉCISION - Les données ont-elles une marge d'erreur acceptable?                                      |                       | TBD                                |                                                               |
| 5. INTÉGRITÉ- Les données sont-elles exemptes de manipulations?                                          |                       | TBD                                |                                                               |
| 6. ADÉQUATION - Dans quelle mesure les indicateurs caractérisent pleinement les résultats?               |                       | TBD                                |                                                               |
| 7. PRACTICABILITÉ - Les données sont-elles actuelles et fréquemment collectées?                          |                       | TBD                                |                                                               |
| <b>Évaluation Globale</b>                                                                                |                       | TBD                                |                                                               |
| <b>Action taken in response to data quality review</b>                                                   |                       | Non Applicable                     |                                                               |
| <b>Known data limitations and significance</b>                                                           |                       | Non Applicable                     |                                                               |
| <b>Actions taken to address data limitations</b>                                                         |                       | Non Applicable                     |                                                               |
| <b>INDICATOR BASELINE INFORMATION</b>                                                                    |                       |                                    |                                                               |
| Old Baseline                                                                                             | N/A                   | Old Baseline Year                  | 2015                                                          |
| New Baseline                                                                                             | 0                     | New Baseline Year                  | 2015                                                          |
| Justification for Baseline Change (if any)                                                               |                       | New indicator                      |                                                               |
|                                                                                                          |                       | Source of old Baseline             | N/A                                                           |
|                                                                                                          |                       | Source of New Baseline             | USAC reports                                                  |
| <b>INDICATOR TARGET CALCULATIONS</b>                                                                     |                       |                                    |                                                               |
|                                                                                                          |                       | Target                             |                                                               |
| YEAR 1                                                                                                   |                       | Old                                | Justification for changes to targets or calculations (if any) |
|                                                                                                          | Oct 2010 - Sept. 2011 | N/A                                | N/A                                                           |
| <b>Explanation of assumptions and inputs to target calculations</b>                                      |                       |                                    |                                                               |
| YEAR 2                                                                                                   |                       | Old                                | Justification for changes to targets or calculations (if any) |
|                                                                                                          | Oct 2011 - Sept. 2012 | N/A                                | N/A                                                           |
| <b>Explanation of assumptions and inputs to target calculations</b>                                      |                       |                                    |                                                               |
| YEAR 3                                                                                                   |                       | Old                                | Justification for changes to targets or calculations (if any) |
|                                                                                                          |                       | New                                |                                                               |

|                                                                     |     |     |                                                               |
|---------------------------------------------------------------------|-----|-----|---------------------------------------------------------------|
| Oct 2012 - Sept. 2013                                               | N/A | N/A | Justification for changes to targets or calculations (if any) |
| Explanation of assumptions and inputs to target calculations        |     |     |                                                               |
| YEAR 4                                                              | Old | New | Justification for changes to targets or calculations (if any) |
| Oct 2013 - Sept. 2014                                               | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations        |     |     |                                                               |
| YEAR 5                                                              | Old | New | Justification for changes to targets or calculations (if any) |
| Oct 2014 - Sept. 2015                                               | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations        |     |     |                                                               |
| Cible post compact                                                  | Old | New |                                                               |
|                                                                     | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations        |     |     |                                                               |
| COMMENTS                                                            |     |     |                                                               |
| SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required) |     |     |                                                               |

