

Moldova Post Compact
Monitoring and Evaluation Plan
November 2015

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Preamble

This Post Compact Monitoring and Evaluation (M&E) Plan is required according to the MCC M&E Policy approved on May 1, 2012. As stated in the Policy on Monitoring and Evaluation of Compacts and Threshold Programs “In conjunction with the Program Closure Plan, MCC and MCA will develop a Post Compact monitoring and evaluation plan designed to observe the persistence of benefits created under the Compact. This plan should describe future monitoring and evaluation activities, identify the individuals and organizations that would undertake these activities, and provide a budget framework for future monitoring and evaluation which would draw upon both MCC and country resources.”

The Post Compact Monitoring and Evaluation Plan serves as a guide for monitoring Post Compact sustainability of Millennium Challenge Corporation (MCC) investments during the period 2016-2022. The Post Compact Monitoring and Evaluation Plan may be modified or amended based on the agreement between the designated representative and the Millennium Challenge Corporation.

As described in the MCA-Moldova Program Closure Plan the designated representative for Post Compact M&E is the Directorate for Monitoring and Evaluation of the General Directorate for Coordination of the Policies, External Assistance and Central Public Administration Reform within the State Chancellery of the Government of Moldova.

List of Acronyms

2KR	The Increase of Food Production Project Implementation Unit
AADT	Annual average daily traffic
AAF	Access to Agriculture Finance
AAFS	Access to Agriculture Finance Survey
ACED	Agricultural Competitiveness and Enterprise Development Project
AM	Agency “Apele Moldovei”
BAU	<i>Business as usual</i> post-rehabilitation maintenance
CIS	Central Irrigation System
CISRA	Centralized Irrigation System Rehabilitation Activity
CLD	Credit Line Directorate
DAI	Development Alternatives, Inc.
DQR	Data Quality Review
EBRD	The European Bank for Reconstruction and Development
EIF	Entry Into Force
ERR	Economic Rates of Return
ESA	Environmental and Social Assessment
EU	European Union
FOS	Farm Operator Survey
GDP	Gross domestic product
GHS	Growing High-Value Agriculture Sales
GoM	Government of Moldova
HDM	Highway Design and Maintenance Standards Model
HVA	High-Value Agriculture
IMF	The International Monetary Fund
IRI	International Roughness Index
ISRA	Irrigation System Reform Activity
ITT	Indicator Tracking Table
M&E	Monitoring and Evaluation
MCA-Moldova	Millennium Challenge Account of the Government of the Republic of Moldova
MCC	Millennium Challenge Corporation, a United States Government corporation
MoE	Ministry of the Environment
MoF	Ministry of Finance
MTRI	Ministry of Transport and Road Infrastructure
PCP	Program Closure Plan
PFI	Participating financial institutions
POC	Point of Contact
RBM	River Basin Management
RRP	Roads Rehabilitation Project
GSI	Gender and Social Inclusion
SRA	State Road Administration
TBD	To be determined
THVA	Transition to High-Value Agriculture Project
USAID	The United States Agency for International Development
WUA	Water User Association

1. Compact and Objective Overview

1.1. Introduction

The Government of the Republic of Moldova and the Millennium Challenge Corporation, on behalf of the United States Government, signed a Compact Agreement for a US \$262 million grant on January 22, 2010. The 5-year Compact entered into force on September 1st, 2010 and ended on September 1, 2015

As MCA-Moldova's designated representative, and in accordance with the Program Closure Plan (PCP) agreed between the Government of Moldova and MCC, the Directorate for Monitoring and Evaluation of the General Directorate for Coordination of the Policies, External Assistance and Central Public Administration Reform within the State Chancellery of the Government of Moldova will be designated as the government entity (Point of Contact – POC) to continue monitoring and evaluation of the Compact investments during the period 2016-2022. The purpose of the Post Compact M&E Plan is to explain what MCC expects the State Chancellery to monitor after the Compact closure period and how the State Chancellery and MCC will conduct Post Compact M&E to observe the persistence of benefits created under the Compact and confirm that proper operations and maintenance of Compact investments is taking place.

This Post Compact M&E Plan is a tool that provides the following functions:

- Gives details about Post Compact monitoring. Under the PCP, the State Chancellery is responsible for on-going monitoring of a small set of indicators. The data themselves will be collected by various involved entities, while the State Chancellery will be responsible for collating and verifying the data. The Indicator Documentation Table in Annex 1 provides a detailed definition of each indicator, unit of measurement, source of data, responsible entity, and frequency of reporting.
- Discusses Post Compact reporting requirements and other obligations. In accordance with the Post Compact M&E Plan, the State Chancellery is responsible for developing and submitting an Annual Summary Report. The report will include, amongst other things, the small set of monitoring indicators mentioned above. Additionally, the Post Compact obligations include permitting any authorized MCC representative to conduct assessments, review, evaluate or audit and inspect activities funded by MCC, and providing documentation as may be requested from time to time by MCC.
- Provides information about Post Compact evaluation, including independent evaluation resources. In addition to Post Compact monitoring, MCC will be managing and publishing final evaluations after the Compact. MCC will contract independent evaluators to conduct final evaluations of all Compact activities. The State Chancellery is responsible for organizing and facilitating the presentations of the findings of the final evaluations as well as for spreading these results through local media and posting them on selected governmental web pages¹. Section 3.2 provides a summary of surveys and evaluations.

The Post Compact M&E Plan is a collaborative effort developed by MCA, the designated representative at the State Chancellery and MCC. The Post Compact M&E Plan is elaborated with the support and input from MCC's Economist, key stakeholders, including MCA leadership and MCA Project/Activity leads, the MCC Resident Country Mission, and others within MCC, such as Environmental and Social Assessment (ESA) and Gender and Social Inclusion (GSI) leads.

¹ MCA-Moldova web page will be functional until end 2016.

The Post Compact M&E Plan should be jointly agreed to by MCC and the designated representative. The agreed upon Post Compact M&E Plan should be made public by posting it on MCC’s and the country’s websites.

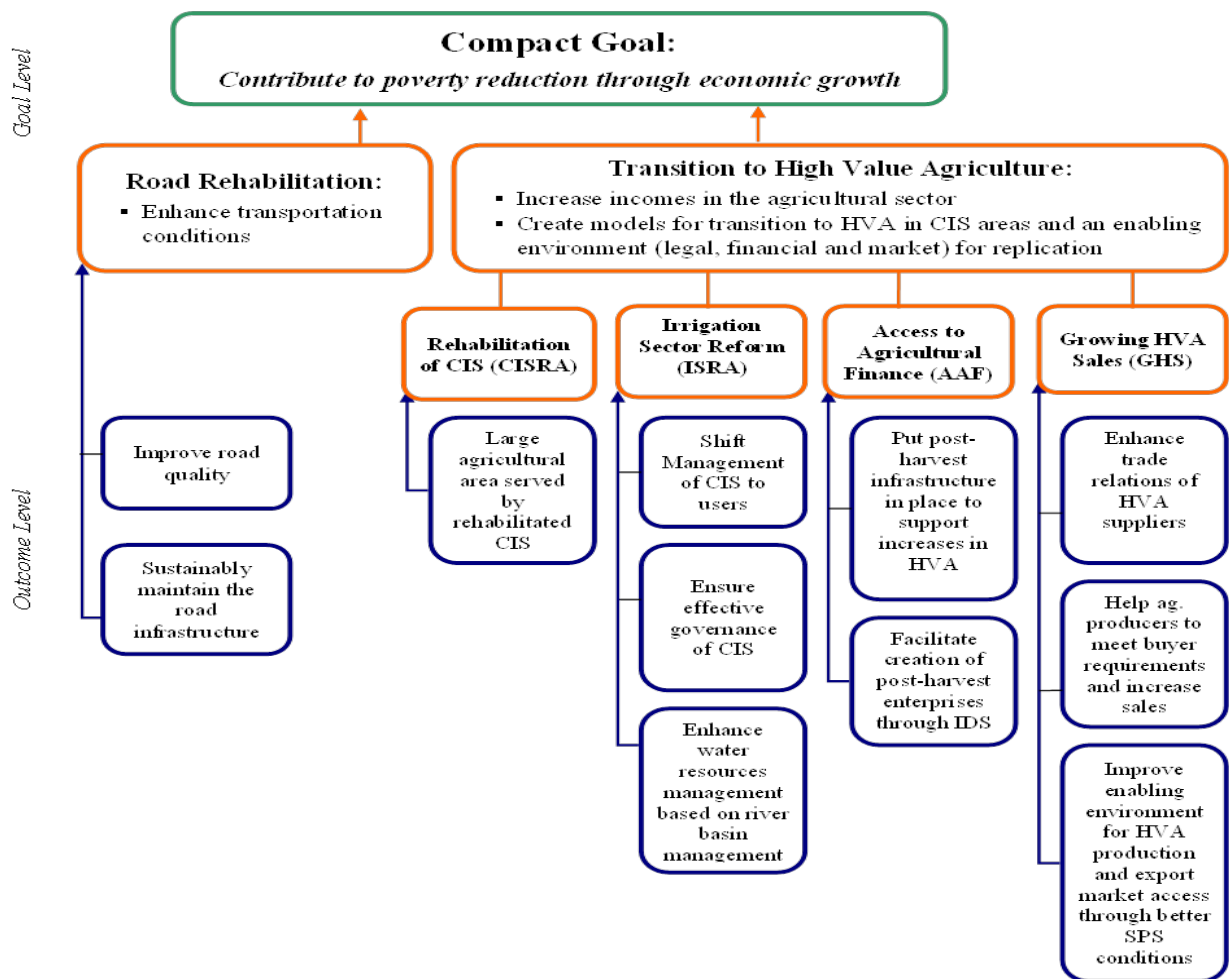
1.2. Compact Successor Entity

As stated in the MCA Moldova Program Closure Plan, an MCA Successor Entity will be set up “to promote effective management of public funds, expand investments in irrigation, ensure sustainability and replication of investments and access to HVA finance reforms”. The Successor Entity initially plans to operate in the period of 2016-2017 and among its main objectives will be to support governmental institutions involved in Post Compact MCC required M&E reporting². The Successor Entity will also submit to the designated representative annual activity reports that will be annexed to the Annual Summary Report submitted by the State Chancellery to MCC.

1.3. Program Logic

The diagram below illustrates and describes the causal relationships among the program components and synthesizes expected outcomes intended to achieve the project objectives and the program goal for the Compact as a whole.

