GEORGIA
PROGRAM MONITORING AND EVALUATION PLAN

Original Acknowledged and Approved by Millennium Challenge Corporation

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1. Overview

The Government of Georgia (GoG) and Millennium Challenge Corporation (MCC) signed a $295.3 million Compact in 2005 that aims to reduce poverty through economic growth by focusing on key constraints to development through rehabilitation of dilapidated infrastructure, improvements to roads and energy infrastructure, and investment in SMEs and agribusinesses. An amendment to the Compact was signed on November 20, 2008 on provision of additional $100 million assistance. The Program primarily emphasizes regions outside of the capital of Tbilisi.

Monitoring and Evaluation (M&E) is a key component of Program implementation in order to follow MCC's results-based approach. The M&E Plan serves the following functions:

- Explains in detail how Millennium Challenge Georgia (MCG) and the MCC will monitor the Projects in order to determine whether they are achieving their intended results and measure their impacts over time.
- Serves as a guide for Program implementation and management, so that MCG staff, Supervisory Board members, GoG, and Implementing Entities understand the results they are responsible for achieving, and that the beneficiaries and stakeholders are aware of progress towards those results.
- Alerts MCG, implementing entities, and other stakeholders to problems in Program implementation, provides a basis for making any needed Program adjustments, and informs key project decisions.
- Describes impact and other evaluations that assess the causal relationship between the Program and its Goal and demonstrate the overall impact the Program ultimately has on poverty and economic growth in Georgia.

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 only with the approval of MCC and if it is consistent with the requirements of the Compact and any other relevant supplemental legal documents.

This document reflects the second amendment made to the M&E Plan, agreed with MCC on the denoted date of the cover page. MCG has now complied with MCC's Policy for Monitoring and Evaluation of Compacts and Threshold Programs developed in 2009; adjustments were needed given that the original plan was developed prior to the establishment of this Policy.

2. Summary of the Program and Objectives

The Georgia Program focuses primarily on the regions outside of the capital of Tbilisi. The Program's Goal is Economic Growth and Poverty Reduction in Georgia, and, more specifically, has an overall Program Objective of economic growth and poverty reduction in the regions of Georgia outside of Tbilisi. The

Program will be implemented over 5 years and comprises two Projects, with a total of five Activities.

2.1. Regional Infrastructure Rehabilitation Project ($310.7 million)

The Objective of this Project is key regional infrastructure rehabilitated, which is supported by the following three Activities:

- Samtskhe-Javakheti (S-J) Road Rehabilitation ($203.5 million) – Rehabilitation and construction of approximately 220.2 kilometers of the main road traversing the S-J region.
- Main Gas Pipeline Rehabilitation ($49.5 million) – Rehabilitate the North-South Gas Pipeline that fuels electric power generation and provides heat to homes and businesses, and to further develop and implement the Georgian government's energy sector strategy.
- Regional Infrastructure Development (RID) ($57.7 million) – Fund regional and municipal physical infrastructure for improved potable water supply.

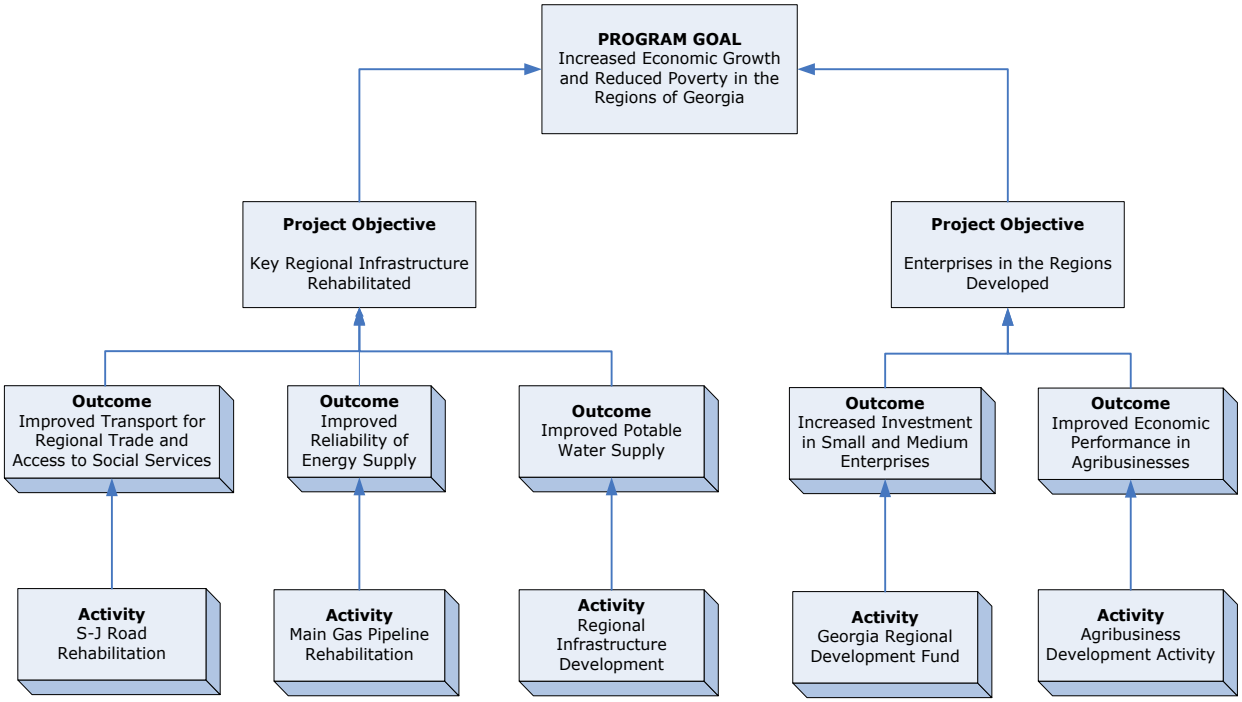
2.2. Enterprise Development Project ($52.6 Million)

The Objective of this Project is enterprises in the regions developed, which is supported by the following two Activities:

- Georgia Regional Development Fund (GRDF) ($32.0 million) – Fund a professionally- and independently-managed investment fund to provide long-term risk capital and technical assistance to SMEs, primarily in the regions outside of Tbilisi, and to identify legal and policy reforms needed to improve the investment environment.
- Agribusiness Development Activity (ADA) ($20.6 million) – Grants and technical assistance to farmers and agribusinesses that supply both agricultural raw and processed products to the domestic and international market.

The following is a Program Logic diagram, demonstrating the links between these Projects and Activities and the Compact's expected Outcomes, Objectives, and Goal.

Program Logic Diagram



3. Economic Analysis

The economic impact of the Program was estimated by forecasting the economic and income gains of each Activity relative to the costs, as demonstrated through the calculation of an Economic Rate of Return (ERR). Costs and benefits were estimated using the best available data at the time of Program development. The resulting ERR projections and bases for their calculation is explained below;

The following is a summary of ERRs for each of the Activities:

Activity	ERR
Regional Infrastructure Rehabilitation Project	
S-J Road Rehabilitation	20.4%
Main Gas Pipeline Rehabilitation	11.7%
RID	11.6%
Enterprise Development Project	
GRDF	26%
ADA	12%

S-J Road Rehabilitation

The original ERR of the S-J Road Rehabilitation is estimated at 20.4 percent over a 24-year time horizon. The key benefit streams are reduced vehicle operating costs for road users and increased agricultural value.