## 3.17. Indicator RRP.17. Number of borrow pits rehabilitated

| INDICATOR BASIC DETAILS                                                                             |                                                                                                                                                                                                                                              |                          |                     |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|
| Indicator Name                                                                                      | Number of borrow pits rehabilitated                                                                                                                                                                                                          |                          | Version             |
| Common Indicator Number                                                                             | Not Applicable                                                                                                                                                                                                                               | Current Indicator Number | RRP.17.             |
| Niveau                                                                                              | Outcome                                                                                                                                                                                                                                      | Classification           | Level               |
| Detailed Definition                                                                                 | The indicator will give an appreciation of the extent of borrow pit rehabilitation. The rehabilitation consist of leveling, reforestation, pastoral drinking pond and protection measures. The indicator concerns only the Lot 1 of the RN6. |                          |                     |
| Frequency of Reporting                                                                              | ANNUAL                                                                                                                                                                                                                                       | Reporting Period Covered | Post-Compact Period |
| Disaggregations                                                                                     | By gender (YES/NO)                                                                                                                                                                                                                           | NO                       |                     |
|                                                                                                     | By age (YES/NO)                                                                                                                                                                                                                              | NO                       |                     |
|                                                                                                     | By income (YES/NO)                                                                                                                                                                                                                           | NO                       |                     |
|                                                                                                     | By locality (YES/NO)                                                                                                                                                                                                                         | NO                       |                     |
| INDICATOR JUSTIFICATION DETAILS                                                                     |                                                                                                                                                                                                                                              |                          |                     |
| Justification for Including Indicator                                                               | The indicator shows the extent of borrow-pits rehabilitation for those that were not yet completed at the end of the compact.                                                                                                                |                          |                     |
| How does the indicator link to the ERR?                                                             | N/A                                                                                                                                                                                                                                          |                          |                     |
| How does the indicator link to the BA?                                                              | N/A                                                                                                                                                                                                                                          |                          |                     |
| How does the indicator link to the impact evaluation?                                               | N/A                                                                                                                                                                                                                                          |                          |                     |
| Justification for Disaggregations                                                                   | N/A                                                                                                                                                                                                                                          |                          |                     |
| INDICATOR ACQUISITION PLAN                                                                          |                                                                                                                                                                                                                                              |                          |                     |
| Entity Responsible for Collecting Data                                                              | USAC                                                                                                                                                                                                                                         |                          |                     |
| Point of Contact Responsible for Collecting the Data at AGEROUTE:                                   | Mamadou Assane NIANG                                                                                                                                                                                                                         | Phone                    | +221 77 333 07 96   |
| Entity Responsible for the collection of primary Data                                               | USAC                                                                                                                                                                                                                                         |                          |                     |
| Detailed description of data collection methodology (including any calculations computed by source) | The indicator will be collected annually by USAC.                                                                                                                                                                                            |                          |                     |
| If survey data, verbatim question(s) posed to respondent                                            |                                                                                                                                                                                                                                              |                          |                     |
| Detailed description of how data is transmitted from source to USAC                                 | USAC will fill out the ITT                                                                                                                                                                                                                   |                          |                     |
| Frequency and timing of data acquisition                                                            | YEARLY                                                                                                                                                                                                                                       |                          |                     |
| Names of verification sources                                                                       | Means of verification                                                                                                                                                                                                                        |                          |                     |
| • Reports from USAC                                                                                 | Number of borrow-pits rehabilitated                                                                                                                                                                                                          |                          |                     |
| Location of Data Storage                                                                            | USAC                                                                                                                                                                                                                                         |                          |                     |
| INDICATOR DATA QUALITY                                                                              |                                                                                                                                                                                                                                              |                          |                     |

