

PREMIER MINISTERE

**MILLENNIUM CHALLENGE
ACCOUNT – BURKINA FASO**

COORDINATION NATIONALE

DIRECTION DU SUIVI-EVALUATION



BURKINA FASO
Unité – Progrès – Justice

BURKINA FASO POST-COMPACT MONITORING AND EVALUATION PLAN

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1. Preamble

This Monitoring and Evaluation (M&E) Plan:

- is part of the action plan set out in the MILLENNIUM CHALLENGE COMPACT (Compact) signed on July 14th, 2008 between the United States of America, acting through the Millennium Challenge Corporation, a United States Government corporation (MCC), and Burkina Faso, acting through its government;
- to support provisions described in the Compact;
- being governed and following principles stipulated in the Policy for Monitoring and Evaluation of Compacts and Threshold Programs (MCC M&E Policy).

This M&E Plan is considered a binding document, and failure to comply with its stipulations could result in suspension of disbursements. It may be modified or amended as necessary following the MCC M&E Policy, and if it is consistent with the requirements of the Compact and any other relevant supplemental legal documents.

2. Abbreviations

ADP	: Agriculture Development Project
AMVS	: Sourou Valley Development Authority
APD-Burkina	: Partner Agency for the Development of Burkina
BDS	: Business Development Services
BRIGHT	: Burkinabe Response to Improve Girls' Chances to Succeed
CE2	: Fourth Grade (primary school)
CIF	: Compact Implementation Fund
CLE	: Local Water Committee
CM2	: Sixth Grade (primary school)
CN	: National Council
COS	: MCA-BF Board
CP1	: First Grade (Primary school)
CSPS	: Health Care and Social Promotion Facility
CVD	: Village Development Council
DEP	: Directorate for Planning
DGATD	: General Directorate of Land-Use Planning and Decentralization
DGFOMR	: General Directorate of Land and Rural
DGR	: General Directorate of Roads
DGPER	: General Directorate of Rural Economy Promotion
DGPR	: General Directorate of Rural Roads Organization
DGRE	: General Directorate of Water Resources
DRAHRH	: Regional Directorate of Agriculture, Hydraulics and Fisheries
DRRA	: Regional Directorate of Animal Resources
DSE	: MCA-BF Monitoring and Evaluation Department
EIE	: Environmental Assessment
EIF	: Compact Entry into Force
EMP	: Environmental Management Plan
ERR	: Economic Rate of Return
ESA	: MCA-BF Environmental and Social Assessment Department
FER	: Burkina Faso Road Maintenance Fund
GAR	: Result-based Management
IE	: Implementing Entity
IMFP	: Incentive Matching Fund for Periodic Road Maintenance
INSD	: National Institute for Statistics and Population Studies
IRI	: International Roughness Index
IWRM	: Integrated Water Resource Management
MASA	: Ministry of Agriculture and Food Security
MATD	: Ministry of Territory Administration and Decentralization
MCA-BF	: Millennium Challenge Account-Burkina Faso
MCC	: Millennium Challenge Corporation
MEF	: Ministry of Economy and Finance
MHU	: Ministry of Housing and Urban Planning
MoE	: Ministry of Environment
MoJ	: Ministry of Justice
MRA	: Ministry of Animal Resources
N/A	: Not Applicable
ONG	: Non-Governmental Organization

PFI : Participating Financial Institutions
PMC : Project Management Consultant
PRSP : Poverty Reduction Strategy Paper
RAF : Agrarian and Land Reorganization
RAP : Resettlement Action Plan RLG : Rural Land Governance Project
SFR : Rural Land Services Offices TBD : To Be Determined
TOR : Terms of Reference USAID : United States Agency for International
Development

3. Key contracts

- **AD1:** Water Irrigation and Diversified Agriculture PMC
- **AD2:** Detailed feasibility studies and Environmental and Social Assessments, RAP compensation and designs and supervision of the Di and Léry sub-Activities of the Water Management and Irrigation Activity of the Agriculture Development Project
- **AD3:** Supervision of the Di and Léry sub-Activities of the Water Management and Irrigation Activity and the Rehabilitation of Rural Markets sub-Activity of the Diversified Agriculture Activity of the Agriculture Development Project
- **AD4:** Di Irrigated Perimeter Construction
- **AD5:** Léry Dam Construction
- **AD7:** Capacity Building and Technical Assistance for Water User Associations to provide O&M for Sourou Valley irrigated perimeters
- **AD9:** Integrated Water Resource Management, including region-wide institutional support for water management and participatory approaches to water management
- **AD10:** Consultant Services for Diversified Agriculture and Rural Finance Implementation
- **AD11:** Design and RAP compensation for Rehab of Rural Markets
- **AD12:** Rehab of Rural Markets,
- **LTP5 and LTP45:** Land Services
- **RD1:** Road Project Management Consultant
- **RD2:** Feasibility, Environmental Assessment and Detailed Technical Studies and Construction Supervision for the Dédougou-Nouna-Mali Border Road
- **RD3:** Feasibility studies, environmental and social assessments, final design and construction supervision of the Banfora-Sindou road (50 km), rural access roads in Comoe, Leraba and Kenedougou. Feasibility studies, environmental and social assessments, final design for the rural access roads in the Sourou valley at Di
- **RD4:** Feasibility studies, Environment and Social Assessment,, final design and construction supervision of Sabou-Koudougou-Didyr road and feasibility studies, Environment and Social Assessment, and final design of Didyr-Toma-Tougan Road
- **RD5.1:-** Dédougou-Nouna-Mali Border Road and RAP compensation
- **RD6.1:-** Rural Roads in Comoe, Leraba, Kenedougou and Houet and RAP compensation
- **RD7.1:** Sabou-Koudougou-Didyr Road and RAP compensation
- **RD8.1:** Banfora-Sindou Road and RAP compensation

4. Introduction

On July 14, 2008, the Millennium Challenge Corporation, on behalf of the United States Government and the Government of Burkina Faso, entered into a Compact Agreement worth **US\$ 480,943,569**. The Burkina Faso Compact implementation responsibility is vested in the Millennium Challenge Account, an autonomous body established on March 12, 2008 by the Government of Burkina Faso.

Following the example of all other MCC-sponsored programs, the Burkina Faso Compact Funding Agreement includes Monitoring and Evaluation as a key function in the program implementation mechanism. Indeed, Annex III of the Compact, which provides a general description of how progress is measured through the Compact results, is largely devoted to this. This Monitoring and Evaluation Plan, which appears as a consensual and operational instrument, is therefore necessary to monitor the implementation and evaluate all Compact projects.

Besides, the Monitoring and Evaluation Plan is a key component in the program design and is integrated in all aspects of the program cycle, from beginning to end.

This Monitoring and Evaluation Plan, was originally approved by the COS on December 9, 2009. It underwent a series of revisions, including a final revision in August 2014, to better reflect the results achieved in the execution of project activities, studies and surveys outcomes and the new requirements to consider for effective mapping of expected progress and in compliance with MCC guidelines pertaining thereto. The current revision (known as the Post-Compact M&E Plan) will present the M&E functions, plans, and procedures for the post-compact period.

Monitoring and Evaluation Plan Objectives

The M&E plan describes how performance objectives will be measured, how monitoring reports will be developed and how evaluations will be conducted. It has the following objectives:

- Explain in detail how MCA-Burkina Faso and MCC will monitor and evaluate project *short term* results and *long term* impacts;
- Define the way in which Burkina Faso intends to perform the monitoring so as to achieve the program objectives; establish clear targets for each objective based on economic analysis and establish a schedule for thorough impact evaluations;
- Provide guidance on program implementation and management to enable MCA-BF staff, COS and CN members as well as beneficiaries and any other person to track progress achieved towards expected results;
- Present data and information flow from the projects to the various stakeholders;
- Establish mechanisms that ensure performance information and data quality, reliability and accuracy;
- Define all agencies involved in monitoring and specify each party's responsibilities.

5. Program Overview

5.1 Project Components and Logic

Burkina Faso relies heavily on agriculture, which employs 85% of the labor force and provides on average 75% of export earnings. That said, agriculture remains predominantly rain-fed and

subject to serious weather fluctuations. It is almost exclusively dominated by small family farms using outdated farming practices.

Despite its poor performance, the agricultural sector remains Burkina Faso's economic development engine, driving economic growth strategies designed to improve economic well-being through poverty reduction.

This is why the Burkina Faso Compact, whose overall objective was to reduce poverty through economic growth, focused on increasing rural incomes. The Compact consists of four projects:

- **The Rural Land Governance Project**
- **The Agriculture Development Project**
- **The Roads Project**
- **The BRIGHT 2 Schools Project**

A project description and program logic for each project follows below:

5.1.1 The Rural Land Governance (RLG) Project

Project Description:

The overall objective of the **Rural Land Governance (RLG) Project** was to increase investment in land and rural productivity through improved land tenure security and land management. Expected results include greater security of land rights and improved access to more efficient land institutions, which together contribute to economic growth and poverty reduction in rural areas. The project budget was approximately US\$60 million and included the following mutually reinforcing activities:

Legal and Procedural Change and Communication

This Project Activity supported the Government's efforts to improve rural land laws and the regulatory and procedural framework to implement those laws. Most notably, the Project played a key role in the development of Law No. 34/2009 "On Rural Land Tenure" and its implementing regulations in 2009-2010, and Law No. 34/2012 "On Agrarian and Land Reform in Burkina Faso." These efforts were complemented by a significant public outreach program to inform people about the new legislation and its expected benefits.

This Activity was the first one implemented and set the framework for the other RLG activities, including decentralization of land administration and conflict resolution institutions, and issuance of rural land possession certificates (APFRs).

Institutional Development and Capacity Building

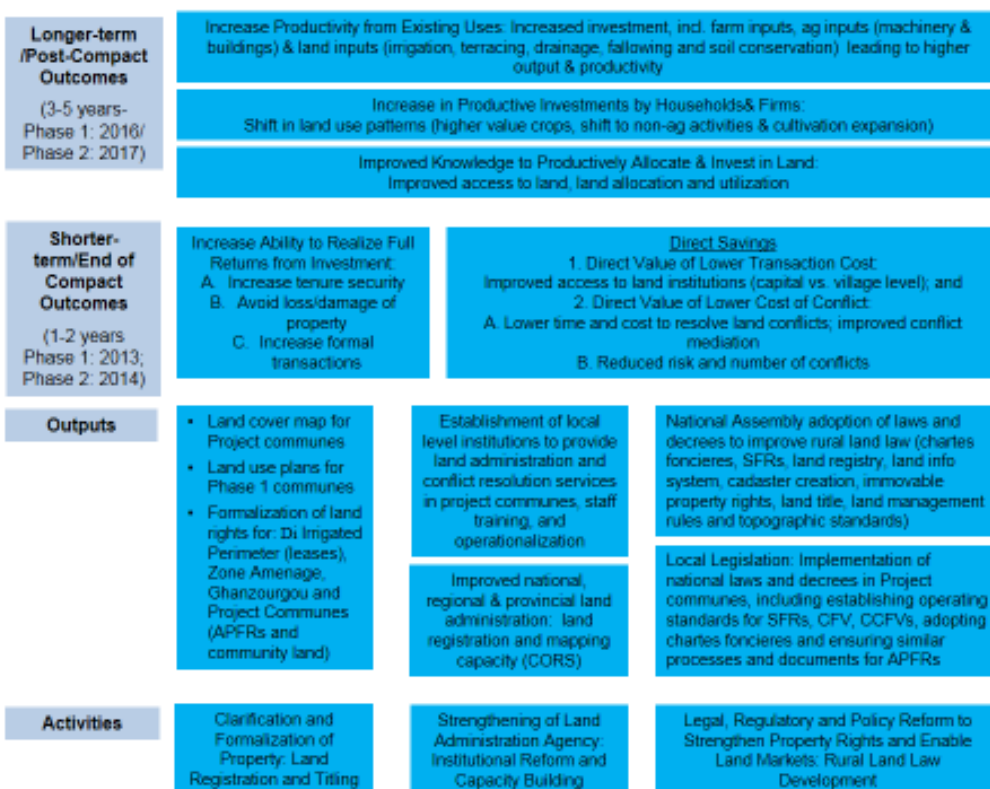
This Project Activity, in conjunction with the Legal and Procedural Change and Communication Project Activity, worked to improve institutional capacity to deliver land services in rural areas. Most notably, this activity supported extensive training of GOBF officials from various ministries, and the establishment and operations of commune-level rural land services offices (SFRs), village level land commissions (CFVs) that support SFR operations, and village level conflict resolution commissions (CCFVs) that mediate land conflicts. Implementation took place at the commune and village level in the Project's 17 Phase 1 municipalities on a pilot basis, and expanded in 2013 to an additional 30 Phase 2 communes based on certain targets reached during Phase 1.

Site-Specific Land Tenure Interventions

This Project Activity supported a variety of site-specific land rights formalization interventions. Activities included:

- Preparation of land titles and land leases for recipients of farmland in the new Di Irrigation Perimeter (the Perimeter was developed under the Agriculture Development Project) in 2014;
- Preparation of leases for users of land in existing irrigation perimeters near the Di Perimeter in 2014;
- Preparation of rural land possession certificates (APFRs) for non-irrigated land in the Project's 47 implementation communes in 2013-2014;
- Provision of APFR-like certificates to households in Ganzourgou Province in 2010; and
- Working with local populations to develop participatory land and natural resource use plans.

Rural Land Governance Program Logic:



5.1.2 The Agriculture Development Project

Project Description:

The objective of the **Agriculture Development Project** was to expand the productive use of land in order to increase the volume and value of agricultural production in Project zones. In that regard, the Agriculture Development Project was designed to increase rural incomes and employment and to enhance the competitiveness of the rural economies in the Sourou Valley and the Comoé Basin by addressing core constraints typical to rural Burkina Faso: poor water resource availability and management; weak beneficiary technical capacity; lack of access to inputs, market information and markets; and lack of access to credit. Expected results include increased agricultural production and productivity in Project zones, increased total area of land under irrigation in Di, and increased availability of rural credit in the Project's intervention zones. The Project budget was approximately US\$ 142 million and consists of the following interrelated and mutually reinforcing activities:

Water Management and Irrigation

This activity aimed to ensure adequate water supply while providing flood control and dam safety (for the Léry dam) to support and protect irrigation infrastructure investments in the Sourou Valley and Comoé Basin. It consists of the following sub-Activities:

- *Di Irrigated Perimeter:* This sub-activity included the construction of 2,240 hectares of newly irrigated land in the commune of Di in the Sourou province of the Boucle du Mouhoun region of Burkina Faso. Estimated at \$69 million for construction and \$85 million for all related activities (design, supervision, training of producers, creation and training of Water User Associations and support to AMVS), works kicked off in December, 2011. The first 600 hectares were delivered in spring 2013, allowing producers to begin agriculture activities in the 2013 rainy season; the remaining hectares were delivered prior to the end of the compact.
- *Lery Dam rehabilitation:* This sub-activity's main benefit stream derives from avoidance of the catastrophic failure of the Lery Dam, which would result in a loss of water available for irrigation in the Sourou Valley (including the Di irrigated perimeter, although benefits from Di are not included in the Lery ERR). It is estimated to cost \$4.8 million for construction, \$9.3 million when including related activities (design, supervision, creation of a Dam Safety Unit). The construction contract was signed in April, 2013; works were completed in July 2014.
- *Support to Water User Associations:* This sub-activity supported the sustainability of the Di irrigated perimeter (as well as already existing perimeters) by organizing and training geographically proximate producers in the perimeter to properly operate the irrigation system, manage water supply and provide ongoing maintenance. The original \$2 million contract was signed in March, 2011, but delays in startup of construction led to some of these Water User Associations not benefitting from a full season of training. To mitigate the risk of poor operation and maintenance (O&M), creation of WUAs was expanded to include existing perimeters in Niassan (south of the Di perimeter) in order to reinforce their institutional sustainability. In addition, training for WUAs is being continued post-Compact using GOBF assets generated by loan repayments made under the Access to Rural Finance Activity, and the *Centre d'Appui Gestion et Technique* (CATG) – a private sector entity - will provide subsidized operations and maintenance services to the WUAs.

- *Integrated Water Resource Management:* This \$2.4 million dollar contract, signed in October, 2010 provided support to the GOBF to implement reforms on how surface water in the country is retained and distributed. The sub-Activity focused on the Comoé Basin and the Mouhoun Basin, the Sourou Valley being a sub-basin of the latter. The GOBF adopted Integrated Water Resource Management Master Plans for each basin on July 30, 2014.

Diversified Agriculture

This activity built on the previous activity by supporting on-farm production and related activities using an agricultural value chain approach. Specifically, training and institutional support were provided in the following topics: agriculture production, animal health, value chain and rural market management. In addition, four rural markets were rehabilitated and market management committees were established.

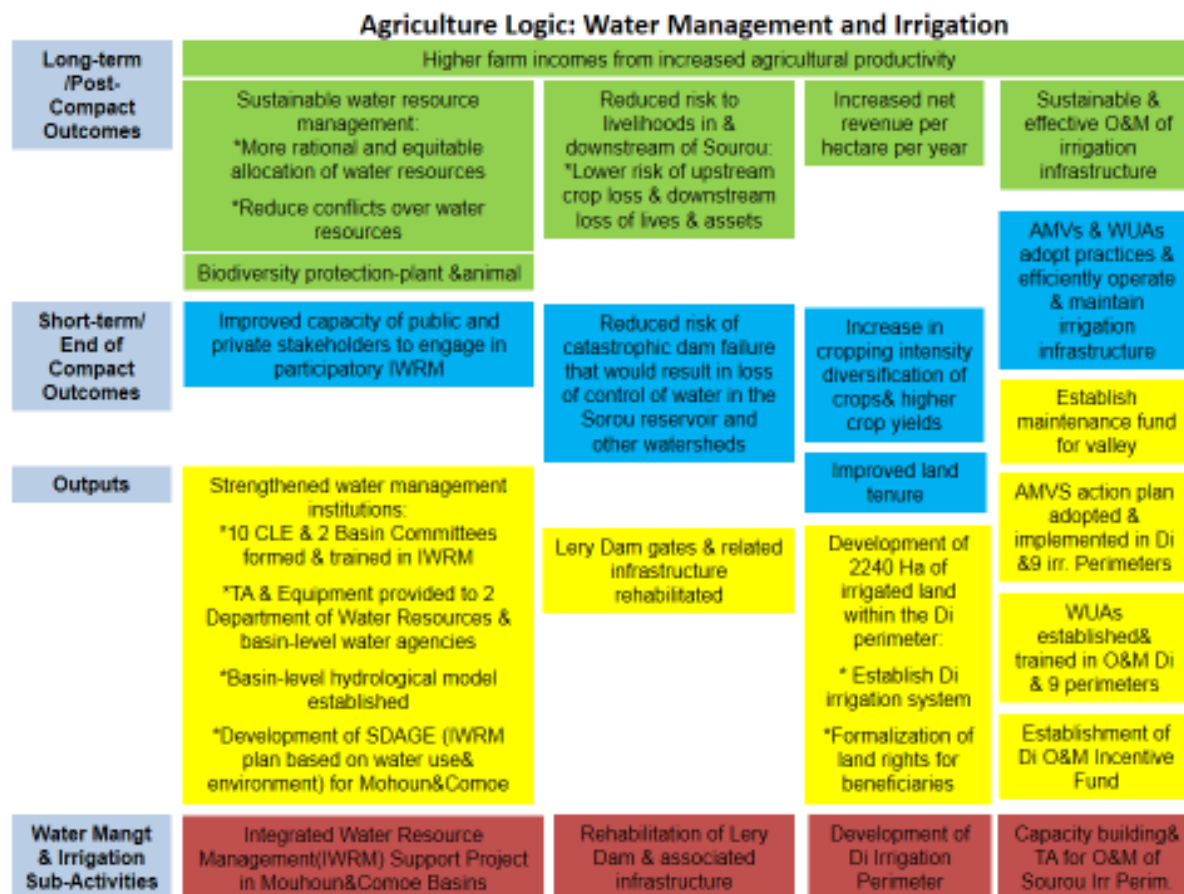
- *Training and Institutional Support:* MCC invested about \$23 million in providing training and technical assistance to producers, as well as actors involved in value-added activities and rural markets (including a cell phone based market information system). The base contract for the main implementation of this sub-activity was signed in November, 2009, and focused on market studies to identify the major crops and value chains to be targeted. In June, 2011, actual support to both rainfed and irrigated production and related activities began in the Comoé and Sourou provinces. After delivery of the first irrigated parcels in Di, producers also benefited from these trainings. Given a lack of start-up investment, producers in Di also received “Starter Kits” which included seeds and simple farming tools to help them maximize production on their land. Producers outside of Di received smaller “Incentive Kits,” to encourage them to complete training. Though the project had originally anticipated providing 2 full years of training to the new farmers on the Di perimeter, due to delays in construction, this was not possible. Thus, under the management of the APD and the GoBF, farmer training on the Di perimeter is expected to continue post-compact.
- *Rehabilitation of four rural markets:* MCA studied nine rural markets in order to determine which would most likely realize economic benefit from rehabilitation. Four were eventually selected for construction, work began in July 2013, and all four were provisionally received in July, 2014.