In southern Georgia, deterioration of the roads has cut the region of Samtskhe-Javakheti off from the rest of the country. With high costs to transport produce out of the region, regional farmers are unable to compete with farmers from other regions. Moreover, the poor road infrastructure also creates significant obstacles to importing high quality agricultural inputs and other goods. Rehabilitation of roads in the Samtskhe-Javakheti area is expected to foster economic development in Samtskhe-Javakheti through:

1. Increasing exports of agricultural products from the region.
2. Increasing social, political and economic integration of the local population in Samtskhe-Javakheti, including ethnic minorities, with the rest of Georgia.
3. Expanding international trade, by providing a more direct transport link from Tbilisi and eastern and southern Georgia to Turkey and by rehabilitating the existing road sections from Ninotsminda to Armenia; and
4. Complementing other road development projects.

The principal economic contribution of the S-J Road derives from opening up the region to commerce that would otherwise be unprofitable as a result of high transportation costs. Economic analysis includes not only the standard savings to vehicle operating costs but also the projected impact of the road on agricultural output. Unquantifiable benefits that are not included in the estimates include gains to other non-agricultural industries that result from better transit as well as social

and educational gains resulting from better access to markets, schools, and health centers.

In order to quantify the benefits of reduced vehicle operating costs, the World Bank's HDM-4 model was applied. To estimate surplus agricultural production from improved transport, it was assumed that agricultural output across all sectors would increase 10 percent in 2010 and, through 2020, rise to the levels experienced during the Soviet era.

Sensitivity analysis conducted by MCC economists confirmed that predicted economic returns from the road rehabilitation are robust to changes in the cost and benefit assumptions.

Main Gas Pipeline Rehabilitation

The ERR of the Main Gas Pipeline Rehabilitation Activity was estimated at 11.7 percent over a 10-year time horizon. The key benefit streams were assumed to be reduction in gas losses and monetized carbon credits.

By rehabilitating the North-South Gas Pipeline, it was assumed that Georgia could avoid additional expenditures on gas purchases and reap returns from selling carbon credits for the reduction of greenhouse gas emissions under the United Nations Framework Convention on Climate Change. Another benefit was expected to be carbon credit revenue which may be secured as a result of reduced greenhouse gas emissions related to pipeline rehabilitation. The emergency repairs are expected to provide a significant increase to the reliability and security of the country's energy supply.

Beneficiaries include households, businesses and industrial enterprises throughout Georgia that consume gas or electricity. Rehabilitation will help to avoid the emergency disruptions in the gas supply, improve a situation which currently endangers the environment as well as the health and safety of the population.

It should be noted that since Program implementation began, the carbon credit facility that was expected to be established is no longer moving forward, so those expected benefits may not materialize. However, the reduction in losses from both emergency and other types of repairs is expected to still provide a robust economic impact.

RID

Original Overall ERR

The overall original ERR of the RID activity was estimated at 11.6 percent over a 19-year time horizon.

Rehabilitation and development of infrastructure for local services will improve the operation of important population centers and reduce business transaction costs, thereby contributing to economic growth and poverty reduction. Improvements in local services will also have a direct impact on quality of life, thereby benefiting the poor. It was impossible to calculate a precise ERR for the RID Activity during the Compact Development, as investments only began to be selected once the Activity became operational. As a substitute, MCC economists analyzed a representative comparison group of projects submitted to the World Bank's Georgia-Municipal Development and Decentralization Project II for their content and economic potential.

In addition, at the time the ERR was calculated during Program development, it was assumed that RID would make investments in a variety of sectors, including water, sanitation, roads, and gasification. At this point, all of the investments will be in potable water systems, which may have an effect on any ex-post ERR that is calculated, though it is anticipated that such ERR would still be very strong.

Project ERRs

As mentioned above, each individual investment under the Activity must have an initial estimated minimum ERR of 15% (exclusive of project management and operating costs). At this point, the ERRs for the following projects that have been approved for investment are:

Project	ERR
Bakuriani	17.8%
Poti	22.6%
Kobuleti	15.5%
Kutaisi	34.6%
Borjomi	15.2%

GRDF

The overall ERR of the GRDF activity is estimated at 26 percent over a 15-year time horizon. The key benefit streams are incremental profits of entrepreneurs and incremental wages of employees.

The GRDF is designed to give small and medium sized companies access to the risk capital and technical assistance they need to grow. The fund will (a) provide a competitive mechanism for allocating capital to small and medium sized companies, with a particular emphasis on agriculture and agribusiness, and (b) through technical assistance develop local company capacity.

The original ERR for the Activity was estimated using indicative Georgian investment proposals in agribusiness and tourism that were drawn from Georgian entrepreneurs encountered during MCC due diligence. Analysis suggests an ERR of

26 percent. This reflects underlying benefits in net profit, wages paid, taxes paid, and payments to local suppliers, particularly farmers in the case of agribusiness projects. This definition is conservative because it ignores benefits that may accrue to competitors, local communities, suppliers of related products, financial institutions, or other parties, as well as any "spillover" benefits to the economy.

ADA

The overall ERR of the ADA activity is estimated at 12 percent over a 10-year time horizon. The key benefit streams are (i) increased farmers' net agricultural incomes and laborers' wages, (ii) increased service providers' net revenues and wages, (iii) increased value-added enterprises' net revenues and incremental wages, (iv) increased value chain agribusinesses' net revenues and incremental wages, and (v) increased farmers' agricultural incomes due to improved outreach

The ADA is expected to contribute to poverty alleviation by accelerating agriculture sector transformation from subsistence production to profitable farms and rural enterprises directly participating in commercial value-chains. The Activity's efforts to identify, introduce, and anchor appropriate innovations in primary agriculture and agribusiness is expected to:

1. Mitigate problems of incomplete information, credit constraints, and risk perceptions and management, leading in turn to increased productivity, profitability, and incomes; and
2. Facilitate and increase meaningful coordination among stakeholders in key agricultural value chains, permitting them to take advantage of larger, more integrated vertical economies.

Restructuring 2009

MCG has requested increase of ADA grants budget by $4.95 million in order to fund a new Machinery Rings Initiative - MRI ($1.8 million) and meet increased demand for agribusiness grants in Round IX of application selection process. MRI was designed as an aid to Georgian farmers to increase the mechanization of agricultural techniques through additional matching grants (up to $150,000) to Farm Service Centers (FSCs) already created by ADA project. These centers will provide agricultural machinery services to local farmers during high agricultural seasons. The decision on MRI is in harmonization with agricultural priorities of Georgian Government and is reinforced with the results of a thorough research carried out by an especially invited expert. This initiative will be applied to 12 FSCs which is expected to foster creation of 60 additional investments and 10,000 beneficiaries and will increase annual net revenue of these centers by $354,000. MCG requested also additional funding of $450,000 for 12 PP Projects eligible for funding from round 9 what was approved by the Supervisory Board. The outcomes of this recent investment will be reflected into the additional jobs and increased household net income earned by Primary Producers.

Final ex-post ERRs for the projects will be calculated at part of the Impact evaluation studies. For the Main Gas Pipeline rehabilitation project, where detailed impact evaluation study is not considered, MCG is hiring the economist to re-calculate the ERR.

4. Beneficiaries

The beneficiaries of the Program can be categorized by Activity. Overall, the Compact will benefit a variety of households and businesses across multiple regions.

Below is a summary of beneficiaries by Activity:

Activity	Beneficiaries
Regional Infrastructure Rehabilitation Project	
S-J Road Rehabilitation	53,988
Main Gas Pipeline Rehabilitation	n/a
RID	265,964
Enterprise Development Project	
GRDF	4,400
ADA	75,996

S-J Road Rehabilitation

In total about 53,988 people[1] is expected to benefit from this Activity, comprised of households in relative geographic proximity to the road. Specifically, the catchment area is defined as the four *rayons*, or districts, through which the road passes in the Samtskhe-Javakheti and Kvemo-Kartli regions – Tetriskaro, Tsalka, Ninotsminda, and Akhalkalaki – totaling about 4,845 square kilometers. The beneficiary population is defined conservatively as the population residing in those four districts, comprising about 47 villages. It is quite likely, however, given the importance of the corridor through which the road passes, and the road's connection to the Turkish and Armenian border, that many more people will benefit from the road rehabilitation.