|                                                                                                          |     |                                    |                                                                         |
|----------------------------------------------------------------------------------------------------------|-----|------------------------------------|-------------------------------------------------------------------------|
| <b>Date of Data Quality Review</b>                                                                       |     | N/A                                |                                                                         |
| <b>Main findings of data quality review</b>                                                              |     | Average score<br>(on a scale of 4) | Recommendations                                                         |
| 1. VALIDITÉ - Les données représentent-elles le résultat désiré de façon satisfaisante?                  |     | TBD                                |                                                                         |
| 2. FIABILITÉ - Les procédures de collecte des données sont-elles stables et consistantes dans le temps ? |     | TBD                                |                                                                         |
| 3. OPPORTUNITÉ - Les données sont-elles actuelles et fréquemment collectées?                             |     | TBD                                |                                                                         |
| 4. PRÉCISION - Les données ont-elles une marge d'erreur acceptable?                                      |     | TBD                                |                                                                         |
| 5. INTÉGRITÉ- Les données sont-elles exemptes de manipulations?                                          |     | TBD                                |                                                                         |
| 6. ADEQUATION - Dans quelle mesure les indicateurs caractérisent pleinement les résultats?               |     | TBD                                |                                                                         |
| 7. PRACTICABILITÉ - Les données sont-elles actuelles et fréquemment collectées?                          |     | TBD                                |                                                                         |
| <b>Évaluation Globale</b>                                                                                |     | TBD                                |                                                                         |
| <b>Action taken in response to data quality review</b>                                                   |     | Non Applicable                     |                                                                         |
| <b>Known data limitations and significance</b>                                                           |     | Non Applicable                     |                                                                         |
| <b>Actions taken to address data limitations</b>                                                         |     | Non Applicable                     |                                                                         |
| <b>INDICATOR BASELINE INFORMATION</b>                                                                    |     |                                    |                                                                         |
| Old Baseline                                                                                             | N/A | Old Baseline Year                  | 2015                                                                    |
| New Baseline                                                                                             | 0   | New Baseline Year                  | 2015                                                                    |
| Justification for Baseline Change (if any)                                                               |     | New indicator                      | Source of old Baseline<br>N/A<br>Source of New Baseline<br>USAC reports |
| <b>INDICATOR TARGET CALCULATIONS</b>                                                                     |     |                                    |                                                                         |
|                                                                                                          |     | Target                             |                                                                         |
| <b>YEAR 1</b>                                                                                            |     | Old                                | New                                                                     |
| Oct 2010 - Sept. 2011                                                                                    |     | N/A                                | N/A                                                                     |
| <b>Explanation of assumptions and inputs to target calculations</b>                                      |     |                                    | Justification for changes to targets or calculations (if any)           |
| <b>YEAR 2</b>                                                                                            |     | Old                                | New                                                                     |
| Oct 2011 - Sept. 2012                                                                                    |     | N/A                                | N/A                                                                     |
| <b>Explanation of assumptions and inputs to target calculations</b>                                      |     |                                    | Justification for changes to targets or calculations (if any)           |
| <b>YEAR 3</b>                                                                                            |     | Old                                | New                                                                     |
| Oct 2012 - Sept. 2013                                                                                    |     | N/A                                | N/A                                                                     |
| <b>Explanation of assumptions and inputs to target calculations</b>                                      |     |                                    | Justification for changes to targets or calculations (if any)           |

|                                                                            |                                 |     |     |                                                               |
|----------------------------------------------------------------------------|---------------------------------|-----|-----|---------------------------------------------------------------|
| Explanation of assumptions and inputs to target calculations               | YEAR 4<br>Oct 2013 - Sept. 2014 | Old | New | Justification for changes to targets or calculations (if any) |
|                                                                            |                                 | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations               | YEAR 5<br>Oct 2014 - Sept. 2015 | Old | New | Justification for changes to targets or calculations (if any) |
|                                                                            |                                 | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations               | Cible post compact              | Old | New |                                                               |
|                                                                            |                                 | N/A | N/A |                                                               |
| Explanation of assumptions and inputs to target calculations               |                                 | Old | New |                                                               |
|                                                                            |                                 | N/A | N/A |                                                               |
| <b>COMMENTS</b>                                                            |                                 |     |     |                                                               |
| <b>SUPPLEMENTARY DOCUMENTATION FOR DETAILED CALCULATIONS (if required)</b> |                                 |     |     |                                                               |