Access to Rural Finance

The goal of the Access to Rural Finance Activity was to increase the availability of credit in the four western regions of Burkina Faso—the Sud-Ouest, Hauts Bassins, Cascades, and Boucle du Mouhoun—through three inter-related sub- activities: the Rural Finance Facility (RFF), support to participating financial institutions (PFIs), and support to potential end-borrowers. The RFF was designed as a \$10 million line of credit to provide medium-term funding resources for participating financial institutions (PFIs) to make medium-term investment loans to agricultural borrowers in the target regions. The PFIs borrowed the RFF funds at a low interest rate from MCA-BF and could on-lend them at market rates, to help subsidize the perceived risk of agricultural lending. The PFIs also received training and technical assistance to improve their agricultural lending practices. In addition, a \$1 million fund was established to provide business development services to potential agricultural end-borrowers in the target region (e.g. training on improved business management skills and development of credit-worthy loan proposals to be presented to the PFIs and other financial institutions). The Access to Rural Finance component experienced

significant delays in implementation launch, followed by lower than expected loan demand, causing the activity to be terminated in July 2013, one year before the Compact End Date.

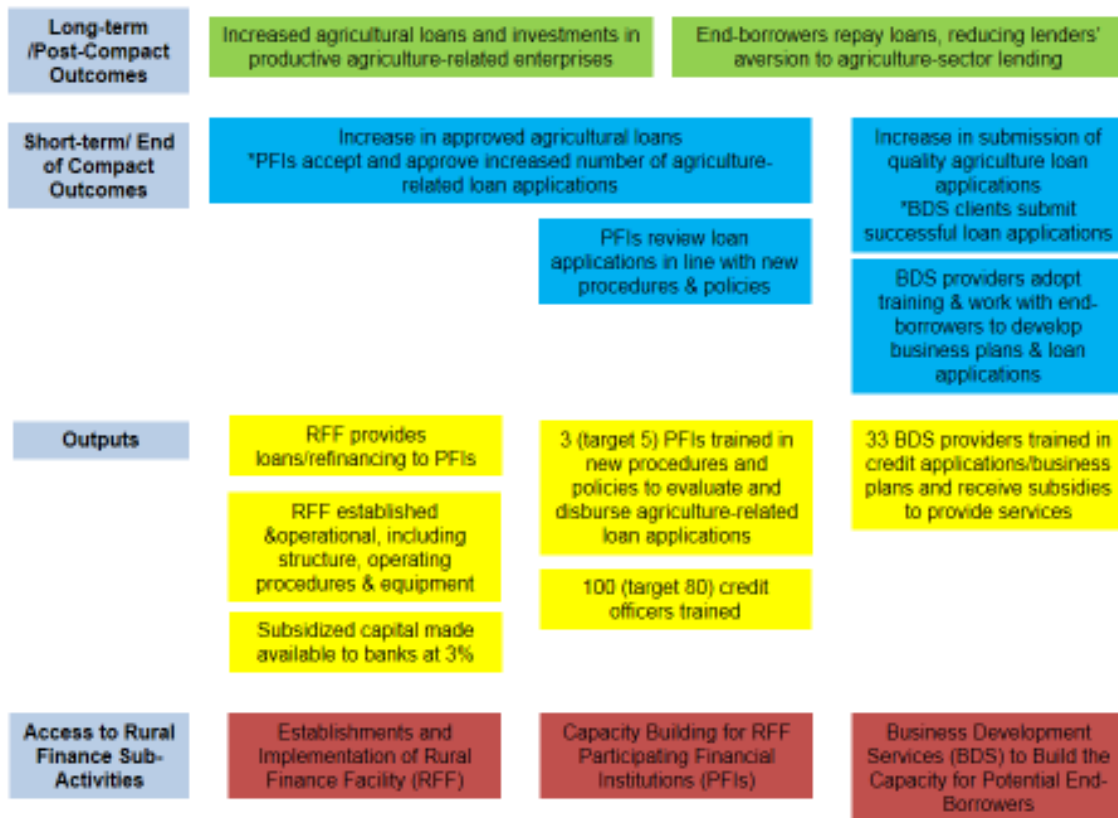
Agriculture Development Program Logic:



Agriculture Logic: Diversified Agriculture

Long-term /Post-Compact Outcomes	Higher incomes for producers, as well as other actors in livestock and agriculture value chains				
	Farmers realize sustainable increases in productivity, yields and profits	Sustained efficiency gains & value addition for beneficiaries	Higher net income from agriculture/livestock and related products		Sustained increases in livestock productivity
Short-term/ End of Compact Outcomes	Increased diversification of crops	Producers & agribusinesses increase value added to their commercial activities	Reduced transaction & marketing costs		Improved livestock productivity & animal health
	Producers adopt practices to increase productivity (animal&agriculture) & reduce post-harvest losses		More business linkages & market transactions	Producers make more informed production & marketing decisions	Improvement of rural market conditions: hygiene, parking, other amenities and organization
	Incentive kits used by farmers	Producers make more informed production & marketing decisions		Improvement of rural market conditions: hygiene, parking, other amenities and organization	
Outputs	TA & incentive kits delivered to farmers	48 producer associations & agribusinesses trained to add value to commercial activities	MIS established in 9 markets for major commodities	Existing 4 rural markets upgraded	Improved livestock services: *Vets trained *Equip& meds provided *Rehab of vet schools/labs
	7000 households trained in 2 tracks: 1) Vegetable: agriculture and agro-forestry; 2)Animal health and animal husbandry (chickens/cows)	Producer Associations Established	Info centers created in 2 markets	9 community-level committees established & trained to manage markets	*500,000 chickens and cows vaccinated from PCP and new cattle
	Outreach campaign implemented for vendors on hygiene, parking, safety, taxes				
Diversified Agriculture Sub Activities	TA for Farmers (rain-fed & irrigated production)	Value Chain Development	Market Info System (MIS)	Rehab of Rural Markets	Animal Health Services

Agriculture Logic: Access to Rural Finance



5.1.3 The Roads Project

Project Description:

The objective of the **Roads Project** was to enhance access to markets through investments in the road network. More specifically, the Roads Project was designed to: (a) improve access to agricultural markets by upgrading primary and rural road segments serving the Sourou Valley and the Comoé Basin; (b) reduce travel time to markets and reduce vehicle operating costs; and (c) ensure the sustainability of the road network by strengthening road maintenance. Expected results include increased volume of freight and passenger traffic on rehabilitated roads, reduced travel times and costs, and improved road maintenance. The Project included a set of primary and rural roads projects for upgrading to appropriate functional standards and designed to carry projected traffic for a 15 to 20 year horizon. Benefits are expected to result primarily from increasing the year-round accessibility to markets of agriculturally productive regions that are typically cut off during the rainy season.

The project's value is US\$ **194,130,681** and consists of the following activities:

Development of Primary Roads

The Development of Primary Roads Activity supported improvements of three primary road segments of 274.05 kilometers in western Burkina Faso. The segments financed by MCC Funding

included the 143.5-kilometer Dédougou–Nouna–Mali border segment (construction on which started in February 2012), the 80.5-kilometer Sabou–Koudougou–Didyr segment (construction on which started in October 2012) and the 50.3-kilometer Banfora–Sindou segment construction on which started in October 2012. Construction on these road segments was mostly complete by July 2014 (the end of the compact).

The 84-kilometer Didyr-Tougan segment and the 100-kilometer Mangodara-Banfora segments were designed under the compact with MCC Funding, and the designs were turned over to the GoBF to be constructed by other sources.

Development of Rural Roads

The Development of Rural Roads Activity improved 151 kilometers of rural roads located in three (3) rural areas in the Comoe Basin, southwestern Burkina Faso, including the Provinces of Léraba, Comoé and Kéné Dougou. These roads had previously been in the form of rural tracks that the works upgraded to fully engineered rural road standards. Construction of these rural roads started in June 2013 and was mostly completed by July 2014 (the end of the Compact).

Capacity Building and Technical Assistance for Road Maintenance

The Capacity Building and Technical Assistance for Road Maintenance Activity provided capacity building and technical assistance to existing government agencies and private sector institutions involved with road maintenance activities to improve road maintenance planning and implementation. It also includes development, installation, rollout and training in the use of a road asset management system.

Incentive Matching Fund for Periodic Road Maintenance (IMFP)

The Incentive Matching Fund for Periodic Road Maintenance (IMFP) is designed to set the Government on a path towards long-term, sustainable funding for periodic maintenance of the entire road network in Burkina Faso. MCC Funding is being used to finance periodic road maintenance works through an incentive matching fund that matches annual increases in the Government's dedicated funding for periodic maintenance, subject to measurable indicators of performance on maintenance planning, capacity, and implementation. The IMFP was administered by the Road Maintenance Fund of Burkina (*Fonds d'Entretien Routier du Burkina - FER-B*), an institution established by the Government in cooperation with the World Bank (the "Road Fund").

Roads Program Logic :



5.1.4 The BRIGHT 2 Schools Project

Project Description:

The objective of the **BRIGHT 2 Schools Project** was to increase primary school completion rates for girls and builds upon the successes of the Burkinabè Response to Improve Girls' Chances to Succeed ("**BRIGHT**") funded under the MCC Threshold Program. In addition, the BRIGHT 2 Schools Project supported the efforts of the Ministry of Basic Education and Literacy (*Ministère de l'Enseignement de Base et de l'Alphabétisation* or "**MEBA**") to increase girls' primary education completion rate.

The cost of the Project was around US\$ 29 million. The Project was administered by USAID pursuant to an agreement between USAID and MCC. The project was begun in early 2010 and was completed at the end of the 2011-2012 academic year.

The BRIGHT 2 Schools Project consisted of the following activities:

Construction/Rehabilitation of about fifty (50) Boreholes and/or Water Catchment Systems

Construction of School Complexes: 396 additional classrooms (including equipment), 396 teacher housing units, 2 blocks of 3 latrines (792 latrines in total), sports grounds and sports equipment.

Construction of 122 *Bisongos* (kindergartens)

Take-home Rations: Provision of daily meals (“**Take-Home Rations**”) during the nine (9) months of each school year to about 100 children expected in each of the 132 *Bisongos*. The Project also provided monthly take-home rations to grades 1-4 (CP1-CE2) girls demonstrating 90% monthly attendance during the nine-month school year.

Social Mobilization Campaign

Adult literacy/Micro-Project Management: Training of trainers, delivery of literacy classes and micro-project management training for women and mothers in the 132 communities.

BRIGHT 2 Schools Program Logic:





5.2 Projected Economic Benefits

MCC considers ex-ante Economic Rate of Return (ERR) analysis as one of the criteria used to evaluate country proposals. ERRs evaluate the total income increase attributable to a proposed MCC-funded activity as compared to total costs. MCC’s ERR analysis is described in more detail here:

<http://www.mcc.gov/mcc/panda/activities/err/index.shtml>

MCC’s ERRs are subject to an independent internal “Peer Review” process to consider the quality and accuracy of the calculations. MCC’s economic analyses for the Burkina Faso Compact can be found at:

<http://www.mcc.gov/mcc/panda/activities/err/err-countries/err-burkinafaso.shtml>

MCC’s Beneficiary Analysis guidelines, (which can be found here: <http://www.mcc.gov/mcc/panda/activities/beneficiary/index.shtml>) consider project beneficiaries to be those individuals who are expected to achieve improved standards of living, primarily through higher incomes, because of economic gains generated by the MCC-funded project.

In the Burkina Faso Compact, many people were involved in MCC-funded activities, including:

- agricultural extension support and training,
- improved access to irrigation, credit and roads,
- improved land tenure procedures,
- availability of new and improved land services, and

- availability of Bright 2 project schools.

However, only some of these participants, users, and other individuals are likely to have higher incomes because of the Compact.

The ERR analysis for the Burkina Faso Compact estimated income gains for the following numbers of individuals:

Project/Activity	Number of Beneficiaries¹	Estimated ERR at compact signing
Rural Land Governance Project ³	N/A	N/A
Agriculture Development Project ^{4,5}	65,920	
1. Lery Dam	65,920	13%
2. Di irrigation	26,577	4.6%
Roads Project	842,584	
1. Development of Primary Roads Activity	754,107	-0.9% to 1.0% ⁷
2. Development of Rural Roads Activity ⁶	88,477	N/A

Estimates as of: 9/8/2009

Notes on Estimated Economic Benefits:

General:

1. This economic benefit analysis is as of 2009. At the time of Compact development, several activities had no ERR estimates. As compact closeout ERRs are still in process, at this time there are no updates available to the beneficiary analysis.
2. The estimated project beneficiary figures do not take into account geographic overlap between projects; they should therefore not be added together and taken as estimates for the overall Compact program.

Rural Land Governance Project:

3. The economic logic of the Rural Land Governance Project hinged upon reducing economic losses due to land conflicts. Though qualitative evidence suggests that land conflict is a problem in Burkina Faso, limited quantitative evidence existed during Compact Development to verify this claim. Therefore, the **Rural Land Governance Project**, intended to reduce economic losses due to land conflicts, adopted a pilot implementation approach whereby the project was tested in seventeen (17) municipalities. Using an ERR model developed during Compact Development, after approximately two years (Phase 1) the project was evaluated and changes in land conflict were measured and considered. At that time, the decision was made to extend the RLG Project to an additional thirty (30) municipalities (Phase 2). However, since specific numbers of income beneficiaries could not be estimated at the time of Compact Development, a complete beneficiary analysis was not completed. In 2014, a plan was made to estimate the number of beneficiaries from the RLG Project. This estimate will ultimately include: beneficiaries from APFRs in the 47 RLG communes; beneficiaries of formalization of rights under the Ganzourgou pilot project; beneficiaries from reduced levels of conflict. At the time of compact closeout,

however, the change in land conflicts is not yet known, as it will depend on data and analysis from the impact evaluation.

Agriculture Development Project:

4. ERRs exist for the Léry Dam and Di irrigation scheme. However, as ERRs were not available for the Diversified Agriculture Activity, the Access to Rural Finance Activity and the Comoé Integrated Water Management Plans, beneficiary estimates for these activities were not calculated.
5. The beneficiaries of the Di irrigation scheme are included in the Léry Dam beneficiary estimates because the irrigation perimeter lies completely within the area supported by the dam.

Roads Project:

6. MCC's standard practice for estimating the number of beneficiaries of a road is to count the number of people living within five (5) km of the road. Thus, in the case of the Rural Roads Activity it is possible to measure the number of beneficiaries without estimates of the increased incomes associated with the activity.
7. In MCC's Investment Memo (2008), the roads project overall had an ERR of between -.9–1%. However, when calculated by individual road segments, the individual ERRs ranged from -3%-3%.

BRIGHT 2 Schools Project:

8. Although no ERR was computed for the BRIGHT 2 Schools Project, expected beneficiaries can be estimated using the data from the BRIGHT Threshold Program impact evaluation.

5.3 Program Beneficiaries

5.3.1 Rural Land Governance Project

The **Rural Land Governance Project** is expected to impact households and businesses throughout the country, first through the Legal and Procedural Change and Communication Project Activity to create a favorable investment environment for existing and prospective farmers. Households and businesses are expected to benefit from: APFRs, land formalization in Ganzourgou, titles and leases distributed on the new Di Perimeter and nearby existing perimeters, and through new conflict resolution mechanisms.

The Institutional Development and Capacity Building Project Activity and the Site-Specific Land Tenure Interventions Project Activity also benefit producers located in the targeted areas. This group of beneficiaries includes producers located in up to 47 of the country's 302 rural municipalities and in the targeted agricultural development areas. The targeted sites are organized in 15 clusters of contiguous municipalities with the expectation that outcomes and impacts achieved by cluster municipalities will eventually extend to neighboring municipalities, which are not targeted by Project, particularly as the clusters are distributed across the 13 administrative regions of the country. Several of these municipalities are also benefiting from the Agriculture Development Project and others are, at the same time, benefiting from the rehabilitation and construction of road segments under the Roads Project. Improved land

registration and mapping services at national, regional or provincial levels may also benefit other public or private users who are neither located in target municipalities nor in the project areas. Other stakeholders from the private sector (investors, banks and decentralized financial systems, etc.) also benefit from the Rural Land Governance Project.

5.3.2 Agriculture Development Project

The primary beneficiaries of the **Agriculture Development Project** are agriculture value-chain stakeholders:

The main beneficiaries of the irrigation investments are those people with some dry farming experience who received irrigated lands. Many beneficiaries earn less than US\$ 2/day and selection criteria for land allocation was designed to serve this category of beneficiaries. The beneficiaries of the Léry dam investments are farmers in the Sourou valley whose water supply is protected by the dam. This includes farmers in the Di irrigated perimeter.

The existing irrigated perimeter residents and farmers (crop and livestock) who are benefiting from the technical assistance activities are more likely to fall into a slightly higher income category. Beneficiaries of rehabilitated markets, rural credit and investments under the IWRM Project Activity are located throughout the Sourou, Hauts Bassins, Sud-Ouest and Cascades regions.

5.3.3 Roads Project

Key **Roads Project** beneficiaries according to the economic analysis are the residents along the the roads, who may experience a more rapid flow of their products. Additionally, transporters who go through these regions may also benefit (in terms of vehicle maintenance, an increase in transport frequency, and reduced travel time). Improved primary roads are affecting nine (9) of Burkina Faso's 45 provinces, and the rural roads are connecting up to 65,000 individuals in thirty (30) villages.

Other expected results include a reduction in the isolation of rural communities, which may lead to increased access to health and education services.

5.3.4 BRIGHT 2 Schools Project

The **BRIGHT 2 Schools Project** beneficiaries include the students (boys and girls) of the new primary schools, the children expected in the Bisongos, as well as the men and women of the communities that participated in the various training and literacy sessions and the micro-project management training.

6. Monitoring Component

6.1 *Summary of Monitoring Strategy*

Monitoring Indicators, Baseline and Target Definition

For the post-compact period, in agreement between the MCA-BF, MCC, and the data collection agencies, the APD-Burkina will continue to monitor a set of indicators, which are included in the annexes to the M&E Plan. Some of these indicators were monitored during the compact. For these indicators, the annexes provide the baselines and targets that were included in the final, closeout M&E Plan, however, no new targets for the post-compact period are needed, per MCC Policy, and thus are not included. For new indicators that have been added for the post-compact period, these indicators generally do not have baseline information or annual targets from the compact period.

Data Sources

For the post-compact period, there will be two reporting mechanisms for reporting post-compact ITT data. One will be through the APD-Burkina. The other will be through MCC's evaluation consultants.

The APD-Burkina will coordinate the collection of most post-compact indicators. The APD-Burkina will work with the Successor Entities of the GOBF who will be in charge of collecting the data in the field and reporting it to the APD-Burkina.

For some indicators, where local data are not available and for which data will be collected for MCC's final project evaluations, post-compact ITT data will be provided by MCC's evaluation consultants. MCC's consultants should provide post-compact ITT data to both MCC as well as the APD-Burkina.

Data Collection Frequency

For the APD-Burkina, reporting will be on an annual basis. For data provided by MCC's evaluation consultants, these data will be available on a rolling basis, as they become available upon survey/evaluation completion.

6.2 *Data Quality Reviews*

For locally collected data, the APD-Burkina is responsible for verification of data quality of the data provided by the Successor Entities. Similarly, MCC's evaluation consultants will be responsible for overseeing and managing the quality of survey-collected data.

6.3 *Standard Reporting Requirements*

The APD-Burkina will be responsible for submitting annual reports to MCC covering through 2018. These reports should be submitted to via email to the MCC M&E counterpart and the Vice President of the Department of Compact Operations VPOperations@mcc.gov with the subject line "Burkina Faso Post-Compact Reporting" and the dates of report coverage.