Main Gas Pipeline Rehabilitation

Due to the broad scope of this project, it is not possible to estimate a specific number of individual beneficiaries. However the project is very important for the energy security and reliability of the country.

[1] Table 2.1-1 (Feasibility Study - by Kocks Consult GmbH in association with Designing and Consulting Company BT

RID

About 265,964 population[2] is estimated to benefit based on the water system projects that have already been chosen for investment. This is based on the population of the five cities where projects have been selected – Bakuriani, Borjomi, Kobuleti, Kutaisi, and Poti – as the breadth of the projects will allow the entire urban population in these areas to benefit. These individuals will have their standards of living improved by increased availability of water, as well as improved water quality.

GRDF

About 20 entrepreneurs, 1,892 company employees, and 2,508 local suppliers, for a total of about 4,400 are expected to benefit from the Activity.

ADA

The 75,996 beneficiaries of ADA includes: 3,823 direct beneficiaries and 72,173 indirect beneficiaries. Direct beneficiaries include grant recipients and employees who fill jobs created by grant recipients. Indirect beneficiaries include suppliers and clients of grant recipients.

5. Monitoring Component

MCG will conduct ongoing quarterly and annual monitoring of Project and Activity results by tracking the indicators (Annex II of PMEP) against their established targets. This will permit Program managers and stakeholders to assess progress in implementation, whether the Program is achieving its intended results, and to make programmatic adjustments as necessary.

It is important to note that this revised version of the M&E Plan contains some changes in indicators and targets from Annex III of the Georgia Compact. However, Annex III states, "Notwithstanding anything to the contrary in the Compact, including the requirements of this M&E Annex, MCC and the Government (or a mutually acceptable Government Affiliate or Permitted Designee) may modify or amend the M&E Plan or any component thereof, including those elements described herein, without amending the Compact; provided, any such modification or amendment of the M&E Plan has been approved by MCC in writing and is otherwise consistent with the requirements of this Compact and any relevant Supplemental Agreement between the Parties." (*Georgia Compact, Annex III, Section 5.d.*) Details of these changes, and the reasons for them, are documented in **Annex I** of this M&E Plan. MCC's written approval/no objection to this revised M&E Plan also constitutes acceptance of the indicator and target changes.

[2] Number of Population is defined according to Feasibility Studies: Poti – 42,000; Borjomi – 15,000; Bakuriani – 2,000; Kobuleti – 20,964; Kutaisi – 186,000

5.1 Indicators

The table attached as **Annex II** of this M&E Plan outlines the indicators at the Goal, Objective, Outcome, and Activity level that will be monitored. The Goal indicators will measure the overall impact of the Program, Objective indicators measure high-level results of the Projects and how well they meet their Objectives, Outcome indicators measure the intermediate results of the Activities, and Activity indicators measure the delivery of key goods and services, outputs, and process milestones that demonstrate whether the Activity's early implementation is on track.

5.2 Baselines and Targets

All of the Monitoring Component indicators will be measured against established baselines and targets, to ensure that the Program is on track to meet its overall Goals and Objectives. Targets are derived from ex-ante economic rate of return analysis, and other types of analysis and other project planning documents, so that they reflect the underlying assumptions made in program design about what each activity would likely achieve.

The complete list of baselines and targets is outlined in **Annex III** of this M&E Plan.

5.3 Performance Indicator Reference Sheets

In addition to the meta-data on indicators contained in this M&E Plan, MCG also has prepared more detailed Performance Indicator Reference Sheets (PIRS) on each indicator, to fully document its definition, source, collection method, calculation methodology, and other key information. PIRS ensure that MCG and implementing entities have all of the information they need to consistently collect, report on, and understand each indicator.

PIRS are developed together by MCG and implementing entities. They are available on request from the MCG M&E Staff, who take responsibility for archiving them and keeping them up to date.

5.4 Disaggregating Data by Gender, Income, and Age

In cases where beneficiaries are individually identifiable, they will be disaggregated by sex, age, income, and urban/rural to the extent practical and such information shall be made publicly available at an aggregated level (not including names, addresses, and other identifying information). MCG will also report this information to its external constituents, including the Government of Georgia and civil society.

Below is a list of indicators that will be disaggregated, and their type of disaggregation:

Activity	Indicator	Disaggregated By
ADA	Jobs Created	Gender
ADA	Number of beneficiaries (direct and indirect[3])	Gender
RID	Number of beneficiaries[4]	Gender
GRDF	Number of Portfolio Company employees	Gender

5.5 Data Quality Reviews

Data quality reviews are used to verify the quality and the consistency of performance data over time, across different implementing units and other reporting institutions. Such data quality reviews is also serve to identify where high levels of quality are not possible, given the realities of data collection circumstances. These assessments will mainly cover data reported from implementing entities and may include surveys and other data sources as necessary. The particular objectives for the data quality reviews includes identification of the following parameters: (i) what proportion of the data has quality problems (completeness, conformity, consistency, accuracy, duplication, integrity); (ii) which of the records in the dataset are of unacceptably low quality; and (iii) what are the most predominant data quality problems within each field.

IMPAQ International had been hired by MCG as consultant to carry out data quality reviews. Considering the complexity of MCG Program the data quality reviews is implemented through four rounds and will cover the following basic timelines: 1) First round - all data through the end of PY2; 2) Second round - all data through the end of PY3; 3) Third round - all data through the end of PY4; and 4) Fourth round - all data through the quarter 3 of PY5. IMPAQ shall carry out the four rounds and provide quality assurance for surveys and other data collection initiatives. DQR is to review the data gathered for the Program per four separate inputs to ensure that data reported are valid, reliable, timely, and precise as resources allow. This is to verify the quality and consistency of data across different Implementing Entities (IE) and other institutions engaged in surveys.

The data quality reviews will also assist in identifying key issues or problematic areas regarding data quality and identifying mitigation measures to correct the problems. Within MCG, the M&E Director will oversee the contracting of independent data quality reviewers through competitive procurement. The M&E Unit within MCG will also conduct spot checks of data quality through field visits.

[3] For the disaggregation of the Indirect Beneficiaries by gender will be used ADA Beneficiary Survey data provided by the Institute for Polling and Marketing (IPM)

[4] Assumption of disaggregation RID beneficiaries by gender will be available after completion of baseline survey

5.6 Progress Reports

MCG follows current approved MCC reporting guidelines, as posted on the MCC website (www.mcc.gov) and provided by MCC to MCA units. Quarterly and annual reports are submitted according to schedules and formats outlined in such guidance, including the Indicator Tracking Table and required narrative content. Within 14 calendar days of MCC acceptance of completed reports, material information contained in the report (at a minimum, the Indicator Tracking Tables) is posted on the MCG website. Finally, MCG will report to its external constituents, especially the Government of Georgia, the Supervisory Board, and civil society, on a regular basis.

5.7 Linking Disbursements to Performance

The Disbursement Agreement includes several Conditions Precedent (CPs) to disbursements including the achievement of certain Indicator targets. The Disbursement Agreement also contains a CP that requires the M&E Plan to remain "current and updated."

6. Evaluation Component

MCG will evaluate the impact of its Program through impact evaluations for Activities where it is possible to carry out a rigorous, quantitative study to determine the impact on poverty reduction and income that can be attributed to MCC interventions. The distinctive feature of an impact evaluation, compared to other types of evaluations, is the use of a counterfactual. The counterfactual identifies what would have happened to the beneficiaries, absent the Program.