Diagram 1. Program Logic



² A detailed description about MCA Moldova Successor Entity can be found in PCP, Annex 24.

1.4. Projected Economic Benefits

Decisions to support the investments proposed by the Government of Moldova were based on economic rates of return (ERRs) greater than or equal to double the average of the economic growth rates in Moldova over the previous three years, which was 12.6³. The hurdle rate for the irrigation rehabilitation project was lowered to 10 percent, since some components of the project are deemed to have positive spillover effects for other areas of the country. Monitoring indicators for the two Projects are tied closely to the assumptions used in the economic analysis of the Projects, and the baselines and targets for the outcome level indicators were extracted from the economic analyses.

1.5. Program Beneficiaries

According to MCC's "Guidelines for Economic and Beneficiary Analysis", beneficiaries of projects are considered individuals that are expected to experience better standards of living due to Compact activities aimed to increase their real incomes⁴. These beneficiaries include owners and employees of firms whose value-added is expected to increase due to Compact interventions. MCC defines and counts as beneficiaries all members of households that have at least one individual who realizes income gains⁵.

The economic rate of return analysis for the projects gave details on benefit streams through which beneficiaries should experience increased income (and is found in a later section of this plan).

At Compact signing there were approximately 273,000 potential beneficiaries living along the road⁶ proposed for rehabilitation within the Compact program, and approximately 29,000 individuals living outside the region who would also benefit by using the road for long-distance travel. In total, it was expected that approximately 302,000 beneficiaries would benefit from the Road Rehabilitation Project or approximately 78,000 households. This beneficiary count encompasses the users and owners of motorized vehicles utilizing the road, including local agricultural and other producers and buyers; providers and users of passenger transport services; and non-commercial owners of private motorized transport. Sellers, merchandisers, and consumers of products transported along this road will likely benefit as well. This beneficiary count was based on the population within 5 kilometers of the road in 2009 for local beneficiaries and the percentage of roads users using the road as through traffic.

Beneficiaries of the Transition to High Value Agriculture Project include households with owners or shareholders of farming enterprises, farmers or owners of land, producers and intermediaries investing in and working in the high agriculture value sector, and laborers employed in the operation of enterprise farms within the command areas where the Compact will rehabilitate the irrigation systems as well as producers and agribusinesses outside the systems targeted for rehabilitation that are already engaged in the high value agriculture sector. Up to 3,100 farm households were expected to benefit from the rehabilitation of centralized irrigation systems. Demand for seasonal labor was projected to increase as farms switch from grains and field crops to more labor-intensive high value agriculture crops. A projected 9,300 employees, most of whom are poor, were expected to realize increased wage income due to greater demand for agricultural labor in the centralized irrigation system areas. Landowners were also expected to benefit from the increased productivity and value of their land once it had access to irrigation. It was projected that approximately 15,000 individuals

³ This hurdle rate corresponds to MCC Guidelines for Economic Analysis dated April 2009

⁴ <https://www.mcc.gov/pages/docs/doc/guidelines-for-economic-and-beneficiary-analysis>

⁵ Ibid.

⁶ During the original beneficiary analysis, the catchment area was defined as regions and towns through which the road passes. This is larger than a 5 km buffer and justified by the road's status as a major artery.

renting out their agricultural land would realize increased rent income. The Access to Agricultural Finance Activity was to directly benefit more than 75 post-production investors. The Growing High Value Sales Activity is expected to spread knowledge and implement technical assistance to 1,300 farmers outside of the CIS, in addition to the farmer beneficiaries within the CIS. Each of the beneficiary counts will also be updated in the spring of 2016 by MCC.

A general overview of the span of program benefits across the population of Moldova, used for Compact justification to MCC's Investment Committee, is presented in the table below. These beneficiary numbers have not been updated since Compact signing.

Overview of Program Beneficiaries Projected 20 Years after Compact Entry Into Force (EIF)⁷

Project	Households	Individuals
Transition to High Value Agriculture Project		
<i>CISRA and ISRA:</i>		
Number of beneficiary farms	3,100	
Number of potential employees reaping wage increases	9,300	
Number of land owners renting out their land potentially reaping rental increase	15,000	
<i>AAF:</i>		
Entrepreneurs receiving credit	75	
<i>GHS:</i>		
Farmers receiving knowledge of and implementing technical assistance practices (outside of CIS only to avoid double counting of beneficiaries)	1,300	
<i>THVA: Total number of beneficiaries</i>	29,000 ⁸	112,000
Road Rehabilitation Project		
<i>Road Rehabilitation: Total number of beneficiaries</i>	78,000	302,000
Compact Total	106,800⁹	414,000

1.6. Transition to High Value Agriculture Project (THVA)

1.6.1. THVA Project Overview

The Transition to High Value Agriculture Project consisted of reinforcing and integrating activities that, when implemented together, were to address the key constraints facing Moldovan producers: lack of reliable water, lack of financing, lack of access to markets and technologies, and lack of know-how. The THVA Project was expected to increase the ability and willingness of farmers to make the transition to higher value fruit and vegetable production. The THVA Project provided the first opportunity to pilot a set of institutional and management reforms, together with much needed infrastructure rehabilitation that was to set the stage for future investment and enable Moldova to benefit from its natural comparative advantage in agriculture.

The four THVA activities are described below:

- The Centralized Irrigation System Rehabilitation Activity (CISRA) aimed at rehabilitating selected Centralized Irrigation Systems (CIS) through: (i) construction works, entailing the

⁷ Households were rounded to the nearest thousand and then converted to individuals at a rate of 3.86 individuals per households.

⁸ The numbers do not add perfectly because of rounding.

⁹ The CISs and road are geographically separated so overlap of beneficiaries between the projects is expected to be negligible.

replacement/reconstruction of pumping stations and other irrigation infrastructure (pipe networks, reservoirs); (ii) the deployment of engineering and other consulting services for the design and supervision of rehabilitation works; and (iii) the provision of compensations to landowners/users affected by rehabilitation works;

- The Irrigation System Reform Activity (ISRA) consisted of two Sub-Activities, namely: (i) the Irrigation Management Transfer (IMT) Sub-Activity, which involved the provision of technical assistance (TA), capacity building and other assistance with the objective of ensuring the efficient management of rehabilitated CIS, namely by entrusting the management of rehabilitated irrigation schemes to users, organized in the form of Water Users' Associations (WUA); (ii) the River Basin Management (RBM) Sub-activity, aimed at enhancing the overall management of water resources through a combination of actions (policy reform, provision of TA and monitoring equipment, common GIS-based management platform, support to hydrologic surveys, development of a basin-level management plan, etc.);
- The Access to Agricultural Finance (AAF) Activity supported investment in post-harvest infrastructure (including cold storage, packing and sorting) and other farming and agro-processing equipment through the provision of medium and long term financing. AAF included two financial instruments, namely: (i) a Credit Program, with funds channeled through commercial banks, and (ii) a Hire-Purchase Program, implemented by a specialized public entity (2KR);
- The Growing High Value Agriculture Sales (GHS) Activity aimed at increasing the competitiveness of the agricultural sector with a focus on the production, processing, and marketing of HVA crops. This objective was to be achieved through the provision of TA, training, demonstration activities, consulting and market intelligence services. Operational work was articulated into five Sub-Activities aimed, respectively, at: (i) developing and expanding market opportunities; (ii) upgrading production techniques; (iii) supporting value chain development; (iv) improving the enabling environment for HVA; and (v) supporting the transition to HVA and the use of irrigation in the CIS areas. This activity was co-financed and managed by USAID.

The scope of THVA Project underwent significant changes during Compact implementation. First and foremost, due to an increase in rehabilitation costs, the scope of CISRA was reduced, with the rehabilitation of 10 CIS with a surface of some 11,700 hectares (not including potential extension areas¹⁰), compared with the 11 schemes and some 15,500 hectares initially envisaged¹⁰. Some changes also concerned AAF Activity, as eligibility criteria for financing were repeatedly modified and a new financial instrument, the Hire-Purchase Program, was added, in order to support investment in on-farm irrigation equipment and other equipment related to production of irrigated crops.

To carry out management responsibilities related to the THVA Project, MCA-Moldova assigned implementation responsibilities to implementing units (Implementing Entities) as follows:

- The Implementing Entity for both CISRA and ISRA was “Apele Moldovei” (AM), a state owned agency responsible for the management of water resources, including irrigation schemes and legal owner of irrigation infrastructure assets.
- The Ministry of the Environment (MoE) was the lead Implementing Entity for the River Basin Management (RBM) activities. Its sub-agency, Hydrometree, installed and managed the data from 8 monitoring stations along the Nistru River Basin. This data fed

¹⁰ Extension areas refer to land adjacent to or near the command areas that will be able to connect to the CIS through connection points.