The APD-Burkina, with support from MCC, should submit an annual report on or by January 15 of 2015, 2016, 2017, and 2018. The annual report should include the following:

- A Post-Compact Indicator Tracking Table (ITT) that includes all of the indicators included in Annex 1 of this plan for the preceding calendar year using the MCC template.
- A narrative description to provide additional information and context to the supplied ITT information.

7. Evaluation Component

7.1 *Summary of Evaluation Strategy*

As an independent and objective review at a particular time (carried out before, during or after project implementation) of the context, objectives, results and means used to assess results and draw lessons, evaluation is an important and essential process and step in the life of a Compact project or program, evaluations aim to determine the relevance, effect and impact of the project in terms of objectives, expected or desired results.

Under the Compact, the “evaluation” component is used to retrospectively analyze achievements and determine whether such results are attributable to interventions. As part of this component, MCA will finance the mid- term evaluation, the final evaluation and the ad hoc evaluations as well as specific studies; MCC will support program independent impact assessments. The following evaluation operations are planned:

7.2 Specific Evaluation Plans

<u>Compact/ Project Covered</u>	<u>Evaluation Name</u>	<u>Evaluation Type</u>	<u>Key Variables</u>	<u>Primary/ Secondary Methodology</u>	<u>Data Collections</u>	<u>Final Report Date</u>	<u>Relevant Local Stakeholders</u>
Compact	Mid-term Evaluation	Performance		Primarily Qualitative	2012	September 2012	
Rural Land Governance	Land Evaluation	Impact	Perceptions of land- tenure security, frequency and types of land conflicts, resolution of land conflicts, producers' investment decisions, legal and policy reform, land institution performance, numbers of formal land transactions, APFR demand and issuance	Difference in Differences	Phase 1: Baseline 2010; Interim 2012; Endline 2017 Phase 2: Baseline 2013 Endline 2017	Estimated end of 2017	CCFVs, DGATD, DGAJJ, SFRs, DPI, IGB, DGAT, MATD
Agriculture Development	Di Lottery Evaluation	Impact	Adoption of new practices, crop yields, Agricultural income, total income	RCT	Baseline: Dec 2013; Interim: 2015 (Est); Final: 2016- 2017 (Est)	Estimated end of 2017	AMVS, DGESS/ DRASA, DPASA, Agences de l'eau- Cascade et
	Di PAPs Evaluation	Performance	Adoption of new practices, crop yields, Agricultural income, total income	Pre/Post	Baseline: Dec 2013; Interim: 2015 (Est); Final: 2016- 2017 (Est)	Estimated end of 2017	Boucle de Mouhoun, DGRE, DGAH

	Farmer Training Evaluation	Impact	Adoption of new practices, crop yields, Agricultural income, total income	Difference in Differences	Baseline: 2012; Interim: 2015 (Est); Final: 2016-2017 (Est)	Estimated end of 2017	AMVS, DGESS/ DRASA, DPASA
	Rural Finance Evaluation	Performance	Assessment of: activity conception, implementation, and outputs/short term outcomes	Mixed-Method/Primarily Qualitative	Feb 2015 (Est)	Estimated mid-2015	DGESS/ DRASA, DPASA
	Water Management and Rural Markets Evaluation	Performance	Assessment of: continuity and sustainability of water management institutions and rural market structures and management committees	Mixed-Method/Primarily Qualitative	2015 (Est)	Estimated end of 2015	AMVS, DGESS/ DRASA, DPASA, Agences de l'eau-Cascade et Boucle de Mouhoun, DGRE, DGAH
Roads	Repeat HDM-4 Analyses	Performance	Traffic counts, IRI	HDM-4	Closeout ERR: 2015 (Est); Follow-up: 2017 (Est)	Estimated end of 2017 for final analysis	DGER, DGR, FERB, DGESS
BRIGHT 2 Schools	BRIGHT Evaluation	Impact	Student enrollment, student achievement/test scores	Regression Discontinuity	Interim: 2012; Final: 2015 (Est)	Estimated end of 2015	DGESS, DPENA, Comité Permanante de Suivi de BRIGHT

Burkina Faso Monitoring and Evaluation Plan

7.2.1 Summary of Specific Evaluation Plans

MCC is committed to conducting rigorous, independent assessments of its programs as an integral part of its focus on results. A rigorous **impact** evaluation measures the changes in individual, household or community well-being that results from a particular project or program. The distinctive feature of an impact evaluation is the use of a counterfactual, which identifies what would have happened to the beneficiaries absent the program. This counterfactual is critical to understanding the improvements in people's lives that are *directly caused* by the program. While the Compact's monitoring indicators described in this M&E Plan will measure whether project activities meet their expected intermediate results, the impact evaluations are designed to rigorously measure the impact of projects on the wellbeing of beneficiaries.

MCC is responsible for selecting one or several independent consulting firms which will design and implement evaluations within each of the 4 Compact Projects: 1) the Rural Land Governance Project, 2) the Agriculture Development Project, 3) the Roads Project and 4) the BRIGHT 2 Schools Project. MCC is responsible for contracting independent evaluators for each evaluation.

Each evaluation will be based on statistical methods, often using data collected through MCA-managed surveys. Under the guidance of MCC, the MCA-BF monitoring and evaluation team will closely work with the impact assessment teams to support the development and implementation of such studies.

In addition to addressing key research questions, the evaluations for all of the projects will also address:

- the Economic Rate of Return;
- cost-effectiveness (to compare the effects per dollar invested with comparable measures of other typical irrigation, road, education and land tenure investments. In particular, it would be useful to know whether a less expensive intervention would have generated similar impacts.);
- why goals, objectives and targets were or were not achieved;
- lessons learned applicable to other similar Projects;
- long-term sustainability of results;
- distribution of benefits (differences in impact of the project activities, by gender, age, and income, to the fullest extent possible);
- unexpected results of the program (positive and negative).

7.2.2 Mid-term Evaluation of Overall Compact Progress

A mid-term evaluation is generally used to: review and assess the project physical, economic, financial, social and institutional environment primary data; analyze and thoroughly understand the project main technical, economic, financial, and operating parameters; assess interim results; reassess estimated costs and various technical standards and if necessary, redefine amounts, conditions, financing and implementation terms.

The Compact mid-term evaluation was a part of the stakeholders' responsibilities (MCA-BF, MCC) and consists in reviewing program management and performance after several years of implementation. This assessment, completed in 2012, allowed an interim assessment of the Compact implementation progress, the feasibility of achieving the objectives and expected outcomes within the agreed timeframe, the relevance and efficiency of program management

while assessing whether and to what extent the current institutional and political environment was conducive to the Compact pilot experience replication.

This assessment also analyzed the level of project implementation, progress achieved regarding all indicators, and M&E plan implementation. It helped analyze the challenges faced and assisted in identifying strategies to achieve Compact expected results.

In addition, it provided MCA-BF and MCC with recommendations on additional opportunities and corrective actions/guidance to be taken to address the problems identified.

7.2.3 Rural Land Governance Project

The evaluation of the Rural Land Governance Project (RLG) focuses on the combined effects of the RLG activities as they relate to the 47 Project communes. The preparation of land titles and leases for recipients of irrigated farmland in the new Di Irrigation Perimeter under RLG's Site Specific Land Tenure Intervention Activity is covered by the Di evaluation under the Agriculture Project as effects of land, farmer training and irrigation could not be separated. Preparation of leases for users of land in the existing perimeters near the Di Perimeter, as well as provision of APFR-like certificates to households in Ganzourgou were not included as part of the evaluation design.

Key evaluation questions include:

- Do the project activities lead to improved land tenure security?
- Can one attribute an effect to project activities with respect to changes in the frequency and types of land conflicts, after accounting for other factors?
- If yes to the previous two questions, does improved tenure security or reduced conflict lead farmers to change their investment decisions (e.g., by increasing investment levels, encouraging farmers to make more fixed investments, etc.) in ways that increase agriculture productivity and incomes?

For the above variables (perceptions of land tenure security, conflict, and investment) were there different results for men and women? If so, what were those different effects?

To study these questions, the impact evaluation uses a difference-in-difference method to compare trends in 17 pilot and 17 comparison communes before and after implementation of RLG's pilot phase (Phase 1) and in 30 pilot and 29 comparison communes before and after implementation of RLG Phase 2. This includes surveys at the individual, household, parcel, commune and village level, including administrative data collection.

An MCA-procured local Burkina survey firm conducted the Phase 1 baseline survey in early 2010 on a sample of 3,552 households with 6,481 land parcels across 450 villages in the 34 communes¹. A follow-up Phase 1 interim survey was conducted in 2012. A Phase 2 baseline

¹ For Phase 1 sampling, a list of administrative villages that were provided by the Quatrième Recensement Général de la Population et de l'Habitat (RGPH2006) served as the sampling frame to select villages in the first stage. After villages had been selected in the first stage, an enumeration of households was done in selected villages and then households were randomly selected in each village. The sample size was computed using the proportion of households experiencing at least one land conflict as a key parameter to estimate with a given degree of statistical confidence. Based on these computations, a minimum sample of 3,552 households was required and 8 households sampled in each village (for a total of approximately 450 villages) in the 34 communes.

survey was conducted in mid-2013 on a sample of 4,016 households (2,008 treatment and 2,008 control) with 16,370 parcels across 357 villages within the 59 communes.

The baseline surveys provided basic information and relevant indicators for the study (including levels of conflict, land tenure security perceptions, and agricultural investment). The interim Phase 1 survey tests early results of RLG activities in the 17 communes, specifically those around the first two activities as APFR issuance had not yet been started at the time of the interim survey. Key short-term outcomes include changes in perception of tenure security and conflict. An endline survey in Phase 1 and Phase 2 RLG areas is planned for 2017 to test longer-term outcomes, including changes in investment and agricultural productivity.

7.2.4 Agriculture Development Project

The original evaluation design for the Agriculture Development Project anticipated a single evaluation that could estimate the effects of all of the different components of the Agriculture Development Project together. However, through the process of implementation, it became clear that the anticipated effects of the different components were diverse enough to require several separate evaluations. These evaluations are described below.

Di

The Di evaluations cover a group of interventions for 3 groups of stakeholders on the newly created Di perimeter (2,240 ha), in northwestern Burkina Faso. Land on the new irrigated perimeter was allocated between three categories of beneficiaries:

- People Affected by the Project (PAPs) as compensation;
- Non-PAPs which are divided into two groups:
 - o Non-PAPs from villages around the perimeter regarded as underprivileged rural producers (*villages défavorisés*);
 - o Non-PAPs from Boucle du Mouhoun region generally.

Land for the first two groups of beneficiaries (PAPs and those from the “villages défavorisés”) was distributed based on set criteria applied to all those eligible. Land for the third group of beneficiaries was distributed through a two stage process: demonstration of minimum farming qualifications; and lottery so that the beneficiaries would be selected at random. Each beneficiary group received a group of interventions, which are being evaluated, including obtaining a new irrigated parcel of land, formal land rights over that parcel (whether titles or leases), farmer training and a starter kit.

There are 2 evaluations covering 2 of the 3 Di beneficiary groups. The third group, the non-PAPs from the *villages défavorisés*, were not included in the evaluation because cost was not worth the nominal additional knowledge to be gained vis-à-vis what would be gathered from evaluation of the other two groups. A description of the 2 evaluations follows below:

A. Di PAPs Evaluation

The Di PAPs Evaluation consists of a separate analysis of the effects of the construction of the Di irrigated perimeter and related farmer training, land certificates and incentive kits on those who were most impacted by its creation. The PAPs are those who had previously farmed land on what is now the irrigated perimeter as well as those whose homes, incomes, or livelihoods were otherwise impacted by the construction of the new perimeter.

This evaluation will consist of a pre/post analysis of household income and other measures of well-being, which may be supplemented by qualitative methods (interviews and/or focus groups). A baseline survey was conducted on all PAPs in 2011 prior to the Project and an interim survey took place in 2013 on 388 PAPs. A follow-up survey is planned post compact.

Primary Research Questions for the Di PAPs Evaluation:

1. Are PAPs at least as well-off as they were before the project's intervention?
2. Have any PAPs been harmed by the intervention?

B. Di Non-PAP RCT Evaluation

The Di Non-PAP Evaluation covers the parcels on the Di perimeter that were open to Non-PAP applicants from the Boucle du Mouhoun region generally. To study the impacts on this group, a Randomized Control Trial is being conducted using a lottery after a pre-designed application process. Eligible applicants were required to submit an application in order to be considered for the lottery. Those who were deemed eligible² by a Land Allocation Committee were then scored based on a set of predetermined criteria. All those scoring more than 60 points became an entrant into the actual lottery. The lottery consisted of two steps: 1) the selection of lottery winners; and 2) the selection of specific parcels for the winners. Applicants had pre-selected their choice of rice or poly-culture (which can support multiple crop types) parcels in their applications. Once a name was drawn (from a pool which included all entrants to the lottery), a parcel was also drawn, according to the individual's preference of parcel type (rice or poly-culture); once one or the other type of parcel was exhausted, all remaining winners received the remaining parcel type. The lottery winners form the treatment group and those who did not win form the control group.

For the lottery, 2,178 applications were deemed eligible, of which 1,528 met the 60 point threshold and became entrants into the lottery. The lottery was held in February, 2014 and 503 winners were selected (of which 23% were women). A short baseline survey was conducted at the end of 2013 (before the lottery), and a follow-up survey is planned for 2016/2017.

Primary research questions for the Di Lottery Evaluation include:

1. Does access to irrigation affect yields, total production, sales, and household income?
2. Have beneficiary household's yields and sales increased as a result of the project?
3. If yes, do increased yields and/or production, and sales lead to higher household incomes?
4. Have farmers benefitting from Compact interventions adopted new technologies/techniques (including using land more intensively and efficiently, choosing products that are more competitive, and optimizing the use of inputs) at a significantly greater rate than farmers that did not benefit from Compact interventions?

Farmer Training Evaluation

The Farmer Training Evaluation will include the following components of the Agriculture Development Project: Farmer Training, Value Chain Development, and Animal Health. The

² Households deemed ineligible could appeal this determination for re-consideration.

impacts of these three components are interdependent and therefore cannot be disaggregated from one another. Thus, the effects of these three project components are evaluated together (for instance, the farmer training sub-activity included modules not only on cultivation practices, but also on animal husbandry and post-harvest transformation (part of the value chain development component). Thus, their effects will be estimated jointly through an impact evaluation utilizing a difference-in-difference design. Those who actually received training through the Compact will form the treatment group while those who did not will form the comparison group.

The evaluation consists of the baseline from the Global Agricultural Survey as well as a crop yield survey and a barymetric survey of bovine weights of a small subset of the sample. The baseline Agriculture Survey took place in June 2012 across a sample of 2000 households. The crop yield survey data which was part of the Global Agricultural Survey was problematic and an interim crop yield survey was conducted in 2013. A barymetric survey of 600 cattle across 153 households was carried out annually in 2012 and 2013.

Primary research questions for the Farmer Training Evaluation include:

- Have farmers benefiting from Compact interventions adopted new technologies/techniques (including using land more intensively and efficiently, choosing products that are more competitive, and optimizing the use of inputs) at a significantly greater rate than farmers that did not benefit from Compact interventions?
- Have beneficiary household's yields and sales increased as a result of the project?
- If yes, do increased yields and/or production, and sales lead to higher household incomes?

Rural Finance Evaluation

The Access to Rural Finance activity was terminated early due to concerns about its ability to achieve results. Thus, this planned performance evaluation, rather than being focused on an estimation of impact on beneficiaries, will be focused on learning from what happened during the planning and implementation of the activity. Though it will utilize available quantitative data and is therefore mixed methods, it will be primarily qualitative in nature.

Primary Research Questions for the Rural Finance Evaluation include:

1. What factors of project design supported/hindered the efficacy of the project? How so? Why?
2. What factors of implementation supported/hindered the efficacy of the project? How so? Why?
3. What lessons can be learned from the Access to Rural Finance Project that can be applied to other, similar projects?

Water Management and Rural Markets Evaluation

The Water Management and Rural Markets Evaluation will cover the remaining sub-activities of the Agriculture Development Project. On the Water Management side, this evaluation will cover technical assistance to water user associations (WUAs) on previously existing irrigated perimeters

as well as on the new irrigated perimeter at Di. It will also cover technical assistance work with the CLEs and Basin Committees³ within the larger Boucle du Mouhoun region.

On the Rural Markets portion of the evaluation, the evaluation will explore the effects of the establishment of market management committees within 9 rural markets as well as the construction/rehabilitation of 4 of those same markets (the project provided technical support to all 9 market committees, however, construction/rehabilitation was only implemented at 4 of the 9 markets).

Though this evaluation will utilize all available quantitative data and is therefore mixed-methods, it will be primarily qualitative in nature.

Primary Research Questions for the Water Management and Rural Markets Evaluation include:

1. How well are the CLE and Basin Committee institutions functioning?
2. How well have the SDAGEs been implemented?
3. Do water user associations on the old perimeters and the new perimeter at Di demonstrate the capacity (financial, technical, and organizational) to fully and sustainably leverage the irrigation investments at their disposal?
4. How well are the market management committees functioning?
5. Has safety and sanitation improved within the 9 markets?
6. How has construction/rehabilitation of the 4 markets impacted their functioning, size, or level of economic activity?

7.2.5 Roads Project

MCC will undertake repeat HDM-4 analyses to calculate economic impacts and to update the Economic Rate of Return analyses after the end of the compact. To support these analyses, MCC will also conduct repeated HDM-4 analyses as well as repeat studies to support these analyses (such as traffic counts and IRI estimations).

7.2.6 BRIGHT 2 Schools Project

The BRIGHT 2 schools project impact evaluation will build off the results of an impact evaluation of the BRIGHT Threshold Program, which was completed in 2009. The BRIGHT 2 evaluation will use the same regression discontinuity design. The evaluation will estimate the impact of the package of interventions using the 293 communities (or study villages) who applied for the new schools. The Ministry of Education scored each of these communities based on pre-set criteria to identify communities that could benefit most from the schools. The evaluation will compare the 132 “treatment” communities with the higher scores to the 161 communities that were not selected for school construction, statistically accounting for the application score.

Primary research questions for the BRIGHT 2 Schools Evaluation include:

- What was the impact of the program on school enrollment (for all grades, 1-6)?
- What was the impact of the program on school attendance (for all grades, 1-6)?

³ The Basin Committees and CLEs are regional water management entities that received technical assistance and support through the compact.

- What was the impact of the program on student retention (for all grades, 1-6)?
- What was the impact of the program on test scores (for all grades, 1-6)?
- Were the impacts different for girls than for boys (for all grades, 1-6)?
- Were the impacts different for different age cohorts?
- Were the impacts different for students from households with different asset levels?
- Have the BRIGHT 1 Threshold Program investments been sustainable (e.g. Bisongos enrollment, teacher presence, and community awareness)?
- What was the impact of the program on community support for girls' education?

7.2.7 Ad hoc Evaluation and Specific Studies on Some Program Interventions

Throughout the life of the Compact, MCA-Burkina Faso and MCC conducted ad hoc evaluations or specific studies to better assess the effects that result from Compact interventions. For this purpose, periodic specific studies may be/have been launched to meet an emerging need or a new opportunity and to inform MCA-BF and MCC on the unexpected effects of the project activities. Such studies may focus on specific activities or the whole actions of a project.

For these types of evaluation, independent reviewers will be hired by MCA-BF on a competitive basis.

8. Implementation and Management of M&E

The APD-Burkina will coordinate the collection, cleaning, and reporting of all local data within the framework of the M&E Plan. The APD-Burkina will also be responsible for supporting the external evaluation teams procured by MCC to evaluate Compact activities.

8.1 Responsibilities

APD-Burkina:

The APD-Burkina Faso, with the support of MCC, is responsible for implementing the Post-Compact M&E Plan, as explained in this document. These responsibilities include:

- Coordination of Post-Compact ITT reporting,
- Updating of the SESAME information system,
- Data quality control,
- Transmission of data to MCC,
- Sharing of Compact data and evaluation findings with other local partners, the GoBF, the public, and other stakeholders,
- Supporting external evaluators (who are recruited by MCC) during field visits, survey implementation, and other local activities.

GoBF:

The Government of Burkina Faso is responsible for ensuring the human and financial resources necessary to fulfill the APD-Burkina and Successor Entity obligations through this Post-Compact M&E Plan.