Rigorous impact evaluation is important in order to be able to attribute Program results to MCC interventions in a reliable manner, rather than to other causes, and assure the validity of reported Program results and outcomes. It also provides applicable lessons for similar future programs and promotes country accountability.

M&E staff in MCG and MCC, in conjunction with other technical counterparts at each organization, has determined that three activities – ADA, RID and the S-J Road Rehabilitation – are eligible for this type of evaluation, taking into account appropriate methodologies and cost-effectiveness. MCC has hired the consultant National Opinion Research Center (NORC) to provide technical assistance in designing and implementing impact evaluation for ADA and S-J Road Rehabilitation projects. Data for these evaluations are collected through different surveys managed by MCG.

MCG has hired Tbilisi Business Service Center (TBSC) to conduct the Impact evaluation for RID. Consultant is responsible to design the impact evaluation methodology and collect all necessary data for this assignment.

The final impact evaluation should address, but not be limited to:

- Why goals, objectives and targets were or were not achieved;
- Positive and negative unintended results of the program;
- Effectiveness of program activities and whether results can be attributed to MCC interventions;
- Lessons learned that can be applied to other Programs/projects of a similar nature;
- Long-term sustainability of results;
- Impact on economic growth, poverty reduction, and the income of Program beneficiaries;
- Analysis of Program beneficiaries and their characteristics, including gender, age, and income level; and
- Key relevant research questions to analyze Program outcomes.

The following are brief descriptions of each impact evaluation. A more detailed description is provided in **Annex IV** of this M&E Plan.

ADA

The impact evaluation will assess the Program's impact on increasing income, reducing poverty, and creating jobs for direct and indirect beneficiaries. The goal of the impact evaluation is to measure the net impact of the ADA activity – i.e., what happened with the Activity versus what would have happened if the Activity had not been implemented (also known as the "counterfactual") – and to determine those results which can be reasonably attributed to the program, rather than other factors. Most importantly, the evaluation will measure the difference in the change in income of direct beneficiaries, the "treatment" group (grantees and individuals who receive new jobs created by the grants), as compared to a statistically similar comparison group, the "control" group.

A randomized methodology was used for the Primary Producer component of ADA. Statistical matching models is employed to evaluate the impact of the Value—Adder, Value-Chain, and Farm Service Center Components.

S-J Road Rehabilitation

The evaluation of the S-J Road Rehabilitation will combine the use of a Geographic Information System (GIS) model with a statistical matching (Propensity Score Matching with Double-Difference) approach to assess the impact of the activity on various income and poverty variables.

RID

RID Impact Evaluation project will measure the influence of water and sanitation intervention on six impact areas, including households, businesses, water utilities, governmental organizations, public health and other MCG activities in Georgia. Baseline and ex-post surveys will be used to collect relevant data on impact areas, while treatment and control method, using Propensity Score Matching and Double Differences, will assess and compare the impact of RID intervention across treatment

and control cities. In addition to standard impact evaluation methods, Computable General Equilibrium (CGE) model will be utilized to assess the impact of RID at macro level (i.e. to capture indirect and induced effects which are reflected at a macro level). Combining CGE with Micro Simulations will illuminate distributional impact of indirect and induced effects on poverty and inequality.

Expansive nature of key research questions and the RID project itself requires understanding of all the details of water and sanitation. For this purpose RID IEP Team used engineering approach to create Micro Models, which captures all monetary and non-monetary expenses, inconvenience, health problems and so forth associated with households, businesses and water utility companies. RID Impact Evaluation Team also found that impact of the project cannot be measured only with quantitative methods. As a result case study approach will be used to understand better the impact of water and sanitation intervention on Public Health, Governmental Institutions and Potential Investors. And finally, given the importance of the level of water consumption across households, RID IEP Team introduced Water Audit, as a separate survey and analytical method, which will closely estimate the amount of water consumed in individual households in RID target cities.

7. Assumptions and Risks

The success of the Program is fully related to achievements of each Project Activity, and projected outcomes are based on assumptions and external risks. These assumptions and risks are presented below for each Project Activity.

Assumption	Risk
OUTCOME 1. Improved Transport for Regional Trade and Access to Social Services	
▪ Good political relationship of Government of Georgia with neighboring countries (Turkey and Armenia) ▪ Access to markets during the whole year period will support farmers to establish business relationships with wholesalers and supermarket networks	▪ Significant increase in fuel and other construction material prices ▪ Overall inflation, US Dollar devaluation and subsequent bargaining power decrease ▪ Loss of traditional regional market outlets due to economic embargo and conflicts
OUTCOME 2. Improved Reliability of Energy Supply	
▪ Energy security and reliability of the energy supply to Georgia and the region will be increased ▪ Existing technical losses from the pipeline will be reduced and saved money will be reinvested by GOGC for rehabilitation of other damaged parts of the Main Gas Pipeline ▪ Prevention of accidents on the pipeline will become possible	▪ Significant increase in gas price by Russian supplying company (Gazprom) can reduce demand on gas ▪ Fuel switching among wholesale customers

Assumption	Risk
▪ GOGC or some other party will invest in rehabilitation of secondary pipelines to increase number of household customers	
OUTCOME 3. Improved Potable Water Supply	
▪ Reliable water supply will contribute to consumers' willingness to pay ▪ Will result in reduction of water and sewer related household and business expenditure ▪ Increased water supply schedule will save time, reduce inconvenience and increase quality of life for RID target city population. However, not everyone will be affected equally	▪ Actual operation and maintenance cost can exceed amount of revenue collected by companies or municipalities ▪ Increase in water and sewer service tariffs which will negatively influence willingness of population to pay to the owners of the infrastructure system ▪ Limited financial capacity of the municipalities to maintain rehabilitated systems ▪ GoG default on operations and maintenance
OUTCOME 4. Increased Investment in SMEs	
▪ Increased diversity and intensity of production is financially profitable ▪ Creation of success stories will draw additional investments from abroad and cause multiplication of successful enterprises	▪ Limited number of existing SMEs in rural area ▪ Infrastructure in regions is badly degraded with essential services such as electricity and water intermittent at best and totally absent at worst ▪ Lack of technical capacity to produce viable business plans
OUTCOME 5. Improved Economic Performance in Agribusiness	
▪ Farmers in Georgia are willing to adopt modern technologies (crop and livestock) ▪ Grants will require focus on high value perennial crops (fruit gardens, nurseries and etc.), which typically entail a lag of at least two years, post-investment, before revenues are realized	▪ Natural disasters (drought, hail or frost, animal infections, fungi and pest deceases ▪ Due to limited technical knowledge, most of farmers will not be able to submit business plans ▪ Cultural suspicion of collective approach ▪ Overall inflation, US Dollar devaluation and subsequent bargaining power decrease

8. Surveys

The following table outlines all of the surveys sponsored with Compact funds that will be undertaken to supplement Monitoring data collection and to support the Evaluation component.