TARGET VALUES OF MCA\_SENEGAL'S PERFORMANCES  
INDICATORS

## 4. Target values of MCA-Senegal's performance indicators

| Indicator                                                                                       | Units      | Indicator Classification Type | Baseline | Baseline year | Year 1<br>Oct. 2010 -<br>Sept. 2011 | Year 2<br>Oct. 2011 -<br>Sept. 2012 | Year 3<br>Oct. 2012 -<br>Sept. 2013 | Year 4<br>Oct. 2013 -<br>Sept. 2014 | Year 5<br>Oct. 2014 -<br>Sept. 2015 | Long Term |
|-------------------------------------------------------------------------------------------------|------------|-------------------------------|----------|---------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------|
|                                                                                                 |            |                               |          |               |                                     |                                     |                                     |                                     |                                     |           |
| <b>PROGRAM</b>                                                                                  |            |                               |          |               |                                     |                                     |                                     |                                     |                                     |           |
| P indicator 1: Rate of variation of beneficiaries' net income drawn from the Irrigation Project | Percentage | Level                         | 0        | 2011-12       |                                     | 0                                   |                                     |                                     |                                     | 35        |
| P indicator 2: Change in vehicle operating costs per trip/kilometer for the RN2                 | US\$       | Level                         | 0        | 2010          |                                     |                                     |                                     |                                     | 0.05                                | N/A       |
| P indicator 3: Change in vehicle operating costs per trip/kilometer for the RN6                 | US\$       | Level                         | 0        | 2010          |                                     |                                     |                                     |                                     | 0.16                                | N/A       |
| <b>IRRIGATION AND WATER RESOURCES MANAGEMENT PROJECT</b>                                        |            |                               |          |               |                                     |                                     |                                     |                                     |                                     |           |
| IWRM indicator 1: Rice Paddy Production (Delta / Ngalenka)                                      | Tons       | Level                         | 102,000  | 2010-11       | 102,000                             | 107,000                             | 107,000                             | 107,000                             | 111,000                             | 277 000   |
| IWRM indicator 2: Tomato production (Delta and Ngalenka)                                        | Tons       | Level                         | 12,700   | 2010-11       | 12,700                              | 14,200                              | 14,200                              | 14,200                              | 35,500                              | 115 000   |
| IWRM indicator 3: Onion production (Delta and Ngalenka)                                         | Tons       | Level                         | 10,900   | 2010-11       | 10,900                              | 16,000                              | 16,000                              | 16,000                              | 40,000                              | 130 000   |
| IWRM indicator 4: Cropping intensity (Delta)                                                    | Percentage | Level                         | 60%      | 2011-12       | 60%                                 | 60%                                 | 60%                                 | 60%                                 | 70%                                 | 150%      |
| IWRM indicator 5: Cropping intensity (Ngalenka)                                                 | Percentage | Level                         | 20%      | 2010-11       | 20%                                 | 20%                                 | 0%                                  | 100%                                | 120%                                | 180%      |
| IWRM indicator 6: Total area with improved irrigation infrastructure (Delta and Ngalenka)       | Ha         | Level                         | 34,848   | 2010-11       | 34,848                              | 36,541                              | 37,554                              | 38,381                              | 38,381                              | 42 721    |
| IWRM indicator 7: Hectares under production across cropping seasons                             | Ha         | Level                         | 21,400   | 2010-11       | 20,300                              | 20,300                              | 20,300                              | 20,300                              | 23,600                              | 56 600    |
| IWRM indicator 8: Total flow measured (Q) at the Ronkh and G works                              | Rate       | Level                         | 20       | 2011-12       | 20                                  | 20                                  | 20                                  | 20                                  | 65                                  | N/A       |
| IWRM indicator 9: Number of hectares formalized (having a land allocation title and registered) | Ha         | Cumulative                    | 0        | 2010-11       | 0                                   | 0                                   | 0                                   | 748                                 | 3,440                               | N/A       |
| IWRM indicator 10: Percentage of land disputes resolved                                         | Percentage | Level (Cumulative)            | 0        | 2010-11       | 0                                   | 0                                   | 0                                   | 30                                  | 50                                  | 50        |
| IWRM indicator 11: Conflicts successfully mediated                                              | Number     | Cumulative                    | 0        | 2011-12       |                                     | 0                                   | 0                                   | N/A                                 | N/A                                 | N/A       |
| IWRM indicator 12: Parcels corrected or incorporated in land system                             | Parcels    | Cumulative                    | 0        | 2011-12       | 0                                   | 0                                   | 5,694                               | 5,787                               | 5,787                               | N/A       |
| IWRM indicator 13: Land rights formalized <sup>1</sup>                                          | Number     | Cumulative                    | 0        | 2011-12       | 0                                   | 0                                   | 0                                   | 600                                 | 2,500                               | 2500      |
| IWRM indicator 14: Number of land management committees and commissions set up or improved upon | Number     | Cumulative                    | 0        | 2010-11       | 9                                   | 9                                   | 9                                   | 9                                   | 9                                   | N/A       |

<sup>1</sup> This indicator refers to households, businesses and legal entities holding formalized land rights

Millennium Challenge Account Sénégal (MCA-Sénégal)