Successor Entities of the GoBF:

The Successor Entities of the GoBF are responsible for collecting data in fulfillment of their responsibilities under this Post-Compact M&E Plan. This data will be provided to the APD-

Burkina for transmission to MCC. The Successor Entities are responsible for assuring the quality of the data provided to the APD-Burkina. In addition, the Successor Entities are considered stakeholders for the final Compact evaluations. Thus, the Successor Entities will review evaluation deliverables and provide comments to MCC and/or MCC's evaluation consultants. The list of contacts at each Ministry is included in Annex III.

MCC:

MCC is responsible for coordination with the APD-Burkina for the implementation of this Post-Compact M&E Plan. MCC's responsibilities include:

- Supporting the APD-Burkina in the fulfillment of its duties under this Plan,
- Procuring and managing external evaluation consultants for the different components of the Compact,
- Sharing compact data and evaluation findings with US-based stakeholders

8.2 ***Management Information System for Monitoring and Evaluation***

The SESAME information system that was developed for the MCA-BF during implementation of the compact will be provided to the APD-Burkina for use post-compact. The APD-Burkina will be responsible for maintaining and updating the SESAME system.

9. M&E Budget for the APD

Funding and oversight of post compact monitoring and evaluation activities will be provided primarily by APD. To do this, APD has included in its budget submitted to the government a section for post compact monitoring and evaluation activities.

It should be noted that funding for some post compact evaluations will be funded by MCC. See “Specific Evaluation Plans”; subsection 7.2; page 23.

10. Conclusion

The Burkina Faso Compact was implemented with a focus on results. This focus was supported by a focus on high quality data and rigorous evaluation. The intent of this Post-Compact M&E Plan is to continue that effort into the post-compact period in order to show the results of the Compact for the people of Burkina Faso.

This Post-Compact M&E Plan will help assure that lessons learned during the Burkina Faso Compact will be recorded and shared with stakeholders so that they may be used to improve performance of other, similar projects and compacts.

ANNEX 1: M&E PLAN INDICATORS

Post-Compact Indicators are to be tracked for at least five years after the end of the compact.

Indicator Definitions:

Cumulative Indicators: Cumulative indicators provide a running total over time, where the total for each new reporting period is added to the total from the prior reporting period. For instance, number of farmers trained is often a cumulative indicator, as the intent is often to track the total number of people trained throughout the compact and not to compare the number of people trained in one period to the number trained in another period.

Level Indicators: Level indicators, for each reporting period, include only the total for that reporting period and allows for tracking and comparing data over time. For instance, tracking road traffic counts is typically a level indicator. For each period in which traffic counts are calculated, the traffic count for that period is entered. This allows for the comparison of traffic counts over time, across reporting periods.

Cumulative-Level Indicators: Cumulative-Level indicators use a hybrid of the Cumulative and Level formats. For these indicators, actuals are treated as cumulative, but only for an annual cycle. At the end of the cycle, the indicator is reset to zero and the actuals begin accruing again the next reporting period. For instance, the number of land conflicts reported is often tracked on a cumulative-level basis. Because the frequency of land conflicts can vary from quarter to quarter based on seasonal factors (rainy season vs dry season, etc), each quarter, on its own, is not directly comparable to other quarters. But, on an annual basis, the number of land conflicts reported can be compared across years to note trends.

BURKINA FASO COMPACT RURAL LAND GOVERNANCE PROJECT INDICATORS

Row Number	Type of Indicator	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline value	Compact Targets					Indicator Source	Data collection methodology	Frequency of data reporting ⁴	Disaggregations, if any	
								Baseline year	Year 1	Year 2	Year 3	Year 4					Year 5
								Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014					
Land Conflicts																	
1	Outcome		Total number of land conflicts recorded in the 47 communes covered under the compact	The number of conflicts recorded by the chef de village and Village Development Commission/ Conseil Villageoise de Développement (CVD) for baseline and the number of conflicts recorded by the Village Land Conciliation Committees/ Commission de Conciliation Foncière Villageoise (CCFV) once they have been established and Communal Land Conciliation Committees/Commission de Conciliation Foncière de Chef de la Commune (CCFC) at the commune capital. A conflict is considered to be Female if at least one party is female.	Level	Number	N/A ⁵	N/A						DGATD	Registres and Cahier de Conflict of CCFVs and CCFC (Conflict Notebook/Register of CCFV/CCFC) which are provided and reviewed by CVD and then SFR will provide to DGATD to combine results.	Annual	By Gender
2	Outcome		Total number of land conflicts resolved in the 47 communes covered under the compact.	The number of disputed land and property rights cases that have been resolved by local authorities listed above	Level	Number	N/A ⁶							DGAJJ	CCFV decision is sent to DGAR for "homoguer". DGAR has the list.	Annual	By Gender
3	Outcome		Trend in incidence of conflicts over land rights reported by treatment households surveyed in the 47 communes of the Compact	Percent of surveyed parcels in Phase I treatment areas (17 communes) and Phase II treatment areas (30 communes) - male managed/female managed reporting having had a conflict over land i	Level	%	5.55% in the 17 Phase 1 communes (6.83% for households headed by male and 2.62% for households headed by a female); 2.65%(2.91 % for male managed parcels and 2.13% for female managed parcels in the 30 Phase 2 communes	2010						MCC Independent Evaluator	Phase I baseline survey for the 17 communes (and follow-up survey for actuals); Baseline survey for the 30 communes; Post-compact data via final Land Surveys procured by MCC. ⁷	2010, 2012, 2013 and 2017	By Gender; by Phase

⁴APD may collect data from institutions more frequently but the data will be reported to MCC as stated in the table.

⁵ New indicator combining two compact indicators-Phase 1 and Phase 2 commune conflicts recorded. Baselines have different timings for Phase 1's 17 communes and Phase 2's 30 communes. There was no overall baseline and target for the 47 communes combined-only Phase 1.

⁶ New indicator combining two compact indicators-Phase 1 and Phase 2 commune conflicts recorded. Baselines have different timings for Phase 1's 17 communes and Phase 2's 30 communes. There was no overall baseline and target for the 47 communes combined-only Phase 1.

⁷ For Baseline Phase 1: Used I01a of Parcel Questionnaire: Avez-vous eu au moins un conflit foncier sur ce champ?. For Baseline Phase 2 in 2013: Question M3 of Field Manager Questionnaire: Est-ce que vous (ou un membre de votre ménage) avez une fois eu un conflit lié au [CHAMP] ? Endline Survey: Percent of households in treatment areas reporting having experienced a land conflict in the past xx years.

Row Number	Type of Indicator	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline value	Compact Targets					Indicator Source	Data collection methodology	Frequency of data reporting ⁴	Disaggregations, if any	
								Baseline year	Year 1	Year 2	Year 3	Year 4					Year 5
									Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013					Aug 2013- July 2014
4	Outcome		Number of "Verbal Processes" (PVs) created by CCFVs	The number of "PVs" created by the CCFVs to record a land conflict and what was done to try to resolve the conflict ⁸	Level	Number	N/A ⁹						DGATD	Collected from the CCFVs through SFRs	Annual		
Perceptions of Land Tenure Security																	
5	Outcome		Proportion of heads of households perceiving potential land conflict for their household as a concern in the 47 communes of the RLG project	Percentage of (male/female) heads of households in both Phase I treatment areas who perceive that there will be a land conflict in their village within the next 2 years and in Phase II who are concerned they will be part of a land conflict.	Level	%	73.5% for the 17 communes (74.2% Male headed households and 63.4% Female headed households) ; 45% for the 30 communes (32.8% of female headed households and 45.8% of male headed households)	2010; 2013					80%	MCC Independent Evaluator	Phase I baseline survey for the 17 communes (and follow-up survey for actuals); Baseline survey for the 30 communes; Post-compact data via final Land Surveys procured by MCC. ¹⁰	2010, 2012, 2013 and 2017	By Gender; by Phase
6	Outcome		Extent of confidence in land tenure security across all 47 communes of the Compact	Percent of household survey respondents (total; women and men) in both Phase I and Phase II treatment areas perceiving their land tenure as secure as measured by land conflict not perceived as a concern. ¹¹	Level	%	Phase 1: 43.3% (For males, the fraction is 41.5% and for females, it is 44.8%). Phase 2: 68.5% (60.7% of females and 69.0% of males)	2010; 2013						MCC Independent Evaluator	Phase I baseline survey for the 17 communes (and follow-up survey for actuals); Baseline survey for the 30 communes; Post-compact data via final Land Surveys procured by MCC. ¹²	2010, 2012, 2013 and 2017	By Gender ; By Phase
7	Outcome		Extent of confidence in local conflict resolution institution	Percent of household survey respondents (total, women and men) in Phase I and Phase II treatment areas who respond that they are confident in their local conflict resolution institution (CVD or village chief for baseline and CCFV, CVD, or village chief for follow-up)	Level	%	87% for the 17 Phase 1 communes(84.4% for males and 89.3% for females) ¹³	2010						MCC Independent Evaluator	Phase I baseline survey for the 17 communes (and follow-up survey for actuals); Baseline survey for the 30 communes; Post-compact data via final Land Surveys procured by MCC. ¹⁴	2010, 2012, 2013 and 2017	By Gender; By Phase

⁸ This is similar to L-4; however, it is not only those conflicts that are resolved but also those that discussed.

⁹ This is a new indicator in Post Compact so no baseline or target during the Compact.

¹⁰ Baseline Phase 1 individual questionnaire #D07c : Phase 2 field manager question M17.

¹¹ Phase 1 used individual questionnaire D07A : whether land conflicts are a source of concern for household. If no, they were considered secure. Phase 2 asked individuals/field managers whether they perceive that land disputes are a problem for their household (Question S09).

¹² For Baseline Phase 1: Percent of households in treatment areas reporting having experienced a conflict over land in the last agricultural year (2008-2009). For Baseline Phase 2: Percent of households in treatment areas reporting having experienced at least one conflict over land in at least one of their fields. Endline Survey: Percent of households in treatment areas reporting having experienced a land conflict in the past xx years.

¹³ There is no baseline value for the 30 communes.

¹⁴ For Baseline Phase 1: Percent of households in treatment areas reporting having experienced a conflict over land in the last agricultural year (2008-2009). For Baseline Phase 2: Percent of households in treatment areas reporting having experienced at least one conflict over land in at least one of their fields. Endline Survey: Percent of households in treatment areas reporting having experienced a land conflict in the past xx years.

Row Number	Type of Indicator	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline value	Compact Targets					Indicator Source	Data collection methodology	Frequency of data reporting ⁴	Disaggregations, if any	
								Baseline year	Year 1	Year 2	Year 3	Year 4					Year 5
								Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014					
Continuation, Expansion, and Sustainability of Land Governance System																	
8	Output		Number of "Chartes Foncières" (Social pacts) completed per the new land law	Total number of Chartes Foncières (local/village-level land use and land management standards and procedures) adopted by municipal council at the commune level	Cumulative	Number	0	2010	0	17				SFR	Deliberation of Municipal Council	Annual	
9	Output		Number of Rural Land Possession Certificates (APFR) approved by the local government	Number of APFRs prepared by the SFR (this means that the beneficiary has been notified). This only concerns APFRs in the 47 communes of the Compact. ¹⁵	Cumulative	Number	0	2012					6,000	LTP-45 reports during the compact; post-compact: DGATD	Notification of land possession	Annual	By Gender (male only/ female only/ joint/ community/ commercial and/or other legal entity)
10	Output		Number of APFRs delivered	Number of parcels with an approved APFR received by a household. This only concerns APFRs in the 47 communes of the Compact.	Cumulative	Number	0	2012					3,000	LTP-45 reports during the compact; post-compact: DGATD	Registration of land possession ¹⁶	Annual	By Gender (male only/ female only/ joint/ community/ commercial and/or other legal entity)
11	Output		Number of hectares secured with an APFR	Number of hectares secured by delivered APFRs	Cumulative	Number	0							LTP-45 reports during the compact; post-compact: DGATD	APFR of those with registration of land possession	Annual	By Gender (male only/ female only/ joint/ community/ commercial and/or other legal entity)
12	Output		Number of hectares of irrigated land leased to households or legal entities by the state in the Zone Aménage (14 old perimeters of the Sourou Valley and the new Perimeter of Di)	Number of hectares of irrigated land leased to households or legal entities by the state. Proof of this is registration of leases in the Land Book and delivery of leases to the lessees.	Cumulative	Number	0	2009					3500	Report by AD-4.9 during the compact; Post-Compact: Direction Provinciale des Impots- Sourou	Livre foncier de la DPI Sourou	Annual	Di, Old Perimeters
13			Number of parcels of irrigated land leased to households or legal entities by the state in the Zone Aménage (14 old perimeters of the Sorou Valley and the new Perimeter of Di)	Number of parcels of irrigated land leased to households or legal entities by the state. Proof of this is registration of leases in the Land Book and delivery of leases to the lessees.	Cumulative	Number	0	2009						Report by AD-4.9 during the compact; Post-Compact: Direction Provinciale des Impots- Sourou	Livre foncier de la DPI Sourou	Annual	Di, Old Perimeters
14	Output		Number of leases delivered to households or legal entities by the state in the Zone Aménage (14 old perimeters of the Sourou Valley and the new Perimeter of Di)	Number of leases to households or legal entities by the state. Proof of this is registration of the leases in the Land Book and delivery of leases to the lessees.	Cumulative	Number	0	2009						MCA-RLG during the compact ; Post-Compact : Direction Provinciale des Impots Sourou	Livre foncier de la DPI Sourou	Annual	Old Perimeters/Di (within Di: PAPs/Non-PAPs)
15	Output		Number of leases approved by the state in the Zone Aménage (14 old perimeter of the Sorou Valey and the new Perimeter of Di)	Number of leases approved for households or legal entities by the state. Proof of this is registration of the leases in the Land Book	Cumulative	Number	0	2009						MCA-RLG during the compact ; Post-Compact : Direction Provinciale des Impots Sourou	Livre foncier de la DPI Sourou	Annual	Old Perimeters/Di (within Di: PAPs/Non-PAPs)
16	Output		Number of land titles delivered on the Di perimeter	Total number of land titles delivered on the Di perimeter	Cumulative	Number	0	2009						MCA-RLG during the compact ; Post-Compact : Direction	Livre foncier de la DPI Sourou	Annual	PAPs/Non-PAPs

¹⁵ The commune approval is at the SFR. After a person pays the fee for the APFR, it is signed by the mayor and delivered. The clarification of the definition between the Closeout M&E Plan and the Post-Compact M&E Plan (in which the language "(this means that the beneficiary has been notified)" was added) did not affect the figures previously collected. It was merely a precision of the definition. Also, the clarification that the indicator only refers to the 47 communes included in the Compact was added to distinguish these APFRs from any APFRs that might be issued by the government in additional communes in the future, as implementation of the land law expands.

¹⁶ A parcel is considered secure once the APFR is delivered.

Row Number	Type of Indicator	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline value	Compact Targets						Indicator Source	Data collection methodology	Frequency of data reporting ⁴	Disaggregations, if any
								Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5				
								Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014					
													Provenciale des Impots Sourou				
17	Output		Number of hectares secured by a land title on the Di perimeter	Are of land covered by land titles delivered on the Di perimeter	Cumulative	Number	0	2009						MCA-RLG during the compact ; Post-Compact : Direction Provenciale des Impots Sourou	Livre foncier de la DPI Sourou	Annual	
18	Output		The number of communes that have been provided the "Registres de Conciliation Foncière" by the Ministry of Justice	As of the end of the Compact, the Registres which help the SFRs track land conflicts, had not yet been provided to the communes. This indicator will track the number of communes that have received this land management tool after the end of the Compact.	Cumulative	Number	0	2009						DGATD	Registres paraphes et disponibles au niveau des SFR	Annual	
19	Output		Number of functioning CORS stations	Number of functioning CORS stations (Capable of producing data)	Cumulative	Number	0	2009					9	LTP-18 during the compact ; Post-Compact : The Institut Geographique de Burkina (IGB)	Report of IGB	Annual	
20	Outcome		Number of CORS users	The number of unique users of the CORS network ¹⁷	Cumulative	Number	0	2009						LTP-18 during the compact ; Post-Compact : The Institut Geographique de Burkina (IGB)	Report of IGB	Annual	
21	Outcome		Number of communes implementing the Land Reform law in their commune	The number of communes that have implemented an CCFV, CFV ¹⁸ , and an SFR	Cumulative	Number	0	2009					47	DGAT/MATD Arretes des Maires	Report of DGA	Annual	
22	Outcome		Percentage of land transactions within the survey sample that were completed formally through the SFR	Per final land surveys, the percentage of individuals reporting having performed a land transaction through the formal system out of the total number of individuals reporting having completed a land transaction	Level	%	N/A ¹⁹							MCC Independent Evaluator	Final surveys by MCC-procured evaluation consultant	2017	Gender; Phases
23	Output	L-6	Land rights formalized ²⁰	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.	Cumulative	Number	0						N/A ²¹	Direction Provenciale des Impots Sourou and DGATD	Reports by LTP-5, LTP-45, and AD-4.9 during Compact based on APFR registers maintained by the SFRs; Land Book maintained by the Sourou Province RDPF/DPI; Ganzourgou Province RDPF/DPI	Quarterly	By Gender (male only/ female only/ joint/ community/ commercial and/or other legal entity)

¹⁷ Each user registers in the system upon first use. If a user needs to use the system again, they would use the same unique user ID, preventing double counting.

¹⁸ CFV is a village level land manager; SFR is a commune level land manager; CCFV is a village level conflict institution.

¹⁹ New indicator for Post Compact so no baseline.

²⁰ In Burkina, this includes the number of households: receiving APFRs ("households receiving APFRs"); receiving formal land rights in Di (this includes Di lottery, groupements, and PAPs); receiving APFR-like rights in Ganzourgou Province ("Number of households that benefited from parcels in the Ganzourgou pilot project"); and households receiving land leases in existing irrigation zones ("Number of households or legal entities signing leases for irrigated land with the state in the Zone Aménagé"). It is estimated that there are 2 parcels per PAP household in Di. It is estimated that there are 1 parcels per 1 household for Di lottery area. The number of households per groupement in Di differ. The groups consist of grouping of 10 households for 0.5 ha; grouping of 20 households for 1 hectare; grouping of 25 households for 1.25 hectare. Reporting in the ITT will try to avoid double counting between households who received Di groupement and Di PAP parcels. It is estimated that there is 1 parcel per household in Ganzourgou. It is estimated that there is 1 parcel per household in the Zones Aménagé. It is estimated that there are 1 parcels per household in communes receiving APFRs.

²¹ A target was set for parcels/hectares but not for households.

BURKINA FASO COMPACT AGRICULTURE DEVELOPMENT PROJECT INDICATORS

Description	Row Number	Type of Indicators	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data collection methodology	Frequency	Disaggregations, if any
										Year 1:	Year 2:	Year 3:	Year 4:	Year 5:				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
Expand productive use of land in order to increase agricultural production volume and value in project area		Outcome																
Old Irrigated Perimeters	1	Outcome		Rainy season rice production in Sourou Valley old irrigated perimeters ²²	Total volume of rice production in old irrigated perimeters during the rainy season	Level	Tons	3,987 ²³	2009	3,987	4,164	4,430	4,696	4,873	AMVS conducted baseline and provided data during the compact ; Post compact Direction General des Etudes et Statistiques Sectorielles (DGESS)/ Direction Regionale d'Agriculture et Secutirté Alimentaire (DRASA) du Boucle de Mouhoun	Annual Report ; Measurement rel es on « Carrés de Rendements » ²⁴	Annual	
	2	Outcome		Rainy season rice productivity in the Sourou Valley old irrigated perimeters	Yields per hectare for rice production in old irrigated perimeters during the rainy season (=production per area unit)	Level	Tons/ha	4.5	2009	4.5	4.7	5	5.3	5.5	AMVS conducted baseline and provided data during the compact ; Post compact DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement rel es on « Carrés de Rendements »	Annual	
	3	Outcome		Rainy season corn production in Sourou Valley old irrigated perimeters	Total volume of corn production in old irrigated perimeters during the rainy season	Level	Tons	9,259 ²⁵	2009	9,496	9,496	9,496	10,683	11,870	AMVS conducted baseline and provided data during the compact ; Post compact DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement rel es on « Carrés de Rendements »	Annual	

²² These results are expected as a result of AD-10 farmer training, AD-7 water use funds and training, and AMVS action plan being implemented.