Survey	Brief Description	Timing	Purpose	Responsible Party
Integrated Household Survey	National socio-economic and living standards survey. Existing sample size will be increased by 3,382 (total 6,764 households).	Annual, with data collection on a quarterly basis	ADA and S-J Road impact evaluation, as well as end-of-Compact poverty calculations and beneficiary analysis	Georgia Department of Statistics
Village Infrastructure Census	A new nationwide census that will collect data on available infrastructure and its quality, use, and accessibility in every village in Georgia	PY 3, PY5	ADA and S-J Road impact evaluation	Georgia Department of Statistics
ADA Beneficiary Survey	Socio-economic survey of the beneficiaries of the ADA activity, as well as their production levels, sales, revenue, and business practices.	Ongoing until end of Compact (based on set schedule tied to activity implementation and agriculture cycle)	ADA, impact evaluation, and beneficiary analysis	Private survey firm (IPM)
Settlement Infrastructure Survey	Survey of infrastructure availability, quality, accessibility, and use in villages in the S-J Road project and comparison area and other comparison	PY 2, PY 5	S-J Road Evaluation	Private survey firms (IPM Baseline and ACT Final)
RID Beneficiary Survey	Survey will collect data on water and sanitation infrastructure, income and expenditure, and health at household, enterprise water utility, representative of public health system, investors and water audit	PY 4, PY 5	RID beneficiary analysis, impact calculation and forecasting	Private Consulting firm (TBSC)
Road User's Survey	Measure number of vehicles and Travel Time on selected road segments, as well as conduct a random sample survey on the origin and destination of vehicles crossing Georgian borders	PY 4, PY 5	S-J Road monitoring and impact evaluation	Private survey firm (GORBI)

9. Implementation and Management of M&E

9.1. Organizational Structure and Responsibilities

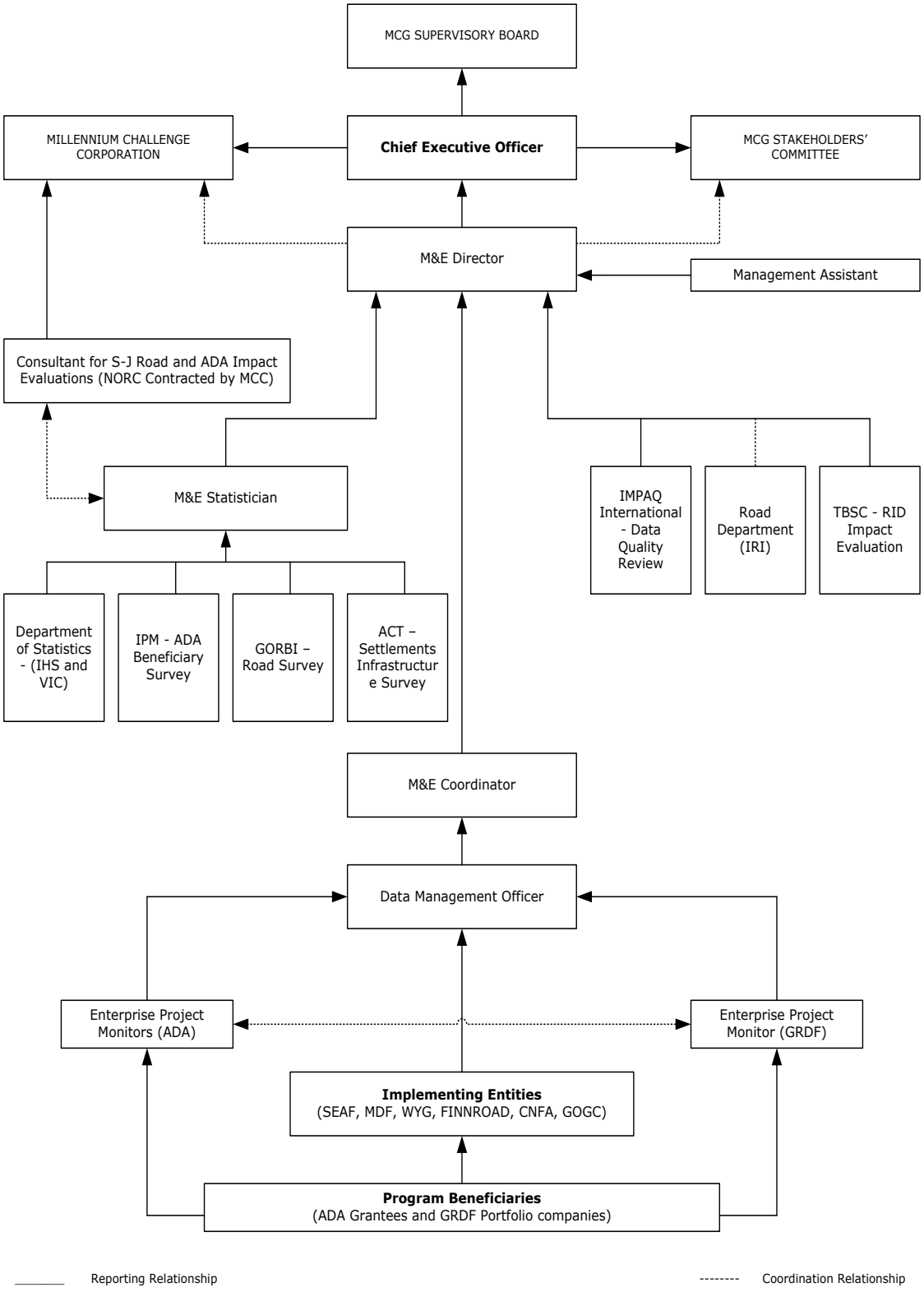
The M&E Unit established within MCG is responsible for overall monitoring and evaluation of the Program. The M&E Unit is headed by the Monitoring and Evaluation Director. The M&E Unit is primarily responsible for coordinating and ensuring quality and accuracy in data collection and reporting on the indicators in this M&E Plan. In addition, the unit oversees and manages all relevant contractors involved in data quality assessments, survey work, evaluations, and other activities. MCG works in close coordination with NORC, contracted by MCC, to ensure high quality evaluation for ADA and S-J Road Rehabilitation projects.

Effective Program monitoring and evaluation also depends on actions not only undertaken by the M&E Unit but also on the effective involvement of MCG staff, implementing entities, and other actors in the M&E process. The M&E unit will work closely with MCG project directors to track results and seek input on evaluations and other activities, with the MCG outreach team to communicate results to key stakeholders, and with implementing entities to support their data collection and reporting efforts and to ensure data quality and accuracy.

Other M&E unit responsibilities include:

- Develop training material and train implementing entity M&E staff as necessary regarding any M&E requirements they must fulfill;
- Collaborate in the design and implementation of impact evaluations with MCC;
- Develop and maintain Performance Indicator Reference Sheets, showing such indicator-specific details as its precise definition and detailed data gathering and calculation methods;
- Identify, together with MCC, relevant special studies;
- Coordinate Data Quality Audit process; and
- With MCC, review and revise the M&E Plan as necessary.

The organization chart below outlines the key positions and functions of the M&E unit, as well as the relationships between the units and implementing entities and contractors.


MCG SUPERVISORY BOARD
MILLENNIUM CHALLENGE CORPORATION
Chief Executive Officer
MCG STAKEHOLDERS' COMMITTEE
M&E Director
Management Assistant
Consultant for S-J Road and ADA Impact Evaluations (NORC Contracted by MCC)
M&E Statistician
IMPAQ International - Data Quality Review
Road Department (IRI)
TBSC - RID Impact Evaluation
Department of Statistics - (IHS and VIC)
IPM - ADA Beneficiary Survey
GORBI – Road Survey
ACT – Settlements Infrastructur e Survey
M&E Coordinator
Data Management Officer
Enterprise Project Monitors (ADA)
Enterprise Project Monitor (GRDF)
Implementing Entities
(SEAF, MDF, WYG, FINNROAD, CNFA, GOGC)
Program Beneficiaries
(ADA Grantees and GRDF Portfolio companies)
Reporting Relationship
Coordination Relationship

9.2. Review and Revision of the Program M&E Plan

The Program M&E Plan evolved over time to reflect changes in the Program's design and implementation and lessons learned.

The Disbursement Agreement contains a CP that the M&E Plan is current and updated prior to disbursement in Quarter 3 of each operating year. To that end, the M&E Unit of MCG, together with MCC, review the M&E Plan each year in anticipation of this requirement, and update and revise it as necessary. This review includes the following steps:

- Prove that the intended logical causal relationship of interventions are occurring;
- Check that the selected indicators are sufficiently and accurately reflecting program results;
- Add performance indicators to track significant results that are occurring but are not being measured;
- Update the indicator targets when appropriate;
- Check that the definitions of the indicators are correct and sufficiently precise and that the frequency of the data gathering is satisfactory; and
- Update details on the Evaluation Component as relevant.