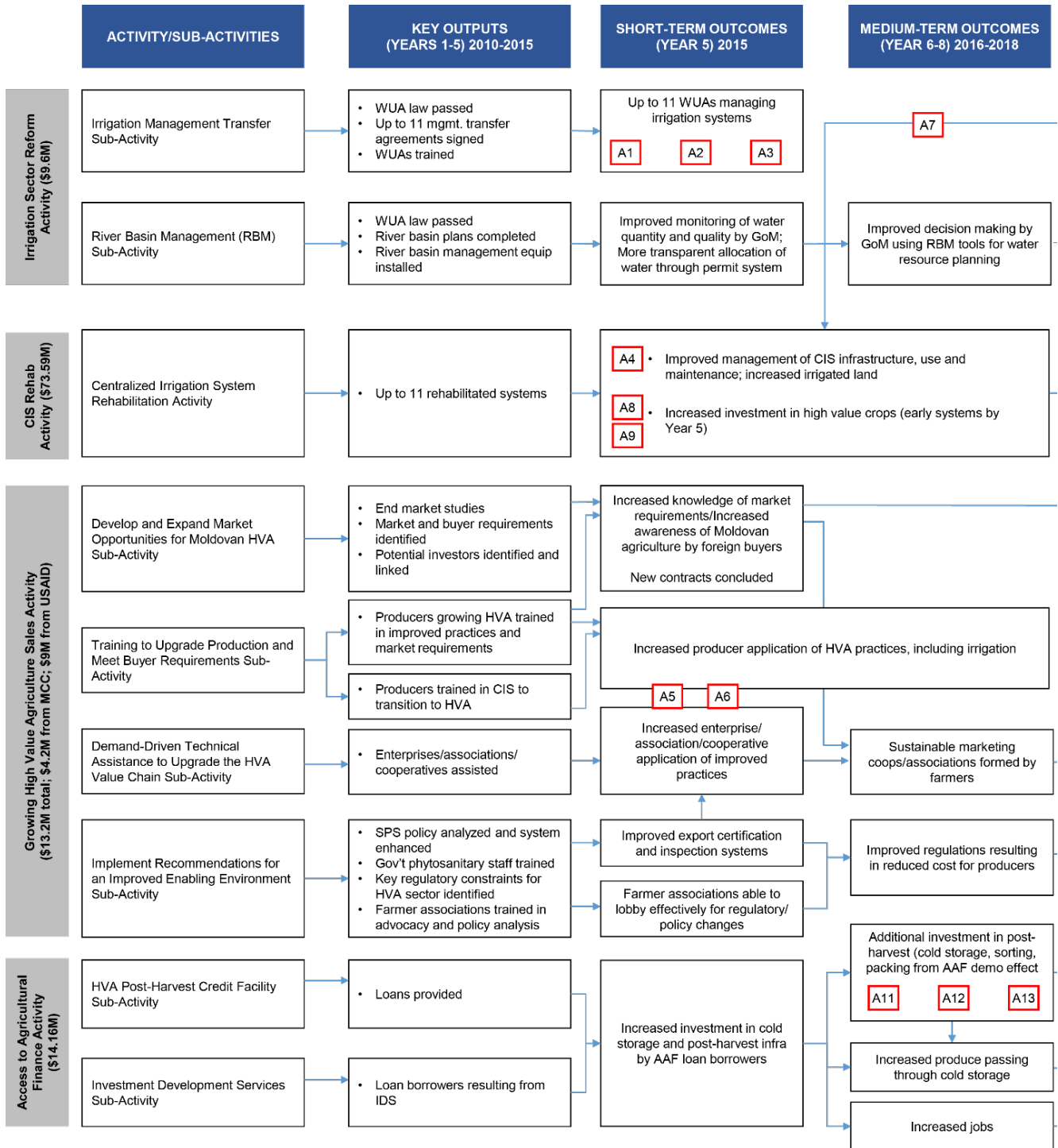
into the Common Platform that was developed with MoE as the lead agency, drawing on water quantity and quality data from a total of 9 different agencies spread over two ministries. MoE also led the process of developing the first basin level management plan: The Nistru Basin Management Plan, funded by MCC and coordinated with the Prut Basin Management Plan supported by the EU.

- The Implementing Entity for the AAF Activity was the Credit Line Directorate (CLD), which is a structure of the Ministry of Finance (MoF) specifically created to manage multiple donor credit lines through the banking systems of Moldova. The Credit Facility provided (i) medium to long term loans (three to seven years) through Participating Financial Institutions (PFIs) and (ii) leases through the Increase of Food Production Project Implementation Unit (2KR) to fund post-harvest supply chain, irrigation and other HVA on-farm investments.
- The Growing High-Value-Agriculture Sales (GHS) Activity implemented under the Agricultural Competitiveness and Enterprise Development Project (ACED) was a five-year project (2011-2016), which was jointly funded by USAID/Moldova and the Millennium Challenge Corporation (MCC). The contract was awarded to Development Alternatives, Inc. (DAI) in March of 2011. Activities within this Component were national in scope, with a special emphasis on those areas which would benefit from the MCC-financed rehabilitation of central irrigation systems through the THVA Project. In coordination with MCC and MCA-Moldova, USAID as the implementing agency bore the responsibility for the achievement of the ACED goals. A Memorandum of Understanding (MOU) about the roles and responsibilities of USAID, MCC and MCA with respect to the implementation and coordination of the GHS included setting of proper targets and reporting mechanisms for the implementing contractor. It is necessary to stress that given the nature of the ACED contract with USAID, progress made by ACED was measured against the ACED PMEP targets and ACED Work Plans.

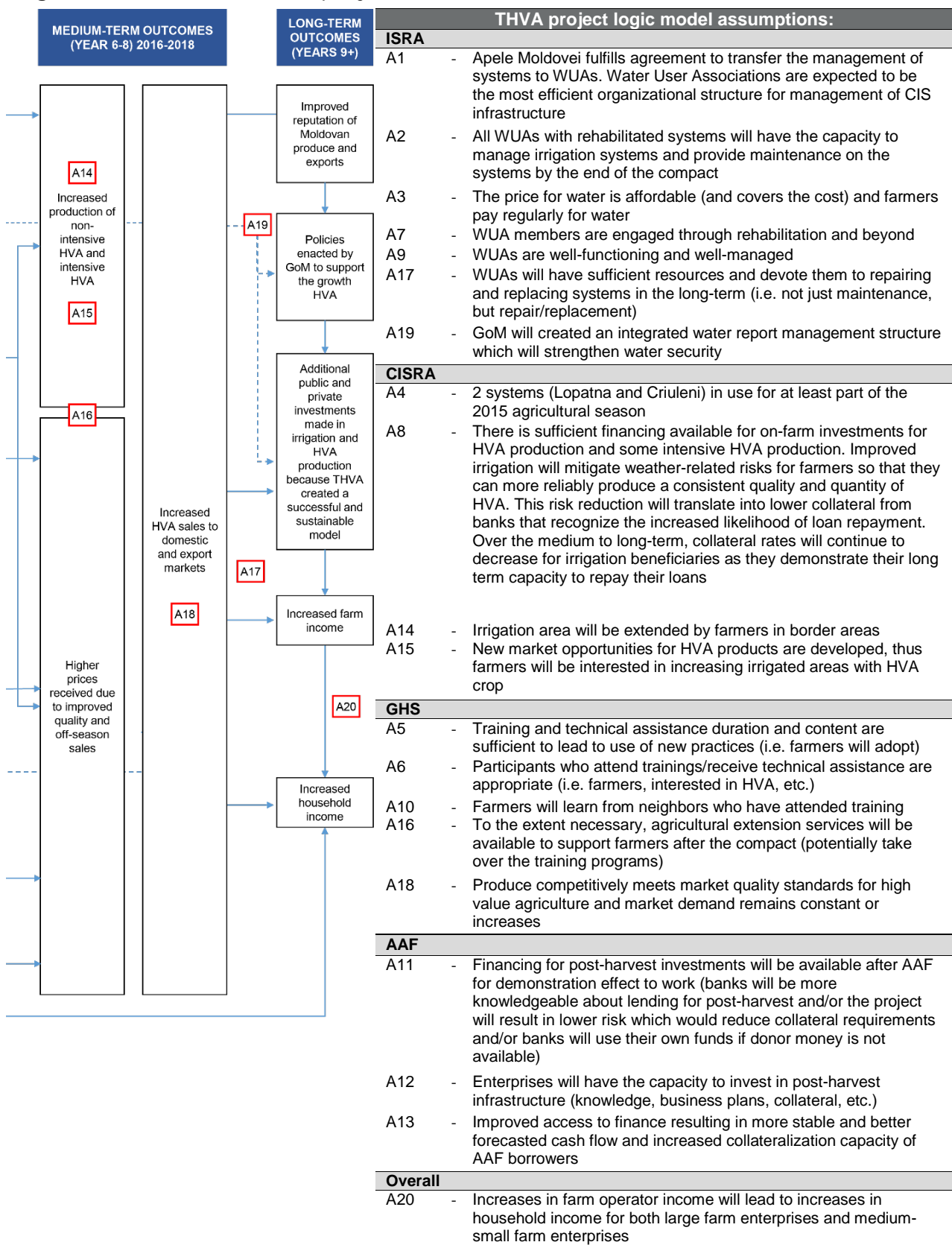
1.6.2. THVA Project Logic and Assumptions

The diagram that illustrates and describes the causal relationships among the THVA components and synthesizes expected outcomes is given below. The detailed logic of THVA was developed jointly between MCC and MCA in 2013.

Logic model for the THVA project



Logic model for the THVA project (continued)



1.6.3. Outline of THVA Economic Analysis

The economic analysis and assumptions for the THVA project were originally prepared by MCC in consultation with MCA shortly before Compact signing. Since then, the analysis has continued to change, as more information has been made available. The original economic analysis spreadsheets can be found on MCC's website¹¹.

Economic analysis of the THVA Project was done separately for the Access to Agricultural Finance (AAF) Activity and the "Irrigated Agriculture" group of activities, which encompasses the CIS Rehabilitation (CISRA), Irrigation Sector Reform (ISRA), and Growing HVA Sales (GHS) Activities. Although the AAF Activity is deemed to be complementary to the other THVA activities, the direct beneficiaries of the two groups of activities may be very different. In particular, entrepreneurs, farmers, farmer groups, and other non-farm investors both within and outside the rehabilitation project areas will have access to and potentially benefit from the AAF Activity, and impacts on the Irrigated Agriculture beneficiaries are likely to be indirect.

1.6.4. CISRA, ISRA and GHS: Economic Analysis and Assumptions

The closeout ERR for CISRA and ISRA will be significantly lower than the original estimate described here due to increased costs and less optimistic assumptions about transition rates of land to HVA (due to a devalued exchange rate, maintenance expenditure, limited access to credit, and limited access to foreign markets). This plan will be updated once the closeout ERR has been completed in the spring of 2016.

The ERR for the CIS Rehabilitation Activity, Growing HVA Sales Activity, and ISRA combined was approximately 14.3 percent at EIF. To arrive at the aggregate ERR, individual ERRs were calculated for each irrigation system and these ranged from 8.8 to 17.7 percent. The costs of the ISRA, the Growing HVA Sales Activity, and Implementing Entity support to AM are assigned proportionally by hectare across all systems selected for rehabilitation. Some aspects of the Growing HVA Sales Activity – in particular, the improvement of the enabling environment for HVA (i.e. Sanitary and Phytosanitary Standards and agricultural policy improvements) – will support the system specific ERRs, but could also carry benefits to the national HVA sector, and the Project-level ERR does not include the benefits accruing outside these systems (which if included would raise the aggregate ERR).