²³ This is based on 886 ha for rice during rainy seasons and no change in number of hectares planted. For rainy season, people grow rice for household consumption and market sales.

²⁴AMVS used to sample all regions two times-rainy and dry seasons for the yield ; at the beginning of each season, the cooperatives tells AMVS the area that will be planted for each crop. AMVS post compact only will deal with water. DGESS/DRASA will carry out the same methodology to track these indicators in the ancient perimeters.

²⁵ This is based on 2374 ha for corn during rainy seasons and no change in number of hectares planted. For rainy season, people grow corn for largely household consumption.

Description	Row Number	Type of Indicators	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data collection methodology	Frequency	Disaggregations, if any
										Year 1:	Year 2:	Year 3:	Year 4:	Year 5:				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
	4	Outcome		Rainy season corn productivity in Sourou Valley old irrigated perimeters	Yields per hectare for corn production in old irrigated perimeters during the rainy season (=production per area unit)	Level	Tons/ha	3.9	2009	4.0	4.0	4.0	4.5	5	AMVS conducted baseline and provided data during the compact ; Post compact DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement rel es on « Carrés de Rendements »	Annual	
	5	Outcome		Dry season rice production in Sourou Valley old irrigated perimeters	Total volume of rice production in old irrigated perimeters during the dry season	Level	Tons	4,914 ²⁶	2009	4,914	5,093	5,182	5,182	5,361	AMVS conducted baseline and provided data during the compact ; Post compact DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement rel es on « Carrés de Rendements »	Annual	
	6	Outcome		Dry season rice productivity in the Sourou Valley old irrigated perimeters	Yields per hectare for rice production in old irrigated perimeters during the dry season (=production per area unit)	Level	Tons/ha	5.5	2009	5.5	5.7	5.8	6	6	AMVS conducted baseline and provided data during the compact ; Post compact DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement rel es on « Carrés de Rendements »	Annual	
	7	Outcome		Dry season onion production in Sourou Valley old irrigated perimeters	Total volume of onion production in old irrigated perimeters during the dry season	Level	Tons	29,960 ²⁷	2009	29,960	31,458	32,956	34,454	37,450	AMVS conducted baseline and provided data during the compact ; Post compact DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement rel es on « Carrés de Rendements »	Annual	
	8	Outcome		Dry season onion productivity in Sourou Valley old irrigated perimeters.	Yields per hectare for onion production in old irrigated perimeters during the dry season (=production per area unit)	Level	Tons/ha	20	2009	20	21	22	23	25	AMVS conducted baseline and provided data during the compact ; Post compact DGESS/ DRASA	Annual Report ; Measurement rel es on « Carrés de Rendements »	Annual	

²⁶ This is based on 893.44 ha of rice during dry season and no change in number of hectares planted. For dry season, people grow rice largely for market sales.

²⁷ This is based on 1498.2 hectares cultivated with onions during the dry season and no change in total number of hectares planted. However, the number of hectares planted each year depends on the market price from the previous year.

Description	Row Number	Type of Indicators	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data collection methodology	Frequency	Disaggregations, if any
										Year 1:	Year 2:	Year 3:	Year 4:	Year 5:				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
														Boucle de Mouhoun				
	9	Outcome		Dry season corn production in Sourou Valley old irrigated perimeters	Total volume of corn production in old irrigated perimeters during the dry season	Level	Tons	824.60	2009	824.60	824.60	868	868	976 ²⁸	AMVS conducted baseline and provided data during the compact ; Post compact DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	10	Outcome		Dry season corn productivity in the Sourou Valley old irrigated perimeters	Yields per hectare for corn production in old irrigated perimeters during the dry season (=production per area unit)	Level	Tons/ha	3.80	2009	3.80	3.80	4	4	4.5	AMVS conducted baseline and provided data during the compact ; Post compact DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	11			Dry season tomato production in the Sourou Valley old irrigated perimeters	Total volume of tomato production in old irrigated perimeters during the dry season	level	Tons	1,458	2009						AMVS conducted baseline and provided data during the compact ; Post compact DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	12			Dry season tomato productivity in the Sourou Valley old irrigated perimeters	Yields per hectare for tomato production in old irrigated perimeters during the dry season (=production per area unit)	level	Tons/ha	27.5	2009						AMVS conducted baseline and provided data during the compact ; Post compact DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	13	Outcome		Crop Diversification in the 9 existing irrigated perimeters	Ratio of: Numerator: Number of hectares under production for all non-traditional crops (traditional crops are: rice, corn, tomato, and onion)	Level	Number	N/A							DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	

²⁸ This is based on 824.60ha for corn production in the dry season and no change in total number of hectares planted. However, the number of hectares planted each year depends on the market price from the previous year.

Description	Row Number	Type of Indicators	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data collection methodology	Frequency	Disaggregations, if any
										Year 1:	Year 2:	Year 3:	Year 4:	Year 5:				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
					Denominator: Total number of hectares under production													
Di	14	Outcome		Rainy season rice productivity in the new irrigated perimeter of Di ²⁹	Yields per hectare for rice production in the new Di irrigated perimeter during in the rainy season (=production per area unit)	Level	Tons/ha	03.25	2009					5.3 ³⁰	Baseline-ESA_RAP;End of Compact : AD-10 survey ; Post compact is DGESS/ DRASA Boucle de Mouhoun ³¹	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	15	Outcome		Rainy season rice production in the new irrigated perimeter of Di.	Total volume of rice production in the new Di irrigated perimeter during the rainy season	Level	Tons	803.4	2009					2,692 ³²	Baseline-ESA_RAP;End of Compact : AD-10 survey ; Post compact is DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	16	Outcome		Rainy season corn productivity in the new irrigated perimeter of Di	Yields per hectare for corn production in the new Di irrigated perimeter during the rainy season (=production per area unit)	Level	Tons/ha	2.50	2009					4	Baseline-ESA_RAP;End of Compact : AD-10 survey ; Post compact is DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	17	Outcome		Rainy season corn production in the new irrigated perimeter of Di	Total volume of corn production in the new Di irrigated perimeter during the rainy season	Level	Tons	749.42	2009					6,558 ³³	Baseline-ESA_RAP;End of Compact : AD-10 survey ; Post compact is DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	18	Outcome		Dry season rice productivity in the new irrigated perimeter of Di	Yields per hectare for rice production in the new Di irrigated perimeter during the dry season (=production per area unit)	Level	Tons/ha	0	2009					6	Baseline-ESA_RAP;End of Compact : AD-10 survey ; Post compact is DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	

²⁹ The area did produce traditional rice along river but mostly millet. Until the end of Compact, this figure just represents PAP production. Lottery recipients will not have received land in time for production. During the final season, most PAPs will have production that used starter/incentive kits. Long-term production may not continue at that yield. Final yields will be gathered by independent evaluator reports post compact.

³⁰ Di targets were set slightly lower than Sourou targets due to expected differences in experience of the new farmers on the Di perimeter.

³¹ AD-10 used a sample for yields. For area cultivated they discussed with everyone.

³² Based on an estimated 508ha of rice planted on the new perimeter in the rainy season. LPR – Other sources indicate that the total Di area under cultivation in July 2014 (rainy season) was 625 hectares, which implies that almost all Di cultivated land was planted to rice. Is this correct?

³³ Based on an estimated 1639ha of corn planted on the new perimeter in the rainy season.

Description	Row Number	Type of Indicators	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data collection methodology	Frequency	Disaggregations, if any
										Year 1:	Year 2:	Year 3:	Year 4:	Year 5:				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
	19	Outcome		Dry season rice production in the new irrigated perimeter of Di	Total volume of rice production in the new Di irrigated perimeter during the dry season	Level	Tons	0	2009					2,286 ³⁴	Baseline-ESA_RAP;End of Compact : AD-10 survey ; Post compact is DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	20	Outcome		Dry season onion productivity in the area of the new irrigated perimeter of Di.	Yields per hectare for onion production in the new Di irrigated perimeter during the dry season (=production per area unit). The baseline is the yield prior to the irrigated perimeter.	Level	Tons/ha	20	2009					25	Baseline-ESA_RAP;End of Compact : AD-10 survey ; Post compact is DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	21	Outcome		Dry season onion production in the new irrigated perimeter of Di	Total volume of onion production in the new Di irrigated perimeter during the dry season	Level	Tons	1,297.6	2009					24,106 ³⁵	Baseline-ESA_RAP;End of Compact : AD-10 survey ; Post compact is DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	22	Outcome		Dry season corn productivity in the new irrigated perimeter of Di.	Yields per hectare for corn production in the new Di irrigated perimeter during the dry season (=production per area unit)	Level	Tons/ha	0	2009					5 ³⁶	During compact : AD-10 survey ; Post compact is DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	23	Outcome		Dry season corn production in the new irrigated perimeter of Di	Total volume of corn production in the new Di irrigated perimeter during the dry season	Level	Tons	0	2009					3,116 ³⁷	During compact : AD-10 survey ; Post compact is DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	24			Dry season tomato productivity in the new irrigated perimeter of Di.	Yields per hectare for tomato production in the new Di irrigated perimeter during the dry season (=production per area unit)	level	Tons/ha	42.4	2014						During compact : AD-10 survey ;Post compact is	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	

³⁴ Based on an estimated 381ha of rice planted on the new perimeter in the dry season(which is assumed to be consistent for all years).

³⁵ Based on an estimated 964ha of onions planted on the new perimeter in the dry season (which is assumed to be consistent for all years). LPR – These numbers are much higher than other estimates of the area under cultivation in the Di perimeter in Year 5.

³⁶ Target of 5 based on what was produced during rainy season. This is first campaign for corn in dry season.

³⁷ Based on an estimated 623ha of corn planted on the new perimeter in the dry season (which is assumed to be consistent for all years).

Description	Row Number	Type of Indicators	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data collection methodology	Frequency	Disaggregations, if any
										Year 1:	Year 2:	Year 3:	Year 4:	Year 5:				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
														DGESS/ DRASA Boucle de Mouhoun				
	25	Outcome		Dry season tomato production in the new irrigated perimeter of Di	Total volume of tomato production in the new Di irrigated perimeter during the dry season		Tons	2,652	2014						During compact : AD-10 survey; Post compact is DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	26	Outcome		Crop Diversification in the Di irrigated perimeter	Ratio of: Numerator: Number of hectares under production for all crops other than (rice, corn, and onion)Ratio of: Numerator: Number of hectares under production for all crops other than (rice, corn, tomato, and onion) Denominator: Total number of hectares under production	Level	Ratio	N/A	N/A						During compact : AD-10 survey; Post compact is DGESS/ DRASA Boucle de Mouhoun	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	27	Outcome		Cultivation Intensity for Di	Ratio: Numerator: The total number of hectares exploited across cropping seasons (each hectare is counted once per season that it is under production, including dry hot and dry cold seasons for 3 seasons per year) Denominator: Total number of irrigated hectares on the Di perimeter (2240ha)	Level	Ratio	N/A	N/A						DGESS/ DRASA Boucle de Mouhoun	Annual Report Measurement relies on « Carrés de Rendements	Annual	
	28	Outcome		Rainy season corn productivity in Comoé	Yields per hectare for corn production in the Comoé intervention villages in the rainy season (=production per area unit)	Level	Tons/ha	2.80	2010			3	3	3.5	Baseline: DPASA (Direction Provinciale Agricolture and security alimentaire)/C OMOE with AD-10 support , Post Compact: DGESS/ DRASA Cascade	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	29	Outcome		Dry season corn productivity in Comoé vegetable gardening perimeters	Yields per hectare for corn production on vegetable gardening perimeters in the Comoé intervention villages in the dry season (=production per area unit)	Level	Tons/ha	4.51	2010			5	5	5.5	Baseline: DPASA (Direction Provinciale Agricolture and security alimentaire)/C OMOE with AD-10 support , Post Compact: DGESS/ DRASA Cascade	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	30	Outcome		Dry season onion productivity in Comoé	Yields per hectare for onion production on vegetable	Level	Tons/ha	23	2010			23	23	24	Baseline: DPASA	Annual Report ; Measurement	Annual	

Description	Row Number	Type of Indicators	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data collection methodology	Frequency	Disaggregations, if any
										Year 1:	Year 2:	Year 3:	Year 4:	Year 5:				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
				vegetable gardening perimeters	gardening perimeters in the Comoé intervention villages in the dry season (=production per area unit)									(Direction Provinciale Agriculture and security alimentaire)/C OMOE with AD-10 support , Post Compact: DGESS/ DRASA Cascade	relies on « Carrés de Rendements »			
	31	Outcome		Dry season tomato productivity in Comoé vegetable gardening perimeters	Yields per hectare for tomato production on vegetable gardening perimeters in the Comoé intervention villages in the dry season (=production per area unit)	Level	Tons/ha	14.48	2010			15	15.5	16	Baseline: DPASA (Direction Provinciale Agriculture and security alimentaire)/C OMOE with AD-10 support , Post Compact: DGESS/ DRASA Cascade	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
	32	Outcome		Dry season cabbage productivity in Comoé vegetable gardening perimeters	Yields per hectare for cabbage production on vegetable gardening perimeters in the Comoé intervention villages in the dry season (=production per area unit)	Level	Tons/ha	19.33	2010			20	21	22	Baseline: DPASA (Direction Provinciale Agriculture and security alimentaire)/C OMOE with AD-10 support , Post Compact: DGESS/ DRASA Cascade	Annual Report ; Measurement relies on « Carrés de Rendements »	Annual	
Activities																		
Activity (a) – IWRM																		
	33	Outcome		Local Water Committees (CLE) that are operational in the Comoé and Mouhoun basins.	Number of CLEs operational per year (holding regular meeting, managing water resources, producing activity reports, and receiving funds for operations)	Level	Number	2 ³⁸	2008			0	5	12	AD-9 during the compact ; Post-Compact : Agence de l'eau du Mouhoun/ Agence de l'eau des Cascades	Annual Report	Annual	
	34	Outcome		Cascades and Mouhoun Basin Committees (CB) that are operational	Number of Basin Committees (CB) operational (regular meetings of the Conseil d'Administrato, receiving funds for operations, having a management plan) per year	Level	Number	0	2008				2		AD-9 during the compact ; Post-Compact : Agence de l'eau du Mouhoun/ Agence de l'eau des Cascades	Annual Report	Annual	
	35	Outcome		Percentage of Contribution Financier en matiere d'Eau (CFE)	Recovery Rate for CFE (Denominator: the value of CFE owed by users ;	Level	Ratio	N/A							Agence de l'Eau du Mouhoun and Agence de	Annual Report	Annual	

³⁸ Two CLEs were already created and operational through support from DANIDA

Description	Row Number	Type of Indicators	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data collection methodology	Frequency	Disaggregations, if any
										Year 1:	Year 2:	Year 3:	Year 4:	Year 5:				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
				received by the 2 Basin Committees	Numerator: CFE received by the Agence de l'EAU									l'Eau des Cascades				
	36	Outcome		Resolution of water conflicts in the 2 Basin Committees	Ratio between the number of water conflicts recorded and the number resolved	Level	Ratio	N/A						Agence de l'Eau du Mouhoun and Agence de l'Eau des Cascades	Annual Report	Annual		
Activity (b) – Operations and Maintenance																		
Sustainability of Water User Associations	37	Outcome		Number of WUAs that are operational on the Di perimeter and the 9 perimeters supported by the Compact	Number of WUAs that are operational per year on the Di perimeter and the 9 perimeters supported by the Compact ³⁹	Level	Number	0	2009					AD-7 during the compact; Post-Compact: AMVS	Annual Report	Annual		
	38	Outcome		Number of sectors on the Di irrigated perimeter that have completed annual maintenance at the end of the rainy season	Number of sectors on the Di perimeter (of 7 total) that have conducted maintenance on hydraulic network, pumping station and related equipment ⁴⁰	Level	Number	N/A						AMVS	Annual Report	Annual		
	39	Outcome		Raw water charges collection by Water Users' Associations (WUA) of agricultural producers in the new DI irrigated perimeter	Percentage of water fees paid annually by users and collected by WUAs in the new DI irrigated perimeter ⁴¹	Level	%	N/A					100 ⁴²	AMVS	Annual Report; Based on the registers of the WUAs	During compact: once at the end of the compact; Post-compact: Annual		
	40	Outcome		Raw water charges collection by Water Users' Associations (WUA) of agricultural producers in old Sourou Valley perimeters	Percentage of water fees paid annually by users and collected by WUAs in old irrigated perimeters; Baseline from cooperatives; follow-up is from WUAs ⁴³	Level	%	46.5%	2007				100 ⁴⁴	AMVS (during the compact and Post-Compact)	Annual Report; Based on the registers of the WUAs	During compact: once at the end of the compact; Post-compact: Annual		
Improved irrigation and water management	41	Outcome		Overall efficiency of raw water transport and distribution in old perimeters in the Sourou Valley	Ratio of the water volume delivered in fields to the total water volume pumped from the source ^{45A}	Level	%	TBD	2014				70	AD-7.1 during the compact; Post-Compact: AMVS	Annual Report ⁴⁶ ;	Annual		
	42	Outcome		Overall efficiency of raw water transport and distribution in the new perimeter of Di	Ratio of the water volume delivered in fields to the total water volume pumped from the source ⁴⁷	Level	%	NA	2014				85	AD-7.1 during the compact; Post-Compact: AMVS	Annual Report; ⁴⁸	Annual		

³⁹ There are three criteria for adoption of new practices: governance, operations and maintenance, and administrative and financial management. Each WUA is graded on a scale of 0-2 for each criteria, which is translated into an index from 0-1. Those scoring at least .8 will be considered functional. Refer to AD-7 O&M notice which will be used by AMVS.

⁴⁰ Il y a 7 secteurs : Sud1, sud2, Centre1, Centre2, Centre3, Centre4, Nord. Comme le Nord est alimenté en eau par une même station de pompage, il est subdivisé en Nord1, Nord2 et Nord3.

⁴¹ Ibid

⁴² This is only for the 2 out of 7 which will be functional by the end of the Compact

⁴³ Ibid

⁴⁴ This is for all 9 WUAs in old perimeters.

⁴⁵ See annex for additional details

⁴⁶ See annex : Méthodologie de mesure des indicateurs de gestion de l'eau

⁴⁷ See annex for additional details

⁴⁸ See annex : Méthodologie de mesure des indicateurs de gestion de l'eau

Description	Row Number	Type of Indicators	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data collection methodology	Frequency	Disaggregations, if any
										Year 1:	Year 2:	Year 3:	Year 4:	Year 5:				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
	43	Outcome		Efficiency of raw water use in old perimeters in the Sourou Valley	Ratio between crop water needs and the volume of water supplied ⁴⁹	Level	%	TBD	2014					55	AD-7.1 during the compact; Post-Compact: AMVS	Annual Report;	Annual	
	44	Outcome		Efficiency of raw water use in the new perimeter of Di	Ratio between crop water needs and the volume of water supplied ⁵⁰	Level	%	NA	2014					55	AD-7.1 during the compact; Post-Compact: AMVS	Annual Report;	Annual	
Activity (c) – Farmer Training																		
Adoption of New Practices	45	Outcome	AI-11	Farmers who have applied improved practices as a result of training ⁵¹	The number of primary sector producers (farmers, ranchers, fishermen, and other primary sector producers) that are applying new production or managerial techniques introduced or supported by MCC training or technical assistance, such as input use, production techniques, irrigation practices, post-harvest treatment, farm management techniques, or marketing strategies. ⁵²	Cumulative	Number	0	2009			1,995	3,642	6,860	Baseline: AD10; Post Compact: MCC Independent Evaluator	Interim and final evaluation reports based on the interim and final surveys	During compact: quarterly; Post-compact: 2014/2015; and 2016/2017	Gender
	46	Outcome	AI-12	Hectares under improved practices as a result of training	The number of hectares on which farmers are applying new production or managerial techniques introduced or supported by MCC, such as input use, production techniques, irrigation practices, post-harvest treatment, farm management techniques, or marketing strategies. ⁵³	Level	Hectares	0	2011					3440 ⁵⁴	Baseline AD10; Post Compact: MCC Independent Evaluator	Interim and final evaluation reports based on the interim and final surveys	During compact: quarterly; Post-compact: 2014/2015; and 2016/2017	Gender
Activity (d) – Animal Health																		
Activity (e) – Lery Dam																		
	47	Outcome		Percent of maintenance funds for Lery dam provided by the government	Ratio: Numerator: Value of funds provided by the government Denominator: Value of funds needed to complete maintenance of the dam	Level	%	N/A							Direction Générale de Ressource en Eaux (DGRE) and Direction General d'Aménagements Hydrauliques (DGAH)	Annual Report	Annual	
Activity (f) – Rural Finance																		
	48	Outcome		Recovery rate for loans made through the Access to Rural Finance	The ratio between Payments owed to date by end borrowers and what is actually recovered by the PFIs	Level	%	N/A							PFIs Agence de Partenariat pour la	Annual Report	Annual	

⁴⁹ See annex for additional details

⁵⁰ Ibid

⁵¹ For Burkina, this indicator represents households trained and not farmers trained. This indicator represents 70% rate of adoption of the target 7000 trained by AD-10.