The Performance Indicator Reference Sheets for indicators requiring revision also will be updated in conjunction with any revision of the Program M&E Plan.

9.3. Confidential Handling of Data

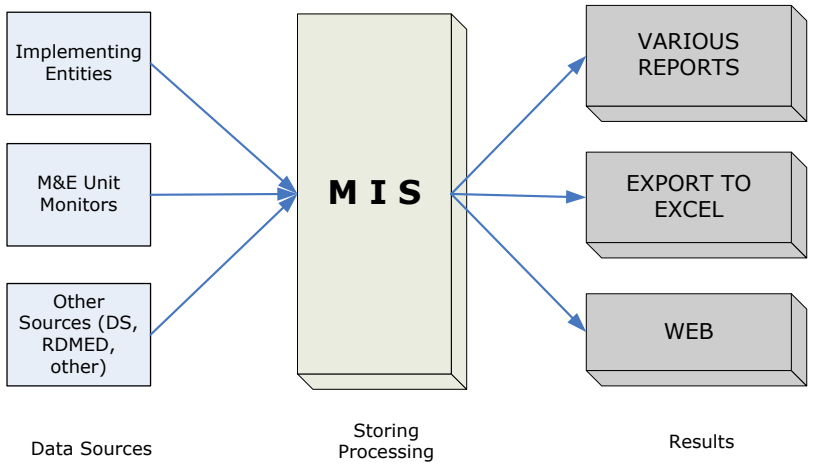
All MCG employees who have access to any of the primary and secondary data related to the Program are expected to treat that data as confidential, meaning that it cannot be distributed or shared outside of MCG or used for personal research or work without the consent of the M&E Unit Director. Any inappropriate use or dissemination of Program-related data will be treated as breach of confidentiality and the responsible party will be subject to MCG policies on this issue.

9.4. Management Information System for M&E and Coordination of Data Reporting

MilMIS is an information system designed for warehousing, processing and reporting of monitoring and other data collected under the M&E Plan. This file-server type software allows implementing entities and other stakeholders reporting data to MCG to send data from their own management information and computer systems via internet. MilMIS, in turn, receives data from implementing entities, checks and archives it, and provides a report-generation capability. MCG field monitors can also fill out specially-designed spreadsheets during data collection in

the field, which can then be uploaded into the system when they are able to connect to the internet.

Data Flow Chart



10. Budget

Summary M&E Budget ($000)

Expenditure Category/Sub-category	PY1 - PY3	PY 4	PY 5	PY1 - PY5
Equipment for the M&E Unit	41.2	0.8	8.0	50.0
Technical Assistance	140.8	194.5	250.5	585.8
Field Monitoring	99.6	16.2	121.5	237.3
Training	27.1	-	20.0	47.1
Workshop, Presentation, Review	116.7	21.7	5.5	143.9
Department of Statistics (IHS and VIC)	694.8	*487.8*	*682.7*	*1,865.4*
Department of Statistics (TA)	-	-	*500.0*	*500.0*
IPM (SIS Baseline Survey)	100.0	-	-	*100.0*
ACT (SIS Follow up Survey)	0.0	*26.1*	*263.9*	*290.0*
IPM (ADA Beneficiary Survey)	54.3	*27.1*	*189.9*	*271.3*
IMPAQ (Data Quality Review)	-	*172.9*	*172.9*	*345.8*
GORBI (Road Survey)	-	*249.2*	*406.5*	*655.7*
TBSC (RID Impact Evaluation - Phase I and II)	44.7	*418.9*	*61.8*	*525.3*
TBSC (RID Impact Evaluation - Phase III)	-	-	*326.6*	*326.6*
Total for Studies and Surveys	893.8	1,382.0	2,604.3	4,880.1
3% contingency (for studies and surveys)	-	-	150.9	150.9
Grand Total (included contingency)	**1,319.2**	**1,615.2**	**3,160.7**	**6,095.0**
Unallocated	-	-	2,355.0	2,355.0
Grant Total (included unallocated)	**1,319.2**	**1,615.2**	**5,515.7**	**8,450.0**

Annex I – Summary of Indicator and Target Changes

Below is a summary of all indicator modifications as a result of M&E Plan recent revision

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	Main Gas Pipeline Rehabilitation (MGPR)
Indicator	Collection Rate
Modification	Addition of new indicator
Justification	The indicator "Collection Rate" has been added to the Out-come Level for the Main Gas Pipeline Rehabilitation Project, as it is considered as an important indicator for calculation of benefits received from gas pipeline rehabilitation.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	S-J Road Rehabilitation (S-JRR)
Indicator	Value of signed contracts for feasibility, design, supervision and program management contracts
Modification	Addition of new indicator
Justification	This indicator has been added to the M&E Plan based on MCC recent request for the common indicators and special guidance related to all MCA-Countries.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	S-J Road Rehabilitation (S-JRR)
Indicator	Percent disbursed for contracted studies
Modification	Addition of new indicator
Justification	This indicator has been added to the M&E Plan based on MCC recent request for the common indicators and special guidance related to all MCA-Countries.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	S-J Road Rehabilitation (S-JRR)
Indicator	Value of signed contracts for road works
Modification	Addition of new indicator
Justification	This indicator has been added to the M&E Plan based on MCC recent request for the common indicators and special guidance related to all MCA-Countries.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	S-J Road Rehabilitation (S-JRR)
Indicator	Percent of contracted roads works disbursed
Modification	Addition of new indicator
Justification	This indicator has been added to the M&E Plan based on MCC recent request for the common indicators and special guidance related to all MCA-Countries.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	S-J Road Rehabilitation (S-JRR)
Indicator	Kilometers (km) of roads under works contracts
Modification	Addition of new indicator
Justification	This indicator has been added to the M&E Plan based on MCC recent request for the common indicators and special guidance related to all MCA-Countries.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	S-J Road Rehabilitation (S-JRR)
Indicator	Percent of contracted roads works disbursed
Modification	Addition of new indicator
Justification	This indicator has been added to the M&E Plan based on MCC recent request for the common indicators and special guidance related to all MCA-Countries.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	S-J Road Rehabilitation (S-JRR)
Indicator	Kilometers (km) of roads completed
Modification	Modification of Indicator title
Justification	This indicator existed into the M&E Plan with the title of "Road Paved/Completed", as the meaning remains the same had been modified only title of the indicator. Now it is consistent with the definitions used in common indicators guidance for MCA-Countries.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	S-J Road Rehabilitation (S-JRR)
Indicator	Structures Completed

Modification	Retirement of Indicator
Justification	This indicator was one of the activity/process indicators for the S-J Road Rehabilitation. Due to the unavailability of the structures in some newly added sections for S-J Road was made decision to retire the indicator.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	Regional Infrastructure Development (RID)
Indicator	Water Consumption
Modification	Retirement of Indicator
Justification	This indicator presented one of the common indicators, but is inappropriate in the urban scope of the RID Activity in Georgia. There is no ultimate target for the Water Consumption and changes can not be interpreted unambiguously. Therefore it was decided to retire the indicator.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	Regional Infrastructure Development (RID)
Indicator	Value of Construction Contracts Signed
Modification	Modification of Indicator title
Justification	This indicator existed into the M&E Plan with the title of "Works and Goods Contracts Signed", as the meaning remains the same had been modified only title of the indicator. Now it is consistent with the definitions used in common indicators guidance for MCA-Countries.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	Regional Infrastructure Development (RID)
Indicator	Percent of Contracted Water & Sanitation Works Disbursed
Modification	Modification of Indicator title
Justification	This indicator existed into the M&E Plan with the title of "Construction Works Completed", as the meaning remains the same and it measures the disbursement % for construction works. Now it is consistent with the definitions used in common indicators guidance for MCA-Countries.