The main benefit stream in the ERR model is the net return from sales of fruits, vegetables, and non-HVA crops on newly-irrigated land in the ten rehabilitated systems. The ERR model computes this benefit stream separately for each system in each year, based on assumptions regarding the overall proportion of fruits, vegetables, and non-HVA crops cultivated; the rate at which land will transition to being irrigated; and the mix and profitability of specific crops. The costs in the model include the implementation and administrative costs of ISRA-CISRA and GHS; the costs of irrigation system operation, maintenance, and repair; and the costs of on-farm irrigation (equipment, maintenance, and labor).

1.6.5. AAF: Economic Analysis and Assumptions

An ERR could not be calculated for the AAF Activity due to lack of information on the additionality of AAF, or in other words, how much of the investments made by AAF loan recipients would not have been made without the AAF Activity.¹²

¹¹ <https://www.mcc.gov/where-we-work/program/moldova-compact>

¹² Previous versions of the M&E Plan reported an AAF ERR of 11.5 percent with a range of 5 to 19 percent. However, the initial ERR was never finalized due to the issues with estimating the benefit streams.

1.7. Road Rehabilitation Project

1.7.1. Road Rehabilitation Project Overview

Ahead of Compact implementation it was envisioned that the Road Rehabilitation Project (RRP) would be implemented by the State Road Administration (SRA), a Public Entity which bears responsibility for road development and maintenance in Moldova. According to MCA-Moldova and MCC assessments, SRA appeared to have adequate management capacity and relevant experience to efficiently implement the project. It was originally planned that capacity would be extended by additional financing from MCA-Moldova to establish a compact but efficient implementation team within the SRA. However, due to SRA capacity concerns, after Compact signing it was decided that MCA-Moldova would implement the project directly instead of SRA.

1.7.2. Road Rehabilitation Project: Economic Analysis and Assumptions

The ERR for the RRP is expected to be lower than the original estimated at EIF due to less optimistic analysis on future maintenance of the road, but this may be adjusted further, once new IRI, deflection, and AADT are collected in the spring. The ERR is currently at 9 percent based on 2012 IRI/deflection data and 2009 traffic counts projected outward until 2015.

At EIF, ERR calculations for the M2 Road to be rehabilitated from the Compact funds had been made based on an “optimal” or recommended post-rehabilitation maintenance scenario but after conducting a political economy analysis of this process, the closeout ERR may be closer to a “business as usual” (BAU) post-rehabilitation maintenance assumption. The latter assumes maintenance levels consistent with Moldova’s recent past performance, which is significantly below the optimal level. Given Moldova’s past performance in maintaining its road network, the most prudent approach to selecting MCC investments was to use the BAU maintenance assumptions.

The segments of the M2/R7 roads were chosen for rehabilitation. Due to the significant volume of traffic on these segments, the projected economic rate of return for the proposed rehabilitation of the M2 from Sarateni to the Drochia junction at EIF was robust, at approximately 21.1 percent (using conservative calculation with BAU scenario).¹³ This rate of return was calculated using the Highway Design and Maintenance Standards Model (HDM-4) which was developed by World Bank’s Transportation Department.

The feasibility consultants concluded that there was little possibility that the road rehabilitation would generate or divert additional traffic beyond normal traffic growth. Thus, only normal traffic was used in the analysis. It was assumed that this traffic would grow with respect to the economy with an elasticity of 1.65 through 2019 and 1.40 from 2020 onwards for passenger vehicles, and of 1.20 for freight carrying vehicles through the entire period from 2009 to 2030. Both of these estimates were based on empirical analysis of these elasticities over prior years. GDP growth was projected using an average of IMF, EBRD, and other projections, with the resulting assumptions of 3 percent growth until 2011, 4 percent from 2012-2019, and 3 percent thereafter. The final ERR will update growth assumptions based off AADT observations made in 2015/2016.

This resulted in traffic counts for the relevant segments as shown:

Estimated Traffic Levels on M2 Road Segments

M2 sections	km	AADT 2009	AADT 2015	AADT 2025
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¹³ The period of analysis is twenty years

a	Sarateni – Floresti	27.1	2,556	3,600	6,000
b	Floresti – Soroca	47.6	3,429	4,900	8,100
c	Soroca - Drochia junction	18.0	2,469	3,500	5,800
d	Drochia junction - Arionesti	31.0	786	1,100	1,800
--	Arionesti – Otaci	10.0	786	1,100	1,800

As shown, traffic volumes were relatively high between Sarateni and the Drochia junction, the segment proposed for rehabilitation. Volumes dropped considerably after the Drochia junction, and the origin-destination surveys showed a relatively high proportion of local trips. Thus, the M2 road would produce considerable benefits even without reconstruction to the border with Ukraine at Otaci or Unguri¹⁴.

The resulting median/ most likely traffic growth scenario used in the ERR, from year 2010 onward is as follows:

Distribution of Projected M2 Traffic Growth by Vehicle Type

Type of Vehicle	To 2011	2012-2020	2021--
Passenger vehicles	5.0%	6.6%	4.2%
Freight vehicles	3.6%	4.8%	3.6%

Based upon the HDM results, substantial project benefits would result from improvements to the road surface, which exhibits a high International Roughness Index (IRI) with average overall IRI of –6.5 m/km prior to road construction, as measured by the state road authority in 2012. Without the project, significant annual patching would be required to keep the road reasonably serviceable, and even in this case it would remain rough. Therefore, reconstruction was a preferred option over just performing periodic maintenance. Moreover, the ERR does not differ substantially between the ‘optimal’ maintenance and BAU maintenance scenarios, and was sufficiently high for both. This is because the road was in such poor condition that project benefits would be very high in the early years, whereas on this particular road the volume of traffic and conditions do not dictate a high level of frequent periodic maintenance (resurfacing, etc.).

Consultants did not attempt to quantify possible accident reduction benefits, and thus these were not included in the analysis. The calculated rates of return include some project management costs, as well as environmental and social mitigation costs (assumed at 2.5 percent).

¹⁴ There are three small border crossings to Ukraine in the vicinity of Soroca.

2. Monitoring Component

The Post Compact performance will be monitored systematically and progress will be reported regularly through a small set of indicators listed in the indicator tracking table (ITT). The analysis will allow the State Chancellery and MCC to track the sustainability of Compact investments. The MCC M&E point of contact worked with MCA-Moldova and the designated representative at the State Chancellery along with the MCC sector experts to select the Post Compact indicators. All indicators were included at the request of a sector expert at MCC to ensure that there was an audience for the Post Compact reports. Note that the indicators whose data source is “MCC Evaluation Consultant” or “USAID ACED Contractor” will not be reported on by the State Chancellery. MCC will be responsible for compiling the data on those indicators.

2.1. Monitoring Strategy

2.1.1. Indicator Levels

All MCC M&E plans are framed and constructed using the program logic framework approach that classifies indicators as process, output, outcome, and goal indicators. This Post Compact M&E Plan only includes indicators at two levels – output and outcome – as the other two levels are no longer relevant.

The output indicators presented in the table track the performance of the on-going progress of interventions that were begun under the Compact, but that are continuing into the Post Compact period. Outcome indicators measure the long-term effects of an intervention’s outputs. Actuals of some outcome indicators included in the Post Compact M&E Plan come from evaluations.

2.1.2. Indicator Classification

According to MCC’s Monitoring and Evaluation Policy all indicators must be classified as one of the following types:

- Cumulative – to report a running total, so that each reported actual includes the previously reported actual and adds any progress made since the last reporting period.
- Level – to track trend over time.
- Date – to track calendar dates as targets.

2.1.3. Indicator Documentation Table

The Indicator Documentation Table provides relevant details for each indicator by Project and Activity, and can be found in Annex I. It provides descriptions for the indicator structure by specifying each indicator’s: (i) indicator level; (ii) indicator name; (iii) definition; (iv) unit of measure; (v) disaggregation; (vi) primary data source; (vii) responsible party; (viii) the frequency of reporting; and (ix) additional information.

2.1.4. Table of Indicator Baselines and Targets

To ensure that the Program is on track to meet its overall goals and objectives, the monitoring indicators are measured against established baselines and targets, derived from ex-ante economic rate of return analysis, other types of analysis, and project planning documents. The targets reflect the underlying assumptions made in program design about what each activity would likely achieve. Baselines and target levels for each indicator are defined in the Table of Indicator Baselines and Targets (Annex II).

Baseline figures were established using the most current and appropriate data available prior to an Activity’s implementation. This can include the MCC/MCA Baseline Survey, government surveys such as those conducted by the National Bureau of Statistics, and other organizations’ records. If baseline figures are revised from those used in the economic analysis, the Activity’s targets, should be revised accordingly.

Targets are derived from 1) the initial economic analysis used in justifying Program investments, 2) project documents, 3) discussions with experts and consultants, and 4) implementation work plans.

Any revision of baselines and targets must adhere to MCC’s policies regarding baseline and target revisions and will require MCC’s formal approval.

2.1.5. Disaggregation of Data

The Indicator Documentation Table (Annex 1) identifies which indicators should be disaggregated, to the extent that it is feasible and cost-effective. Select disaggregated figures identified in the Indicator Documentation Table will be reported to MCC in the annual Indicator Tracking Table.

2.2. Data Quality Reviews (DQRs)

The designated representative will be responsible for ensuring data quality by verifying that all data reported has appropriate source documentation from each reporting entity.

MCC may contract an independent data quality reviewer if deemed necessary. The designated representative may also conduct field visits to review the quality of the data gathered through this Post Compact M&E Plan. This exercise will be done in coordination with MCC and the respective stakeholders.

2.3. Standard Reporting Requirements

As per the terms of the PCP, the State Chancellery will be responsible for submitting a regular report to MCC covering the period through the end of calendar year 2022. The Annual Summary Report need only cover the projects thru to the completion of the final evaluation for the particular project. As indicated in the table below, both THVA and RRP will be covered in reports #1-3, and reports #4-7 will only cover THVA. These reports do not cover the GHS Activity because those indicators will be reported on by USAID to MCC.

This report should be submitted to MCC via email to the Vice President of the Department of Compact Operations at VPOperations@mcc.gov with the subject line “Moldova Post Compact Reporting” and the dates of report coverage. The Annual Summary Report for every Compact is due on April 30th of each year.