⁵² For each of the different types of training, there are a set of specific practices that a farmer must have adopted in order to be considered as having applied improved techniques. This list is included in the annexes. Additionally, the annexes describe the amount of a farmer's land that must be farmed using the new technique in order for a practice to be considered adopted.

⁵³ For Burkina Faso, this indicator includes the total area of the Di irrigated perimeter and the other areas on which those trained by AD-10 effectively applied the techniques learned.

⁵⁴ This target represents 2400ha in the Sourou and 1040ha in the Comoe, which is the estimated number of hectares to be treated with compost as a result of training. The actual calculation of the area under improved practices, however, will be measured with the larger definition of new practices adopted.

Description	Row Number	Type of Indicators	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data collection methodology	Frequency	Disaggregations, if any
										Year 1:	Year 2:	Year 3:	Year 4:	Year 5:				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
														Developpment du Burkina (APD-Burkina)				
Environmental and Social Protection																		
	49	Output		Remaining Number of PAPs that Need to be Compensated under the Agriculture Project	The total number of Project Affected Persons (PAPs) that have still not yet received full compensation for losses incurred through the Compact's Agriculture Development Project. This only pertains to PAPs that had not been fully compensated as of the end of the Compact Closure Period	Cumulative	Number	83	2014						APD for post-compact	APD reporting	Annual	

BURKINA FASO COMPACT ROADS PROJECT INDICATORS

Description	Row Number	Type of Indicator	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data Collection Methodology	Frequency of Data Availability	Disaggregations, if any
										Year 1	Year 2	Year 3	Year 4	Year 5				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
Improved Transportati on Access																		
	1	Outcome	R-10	Average Annual Daily Traffic (AADT)	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.		Number							Direction Generale d'Entretien Routiere (DGER) for baseline as well as post-compact	Total weekly traffic for each category of vehicle divided by seven (7) weekdays over the two annual counting campaigns. Two periods are averaged.	Annual		
	2	Outcome		RD-7	Sabou - Koudougou	Level	Number	63	2011					230 ⁵⁵				
	3	Outcome			Koudougou - Perkoa	Level	Number	212	2011					330				
	4	Outcome			Perkoa - Didyr	Level	Number	115	2011					195				
	5	Outcome		RD-5	Dédougou - Nouna	Level	Number	77	2011					330				
	6	Outcome			Nouna - Bomborukuy	Level	Number	37	2011					190				
	7	Outcome			Bomborukuy - Mali Border	Level	Number	20	2011					110				
	8	Outcome		RD-8	Banfora - Sindou	Level	Number	61	2011					215				
Improved road quality and reduced travel times	9	Outcome	R-9	Roughness	The measure of roughness of the road surface, in meters of height per kilometer of distance traveled.	Level	m/km							DGR for baseline as well as post compact	Direction General des Routes (DGR) Annual Report	During compact : pre/post construction ; Post-Compact : annual		
	10	Outcome		Sabou - Koudougou - Perkoa - Didyr (RD-7)		Level	m/km	12 ⁵⁶	2008					3.5 ⁵⁷				
	11	Outcome		Dédougou - Nouna - Bomborukuy - Mali Border (RD-5)		Level	m/km	16	2008					3.5				
	12	Outcome		Banfora - Sindou (RD-8)		Level	m/km	18	2008					3.5				
	13	Outcome		Improvement in Overall paved Road Network Condition for IMFPM	The measure of roughness of the road surface, in meters of height per kilometer of distance traveled for all paved roads in the IMFPM	Level	m/km	4.5	2012					3.75	DGR baseline and follow-up			

⁵⁵ All targets for traffic volume were set by DGR.

⁵⁶ The baseline is using earlier DGR data from Due Diligence. MCA collected data in 2012 for baseline but M&E-8 (the contractor) has not yet provided the data. As such, the M&E Plan baseline uses the data from DGR.

⁵⁷ IRI target was set by Minister of Roads.

Description	Row Number	Type of Indicator	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data Collection Methodology	Frequency of Data Availability	Disaggregations, if any
										Year 1	Year 2	Year 3	Year 4	Year 5				
										Aug 2009- July 2010	Aug 2010- July 2011	Aug 2011- July 2012	Aug 2012- July 2013	Aug 2013- July 2014				
	14	Outcome		Improvement in Overall Unpaved Road Network Condition for IMFPM	The measure of roughness of the road surface, in meters of height per kilometer of distance traveled for all unpaved roads in the IMFPM	Level	m/km	13	2012					9	DGR baseline and follow-up			
	15	Outcome	R-11	Road traffic fatalities	The number of road traffic fatalities per year on roads constructed, rehabilitated or improved with MCC-funding.	Level	Number	TBD							Office National de Sécurité Routiere (ONASER) (during the compact and post-compact)	Reported by ONASER in collaboration with the Police and Army		By Gender
	16	Outcome		Primary Road traffic fatalities	The number of primary road traffic fatalities per year on roads constructed, rehabilitated or improved with MCC-funding (RD-5, RD-7, RD-8).	Level	Number	TBD							Office National de Sécurité Routiere (ONASER) (during the compact and post-compact)			By Gender
	17	Outcome		Rural Road traffic fatalities	The number of rural road traffic fatalities per year on roads constructed, rehabilitated or improved with MCC-funding.	Level	Number	TBD							Office National de Sécurité Routiere (ONASER) (during the compact and post-compact)			By Gender
	18	Outcome		Road traffic fatalities	The number of road traffic fatalities per year on Dédougou-Nouna- Mali Border road.	Level	Number	TBD							Office National de Sécurité Routiere (ONASER) (during the compact and post-compact)			By Gender
	19	Outcome		Road traffic fatalities	The number of road traffic fatalities per year on Sabou-Koudougou-Didyr road.	Level	Number	TBD							Office National de Sécurité Routiere (ONASER) (during the compact and post-compact)			By Gender
	20	Outcome		Road traffic fatalities	The number of road traffic fatalities per year on Banfora-Sindou road.	Level	Number	TBD							Office National de Sécurité Routiere (ONASER) (during the compact and post-compact)			By Gender
Roads Maintenance																		
	21	Output		Roads (bituminous or no) maintenance work completed with the IMFPM (cumulative)	Kilometers of periodic maintenance completed by the IMFPM (hand over certificates submitted and approved by MCA)	Cumulative	Kilometers	0	2009					300	AGETIB Reports during the compact; Post-Compact: FERB/DGER	Report of DGER		
	22	Outcome		Periodic road maintenance coverage rate	Percent of completed <i>periodic</i> maintenance (only for some road network sections) (annual) (Numerator = completed km of maintenance. Denominator = required km of maintenance.) The road network in question is the one defined in the 2013-2017 five-year plan adopted by the Government of	Level	%	1.67%	2008	2%	10%	20%	25%	30%	During the compact: DGR, ROAD MAINTENANCE FUND for baseline and reporting until IMFPM formed and then FER/B;	Report of DGER		

Description	Row Number	Type of Indicator	CI Code	Indicator	Definition	Classification of the indicator	Units	Baseline	Baseline year	Compact Targets					Indicator Source	Data Collection Methodology	Frequency of Data Availability	Disaggregations, if any
										Year 1	Year 2	Year 3	Year 4	Year 5				
										Aug 2009-July 2010	Aug 2010-July 2011	Aug 2011-July 2012	Aug 2012-July 2013	Aug 2013-July 2014				
					Burkina Faso. This is calculated on an annual basis.									Post-Compact: FERB/DGER				
	23			Updating of the Quinquennial Plan for Periodic Road Maintenance	Each year, a report should be issued that updates the Periodic Road Maintenance Plan. This indicator will show whether or not these reports are completed.	Level	Yes/No							Direction Generale des Etudes Statistiques et Sectorielles (DGESS)	Report of DGESS			
	24			Value of financial resources collected by FERB for periodic maintenance	The total of all taxes and fees that are collected by FERB, which provide for the financial autonomy of the organization (this does not include donor funding, but funds collected by FERB for FERB).	Level	CFA							FERB	FERB Report			
	25			Availability of updated information in the Systeme de Gestion de Patrimoine Routier (SGPR)	Per the agreement between FERB and the DGESS, are all important indicators updated annually? Yes/No	Level	Yes/No							DGESS	DGESS Report			
Outputs																		
Sabou-Koudougou-Didyr (RD-7)	26	Output		Road sections upgraded (cumulative)	The length of roads in kilometers on which upgrade is complete (hand over certificates submitted and approved by MCA).	Cumulative	Kilometers	0	2009					80.25	MCA during implementation; APD post-compact	MCA Results Report	2014	
Rural Roads (Comoé, Léraba and Kéné Dougou) (RD-6)	27	Output		Road sections upgraded (cumulative)	The length of roads in kilometers on which upgrade is complete (hand over certificates submitted and approved by MCA).	Cumulative	Kilometers	0	2009					144	MCA during implementation; APD post-compact	MCA Results Report	2014	
Roads Project Overall	28	Output		Number of PAPs Compensated as Part of the Roads Project	Total number of Project Affected Persons having received full compensation through the Roads Project	Cumulative	Number	0	2009						MCA during implementation; APD post-compact	APD reporting	Annual	

BURKINA FASO COMPACT BRIGHT 2 PROJECT INDICATORS⁵⁸

								Year 1 Aug 09- Jun 10	Year 2 Jul 2010- Jun 2011	Year 3 Jul 2011- Jun 2012	End of Project
Indicator	Definition	Unit	Indicator Classification Type	Source	Data Collection Methodology	Frequency of collection	Baseline	Annual Target	Annual Target	Annual Target	Target
Girls' primary education completion rates in BRIGHT provinces	Percentage of girls who reach the sixth grade of primary school cycle over the total number of girls recruited at the beginning of the cycle Numerator: Number of girls in grade 6 (excluding those who are repeating this grade). Denominator: Total number of girls of the same cohort in first grade	Percentage	Level	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	21%		52%	52%	52%
Boys' primary education completion rates in BRIGHT provinces	Percentage of boys who reach the sixth grade of primary school cycle over the total number of boys recruited at the beginning of the cycle Numerator: Number of boys in grade 6 (excluding those who are repeating this grade). Denominator: Total number of boys of the same cohort in first grade	Percentage	Level	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	28.40%		52%	52%	52%
Girls' primary education completion rates in BRIGHT schools	Percentage of girls who reach the sixth grade of primary school cycle over the total number of girls recruited at the beginning of the cycle Numerator: Number of girls in grade 6 (excluding those who are repeating this grade). Denominator: Total number of girls of the same cohort in first grade	Percentage	Level	Post-Compact: DGESS	Annual census by DGESS	Annual					
Boys' primary education completion rates in BRIGHT schools	Percentage of boys who reach the sixth grade of primary school cycle over the total number of boys recruited at the beginning of the cycle Numerator: Number of boys in grade 6 (excluding those who are repeating this grade). Denominator: Total number of boys of the same cohort in first grade	Percentage	Level	Post-Compact: DGESS	Annual census by DGESS	Annual					
% of girls passing the annual CEP exam in BRIGHT provinces	The number of girls who passed the CEP over the number of girls who sat for the CEP exam	Percentage	Level	Post-Compact: Direction Provinciale de L'education Nationale et de l'Alphabetization (DPENA)	Annual census by DPENA	Annual					
% of boys passing the annual CEP exam in BRIGHT provinces	The number of boys who passed the CEP over the number of boys who sat for the CEP exam	Percentage	Level	Post-Compact: DPENA	Annual census by DPENA	Annual	N/A				
% of girls passing the annual CEP exam in BRIGHT schools	The number of girls who passed the CEP over the number of girls who sat for the CEP exam	Percentage	Level	During the compact : BRIGHT II Project Team Post-Compact: DPENA	Annual census by DPENA	Annual	N/A		73%	73	73
% of boys passing the annual CEP exam in BRIGHT schools	The number of boys who passed the CEP over the number of boys who sat for the CEP exam	Percentage	Level	During the compact : BRIGHT II Project Team Post-Compact: DPENA	Annual census by DPENA	Annual	N/A		73%	73	73
The number of girls graduating from BRIGHT 2 primary schools.	Number of girls enrolled multiplied by the completion rate	Number	Cumulative	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	N/A		1446	2848	4301

⁵⁸ The provision of data will be assured by the permanent monitoring committee of Bright2

								Year 1 Aug 09- Jun 10	Year 2 Jul 2010- Jun 2011	Year 3 Jul 2011- Jun 2012	End of Project
Indicator	Definition	Unit	Indicator Classification Type	Source	Data Collection Methodology	Frequency of collection	Baseline	Annual Target	Annual Target	Annual Target	Target
The number of boys graduating from BRIGHT 2 primary schools.	Number of boys enrolled multiplied by the completion rate	Number	Cumulative	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	N/A		1402	2364	3783
Girls promotion rates to next grade in BRIGHT schools	Proportion of girls who successfully completed a grade and are promoted to next grade Numerator: Number of girls promoted to next grade Denominator: Total number of girls in the grade.	Percentage	Level	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	N/A		90%	90%	90%
Boys promotion rates to next grade in BRIGHT schools	Proportion of boys who successfully completed a grade and are promoted to next grade Numerator: Number of boys promoted to next grade Denominator: Total number of girls in the grade.	Percentage	Level	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	N/A		90%	90%	90%
% of girls dropping out of school in BRIGHT provinces	Dropouts are the girls enrolled in Primary school at the beginning of the year but did not complete the school year , and thus did not take part in end of year assessments. Numerator: Girls who did not complete the school year. Denominator: Total number of girls enrolled in school that year.	Percentage	Level	Post-Compact: DGESS	Annual census by DGESS	Annual					
% of boys dropping out of school in BRIGHT provinces	Dropouts are the boys enrolled in Primary school at the beginning of the year but did not complete the school year , and thus did not take part in end of year assessments. Numerator: Boys who did not complete the school year. Denominator: Total number of boys enrolled in school that year.	Percentage	Level	Post-Compact: DGESS	Annual census by DGESS	Annual					
% of girls dropping out of school in BRIGHT schools	Dropouts are the girls enrolled in Primary school at the beginning of the year but did not complete the school year , and thus did not take part in end of year assessments. Numerator: Girls who did not complete the school year. Denominator: Total number of girls enrolled in school that year.	Percentage	Level	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	3.8%		2%	2%	2%
% of boys dropping out of school in BRIGHT schools	Dropouts are the boys enrolled in Primary school at the beginning of the year but did not complete the school year , and thus did not take part in end of year assessments. Numerator: Boys who did not complete the school year. Denominator: Total number of boys enrolled in school that year.	Percentage	Level	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	5.7%		2%	2%	2%
% of girls regularly attending (90% attendance) BRIGHT schools	Proportion of girls who attended school 90% of the time in a given month Numerator: The number of girls attending BRIGHT schools at least 90% of the time. Denominator: The total number of girls enrolled in BRIGHT schools	Percentage	Level	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	94	97%	97%	97%	97%
# of girls enrolled in the MCC/USAID-supported BRIGHT schools	Total number of girls enrolled in BRIGHT schools at any given point in time	Number	Level	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	11546		16717	19800	19800
# of boys enrolled in the MCC/USAID-supported BRIGHT schools	Total number of boys enrolled in BRIGHT schools at any given point in time	Number	Level	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	8919		13150	18819	18819

								Year 1 Aug 09- Jun 10	Year 2 Jul 2010- Jun 2011	Year 3 Jul 2011- Jun 2012	End of Project
Indicator	Definition	Unit	Indicator Classification Type	Source	Data Collection Methodology	Frequency of collection	Baseline	Annual Target	Annual Target	Annual Target	Target
# of students enrolled in the MCC/USAID-supported BRIGHT schools (both girls and boys)	Total number of students enrolled in BRIGHT schools at any given point in time	Number	Level	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	20465		29867	38619	38619
# of girls/boys enrolled in the BRIGHT Bisongos	Cumulative number of children enrolled in bisongos	Number	Level	During the compact : BRIGHT II Project Team Post-Compact: DGESS	Annual census by DGESS	Annual	700		3961	9440	9440
Girls' attendance rate in the BRIGHT bisongos	The attendance rate is calculated for each month. Then, an average is made for the whole school year.	Percentage	Level	During the compact : BRIGHT II Project Team Post-Compact: DPENA	Annual census by DPENA	Annual					
Boys' attendance rate in the BRIGHT bisongos	The attendance rate is calculated for each month. Then, an average is made for the whole school year.	Percentage	Level	During the compact : BRIGHT II Project Team Post-Compact: DPENA	Annual census by DPENA	Annual					

Annex : Supplemental Indicator Definition Information for RLG and Agriculture Development Projects

Number of Parcels in Di

Estimated number of titles and leases in Di by section of Di (South 1, South 2, Center 1, Center 2, Center 3, Center 4, North 1, North 2, and North 3)



version du 24 Mars 2014	SUD 1	SUD 2	CENTRE 1	CENTRE 2	CENTRE3	CENTRE4	NORD 1	NORD 2	NORD 3	TOTAL
nombre de PAP sur le secteur (TF)	168	570	165	10	65	183	0	31	280	1472
Nbre_Ménages recevant une superficie complémentaire (BE)	104	318	85	7	34	78	0	19	83	728
nombre de groupements (BE)	100	1	0	0	12	10	0	0	11	134
nombre de ménages non PAP défavorisés (BE)	0	0	0	2	234	224	0	0	0	460
nombre de ménages non PAP aléatoire (BE)	1	0	105	132	44	0	68	146	7	503
INERA	1	0	0	1	0	0	0	0	0	2
TOTAL	374	889	355	152	389	495	68	196	381	3299

NB: Données RDPF

Number of Water User Associations Adopting Best Practices in the Sourou :

AD7 apprécie la fonctionnalité des OUEAs selon trois critères.

Les OUEAs exercent trois fonctions essentielles : gouvernance (ou gestion sociale), O&M des périmètres et gestion administrative et financière. A chaque fonction correspond plusieurs activités. A titre indicatif nous fournissons une liste de critères dans le tableau ci-après. Pour chaque critère un nombre de points compris entre 0 et 2 est attribué. L'indicateur ne sera pas entièrement dépourvu de subjectivité.

	Critères	points	0	1	2
gouvernance	Nombre de réunions annuelles de l'AG		0	1	2
	Communication de l'ordre du jour de l'AG à l'avance et des documents à approuver (budget, plan d'exploitation, etc.)		non	≤ 4 jours	≥ 5 jours
	Nombre d'audits interne des comptes par le comité de contrôle		0	1	2
O&M	Préparation à temps des plans d'exploitation (assolements et besoins en eau)		non		oui
	Collecte des données pour les indicateurs		non		oui
	Analyse des données collectées par les responsables de l'OUEA		non		oui
	Action entreprise pour améliorer la gestion de l'eau		non		oui
	Adéquation des apports d'eau d'irrigation (indicateur)		Plus de 1, 4 ou moins de 0,6	Plus de 1,2 ou moins de 0,8	entre 0,8 et 1,2
	Equité de la distribution d'eau (indicateur)		à déterminer		
	Nombre d'inspections saisonnières par an		0	1	2
	Préparation des plans d'entretien à temps		non		oui
	Dépenses O&M réelles / dépenses prévues au budget		≤ 74%	75% - 89%	90% - 100%
	Taux de participation des membres aux travaux collectifs		≤ 74%	75% - 89%	90% - 100%
gestion	Préparation du budget annuel à temps		non		oui
	Remise des rapports techniques et financiers à l'AMVS à temps		plus 30 jours de retard	Moins de 30 jours de retard	Remis dans les délais
	Taux de recouvrement des redevances (indicateur)		moins de 75%	75 à 89%	90 à 100%
	Autonomie financière (indicateur)		à déterminer		

Farmers who have applied improved practices as a result of training

Selon AD10, un producteur adoptant est un apprenant qui intègre dans ses pratiques agricoles et post-récolte plusieurs des innovations techniques enseignées et recommandées dans les formations dispensées. Pour être adoptant, un apprenant doit satisfaire les conditions suivantes :

1. Pour les productions végétales :
 - 1.1. utilise des semences améliorées,
 - 1.2. suit le calendrier cultural,
 - 1.3. applique correctement un minimum de 3 pratiques agricoles de base au champ, au moment de la récolte ou après la récolte.
2. Pour les productions animales :
 - 2.1. vaccine ses animaux contre au moins une maladie contagieuse ;
 - 2.2. assure l'eau potable et la nourriture à ses animaux au moins une fois par jour ;
 - 2.3. pratique au moins une autre technique améliorée de production définie pour chaque spéculation, concernant notamment :
3. Pour les activités de post-récolte, de transformation, de transport, de stockage et de commercialisation, l'emploi d'au moins une pratique améliorée pour le transport et d'au moins deux pratiques améliorées pour les autres activités déterminées selon l'activité.