Indicator Modification Form	
Date	October 2009
Project Objective	Key Regional Infrastructure Rehabilitated
Activity	Regional Infrastructure Development (RID)
Indicator	Percent of Contracted Water & Sanitation Works Disbursed

Modification	Addition of new indicator
Justification	This indicator has been added to the M&E Plan based on MCC recent request for the common indicators and special guidance related to all MCA-Countries

Indicator Modification Form	
Date	October 2009
Project Objective	Enterprises in the Regions Developed
Activity	ADA and GRDF
Indicator	Number of Enterprises Assisted
Modification	Addition of new indicator
Justification	This indicator has been added to the M&E Plan based on MCC recent request for the common indicators and special guidance related to all MCA-Countries. It aggregates ADA grantee enterprises and GRDF Portfolio Companies, though they were counted before separately for both Activities, now the summary number will be available on Project Objective level for the Enterprise Development Project.

Indicator Modification Form	
Date	October 2009
Project Objective	Enterprises in the Regions Developed
Activity	Georgia Regional Development Fund (GRDF)
Indicator	Value of Agricultural and Rural Loans
Modification	Addition of new indicator
Justification	This indicator has been added to the M&E Plan based on MCC recent request for the common indicators and special guidance related to all MCA-Countries. It will count the value of invested loans conducted by the GRDF in the rural regions of Georgia.

Annex II – M&E Indicators

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Program Goal: Increased Economic Growth and Reduced Poverty in the Regions of Georgia					
Poverty Gap in the Samtskhe-Javakheti Region	The mean distance separating the population from the poverty line, defined by DS as the "subsistence minimum"	%	Integrated Household Survey	End of Compact	Department of Statistics
Poverty Incidence in the Samtskhe-Javakheti Region	The fraction of population under the poverty line, defined by DS as the "subsistence minimum"	%	Integrated Household Survey	End of Compact	Department of Statistics
Household Benefits Generated from Compact Interventions	Aggregate cumulative household savings derived from RID and S-J Road Rehabilitation and household net incomes derived from ADA and GRDF	USD `000	Road and RID Surveys and Monitoring Data	End of Compact	GORBI, TBSC, SEAF, CNFA/MCG
Project Objective: Key Regional Infrastructure Rehabilitated					
Household savings from Infrastructure Rehabilitation Activities	Aggregate cumulative savings in vehicle operating costs from S-J Road activity and savings in household utility expenditures from RID activity	USD `000	Road and RID Surveys	Annually (PY4, PY5)	GORBI and TBSC
Outcome: Improved Transport for Regional Trade and Access to Social Services					
Savings in Vehicle Operat-	The VOCs are calculated	USD	HDM-4 database	Annually (PY4,	GORBI

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
ing Costs (VOC)	from a composite of vehicle use costs prices (e.g., parts, wear and tear, fuel consumption, etc.) to obtain an overall cost per kilometer to the driver.	`000		PY5)	
International Roughness Index (IRI)	IRI is a road–surface quality measure for road sections (height of jumps in meters per kilometer distance). The IRI though measured in meters/kilometers, can also be expressed as a dimensionless quantity (i.e., an index)	M/Km	IRI calculation conducted by Road Department	Annually (PY4, PY5)	Road Department
Annual Average Daily Traffic (AADT)	Average number of vehicle that transit the S-J Road each day	Vehicle	Road Survey	Annually (PY4, PY5)	GORBI
Travel Time	Travel time is the total amount of time it takes to drive the road from Teleti to Ninotsminda to the Armenia border , from Akhalkalaki to Turkish Boarder and from Khertvisi to Vardzia	Hour and minute	Road Survey	Annually (PY4, PY5)	GORBI
Activity/Process: Samtskhe-Javakheti Road Rehabilitation					

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Construction Works Initiated	Initiation of construction works for Contract 1 and Contract 2	Date	Progress report	Once per contract	Finnroad
Construction Works Completed	Cumulative percent of works completed for each contract (Earthworks; Drainage; Pavement; Ancillary)	%	Progress report	Quarterly	Finnroad
Value of signed contracts for feasibility, design, supervision and program management contracts	Cumulative value of signed contracts with Kocks, Finnroad and WYG	USD `000	MCG legal records	Quarterly	MCG
Percent disbursed for contracted studies	Cumulative percent of disbursements for the contracts of Kocks, Finnroad and WYG	%	Fiscal Agent records	Quarterly	Fiscal Agent
Value of signed contracts for road works	Cumulative value of all signed contracts with road construction companies	USD `000	MCG legal records	Quarterly	MCG
Percent of contracted roads works disbursed	Cumulative percent of disbursements for all contracted road works	%	Fiscal Agent records	Quarterly	Fiscal Agent
Kilometers (km) of roads under works contracts	Cumulative kilometers of roads under all works contracts	Km	MCG legal records	Quarterly	MCG

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Kilometers (km) of roads completed	Cumulative kilometers of asphalt paved road completed for each contract	Km	Progress report	Quarterly	Finnroad
Outcome: Reliable Supply of Energy					
Sites Rehabilitated	Cumulative number of Sites, where pipeline rehabilitation have been completed covering Phase I Phase II and Phase III	Number	Progress reports	Quarterly	GOGC
Collection Rate	Collection rate presents share of collected fees received by GOGC from the sale of natural gas	%	Progress reports	Quarterly	GOGC
Activity/Process: Gas Pipeline Rehabilitation (Phase II)					
Contracts for Materials Signed	Cumulative number of contracts signed for purchasing of materials for rehabilitation of pipeline	Number	MCG legal records	Quarterly	MCG
Total Goods and Materials Delivered	Confirmation that the goods and materials considered by contracts has been delivered	Date	MCG acceptance documents	Once per contract	MCG
Equipment Delivered	Confirmation that the equipment for GOGC has been delivered	Date	MCG acceptance documents	Once per contract	MCG

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Construction Works RfP Published	Confirmation that the RfP for construction works has been published	Date	MCG procurement records	Once per contract	MCG
Construction Mobilization Completed	Confirmation that the mobilization activities for construction works has been completed	Date	Progress reports	Quarterly	GOGC
RAP Implementation Completed (through Negotiations and Payment of Compensation, and Land allocation)	Confirmation that the RAP Implementation has been completed	Date	Progress reports	Once per contract	GOGC
Construction Works Completed	Cumulative percent of works completed during the accounting period (including disaggregation by project sites)	%	Progress reports	Quarterly	GOGC
Land Restoration Activities Completed	Confirmation that the land restoration activities has been completed	Date	Progress reports	Once per site	GOGC
Activity/Process: Gas Pipeline Rehabilitation (Phase III)					
Design Accepted	Confirmation that the design of phase III of pipeline rehabilitation activity has been accepted	Date	MCC no-objection	Once per Phase III	MCC/Jacobs

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Contracts for Materials Signed	Cumulative number of contracts signed for purchasing of materials for rehabilitation of pipeline	Number	MCG legal records	Quarterly	MCG
Total Goods and Materials Delivered	Confirmation that the goods and materials considered by contracts has been delivered	Date	MCG acceptance documents	Once per contract	MCG
Construction Works RfP Published	Confirmation that the RfP for construction works has been published	Date	MCG procurement records	Once per contract	MCG
Construction Mobilization Completed	Confirmation that the mobilization activities for construction works has been completed	Date	Progress reports	Once per contract	GOGC
RAP Implementation Completed (through negotiations and payment of Compensation, and Land allocation)	Confirmation that the RAP Implementation has been completed	Date	Progress reports	Once per contract	GOGC
Construction Works Completed	Cumulative percent of works completed during the accounting period (including disaggregation by project sites)	%	Progress reports	Quarterly	GOGC