Report Schedule			
Report	Due Date	Includes Data From	Activities covered
Annual Summary Report #1	April 30, 2016	September to December 2015	ISRA/CISRA, AAF; Roads
Annual Summary Report #2	April 30, 2017	2016	ISRA/CISRA, AAF; Roads
Annual Summary Report #3	April 30, 2018	2017	ISRA/CISRA, AAF; Roads
Annual Summary Report #4	April 30, 2019	2018	ISRA/CISRA, AAF;
Annual Summary Report #5	April 30, 2020	2019	ISRA/CISRA, AAF

Annual Summary Report #6	April 30, 2021	2020	ISRA/CISRA, AAF
Annual Summary Report #7	April 30, 2022	2021	ISRA/CISRA, AAF

The Annual Summary Report should include:

- A narrative summary of any activities undertaken or continued by the Government of Moldova Post Compact that relate to the sustainability of compact investments including any issues with operations and maintenance of infrastructure, if applicable.
- Post Compact Indicator Tracking Table (ITT) that includes all of the indicators included in Annex 1 of the plan for the preceding calendar year, except for the indicators whose data source is “MCC Evaluation Consultant” or “USAID ACED Contractor.” The Post Compact ITT will have the same format as the Compact ITT only with additional years added to it. The ITT template will be provided to the designated representative by MCC one quarter before the reporting due date.

The following documents should be Annexed to the Annual Summary Report and submitted as a package to MCC by the designated representative:

- Annual activity reports created by the MCA Successor Entity. If applicable, these reports would include the status of outstanding issues for infrastructure components through the end of the defects liability period.
- AAF Activity Annual progress report provided by CLD, which will include
 - Loan borrower information spreadsheet provided by CLD
 - 2KR – Hire Purchase program spreadsheet provided by CLD
- WUA annual reports provided by Apele Moldovei
- SRA Annual Report
- Ministry of Transport and Road Infrastructure (MTRI) Annual Report

3. Evaluation Component

3.1. Evaluation Strategy

As defined in the MCC M&E Policy, evaluation is the objective, systematic assessment of a program’s design, implementation and results. MCC is committed to making the evaluations as rigorous as warranted in order to understand the causal impacts of the program on the expected outcomes and to assess cost effectiveness. The results of all evaluations will be made publicly available in accordance with the MCC M&E Policy.

3.1.1. Independent Evaluations

According to the MCC M&E Policy, every Project in a Compact must undergo a comprehensive, independent evaluation (impact and/or performance). The next section on Specific Evaluation Plans will describe the purpose of each evaluation, methodology, timeline, required MCC approvals, and the process for collection and analysis of data for each evaluation. All independent evaluations must be designed and implemented by independent, third-party evaluators, which are hired by MCC.

For each independent evaluation, all relevant stakeholders, including the Government of Moldova, are expected to provide feedback to independent evaluators to ensure proposed evaluation activities

are feasible, and final evaluation products are technically and factually accurate. The designated representative at the State Chancellery will be responsible for disseminating the report to the necessary government ministries and entities for their feedback.

3.2. Specific Evaluation Plans

The following table summarizes specific evaluation plans.

Evaluation Name	Evaluation Type	Evaluator	Primary/ Secondary Methodology	Final Report Date
THVA Project Evaluation	Impact	Mathematica Policy Research	Matched comparison group design	2022
	Performance		Qualitative	
Road Rehabilitation Project Evaluation	ERR	TBD	HDM-IV	2018
			Qualitative	

3.2.1. THVA Evaluation

The main goal of the evaluation of the THVA Project is to determine the extent, if any, to which the various activities improved the productivity and profitability of farm operations in the rehabilitated CIS and Extension areas. Originally, each activity of the THVA Project was to be evaluated independent of one another. However, as the program logic implies, each activity was meant to work in collaboration with one another towards a common goal by addressing different constraints to HVA. As a result, the evaluation design was revised to capture a broader set of intermediate outcomes of the project and the interactions between the various activities by combining all of the project’s activities into one evaluation. Also, due to the re-scoping of the project, the THVA impact evaluation will now only look at ten treatment CIS areas, rather than the original eleven (all eleven will be included in the performance evaluation). This evaluation could yield important lessons for Moldova and other countries as they consider developing or scaling up combined irrigation management transfer and rehabilitation projects, with credit and training components. More broadly, because a lack of reliable irrigation water is thought to be a major constraint facing farm operators in Moldova, the evaluation will enable us to assess the impact of relaxing this constraint on relevant outcomes.

Evaluation Questions

The THVA evaluation will address the following research questions:

1. Were the expected results realized from the THVA program logic?
2. If expected results were not realized, why not?
3. What was the contribution of each activity/sub-activity to the results?
4. How did THVA affect land ownership, leasing, and land values in the CIS and border areas?
5. How are the results from the project distributed?
6. Are there indications that some of the intended long-term outcomes will be realized?

7. What lessons can be drawn from analysis of the design, implementation, and results of the THVA Project?
8. What is the ex post ERR of the THVA Project?

Evaluation Methodology Description

The evaluation will consist of two complementary components: an impact and a performance evaluation. The impact evaluation will follow a mostly quantitative approach, a matched comparison group design, and will match the treatment group of 10 CIS areas affected by the activities to a comparison group of similar but unaffected CIS areas. Then outcomes for farmers in the treatment and comparison areas will be compared. If the influence of external factors (such as rainfall and market conditions) is similar in both types of areas, any differences in outcomes can be attributed to the impact of the activities. The performance evaluation will use a primarily qualitative approach, which will attempt to triangulate information from multiple perspectives and different stages during and after implementation to provide a richer understanding of the effects of the activities, which will complement the quantitative impact results.

Data Sources

The THVA evaluation will draw on several different types of data. To identify a comparison group of CIS areas for the impact evaluation component, data on CIS characteristics was obtained from Apele Moldovei and other sources. Data for the quantitative impact analysis will be collected through several rounds of the Farm Operator Survey (FOS), which will gather information on key outcomes from operators of farm plots in treatment and comparison areas before and after system rehabilitation. A survey of AAF loan recipients has also been conducted, which will provide quantitative information on AAF investments, and additional qualitative information on experiences with AAF and future plans. In addition to the quantitative data collection, the THVA evaluation will draw on several rounds of qualitative data through focus groups and interviews with several groups of stakeholders, including farm operators, WUA officials in selected communities in each of the 10 targeted areas, foreign buyers, and GHS training participants, among others. The evaluation will also draw on administrative data, including AAF intake forms, data from WUA registries of water users, GHS administrative data, and administrative data from the Credit Line Directorate.

The timing of the evaluation activities corresponds to that of implementation. The FOS baseline took place in 2014, covering the 2013 agricultural season. Two follow-up rounds for the FOS are scheduled: the first in 2019, covering the 2018 agricultural season; and the final in 2021, covering the 2020 agricultural season. The AAF survey was conducted in 2015 and covered both past and planned investments. Four rounds of qualitative data collection have been completed, and three additional rounds are planned between 2017 and 2022.

If data collection plans are modified, the analysis and reporting plans will be modified accordingly.

Primary Data Collection

Survey Name	Quantitative or Qualitative	Define Sample	Sample Size	Number of Rounds	Exposure Period	Expected Dates of Primary Data Collection

Farm Operator Survey (FOS)	Quantitative	Farm operators of land plots in treatment, comparison, and border areas	4,000	3 ¹⁵	3-5 years	Baseline: 2013-2014 First follow-up: 2018-2019 Second follow-up: 2020-2021
AAF Survey (AAFS)	Quantitative & Qualitative	AAF loan Recipients and non-recipients	56 beneficiaries; 10 non-beneficiaries	1	Variable (3 years to a few months)	2015
Qualitative Survey	Qualitative	THVA Stakeholders	n/a	7	During implementation and up to 5 years after completion	7 rounds conducted between 2013 and 2022

3.2.2. Road Rehabilitation Project Evaluation

Evaluation Questions

MCC will contract an independent evaluator to (i) determine the Post Compact ERR using HDM-4 analysis, (ii) assess the road maintenance regime, (iii) analyze the composition of road users, and (iv) assess the transportation market structure.

The evaluation will focus on the following research areas:

- I. Research Area 1: Evaluation of the economic viability of the RRP Post Compact by undertaking a cost-benefit analysis and estimating the ERR and net present value of the investments using the HDM-4 software. In pursuit of this research area, the evaluation will assess the quality of pre-existing data (as available) and collect the updated data required for modeling, such as traffic, roughness, deflection, and origin-destination. Some of the research questions to be covered under this research area include:
 - a. What is the Post Compact ERR using HDM-4? If the Post Compact ERR differs from the pre compact ERR and the close-out ERR, why?
 - b. What are IRI values of the rehabilitated road, by 100m segments?
 - c. What are deflections of the rehabilitated road, by 100m segments?
 - d. What are the representative cross-sectional pavement structures of the road?
 - e. What is the current road condition? Are there signs of distress (e.g. cracking, bleeding, raveling, rutting, potholing)? What are the causes of deterioration? Are axle weight restrictions being enforced, why or why not?
 - f. How have traffic counts and patterns changed since the RRP was completed?
 - g. How have vehicle operating costs along the RRP changed as a result of the rehabilitated road?

¹⁵ It is envisioned that 3 rounds of the survey will be used for the impact evaluation; however, there was an additional survey conducted in early 2013 covering the 2012 agricultural season, plus a monitoring survey in the treatment areas conducted in early 2015 covering the 2014 agricultural season and plans for 2015.

- h. What is the estimated remaining structural life of the rehabilitated road?
 - i. How has travel time changed for road users?
 - j. How have patterns of accidents, injuries, and fatalities changed since the road was rehabilitated? Did the road safety training conducted under the Compact appear to have any positive results?
- II. Research Area 2: Evaluation of MCC's assumptions about the sustainability of the RRP based on a rigorous political economy analysis that incorporates appropriate and available data. Some of the research questions to be covered under this research area include:
- a. Do HDM-4 road maintenance assumptions represent actual road maintenance expenditures in the RRP? If not, why not? Did the Compact have any continued influence on the quality and quantity of GoM's maintenance regime and practice after the Compact end?
 - b. What are the governance arrangements that explain road maintenance practices from revenue collections through to expenditures and quality of maintenance provided? How is road maintenance regulated? How is the sector funded?
 - c. How were routine and periodic maintenance costs determined and planned by the Government before the Compact? Were there any changes made during the Compact period? What is the status of these procedures since the end of the Compact?
- III. Research Area 3: Study of road users, based on origin-destination data collected for the HDM-4 model, that examines how goods and people are traveling along MCC project roads, where they are going, and what the motivations for the journey are. Some of the research questions to be covered under this research area include:
- a. Where are people or goods traveling to/from and why (e.g. for people, is the trip for business/employment, school, health, social, etc.)?
 - b. How much they are paying for their trip, how long does it take on average, and what type/quantity/value of goods are being transported?
- IV. Research Area 4: Evaluation of the transportation market structure and the formal and informal institutions that regulate and govern the transportation market. Some of the research questions to be covered under this research area include:
- a. Are vehicle operating cost savings that result from road improvements passed on to transport consumers, such as public transport users or farmers transporting their produce to market? Are cost savings for vehicle owners passed on to passengers in the form of lower fares for people and goods?