Pour les itinéraires techniques améliorés, le producteur doit appliquer la technologie sur le double de la grandeur de la superficie de son kit de production de niveau 1 et de niveau 2. Lorsque le producteur n'a plus le droit à un kit incitatif, il doit appliquer l'itinéraire technique sur le double de la superficie emblavée par le dernier kit reçu.

Pour l'adoption d'innovations AD-10 (billon double, planche basse ou creuse, mucuna), une superficie d'au moins 300 m² ou au moins 30% de la superficie pour des superficies totales inférieures à 1000 m² de l'innovation. Dans tous les cas, le producteur doit obligatoirement produire de la fumure organique pour être considéré adoptant.

Number of Producer Organizations that have Applied Improved Techniques

Une OP est adoptante lorsqu'elle remplit les conditions suivantes :

1. offre obligatoirement au moins un service à ses membres non offert jusque-là : achat d'intrants, vente groupée, financement des activités, etc.
2. réalise une activité qui améliore sensiblement la gestion de l'OP dans au moins l'un des aspects suivants :
 - Mission et Vision
 - Ressources humaines
 - Ressources financières et matérielles

- Vie démocratique
- Représentation, alliance

Sur le plan opérationnel, chacune de ces conditions a été définie de manière précise et résumée dans une fiche appelée « fiche OP ». Cette fiche est accompagnée d'une description précise des pratiques et innovations qui doivent être pratiquées par les OP dans l'exercice de leurs activités. Ces innovations contribuent à l'amélioration des performances OP.

AD7.1 / Groupement SHER-GRET		Date :	<i>Nb pages : 82</i>
Réf : 74/2014/TN/BKF66	Expéditeur: Thierry Normand		
Objet : Note indicateurs de suivi des OUEAs			
Destinataires : MCA – Mme Toé;			
Copie : MCA – Mr Koudakidiga; AD7 – Mr De Caluwé; Mr Detienne			

Introduction

L'OCDE définit un indicateur comme un "*Facteur ou variable, de nature quantitatif ou qualitatif, qui constitue un moyen simple et fiable de mesurer et d'informer des changements liés à l'intervention ou d'aider à apprécier la performance d'un acteur du développement.*"

La question clé à garder à l'esprit en spécifiant à la fois les indicateurs et les sources de vérification est « **qui va utiliser cette information ?** » compte tenu du fait que les projets doivent être la « propriété » des parties prenantes/partenaires, ce sont leurs besoins en informations qui sont les plus importants. Par conséquent, les indicateurs ne doivent pas être simplement le reflet de ce que le « bailleur de fonds » (ou l'assistance technique financée par le bailleur de fonds) aimerait savoir, mais ce dont **les gestionnaires locaux ont besoin**, donc les **bureaux des OUEA et leurs membres**.

Un « bon » indicateur doit répondre aux critères suivants :

1. **Spécifique** : Il doit mesurer ce que le projet ou une activité particulière du projet cherche à changer ou améliorer ;
2. **Facile d'emploi** : Les données pour renseigner l'indicateur peuvent être collectées rapidement et à moindre coût ;
3. **Objectivement vérifiable** : La valeur de l'indicateur ne doit pas changer selon la personne qui l'utilise ;
4. **Comparable** : L'indicateur doit permettre de faire des comparaisons, par exemple entre périmètres irrigués.

Les deux questions clés à poser sont :

1. Quelles sont les données disponibles au niveau des OUEA ?
2. Quels sont les indicateurs pertinents pour les OUEA et qui peuvent être facilement suivis ?

Quelles sont les données disponibles au niveau des OUEAs ?

Les données actuellement disponibles au niveau des périmètres (anciens et nouveaux) sont :

- **Heures de pompage** : les heures de pompages consignées dans les cahiers de suivi des stations de pompage.
- **Débits des stations de pompage** : les débits à la sortie des stations peuvent être estimés par une méthode simple à l'aide de flotteurs (bouteille d'eau lestée) pour la détermination de la vitesse. Les caractéristiques des canaux sont disponibles et permettent de déterminer la section du canal. A partir de ces 2 valeurs (vitesse et section du canal), cette méthode peut être utilisée pour obtenir une estimation des débits sur des grands canaux revêtus avec une marge d'erreur de 10 % ;
- **Besoin en eau des cultures** : donnée estimée à partir des superficies emblavées et des besoins en eau des différentes spéculations. Pour cela, l'OUEA avec l'appui d'un technicien du CATG peut aisément déterminer cette information.
- **Redevances payées** : la collecte des redevances est consignée dans les documents comptables des OUEAs (Registre des redevances)
- **Dépenses financières** : idem ci-dessus, les dépenses des OUEAs sont consignées dans les cahiers comptables des OUEAs

Quels sont les indicateurs pertinents pour les OUEA et qui peuvent être facilement suivis ?

Il est impératif que la collecte des données ne soit pas une contrainte pour les OUEA mais soit utile à leur fonctionnement.

Des données disponibles ci-dessus, les OUEAs peuvent facilement effectuer un suivi des indicateurs suivants :

Indicateurs :

1. Efficacité de l'utilisation de l'eau brute
2. Taux de recouvrement des redevances
3. Autonomie financière
4. Valorisation de l'eau d'irrigation
5. Coûts unitaire de pompage

Note :

Concernant le premier indicateur ; « Efficacité de l'utilisation de l'eau brute (Efficience de l'irrigation) » ; pour cette première campagne sèche 2013 – 2014, les OUEAs ne disposent pas des surfaces emblavées au début et la fin du mois (SDm et SFm) sur les anciens périmètres. En effet, les OUEA ont pris fonction après le démarrage de la campagne sèche 2013-2014 qui a démarré avec les coopératives.

Indicateurs

Efficacité de l'utilisation de l'eau brute

Cet indicateur est le ratio entre les besoins en eau des cultures et le volume d'eau apporté. Il est plus communément appelé « efficacité de l'irrigation ». C'est un indicateur du Compact. Il faut corriger le document du compact car le ratio dans la colonne « définition » est inversé.

La valeur de cet indicateur dépend des caractéristiques du réseau d'irrigation : types de canaux et ouvrage et leur état d'entretien et de la qualité de la gestion de l'eau. Il faut cependant l'utiliser avec précaution pour renseigner sur l'amélioration de la gestion de l'eau entre périmètres car il peut conduire à des interprétations erronées. Par exemple si sa valeur est 50% dans le périmètre A et 40% dans le périmètre B on peut en conclure hâtivement que la gestion de l'eau est meilleure dans le périmètre A alors que cela peut être l'inverse si, par exemple, le périmètre B présente des défauts de conception ou de construction.

Par contre, il est pertinent pour un suivi systématique des campagnes sur un même périmètre : comparaison entre campagne sèche et humide, comparaisons entre campagnes des différentes années, comparaison entre riz, polyculture et maïs.

$$Eff (\%) = \frac{Bc}{V} * 100$$

Données à recueillir :

- Volumes d'eau pompés (V) – m³ par unité de temps
- Superficies emblavées (S) – ha unité de temps
- Besoin en eau des Cultures (BC) – m³ par hectare
- Unité de temps : campagne

Pour chaque culture (riz, polyculture et maïs) les besoins en eau par campagne seront donnés par la formule ci-après :

$$Bc = \left[\frac{(SD + SF)}{2} * (ETc - Peff) \right]$$

Avec :

- Bc : besoins en eau de la campagne (m³)
- SD et SF : surface emblavée au début et à la fin de la campagne (ha).
- ETc : Evapotranspiration culture du mois m (mm)
- Peff : Pluviométrie efficace (mm)

Taux de recouvrement des redevances de l'eau brute

Cet indicateur du Compact est le ratio entre le montant des redevances payés et le montant des redevances demandées par le gestionnaire du périmètre. C'est un indicateur financier fréquemment utilisé que **nous renseignerons dans les nouveaux périmètres de Di et dans les anciens périmètres où des OUEAs seront établies.**

$$TR = 100 \times \frac{\text{Redevances payées (F CFA)}}{\text{Redevances demandées (F CFA)}}$$

Données à recueillir :

- *Montant des redevances demandées* figurant au procès verbal des réunions de l'assemblée générale
- *Montant des redevances payées* à la fin de la période de collecte des redevances à partir des documents comptables de l'OUEA.

Autonomie financière

Cet indicateur est le ratio entre le montant des redevances payées et les dépenses financières des OUEAs. C'est un indicateur financier.

$$AFin = 100 \times \frac{\text{Redevances payées (F CFA)}}{\text{Dépenses financières (F CFA)}}$$

Il est fortement souhaitable que le taux de recouvrement des redevances soit proche de 100%. Toutefois cela ne suffit pas pour assurer une véritable autonomie financière des OUEAs. Cet indicateur renseigne sur la capacité d'une OUEA à faire face le jour venu à une situation d'urgence ou au remplacement des équipements renouvelables, par exemple le moteur de la station de pompage. Il faut donc que, chaque année, le montant des redevances soit supérieur aux dépenses de l'OUEA.

L'indicateur permet de faire des comparaisons entre périmètres/OUEAs.

Données à recueillir :

- *Montant des redevances payées* à la fin de la période de collecte des redevances à partir des documents comptables de l'OUEA.
- *Dépenses financières* à partir de livres comptables de l'OUEA.

Valorisation de l'eau d'irrigation

Un objectif final de l'irrigation est de maximiser la production agricole par rapport à l'eau. Pour mesurer dans quelle mesure cet objectif est atteint nous utiliserons deux indicateurs :

- 1) Volume de production par m³ d'eau d'irrigation (t/m³)
- 2) Valeur de la production par m³ d'eau d'irrigation (F CFA/m³)

Si une seule culture est considérée, par exemple le riz, l'indicateur 1) convient. Mais pour faire des comparaisons impliquant plusieurs cultures, le second indicateur doit être utilisé. Une tonne de tomates n'est pas directement comparable à une tonne de maïs. La valeur de la production est estimée au prix moyen du marché bord de champ. L'indicateur 2) permet de mesurer la valorisation globale dans un périmètre (somme des valeurs de chaque culture/volume d'eau total) et de faire des comparaisons entre plusieurs périmètres.

Coûts unitaires de pompage (F CFA/ha)

C'est un indicateur très intéressant pour les responsables des OUEAs pour évaluer les résultats de leurs efforts pour gérer l'eau efficacement. Cet indicateur est correspond au volume pompé par hectare, mais l'interprétation sous forme monétaire est plus compréhensible pour tous les membres des OUEAs, contrairement au volume en m³.

La comparaison se fait entre les mêmes types de campagnes (entre campagnes de saison sèche et entre campagnes de saisons des pluies).

Données à recueillir :

Comptabilité des OUEAs et cahiers de suivi des stations de pompage.

i) The first indicator « l'efficacité de l'utilisation de l'eau brute » indicated in the section 2 Ad A, concerns the estimation of the efficiency of the whole irrigation system (E_s). This indicator is required to evaluate the efficiency of the whole irrigation system. It is an important indicator which can provide information of the performance of the system. It is equal to the ratio of the volume of water diverted to scheme (from the pumping station) to the volume of water that should be used by the crop (theoretical crops water requirements) which could be estimated using the CROPWAT model of FAO. This can be done for each irrigation season or campaign. The method described in the Note is the one which is usually used and it is simple to be applied . However, no need to estimate E_s for each irrigation application.

ii) However “ E_s ” includes two types of efficiencies: the conveyance efficiency “ E_c ” and field application efficiency “ E_a ” ($E_s = E_c \times E_a$). In managing the irrigation system, we need to know both efficiencies. The first (E_c) provides information on the condition of the canal system to detect any deficiency (leakage, ...) and the second one (E_a) on the adequacy of the on-farm or field irrigation management. In a normal surface irrigation system E_a is smaller than E_c

iii) E_c is the ratio of the volume of the diverted water (from the pumping station) to the volume of the water supplied to the irrigated plots. In Di irrigation system, the estimation of the volume of water conveyed to the field can be done using the limnigraphs and/or gates installed on

the canal network. This requires the calibration curve for the section of the canal where the limnigraphs are installed. The O&M manual should provide this information.

The estimation of the E_c requires a continuous measurement of the volume of pumped water and of the water level of the canal (beginning of secondary and tertiary) during the irrigation season and when irrigation is applied. This requires some resources. AMVS and AUEAs should assign some staff to follow up the measurement and conduct the calculation. Roche can conduct this estimation for us if needed. This will provide information to the irrigation agency (AMVS) on the performance of the network and if there is deficiency in any of the conveyance network section.

iv) Estimation of E_a is more complicated as indicated in the Note. E_a is equal to the ratio of the volume of the diverted water to the plot to the volume of the water used by the crops. The method for E_a estimation prescribed in the Note is OK. BUT the application of the method on all the plots in the irrigation system as proposed in the Note will require a lot of resources as indicated in the Note. Therefore, I propose to use it on specific plots in order to verify the value of E_a .

v) For the existing irrigation systems in the Sourou, estimation of E_c require equipping the irrigation network with adequate flow measurement tools. The old systems are very deteriorated and we suppose that E_c will be low.

Conclusion

- a) The method proposed in the Note for the estimation of the efficiency of whole irrigation system E_s is acceptable and can be applied for both new irrigation systems (D_i) and old irrigations systems in the Sourou. E_s can be a good indicator to evaluate the performance of the irrigation scheme.
- b) For the D_i system, as the system is equipped with limnigraphs and gates, I propose to have AD7 estimate E_c as this can provide the irrigation agency with the information on the performance of the different section of the irrigation network. Roche can verify these measurements.
- c) For the old systems of Sourou, estimation of E_c requires equipping the irrigation network with flow measurement devices.
- d) I propose to have estimate E_a on some specific plots to estimate the efficiency of the used field irrigation application and management.
- e) To estimate the above indicators, the capacity of AMVS should be reinforced including staff training.

METHODOLOGIE DE MESURE DES INDICATEURS DE GESTION DE L'EAU

Indicateur	Définition	Méthodologie	Moyens nécessaires de mesure	Moyens actuels disponibles à l'AMVS	Moyens nécessaires à rechercher	Responsable	Délai	Observations
Efficacité globale de transport et de distribution de l'eau brute dans les anciens périmètres irrigués de la vallée du Sourou	Rapport entre le volume d'eau livré au champ et le volume total d'eau pompé à la source.	<p><u>Mesure des volumes pompés:</u> Le surveillant de la station de pompage enregistre les heures de pompage journalier ; un modèle de cahier de suivi du pompage est donné dans le livrable 3.3 du Consultant AD7. Un agent de l'AMVS visite la station de pompage au moins deux fois par mois pour vérifier la qualité des enregistrements. Le débit fourni par chaque groupe moteur-hydrovis est mesuré une fois au début de campagne par un technicien de l'AMVS ; cela permet d'avoir le débit dans tous les cas de figures selon le nombre de groupes moteur-hydrovis fonctionnant simultanément. Il est recommandé de mesurer les débits au moulinet ; à défaut les débits sont mesurés par la méthode du flotteur. Le débit de pompage est ensuite mesuré par mois par un technicien de l'AMVS pour tenir compte des variations pouvant survenir selon le niveau d'eau dans le chenal, la vitesse de rotation des moteurs, etc. L'AMVS projette faire réaliser par la brigade hydrologique de la DREAHA-BM, des courbes de tarage sur les canaux primaires pour faciliter l'évaluation des débits passant.</p> <p>Par campagne le volume d'eau pompé est donné par la formule ci- après :</p>	Une équipe de la brigade hydrologique de Dédougou, agents O&M et un débitmètre (moulinet), les responsables des stations de pompage, les cahiers des stations de pompage.	1 agent AMVS, Responsables des stations de pompage	Equipe de la brigade hydrologique de Dédougou, moulinets	AMVS/OUEA	30 juin (CS) et 05 janvier (CH)	Les responsables O&M de l'AMVS peuvent faire les mesures de débits et le contrôle qualité. Notons que l'AMVS n'a toujours pas reçu le mircomoulinet prévu à cet effet.

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		$V_p = \sum_{j=1}^{n1} (q_{1j} * jt_{1j})$ $+ \sum_{j=1}^{n2} (q_{2j} * jt_{2j})$ $+ \sum_{j=1}^{n3} (q_{3j} * jt_{3j})$ <p>Avec :</p> <ul style="list-style-type: none"> - Vp : volume pompé pendant la campagne (m3) - n 1, n2, n3 : nombre de jours de fonctionnement du groupe motopompe 1, 2 et 3. - Q1j, Q2j et Q3j : Débits du groupe motopompe 1, 2 et 3 le jour j (m3/heure) et tj durée de pompage le jour j (heures). 						

Indicateur	Définition	Méthodologie	Moyens nécessaires de mesure	Moyens actuels disponibles à l'AMVS	Moyens nécessaires à rechercher	Responsable	Délai	Observations
		<ul style="list-style-type: none"> • Débit des tertiaires : Le responsable de tertiaire vérifie que la hauteur d'eau au droit du module à masques est comprise entre la hauteur minimale et maximale pour un débit égal au débit nominal plus ou moins 10% La valeur de débit retenue est le débit nominal (30 l/s). Si la hauteur d'eau est en dessous de la hauteur nominale, le débit est mesuré par un technicien de l'AMVS ou de la brigade hydrologique de Dédougou en posant dans le tertiaire un Canal Venturi RBC à au moins 3 m en aval du module • Durée de fonctionnement des tertiaires : Note de l'heure d'arrivée d'eau et de fin d'irrigation dans chaque tertiaire par le responsable de tertiaire. Si sur un secondaire la plupart des responsables de tertiaire sont des analphabètes, il est nécessaire d'engager un lecteur. Un technicien de l'AMVS vérifie une fois par mois que les notes sont bien prises. • Volumes délivrés : Les volumes délivrés par chaque tertiaire est le produit $Qt * 3,6 * t$ Avec Qt = débit à l'entrée du tertiaire (l/s) et t = durée de fonctionnement (heures). 	5 agents O&M pour couvrir l'ensemble des périmètres avec l'appui de la brigade hydrologique de Dédougou. Des lecteurs d'échelles, matérialisation du fonctionnement normal des modules à masques, trois canaux venturis.	Un canal venturi	5 agents O&M, Brigade hydrologique des DREAHA-BM/HB, 9 lecteurs d'échelles, étalonnage des prises d'eau, 2 canaux venturis			Incapacité des chefs de tertiaires à renseigner les fiches. Les niveaux de l'eau requis ne sont pas matérialisés au droit des modules à masques. L'AMVS n'a qu'un seul canal venturi (insuffisant). L'effectif des techniciens actuels à l'AMVS ne permet pas de prendre en charge ces activités en plus des autres tâches

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Efficacité globale de transport et de distribution de l'eau brute dans le nouveau périmètre de Di	Rapport entre le volume d'eau livré au champ et le volume total d'eau pompé à la source.	<p><u>Mesure des volumes pompés:</u> Le responsable de la station de pompage enregistre les heures de pompage journalier sous le contrôle de l'opérateur "eau". Un agent de l'AMVS visite la station de pompage au moins une fois par mois pour vérifier la qualité des enregistrements. Le débit fourni par chaque groupe moteur-hydrovis est mesuré au début de chaque campagne par un technicien de l'opérateur "eau" ; cela permet d'avoir le débit dans tous les cas de figures selon le nombre de groupes moteur-hydrovis fonctionnant simultanément. Il est recommandé de mesurer les débits au moulinet ; à défaut les débits sont mesurés par la méthode du flotteur. Le débit de pompage est ensuite mesuré par mois par un technicien de l'AMVS pour tenir compte des variations pouvant survenir selon le niveau d'eau dans le chenal, la vitesse de rotation des moteurs, etc. L'AMVS projette faire réaliser par la brigade hydrologique de la DREAHA-BM, des courbes de tarage sur les canaux primaires pour faciliter l'évaluation des débits passant.</p> <p>Par campagne le volume d'eau pompé est donné par la formule ci- après :</p>	L'équipe de l'opérateur eau, les responsables des stations de pompage, les aiguadiers, un agent O&M de l'AMVS pour le contrôle qualité, la brigade hydrologique de la DREAHA-BM, le rapport bilan de l'opérateur Eau.	L'équipe de l'opérateur Eau, 1 agent AMVS, les aiguadiers, Responsables des stations de pompage.	Equipe de la brigade hydrologique des DREAHA-BM/HB, 1 moulinet, 3 agents O&M après la mission de l'opérateur Eau.	AMVS/ Opérateur Eau/ OUEA	30 juin (CS) et 05 janvier (CH)	L'opérateur "eau" calcule cet indicateur et le fournit à l'AMVS dans son rapport bilan. Après la mission de l'opérateur eau, l'AMVS se substitue pleinement à lui

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		$V_p = \sum_{j=1}^{n1} (q_{1j} * t_{1j})$ $+ \sum_{j=1}^{n2} (q_{2j} * t_{2j})$ $+ \sum_{j=1}^{n3} (q_{3j} * t_{3j})$ <p>Avec :</p> <ul style="list-style-type: none"> - Vp : volume pompé pendant la campagne (m3) - n 1, n2, n3 : nombre de jours de fonctionnement du groupe motopompe 1, 2 et 3. - Q1j, Q2j et Q3j : Débits du groupe motopompe 1, 2 et 3 le jour j (m3/heure) et tj durée de pompage le jour j (heures). 						