| Indicator                                                                                                          | Units      | Indicator Classification Type | Baseline    | Baseline year | Year 1                 | Year 2                 | Year 3                 | Year 4                 | Year 5                 | Long Term |
|--------------------------------------------------------------------------------------------------------------------|------------|-------------------------------|-------------|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------|
|                                                                                                                    |            |                               |             |               | Oct. 2010 - Sept. 2011 | Oct. 2011 - Sept. 2012 | Oct. 2012 - Sept. 2013 | Oct. 2013 - Sept. 2014 | Oct. 2014 - Sept. 2015 |           |
| Indicator IWRM.15 : Total length of main drainage canals and outfalls serviced (raked and/or cleaned out) annually | Kilometers | Level                         | 116         | 2015          | N/A                    | N/A                    | N/A                    | N/A                    | N/A                    | N/A       |
| Indicator IWRM.16 : Number of pumps serviced annually                                                              | Number     | Level                         | 115         | 2015          | N/A                    | N/A                    | N/A                    | N/A                    | N/A                    | N/A       |
| <b>ROADS REHABILITATION PROJECT</b>                                                                                |            |                               |             |               |                        |                        |                        |                        |                        |           |
| RRP Indicator 1: Average annual daily traffic (AADT) Richard-Toll – Ndioum                                         | Number     | Level                         | 1,029       | 2011-12       |                        | 1,029                  |                        |                        | 1,116                  | 2,029     |
| RRP Indicator 2: Average annual daily traffic (AADT) Ziguinchor – Tanaff                                           | Number     | Level                         | 571         | 2007          |                        | 571                    |                        |                        | 963                    | 1,510     |
| RRP Indicator 3: Average annual daily traffic (AADT) Tanaff – Kolda                                                | Number     | Level                         | 301         | 2007          |                        | 301                    |                        |                        | 562                    | 849       |
| RRP Indicator 4: Average annual daily traffic (AADT) Kolda – Kounkané                                              | Number     | Level                         | 798         | 2007          |                        | 798                    |                        |                        | 1,426                  | 2,095     |
| RRP Indicator 5: Rate of change in the duration of travel time on RN#2                                             | Percentage | Level                         | 0           | 2011-12       |                        | 0                      |                        |                        | -15                    | -15       |
| RRP Indicator 6: Rate of change in the duration of travel time on RN#6                                             | Percentage | Level                         | 0           | 2011-12       |                        | 0                      |                        |                        | -50                    | -50       |
| RRP Indicator 7: Roughness (RN2)                                                                                   | m/km       | Level                         | 3.2         | 2011-12       |                        | 3.2                    |                        |                        | 2.4                    | N/A       |
| Indicator RRP.8 : Roughness (RN6)                                                                                  | m/km       | Level                         | 13.0        | 2011-12       |                        | 13.0                   |                        |                        | 2.5                    | N/A       |
| RRP Indicator.9 : Road traffic fatalities                                                                          | Number     | Level                         | 43          | 2013-14       |                        |                        |                        | N/A                    | N/A                    | N/A       |
| RRP Indicator 10: Kilometers of roads rehabilitated on RN#6                                                        | Km         | Cumulative                    | 0           | 2010-11       | 0                      | 0                      | 0                      | 0                      | 252                    | N/A       |
| RRP Indicator 11: Kilometers of roads completed                                                                    | Km         | Cumulative                    | 0           | 2010-11       | 0                      | 0                      | 12                     | 234                    | 372                    | N/A       |
| Indicator RRP.12 : Percentage of the required annual budget mobilized for road network maintenance                 | Percentage | Level                         | Unavailable | 2015          | N/A                    | N/A                    | N/A                    | N/A                    | N/A                    | N/A       |
| Indicator RRP.13 : Percentage of paved roads maintained                                                            | Percentage | Level                         | Unavailable | 2015          | N/A                    | N/A                    | N/A                    | N/A                    | N/A                    | N/A       |
| Indicator RRP.14 : The visual state of the road network                                                            | Percentage | Level                         | 71          | 2015          | N/A                    | N/A                    | N/A                    | N/A                    | N/A                    | N/A       |
| Indicator RRP.15 : Deflections                                                                                     | Number     | LevelLevel                    | RN2         | 70            | 2015                   | N/A                    | N/A                    | N/A                    | N/A                    | N/A       |
|                                                                                                                    |            |                               | RN6 Lo11    | N/A           |                        |                        |                        |                        |                        |           |
|                                                                                                                    |            |                               | RN6 Lo12    | 68            |                        |                        |                        |                        |                        |           |
|                                                                                                                    |            |                               | RN6 Lo13    | 73            |                        |                        |                        |                        |                        |           |
| Indicator RRP.16 : Number of functional garden plots                                                               | Number     | LevelLevel                    | 0           | 2015          | N/A                    | N/A                    | N/A                    | N/A                    | N/A                    | N/A       |
| Indicator RRP.17 : Number of borrow pits rehabilitated                                                             | Number     | Level                         | 0           | 2015          | N/A                    | N/A                    | N/A                    | N/A                    | N/A                    | N/A       |