Evaluation Methodology Description

HDM-4 analysis simulates total life cycle conditions and estimates benefits and total costs by comparing total cost streams for various design and maintenance strategies. The model estimates cost savings accruing to transport operators and consumers of transport services following the improvement of road surface conditions and geometries. This approach measures direct cost savings to road users, which approximate the full economic benefits accruing both directly and indirectly to the general population. Benefits can be realized as increased real incomes (or reduced cost of living), reduced costs of production in agriculture, industry, and services, and enhanced time availability. Whereas this approach allows for a relatively accurate quantification of project benefits, it does not allow one to project the precise nature and allocation of benefits. The primary effects that are

considered include reduced vehicle operating costs, reduced travel time, changes in maintenance costs, increases in the value of goods moved, more frequent travel, and possibly environmental and safety effects. These benefits can in principle accrue through normal, generated, and/or diverted traffic.¹⁶ In addition to the HDM-4 analysis, the evaluation will include a political economy analysis of the road maintenance regime.

Other methodologies for conducting an impact evaluation of the roads project were considered, but not adopted. Most notably, a few years after the project, household and firm incomes within the road catchment could be compared to a counterfactual (either a geographic comparison group or the same households/firms before the intervention). However, finding a convincing counterfactual region would be extremely difficult given the uniqueness of the road being rehabilitated; any analysis based on a counterfactual would need to make very strong assumptions that could undermine the conclusions. In addition, conducting enterprise and household surveys is costly and the value of analyzing those data in this context is unclear. Traffic on the road comes from neighboring communities, but it is also a thoroughfare for trucks and therefore, it's not clear that analyzing the impact on households and nearby businesses would capture the major benefits. Given these factors, the HDM-4 approach plus political economy analysis of the maintenance sector was selected.

Data Sources

For data necessary for the independent evaluation, the evaluator may choose to verify the already existing data from various Moldovan entities or subcontract out all or part of the data collection. The data thought to be necessary for the evaluation include the following:

Data	Quantitative or Qualitative	Potential Data Source	Exposure Period	Expected Dates of Primary Data Collection
International Roughness Index	Quantitative	SRA	Immediate, 1 year, and 3 years from end of construction	Baseline: 2009 Endline: 2017
Deflection	Quantitative	Universinj (at 6 months); later TBD	6 months and 3 years from end of construction	Baseline: 2009 Endline: 2017
Thickness	Quantitative	TBD	1 year and 3 years (if necessary) from end of construction	Baseline: 2009 Endline: 2017
Road condition assessment	Qualitative	TBD	3 years from end of construction	Baseline: 2009 Endline: 2017
Average Annual Daily Traffic	Quantitative	SRA and TBD	1 year and 3 years from end of construction	Baseline: 2009 Endline: 2017
Origin-Destination	Quantitative	TBD	3 years from end of construction	Baseline: n/a Endline: 2017
Vehicle Operation Costs	Quantitative	SRA	3 years from end of construction	Baseline: 2009 Endline: 2017
Road Traffic Accidents, Injuries, and Fatalities	Quantitative	Ministry of Internal Affairs	1, 2, and 3 years from end of construction	Baseline: 2009 Endline: 2017

¹⁶ Normal represents growth of existing baseline traffic. Generated traffic is a one-time jump of traffic due to the project – generally found in rehabilitation of roads that were previously impassible or new construction to something that was previously inaccessible. Diverted traffic is traffic that would move from an alternate route to the project road as a result of the rehabilitation.

Maintenance plans, expenditures, and maintenance conducted	Quantitative	SRA	1, 2, and 3 years from end of construction	Baseline: 2009 Endline: 2017
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The evaluation is scheduled to be conducted in Fall 2017, after a 3 year exposure period, with a final report to be submitted in 2018.

MCC will also consider different approaches to evaluating the timing and quality of periodic maintenance activities, as these activities directly influence the economic returns to road investments. One approach would involve contracting a second HDM-4 analysis at the time of the next periodic maintenance needed for this type of road, currently estimated to be 7-10 years from now (2022 -2025). An alternative approach is to identify a candidate set of similar road segments that were rehabilitated 7-10 years ago that should be planned for periodic maintenance in the coming year and contracting the same basic HDM-4 type of analysis on one or more of these comparable road segments. With either approach, the periodic maintenance evaluation would entail assessing the road conditions prior to initiating the periodic maintenance, documenting the maintenance done since road rehabilitation and assessing the road condition after completing the periodic maintenance. The first approach would better document the benefits on the RRP, but these benefits will be influenced by the road maintenance practices in place 7-10 years from now, and the opportunity to learn from the evaluation will be delayed by five or more years. The second approach would examine the benefits across a different set of roads, but we would learn about the maintenance practices in effect shortly after our investment – presumably when MCC’s and our partner IFI’s recent influence on the general quality of road maintenance is most observable – and we would be able to learn from these results much sooner.

4. Implementation and Management of M&E

4.1. Responsibilities

According to the Government of Moldova Decision nr.12 of 19.01.2010 “Regulations on the institutional framework and coordination mechanism of external assistance provided to the Republic of Moldova by international organizations and donor countries”, the national authority for coordinating external assistance is the State Chancellery. The national authority is responsible for programming, monitoring and operational evaluation, as well as recording and ensuring transparency of external assistance provided to Moldova by the donor community.

With the closure of the Moldova Compact, the Directorate for Monitoring and Evaluation of the General Directorate for Coordination of the Policies, External Assistance and Central Public Administration Reform within the State Chancellery of the Government of Moldova will be designated as the government entity (Point of Contact – POC) to continue monitoring and evaluation of the Compact investments after the 5-year Compact term.

The designated representative is expected:

- to submit to MCC an Annual Summary Report as per Section 2.3
- to check data quality of agreed to indicators, ensuring that reported indicators have proper documentation;
- to provide assistance to evaluators in organizing and running primary data collection activities post-Compact;

- to coordinate the review among relevant government agencies and provide an official government response to each evaluation;
- to disseminate results including organizing in-country presentations with stakeholders and posting evaluations on a government website;
- to identify opportunities to apply the learning from the evaluations to project design and implementation; and
- to maintain stable communications with MCC on topics pertaining to the evaluation of projects implemented by MCA-Moldova.

The Successor Entity is expected:

- to provide continuous assistance and advice to the State Chancellery on all aspects related to Post Compact M&E, including:
 - development and submission of the Annual Summary Report to MCC;
 - coordination of technical M&E aspects with entities responsible for providing primary data for indicators reported by the State Chancellery;
 - dissemination of information, organization (if applicable) of presentations of the results of evaluations and publication on relevant websites
- to serve as a point of contact for any inquiries regarding Compact projects and activities implemented; and
- to submit annual activity reports to the State Chancellery to then be submitted to MCC as an annex to the Annual Summary Report.

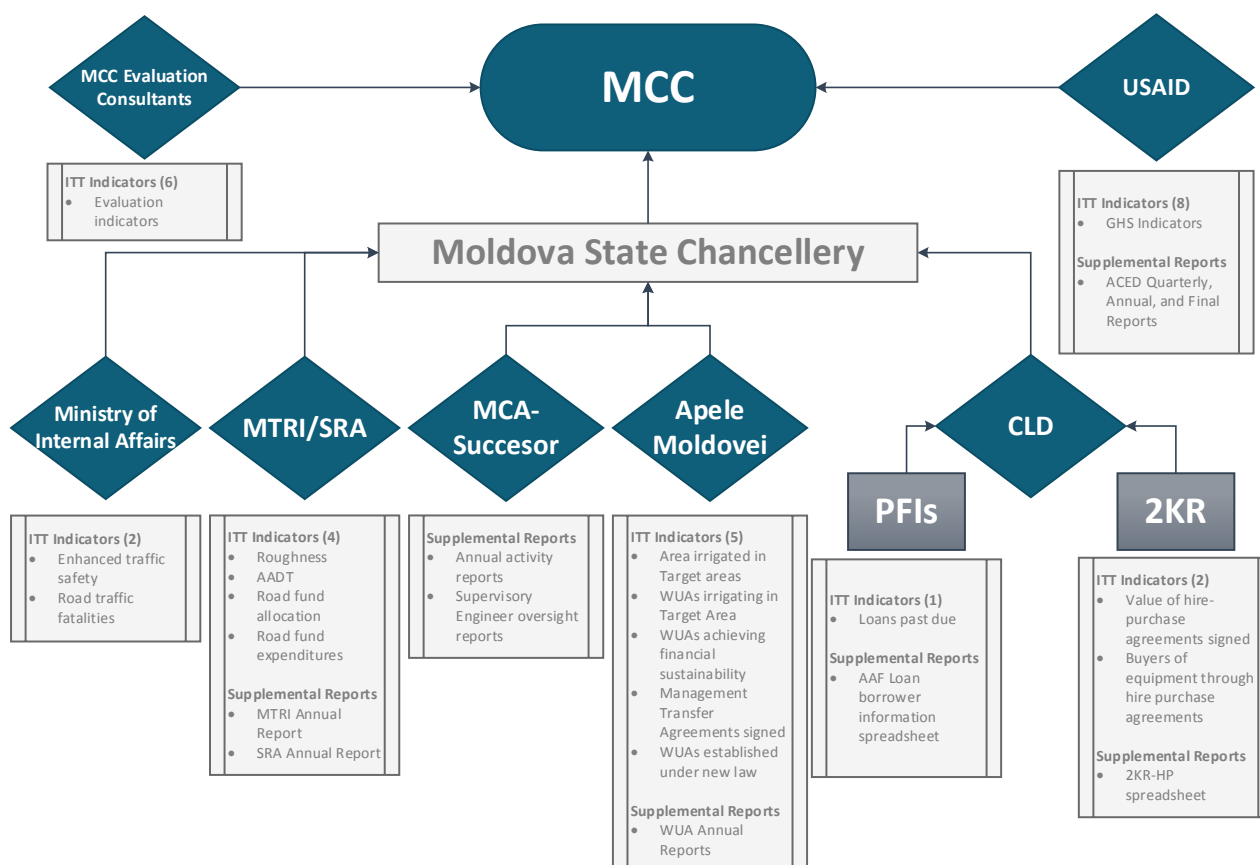
Additional M&E functions may be assumed by the Successor depending on needs and requirements of MCC.