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		<ul style="list-style-type: none"> • Débit des tertiaires : L'aiguadier vérifie que la hauteur d'eau au droit des modules à masques des canaux tertiaires est comprise entre la hauteur minimale et maximale pour un débit égal au débit nominal plus ou moins 10% La valeur de débit retenue est le débit nominal. Si la hauteur d'eau est en dessous de la hauteur nominale, le débit est mesuré par un technicien de l'opérateur "eau" ou de la brigade hydrologique de Dédougou en posant dans le tertiaire un Canal Venturi RBC à au moins 3 m en aval du module • Durée de fonctionnement des tertiaires : Note de l'heure d'arrivée d'eau et de fin d'irrigation dans chaque tertiaire par l'aiguadier sous le contrôle de l'opérateur "eau". Un technicien de l'AMVS vérifie une fois par mois que les notes sont bien prises. • Volumes délivrés : Les volumes délivrés par chaque tertiaire est le produit $Qt * 3,6 * t$ Avec Qt = débit à l'entrée du tertiaire (l/s) et t = durée de fonctionnement (heures). 						

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Efficiencia de l'utilisation de l'eau brute dans les anciens périmètres irrigués dans la vallée du Sourou	Cet indicateur est le ratio entre les besoins en eau des cultures et le volume d'eau livré.	<p><u>Mesure des volumes livrés:</u> Le surveillant de la station de pompage enregistre les heures de pompage journalier ; un modèle de cahier de suivi du pompage est donné dans le livrable 3.3 du Consultant AD7. Un agent de l'AMVS visite la station de pompage au moins deux fois par mois pour vérifier la qualité des enregistrements. Le débit fourni par chaque groupe moteur-hydrovis est mesuré une fois au début de campagne par un technicien de l'AMVS ; cela permet d'avoir le débit dans tous les cas de figures selon le nombre de groupes moteur-hydrovis fonctionnant simultanément. Il est recommandé de mesurer les débits au moulinet ; à défaut les débits sont mesurés par la méthode du flotteur. Le débit de pompage est ensuite mesuré par mois par un technicien de l'AMVS pour tenir compte des variations pouvant survenir selon le niveau d'eau dans le chenal, la vitesse de rotation des moteurs, etc. L'AMVS projette faire réaliser par la brigade hydrologique de la DREAHA-BM, des courbes de tarage sur les canaux primaires pour faciliter l'évaluation des débits passant. Par campagne le volume d'eau pompé est donné par la formule ci- après :</p>	Une équipe de la brigade hydrologique de Dédougou, agents O&M et un débitmètre (moulinet), les responsables des stations de pompage, les cahiers des stations de pompage.	1 agent AMVS, Responsable des stations de pompage	Equipe de la brigade hydrologique de Dédougou, moulinets	AMVS/OUEA	30 juin (CS) et 05 janvier (CH)	Une équipe de la brigade hydrologique de Dédougou, agents O&M et un débitmètre (moulinet), les responsables des stations de pompage, les cahiers des stations de pompage.

Indicateur	Définition	Méthodologie	Moyens nécessaires de mesure	Moyens actuels disponibles à l'AMVS	Moyens nécessaires à rechercher	Responsable	Délai	Observations
		$V_p = \sum_{j=1}^{n1} (q_{1j} * t_{1j})$ $+ \sum_{j=1}^{n2} (q_{2j} * t_{2j})$ $+ \sum_{j=1}^{n3} (q_{3j} * t_{3j})$ <p>Avec :</p> <ul style="list-style-type: none"> - Vp : volume pompé pendant la campagne (m3) - n 1, n2, n3 : nombre de jours de fonctionnement du groupe motopompe 1, 2 et 3. - Q1j, Q2j et Q3j : Débits du groupe motopompe 1, 2 et 3 le jour j (m3/heure) et tj durée de pompage le jour j (heures). 						
		<p><u>Estimation des besoins en eau des cultures :</u> Le calcul se base sur les superficies emblavées mensuelles, le type de culture et les données climatiques recueillies à la station météo de l'INERA de Di (Pluviométrie et ETP). le suivi des emblavures est effectué par les chefs de tertiaires chaque décade et centralisé au niveau de l'OUEA par le secrétaire général. L'OUEA transmet ces données à l'AMVS chaque mois. Les coefficients culturaux par spéculation sont ceux fournis par la littérature (FAO, INERA). Le calcul est réalisé par un technicien de l'AMVS.</p>	Un technicien de l'AMVS, les chefs de tertiaires, les fiches de suivi de la mise en place des cultures	1 Technicien de l'AMVS, les chefs des tertiaires	-			

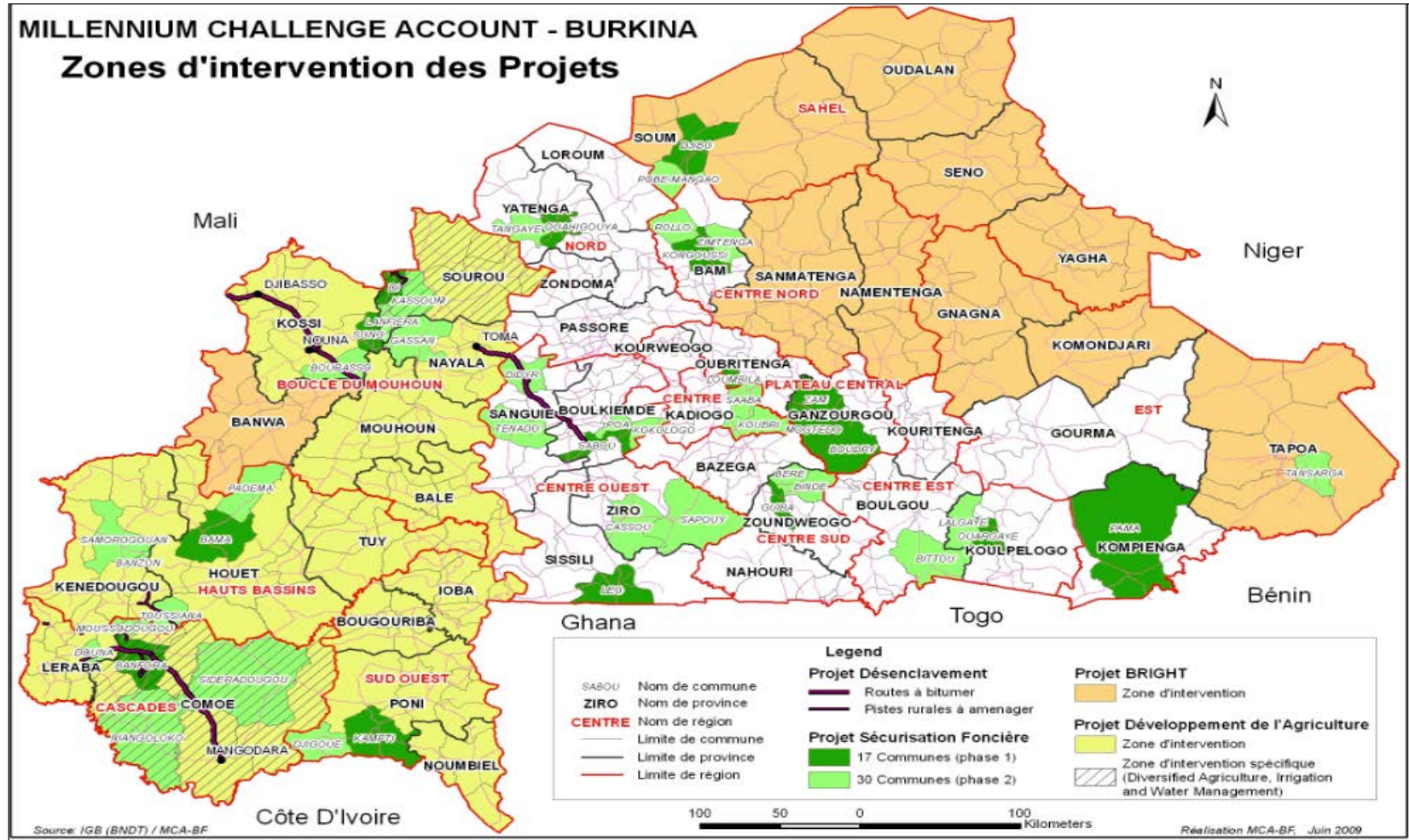
Indicateur	Définition	Méthodologie	Moyens nécessaires de mesure	Moyens actuels disponibles à l'AMVS	Moyens nécessaires à rechercher	Responsable	Délai	Observations
Efficienc e de l'utilisation de l'eau brute dans le nouveau périmètre de Di	Cet indicateur est le ratio entre les besoins en eau des cultures et le volume d'eau livré.	<p><u>Mesure des volumes livrés:</u> Le responsable de la station de pompage enregistre les heures de pompage journalier sous le contrôle de l'opérateur "eau". Un agent de l'AMVS visite la station de pompage au moins une fois par mois pour vérifier la qualité des enregistrements. Le débit fourni par chaque groupe moteur-hydrovis est mesuré une fois par campagne par un technicien de l'opérateur "eau" ou par la brigade hydrologique de la DREAHA-BM ; cela permet d'avoir le débit dans tous les cas de figures selon le nombre de groupes moteur-hydrovis fonctionnant simultanément. Il est recommandé de mesurer les débits au moulinet ; à défaut les débits sont mesurés par la méthode du flotteur. Le débit de pompage est ensuite mesuré par mois par un technicien de l'AMVS pour tenir compte des variations pouvant survenir selon le niveau d'eau dans le chenal, la vitesse de rotation des moteurs, etc. L'AMVS projette faire réaliser par la brigade hydrologique de la DREAHA-BM, des courbes de tarage sur les canaux primaires pour faciliter l'évaluation des débits passant. Par campagne le volume d'eau pompé est donné par la formule ci- après :</p>	L'équipe de l'opérateur eau, les responsables des stations de pompage, les aiguadiers, un agent O&M de l'AMVS pour le contrôle qualité, la brigade hydrologique de la DREAHA-BM, le rapport bilan de l'opérateur Eau.	L'équipe de l'opérateur Eau, 1 agent AMVS, les aiguadiers, Responsables des stations de pompage.	Equipe de la brigade hydrologique des DREAHA-BM/HB, 1 moulinet, 3 agents O&M après la mission de l'opérateur Eau.	AMVS/ Opérateur Eau/ OUEA	30 juin (CS) et 05 janvier (CH)	L'opérateur "eau" calcule cet indicateur et le fournit à l'AMVS dans son rapport bilan. Après la mission de l'opérateur eau, l'AMVS se substitue pleinement à lui

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		<p>Le calcul se base sur les superficies emblavées mensuelles, le type de culture et les données climatiques recueillies à la station météo de l'INERA de Di (Pluviométrie et ETP). le suivi des emblavures est effectué par l'opérateur "eau". Les coefficients culturaux par spéculatation sont ceux fournis par la littérature (FAO, INERA). Le calcul est réalisé par un technicien de l'opérateur "eau"</p>						

Indicateur	Définition	Méthodologie	Moyens nécessaires de mesure	Moyens actuels disponibles à l'AMVS	Moyens nécessaires à rechercher	Responsable	Délai	Observations
Taux de recouvrement des redevances de l'eau brute dans les anciens périmètres de la Vallée du Sourou	Cet indicateur est le ratio entre le montant des redevances payés et le montant des redevances demandées par l'OUEA	A chaque début de campagne (sèche ou humide), l'AMVS exploite le budget de l'OUEA validé en AG pour avoir les données sur le montant des redevances eau demandé. A la fin de chaque campagne (en juin et en décembre respectivement pour les saisons sèche et humide), l'AMVS demandera à l'OUEA la situation de paiement des redevances eau. Cette situation permettra de connaître la redevance d'eau collectée. Les informations collectées permettront de calculer l'indicateur par campagne et par an.	Budgets et bilans des OUEA					
Taux de recouvrement des redevances de l'eau brute dans le nouveau périmètre de Di	Cet indicateur est le ratio entre le montant des redevances payés et le montant des redevances demandées par l'OUEA	A chaque début de campagne (sèche ou humide), l'AMVS exploite le budget de l'OUEA validé en AG pour avoir les données sur le montant des redevances eau demandé. A la fin de chaque campagne (en juin et en décembre respectivement pour les saisons sèche et humide), l'AMVS demandera à l'OUEA la situation de paiement des redevances eau. Cette situation permettra de connaître la redevance d'eau collectée. Les informations collectées permettront de calculer l'indicateur par campagne et par an.	Budgets et bilans des OUEA					

Indicateur	Définition	Méthodologie	Moyens nécessaires de mesure	Moyens actuels disponibles à l'AMVS	Moyens nécessaires à rechercher	Responsable	Délai	Observations	
Nombre d'OUEA fonctionnelles par an		Sur des rapports d'activités des OUEA et du registre des OUEA, l'AMVS note les OUEA sur la base des critères suivants :	Rapport d'activités des OUEA					Critères de notation non disponible à l'AMVS	
		Critères							
		gouvernance							Nombre de réunions annuelles de l'AG
									Communication de l'ordre du jour de l'AG à l'avance et approuver (budget, plan d'exploitation, etc.)
									Nombre d'audits interne des comptes par le comité d
		O&M							Préparation à temps des plans d'exploitation (assolér
									Collecte des données pour les indicateurs
									Analyse des données collectées par les responsables
									Action entreprise pour améliorer la gestion de l'eau
									Adéquation des apports d'eau d'irrigation (indicateur
									Equité de la distribution d'eau (indicateur)
									Nombre d'inspections saisonnières par an
									Préparation des plans d'entretien à temps
									Dépenses O&M réelles / dépenses prévues au budg
									Taux de participation des membres aux travaux collec
gestion	Préparation du budget annuel à temps								
	Remise des rapports techniques et financiers à l'AMV								
	Taux de recouvrement des redevances (indicateur)								
	Autonomie financière (indicateur)								
Les OUEA qui auront une moyenne de 8/10 seront considérés fonctionnelles.									
Le nombre de secteurs ayant complètement mis en œuvre le plan annuel O&M à la fin de la campagne humide		Les agents techniques de l'AMVS sur la base du plan O&M de chaque OUEA suivent leur mise en œuvre sur le terrain. Au moment du bilan ils analysent le bilan fait par l'OUEA en relation avec les observations terrains et le plan O&M. Si l'OUEA a intégrer mené les activités O&M prévues au cours de l'année dans les règles de l'art alors elle est comptabilisée par 1, sinon elle est comptabilisée par 0.	Rapport d'activités des OUEA						

ANNEX 2: PROJECT INTERVENTION AREAS MAP



ANNEX 3 : Points of Contact within the Responsible Entities of the GoBF

Agence de l'eau du Mouhoun/ Agence de l'eau des Cascades :

KABORE W. Ghislain A. : DG Agence de l'Eau du Mouhoun Tel : 70 43 44 02

OUEDRAOGO Kimsé Laurent : Agence de l'Eau des Cascades Tel : 70 16 95 14 Email : ki_laurent@yahoo.fr

AMVS :

OUEDRAOGO Alphonse : Directeur Général Tel : 70247788/78780404 Email: ouederralpha@yahoo.fr

SOMDA Salvador : Chargé de Suivi-évaluation. Tel : 70 26 46 48 E-mail : salvasomda@yahoo.fr

DGAJJ :

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Mr Nignan Bassirou (Magistrat): tél 70306648 Email: abubachfr@yahoo.fr

Mr DAMIBA Paul (magistrat): tél 78590979 Email: pauldamiba@gmail.com

DGATD :

Directeur Général: Mr OUATTARA Jean Marie : Tél 70234569 Email : lefoncier@yahoo.fr

Mme NARE Jacqueline : Tél 72040908 directrice DADF Email : anjacqueline@yahoo.fr

Mr KOHOUN Norbert : tél 70327518 Email : S. Norbert Kohoun kohouns@yahoo.fr

DGER :

Directeur Général DGER: ADAMA LUC SORGHO Tél : Service : (226) 50 49 80 06 Portable : (226) 70 26 42 82 Email : ada007sorg@ yahoo.fr

Responsable du Comptage des traffic : Ismael ZEBRET Portable : (226) 70700593 Email : zbis08@yahoo.fr

DGESS/DRASA- Boucle de Mouhoun :

MAIGA Moussa : Directeur Général des Etudes et des Statistiques Sectorielles (DGESS), Ministère de l'Agriculture et de la Sécurité Alimentaire

Tel : (00226) 50 49 99 21 Cel. (00226) 70 17 50 69 E-Mail : maigamusa@yahoo.fr

YE Dofihouyan ; DRASA/ BCM ; 70 26 53 58/20 52 02 21/29 Email : drahmhn@yahoo.fr or yedofi@gmail.com

DGESS/DRASA- Cascades :

MAIGA Moussa : Directeur Général des Etudes et des Statistiques Sectorielles (DGESS), Ministère de l'Agriculture et de la Sécurité Alimentaire
Tel : (00226) 50 49 99 21 Cel. (00226) 70 17 50 69 E-Mail : maigamusa@yahoo.fr

KONKISSERE Salfo : DRASA Cascades ; 70 47 25 21/20 91 01 41/92 Email : drahrhcascades@yahoo.fr

KONE Adama: Directeur Provinciale de l'Agriculture et de la Sécurité Alimentaire Tel : 70 10 04 64 Email : adama.kone66@yahoo.fr

FAYAMA Baba : SEP /DRASA : Tel: 70 38 44 74 Email: fayama.baba@yahoo.fr

DGESS for Roads :

DGRE/DGAH :

DGR :

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Directeur Général des études et des statistiques sectorielles (DGESS): Dominique KABORE Portable : (226) 70 02 22 26 Email : domi_nik80@yahoo.fr

DPI- Sourou :

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FERB :

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Directeur Technique FER-B : Alexandre SOME Tél : (226) 71 26 16 48 Email : alexandresome@yahoo.fr

IGB :

ONASER:

Directeur Général : Ahoué KOUDGOU : Portable : (226) 70 26 22 18 Email : kahouedouard@yahoo.fr

Directeur des systèmes d'information (DSI) de l'ONASER : FOFANA Aboubakar Portable : (226)78 81 41 82 Bureau : (226) 50 37 44 79 Email : faboubakar@yahoo.fr

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Mme NARE Jacqueline : Tél 72040908 directrice DADF Email : anjacqueline@yahoo.fr

Mr KOHOUN Norbert : tél 70327518 Email : kohouns@yahoo.fr