USAID will be responsible for providing MCC with ACED progress reports for the period September, 2015 – March, 2016 and the final ACED report. These reports should be submitted to MCC via email to the Vice President of the Department of Compact Operations at VPOperations@mcc.gov with the subject line “Moldova GHS Post Compact Reporting” and the dates of report coverage.

The MCC M&E Unit is expected :

- to contract and manage independent evaluators;
- to ensure evaluators conduct stakeholder review of evaluation reports;
- to contract post compact data collection for evaluations; and
- to provide guidance and training to the country on the detailed requirements for preparing the Annual Summary Report, as necessary and practical.

Diagram 2. Reporting/Data Flow Structure for Post Compact Reporting



This Post Compact M&E Plan includes 28 indicators being reported on by 6 different sources as shown in the table below. The GoM is responsible for reporting only 14 of the 28 indicators.

Data Source	Number of Indicators	Supplemental Reports
ACED (only in 2016)	8	-
MCC Evaluation Consultant (THVA)	6	-
Apele Moldovei*	5	1
CLD*	3	2
MTRI/SRA*	4	2
Ministry of Internal Affairs*	2	-
MCA Successor Entity*	-	2
TOTAL	28	7

*The GoM State Chancellery is responsible for collecting data from these entities and reporting it to MCC.

4.2. Review and Revision of the M&E Plan

All revisions to the plan will be mutually agreed upon by the designated representative and MCC. Either party may suggest revisions to the plan.

5. Post Compact M&E Budget

The Post Compact M&E budget is expected to be approximately \$2 million for data collection and analysis for the final evaluations.

ANNEX 1. Indicator Documentation Table

*The GoM State Chancellery will be responsible for retrieving data from the respective Responsible Party for these indicators.

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
Project 1: Transition to High Value Agriculture Project									
	Outcome	Annual profits of crop production per hectare in Target Area	Average annual profits of farms in Target Areas (defined as average annual profits from crop production/average size of farm)	US Dollars		Farm Operator Survey	MCC Evaluation Consultant	Other	Reporting Years: 2020 Target Areas are defined as “areas targeted by the Centralized Irrigation System Rehabilitation Activity” not including extension areas
	Outcome	Rent for land paid to lessors per hectare in Target Area	Average rent paid by lessee to lessor per hectare of rented land in Target Areas	US Dollars		Farm Operator Survey	MCC Evaluation Consultant	Other	Reporting Years: 2020 Target Areas are defined as “areas targeted by the Centralized Irrigation System Rehabilitation Activity” not including extension areas
	Outcome	Wage bill paid to labor per hectare in Target Area	Value of labor (defined as annual person-days of labor per hectare in target areas × average daily wage excluding household labor)	US Dollars		Farm Operator Survey	MCC Evaluation Consultant	Other	Reporting Years: 2020 Target Areas are defined as “areas targeted by the Centralized Irrigation System Rehabilitation Activity” not including extension areas
	Outcome	Area irrigated in Target Areas*	Number of hectares of irrigated crops (high value agriculture, grains and technical crops) in Target Areas	Hectares		WUA administrative documents	Apele Moldovei	Annual	Reporting Years: 2015-2021 Note that the THVA Project evaluation will also have data on this indicator so the

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
									two sets of numbers can be compared. Target Areas are defined as “areas targeted by the Centralized Irrigation System Rehabilitation Activity” not including extension areas
	Outcome	Water User Associations irrigating in Target Area*	Number of Compact WUAs using CIS irrigation in Target Areas	Number		WUA administrative documents;	Apele Moldovei;	Annual	Reporting Years: 2015-2021 Note that the THVA Project evaluation will also have data on this indicator so the two sets of numbers can be compared. A WUA using CIS irrigation is considered that one which during a particular irrigation season used Compact CIS infrastructure at least once.
	Outcome	Adoption of HVA crops in Target Areas	Number of hectares of irrigated and non-irrigated high value agriculture crops (fruits, grapes, vegetables, potatoes, etc.) in Target Areas	Hectares		Farm Operator Survey	MCC Evaluation Consultant	Other	Reporting Years: 2018; 2020 Target Areas are defined as “areas targeted by the Centralized Irrigation System Rehabilitation Activity” not including extension areas
AI-12	Outcome	Hectares under improved practices as a result of training	The number of hectares on which farmers are applying new production or	Hectares		ACED Reports	USAID ACED Contractor	Once	The information will be submitted by USAID to MCC, Final ACED report is expected March 2016.

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
			managerial techniques introduced or supported by MCC, such as input use, production techniques, irrigation practices, post-harvest treatment, farm management techniques, or marketing strategies.						The indicator's targets are based on the number of farmers trained by GHS adopting the new practices. It is assumed each farmer will apply the practices to 3 hectares. ACED Indicator 1.2.3 The targets for this indicator in the MCA M&E Plan are different from the ACED PMP targets for two reasons: the MCA targets were set before the ACED implementation contract was signed and the Compact year covers a different timeframe than the ACED contract year. It was agreed between MCC, USAID and MCA not to adjust the MCA targets because it did not make sense for ACED to recalculate their targets based on the Compact year.
Irrigation Sector Reform Activity									
	Outcome	Perception of quality of service by water users	Percentage of centralized irrigation systems users satisfied with the timeliness, cost and administration of	Percentage	Gender	Farm Operator Survey	MCC Evaluation Consultant	Other	Reporting Years: 2018; 2020

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
			irrigation provided throughout CIS.						
	Outcome	Water User Associations achieving financial sustainability*	Number of Compact WUAs where tariffs collected covers 100% of operating costs plus an amount for capital/replacement costs	Number		WUA administrative documents	Apele Moldovei	Annual	Reporting Years: 2015-2021
	Output	Management Transfer Agreements signed*	Number of Management Transfer Agreements signed	Number		Administrative documents	Apele Moldovei	Annual	Reporting Years: 2015-2021
	Output	Water User Associations established under new law*	Number of WUAs registered under new specific WUA law	Number		Administrative documents	Apele Moldovei	Annual	Reporting Years: 2015-2021
Access to Agriculture Finance Activity (includes Target and non-Target areas)									
	Outcome	Loans past due*	Percent of loans more than 60 days overdue on latest payment	Percentage	Gender	Administrative documents	Credit Line Directorate / PFI	Annual	Reporting Years: 2015-2021
	Output	Value of hire-purchase agreements signed*	The total value of agreements by and between 2KR and a Buyer, under which: (i) 2KR will extend a Hire-Purchase to the Buyer out of the proceeds of a 2KR Loan received by 2KR	US Dollars	Gender	Administrative documents	Credit Line Directorate / Agriculture Production Growth Project Implementation and	Annual	Reporting Years: 2015-2021

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
			from MCA Moldova and (ii) the Buyer will repay that Hire-Purchase to 2KR.				Management Unit (2KR)		
	Output	Buyers of equipment through hire purchase agreements*	Number of agriculture producer, producer group and rural entrepreneur within Moldova engaged in HVA related activities that have signed Hire-Purchase Agreement with 2KR to be financed from the proceeds of the 2KR Loan received from the Credit Facility	Number	Gender	Administrative documents	Credit Line Directorate / Agriculture Production Growth Project Implementation and Management Unit (2KR)	Annual	Reporting Years: 2015-2021
Growing High Value Sales									
	Outcome	Value of sales facilitated	Value of annual sales facilitated by the Activity contractor on behalf of Moldovan producers or producer groups	US Dollars	Gender	ACED Reports	USAID ACED Contractor	Other	<p>The information will be submitted by USAID to MCC. Final ACED report is expected March 2016.</p> <p>ACED Indicator 1.1.1 The targets for this indicator in the MCA M&E Plan are different from the ACED PMEP targets for two reasons: the MCA targets were set before the ACED implementation contract was signed and the Compact year</p>

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
									covers a different timeframe than the ACED contract year. It was agreed between MCC, USAID and MCA not to adjust the MCA targets because it did not make sense for ACED to recalculate their targets based on the Compact year.
	Outcome	Agricultural businesses with sales facilitated	Number of farmers, producers, processing enterprises reporting transactions facilitated through GHS	Number		ACED Reports	USAID ACED Contractor	Other	<p>The information will be submitted by USAID to MCC. Final ACED report is expected March 2016.</p> <p>ACED Indicator 1.1.3 The targets for this indicator in the MCA M&E Plan are different from the ACED PMP targets for two reasons: the MCA targets were set before the ACED implementation contract was signed and the Compact year covers a different timeframe than the ACED contract year. It was agreed between MCC, USAID and MCA not to adjust the MCA targets because it did not make sense for ACED to recalculate their targets based on the Compact year.</p>

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
AI-11	Outcome	Farmers who have applied improved practices as a result of training	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.	Number	Gender	ACED Reports	USAID ACED Contractor	Other	<p>The information will be submitted by USAID to MCC. Final ACED report is expected March 2016.</p> <p>ACED Indicator 1.2.2 The targets for this indicator in the MCA M&E Plan are different from the ACED PMP targets for two reasons: the MCA targets were set before the ACED implementation contract was signed and the Compact year covers a different timeframe than the ACED contract year. It was agreed between MCC, USAID and MCA not to adjust the MCA targets because it did not make sense for ACED to recalculate their targets based on the Compact year.</p>
AI-13	Outcome	Enterprises that have applied improved techniques	The number of rural enterprises; producer, processing, and marketing organizations; water users associations; trade and business associations; and community-based organizations that are applying managerial	Number	Gender	ACED Reports	USAID ACED Contractor	Other	<p>The information will be submitted by USAID to MCC, Final ACED report is expected March 2016.</p> <p>ACED Indicator 1.3.5 MCA did not have targets set initially for this indicator, so the targets from the ACED PMP are being used. However, the targets in</p>

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
			or processing techniques introduced or supported by MCC.						the ACED PMEP cover a different time period than the Compact year. The Compact year is from October of one year to September of the next year; whereas the ACED contract year covers March of one year to February of the next year.
AI-6	Output	Farmers trained	The number of primary sector producers (farmers, ranchers, fishermen, and other primary sector producers) receiving technical assistance or participating in a training session (on improved production techniques and technologies, including post-harvest interventions, developing business, financial, or marketing planning, accessing credit or finance, or accessing input and output markets).	Number	Gender	ACED Reports	USAID ACED Contractor	Other	<p>The information will be submitted by USAID to MCC, Final ACED report is expected March 2016.</p> <p>ACED Indicator 1.2.1 The targets for this indicator in the MCA M&E Plan are different from the ACED PMEP targets for two reasons: the MCA targets were set before the ACED implementation contract was signed and the Compact year covers a different timeframe than the ACED contract year. It was agreed between MCC, USAID and MCA not to adjust the MCA targets because it did not make sense for ACED to recalculate their targets based on the Compact year.</p>

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
AI-7	Output	Enterprises assisted	The number of enterprises; producer, processing, and marketing organizations; water users associations; trade and business associations; and community-based organizations receiving assistance.	Number	Gender	ACED Reports	USAID ACED Contractor	Other	<p>The information will be submitted by USAID to MCC, Final ACED report is expected March 2016.</p> <p>ACED Indicator 1.3.4 MCA did not have targets set initially for this indicator, so the targets from the ACED PME are being used. However, the targets in the ACED PME cover a different time period than the Compact year. The Compact year is from October of one year to September of the next year; whereas the ACED contract year covers March of one year to February of the next year.</p>
	Output	Central Phytosanitary Lab is certified	The Central Phytosanitary Lab is certified to ISO family of standards and / or another appropriate international standard as confirmed by a Certification or Accreditation body.	Date		ACED Reports	USAID ACED Contractor	Once	<p>The information will be submitted by USAID to MCC, Final ACED report is expected March 2016.</p> <p>ACED Indicator 1.4.4</p>
Project 2: Roads Rehabilitation Project									
Sarateni – Drochia Junction M2									

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
	Outcome	Reduced cost to road users	Value of time savings and reduced vehicle operating costs with the project compared to no rehabilitation (modeled by HDM4)	US Dollars		HDM 4 modeling run by MCC Evaluation Consultant	MCC Evaluation Consultant	Once	Reporting Year: 2017
R-10	Outcome	Average annual daily traffic*	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	Road Type	Traffic survey	SRA	Annual	Reporting Year: 2015-2017
	Outcome	Enhanced traffic safety*	Number of road accidents on the rehabilitated portion of road per calendar year	Number		National Patrol Inspectorate database	Ministry of Internal Affairs	Annual	Reporting Year: 2015-2017
R-9	Outcome	Roughness*	The measure of the roughness of the road surface, in meters of height per kilometer of distance traveled.	Meters per kilometer	Road Type	Road survey	SRA	Annual	Reporting Year: 2015-2017 Note that the pre-rehabilitation IRI measured by SRA was 6.5 m/km even though the baseline measured by the feasibility study in 2009 was 12 m/km.

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
	Outcome	Road fund allocation*	Government of Moldova annual allocations to the Road Fund	US Dollars		Government of Moldova Decision	Ministry of Transport and Road Infrastructure (MTRI)	Annual	Reporting Year: 2015-2017 MCC coordinated closely with the World Bank, European Bank for Reconstruction and Development, European Investment Bank, and European Commission during RRP development. Being concerned about road maintenance sustainability a Compact condition was set forth that the GOM will amend the Road Fund Law to ensure that “a minimum of 50 percent in calendar year 2011, 65 percent in calendar year 2012, and 80 percent in calendar year 2013 and thereafter, of revenue from the fuel excise tax is automatically allocated to the Road Fund”. That the Road Fund Law was amended in early 2010. The indicator tracks the amounts allocated annually by the GOM to the Road Fund.
	Outcome	Road fund expenditures*	Government of Moldova annual expenditures on road	US Dollars		Administrative reports on State budget	Ministry of Transport and Road	Annual	Reporting Year: 2015-2017

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Dis - aggregation	Primary Data Source	Responsible Party	Frequency of Reporting	Additional Information
			maintenance from the Road Fund			execution by MTRI	Infrastructure (MTRI)		
R-11	Outcome	Road traffic fatalities*	The number of road traffic fatalities per year on roads constructed, rehabilitated or improved with MCC funding.	Number	Road Type	National Patrol Inspectorate database	Ministry of Internal Affairs	Annual	Reporting Year: 2015-2017

ANNEX 2. Table of Indicator Baselines and Targets

Indicator Name	Unit of Measure	Indicator Classification	Baseline ¹⁷ (year)	Year 1	Year 2	Year 3	Year 4	Year 5
Project 1: Transition to High Value Agriculture Project								
Annual profits of crop production per hectare in Target Area	US Dollars	Level	180 (2009)	-	-	-	180	390 ¹⁸
Rent for land paid to lessors per hectare in Target Area	US Dollars	Level	80 (2009)	-	-	-	80	100 ¹⁹
Wage bill paid to labor per hectare in Target Area	US Dollars	Level	40 (2009)	-	-	-	40	180 ²⁰
Area irrigated in Target Areas	Hectares	Level	1,100 (2009)	-	-	-	2,280	3,460 ²¹
Water User Associations irrigating in Target Area	Number	Level	-	-	-	-	-	-
Adoption of HVA crops in Target Areas	Hectares	Level	1,800 (2009)	-	-	-	2,320	2,840 ²²
Hectares under improved practices as a result of training	Hectares	Cumulative	0	-	-	-	-	8,400
Irrigation Sector Reform Activity								
Perception of quality of service by water users	Percentage	Level	41% (2009)	-	-	41%	43%	75% ²³
Water User Associations achieving financial sustainability	Number	Level	0	0	0	7	7	11 ²⁴

¹⁷ This column contains Compact baseline data collected in the pre-Compact period. Not to be confused with the THVA evaluation baseline conducted by the MCC Evaluation Contractor. The baselines and targets for the THVA evaluation indicators will be updated in mid-2016 after the closeout ERR is complete. The baselines and targets for the Roads indicators will likewise be updated once the closeout ERR is complete.

¹⁸ The final THVA Evaluation will compare findings with this target, but also with the projection from the closeout ERR. The closeout ERR projection will be a more appropriate comparison given the updated information that it will include.

¹⁹ Ibid.

²⁰ This indicator is no longer included as a benefit stream in the ERR; however it will still be assessed in the impact evaluation.

²¹ The final THVA Evaluation will compare findings with this target, but also with the projection from the closeout ERR. The closeout ERR projection will be a more appropriate comparison given the updated information that it will include.

²² Ibid.

²³ This indicator will be reported in the final THVA Project evaluation according to the timeline of the approved evaluation plan.

²⁴ Ibid.

Indicator Name	Unit of Measure	Indicator Classification	Baseline ¹⁷ (year)	Year 1	Year 2	Year 3	Year 4	Year 5
Management Transfer Agreements signed	Number	Cumulative	0	0	7	7	11	11
Water User Associations established under new law	Number	Cumulative	0	0	11	11	11	11
Access to Agriculture Finance Activity (includes Target and non-Target areas)								
Loans past due	Percentage	Level			5%	5%	5%	5%
Value of hire-purchase agreements signed	US Dollars	Cumulative	0	-	-	-	-	-
Buyers of equipment through hire purchase agreements	Number	Cumulative	0	-	-	-	-	-
Growing High Value Sales								
Value of sales facilitated	US Dollars	Cumulative	0	2,100,000	6,300,000	12,600,000	21,000,000	31,500,000
Agricultural businesses with sales facilitated	Number	Cumulative	0	100	300	600	1,000	1,500
Farmers who have applied improved practices as a result of training	Number	Cumulative	0	330	550	1,340	2,050	2,800
Enterprises that have applied improved techniques	Number	Cumulative	0	5	20	35	55	75
Farmers trained	Number	Cumulative	0	500	850	1,340	3,150	4,300
Enterprises assisted	Number	Cumulative	0	8	30	53	84	120
Central Phytosanitary Lab is certified	Date	Date	-	-	-	-	-	31-Aug-2015
Project 2: Roads Rehabilitation Project								
Sarateni – Drochia Junction M2								
Reduced cost to road users	US Dollars	Level	0	-	-	-	-	112,000,000
Average annual daily traffic	Number	Level	3,009 (2009)	-	-	-	-	4,270
Enhanced traffic safety	Number	Level	20 (2009)	-	-	-	-	-
Roughness	m/km	Level	12 (2009)	-	-	-	-	2.5
Road fund allocation	US Dollars	Level	35,800,000 (2009)	49,700,000	63,600,000	81,500,000	99,000,000	106,000,000
Road fund expenditures	US Dollars	Level	-	-	-	-	-	-
Road traffic fatalities	Number	Level	3 (2009)	-	-	-	-	-

ANNEX 3. Summary of Modification to Indicators, Baselines and Targets

Indicator Modification Form	
Date	October 2015
Project/ Activity	Roads Rehabilitation Project / Sarateni – Drochia Junction M2 Activity
Indicator Level	Outcome
Indicator	Enhanced traffic safety
Indicator Definition	Number of road accidents on the rehabilitated portion of road per year
Modification Type	Change in Baseline
Details and Justification	<p>As a result of new data received from the Ministry of Internal Affairs regarding the number of road accidents and fatalities on the Compact rehabilitated road segments per year dating back from 2009, the baseline should be modified from 28 to 20.</p> <p>The variation in the two numbers likely comes from differences in the specific road segments that were to be rehabilitated at the onset of the Compact and which segments in fact received the rehabilitation.</p> <p>Revising the baseline to reflect the exact segments rehabilitated will provide more precision and consistency in the reporting of this indicator by allowing the values to be more easily comparable across reporting years.</p>

Indicator Modification Form	
Date	October 2015
Project/ Activity	Roads Rehabilitation Project / Sarateni – Drochia Junction M2 Activity
Indicator Level	Outcome
Indicator	Road traffic fatalities
Indicator Definition	The number of road traffic fatalities per year on roads constructed, rehabilitated or improved with MCC funding.
Modification Type	Change in Baseline
Details and Justification	<p>No baseline was previously provided.</p> <p>As a result of data received from the Ministry of Internal Affairs regarding the number of road accidents and fatalities on the Compact rehabilitated road segments per year dating back from 2009, the baseline should be 3.</p>