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Land Restoration Activities Completed	Confirmation that the land restoration activities has been completed	Date	Progress reports	Once per site	GOGC
Outcome: Improved Potable Water Supply					
Savings in Household Expenditures for all RID Sub-projects	Savings in household costs associated with the reduction of household utility costs, increased water quality and improved supply availability	USD `000	Baseline and Follow up Survey	Annually (PY4, PY5)	TBSC
Population Served by all RID Sub-projects	Total number of population of cities: Poti, Kutaisi, Kobuleti, Borjomi and town Bakuriani, which will benefit from the improved potable water supply systems	Number	Baseline and Follow up Survey	Annually (PY4, PY5)	TBSC
Activity/Process: Regional Infrastructure Development					
Board Memos Approved	Cumulative number of Board Memos includes Investment Memos, Feasibility Studies, Technical Design	Number	MCC no-objection/Board Meeting Minutes	Quarterly	MCG
Grant Agreements Signed With MDF	Cumulative number of grant agreements signed for Investment Projects, Feasibility Studies and Technical Design	Number	MCG legal documentation	Quarterly	MCG

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Value of Grant Agreements Signed	Cumulative total value of grant agreements signed in accordance with multi-year financial plan. Includes: Feasibility Studies, engineering design, and 5 Investment Projects	USD `000	MCG legal documentation	Quarterly	MCG
EIA/Technical Designs Completed	Cumulative number of EIA/Technical Designs completed and approved by MCG/WB/EBRD	Number	MDF Environmentalists' Records	Quarterly	MDF Environmentalist
International Tenders Announced	Cumulative number of international tenders announced by MDF procurement	Number	MDF Procurement	Quarterly	MDF
Works and Goods Contracts Signed	Cumulative number of Contracts for Works and Goods Signed by MDF/MCG	Number	MDF Procurement	Quarterly	MDF
Value of Construction Contracts Signed	Cumulative Value of Works and Contracts signed by MDF with construction companies	USD `000	MDF Procurement	Quarterly	MDF
Percent of Contracted Water & Sanitation Works Disbursed	Cumulative percent of disbursements for all contracts signed by MDF with construction companies	%	MDF Procurement	Quarterly	MDF

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Sub-projects with Works Initiated	Cumulative number of investment projects, where mobilization was completed	Number	MDF Quarterly reports	Once per Contract	MDF
Funding Contribution from other Donors	Cumulative total value of contributions for co-financing	USD `000	MCG legal documentation	Quarterly	MCG
Funding Contribution from Government of Georgia	Cumulative total value of contributions for co-financing	USD `000	MCG legal documentation	Quarterly	MCG
RID Funding Contribution as Share of Total Funding	RID Funding (MCC/MCG) as a percent of total sub-project funding, total and disaggregated by sub-projects	%	MDF Quarterly reports	Quarterly	MDF
Sub-projects Completed	Cumulative number of RID Sub-projects considers, completed construction or completed feasibility studies	Number	MDF Quarterly reports	Quarterly	MDF
Project Objective: Enterprises in the Regions Developed					
Jobs created from Enterprise Development Activities	Aggregate cumulative jobs created by the Enterprise Development Activities – comprises of total number of additional jobs created by ADA grantees and additional number of employees at GRDF Portfolio Companies(PCs)	Number	Aggregation made by MCG	Annually	MCG
Household Net Income	Aggregate cumulative increase	USD	Aggregation	Annually	MCG

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
	in household net income earned by ADA Primary Producers, wage income earned by recipients of jobs created by ADA grantees (PP, VA, VCI, and FSC), and the wages paid by GRDF PCs per GRDF Investment Policy Guidelines (IPG)	`000	made by MCG		
Number of Enterprises Assisted	Cumulative number of grant agreements signed with ADA grantees and investment contracts signed with GRDF PCs	Number	Aggregation made by MCG	Quarterly	MCG
Outcome: Increased Investment in Small and Medium Enterprises					
Increase in Gross Revenues of Portfolio Companies (PCs)	Aggregate cumulative annual increase in gross revenues	USD `000	PC financials	Quarterly	SEAF
Increase in PC Employees	Aggregate cumulative increase in PC employees other than the Chief Executive Officer and any employee owning more than 10% of the equity of the Investee. Under definition of the PC employees are considered any full or part-time employees that are offi-	Number	PC financials	Quarterly	SEAF

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
	cial "employees" of the PCs working under employment contracts				
Increase in Local Suppliers to the PCs	Aggregate cumulative increase in local suppliers, which considers: individual entrepreneurs, registered firms or any residents of Georgia, that provide raw materials, inputs, equipment or any type of "locally-sourced" goods or services to the PCs as defined in the "Increase in Locally-Sourced Goods and Services" indicator definition	Number	PC financials	Quarterly	SEAF
Increase in Wages Paid to the PC Employees	Aggregate cumulative increase in wages as defined in IPG 5.2b: "All wages of any form combined with the cost of benefits for all employees of the Investee other than the chief executive officer and any employee owning more than 10% of the equity of the Investee." Taxes are excluded from the figure.	USD `000	PC financials	Quarterly	SEAF

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Increase in Locally Sourced Goods and Services Purchased by the PCs	Aggregate cumulative increase in "Locally-Sourced Goods and Services", as defined in IPG section 5.2d: "In the case of goods, as having at least 50% of the value of the goods purchased derived from production within Georgia and in case of services, as having 100% of services purchased provided by individuals resident in Georgia or entities within a Georgian presence"	USD `000	PC financials	Quarterly	SEAF
Activity/Process: Georgia Regional Development Fund					
Board Meetings	Cumulative number of the GRDF Board of Directors meetings	Number	GRDF Quarterly Reports	Quarterly	SEAF
Funds Committed to the PCs	Aggregate cumulative amount of funds committed to the PCs will be defined based on the value of Investment Contracts signed with the PCs	USD `000	GRDF Quarterly Reports	Quarterly	SEAF
Funds Disbursed to the PCs	Aggregate cumulative amount of funds disbursed for the investment to PCs	USD `000	GRDF Quarterly Reports	Quarterly	SEAF

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Value of Agricultural and Rural Loans	Aggregate cumulative amount of loans invested into the PCs in the regions of Georgia	USD `000	GRDF Quarterly Reports	Quarterly	SEAF
Debt Investments into PCs	Aggregate cumulative amount as defined according to definition of "Risk Capital" in IPG section 4. The indicator is defined as "debt with at least two of the three features listed under section 4.1a-c".	USD `000	SEAF Financials	Quarterly	SEAF
Equity Investments into PCs	Aggregate cumulative amount as defined according to the definition of "Risk Capital" in IPG section 4. The indicator is defined as "preferred or ordinary equity shares" For each PC, this will be the book value of equity invested in PCs.	USD `000	SEAF Financials	Quarterly	SEAF
Applicant Businesses	Under cumulative number of applicant businesses are considered those potential customers for the GRDF investments (according to the FMA), who submit a completed questionnaire or an equivalently complete business plan to SEAF	Number	SEAF Records	Quarterly	SEAF

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Portfolio Companies (PC)	Cumulative number of PCs, which are defined as Georgian small or medium enterprises meeting the requirements set forth in the IPG, in which the Fund Manager, on behalf of the Fund, makes an investment	Number	SEAF Records	Quarterly	SEAF
Businesses Receiving Technical Assistance (TA)	Cumulative number of businesses that have received or are receiving TA from the Fund Manager through the TA Facility. The indicator considers both PC's and non PC's	Number	SEAF Records	Quarterly	SEAF
Amount of Technical Assistance Provided by the TA Facility	Cumulative amount of TA Facility Funds disbursed from the Permitted Account for TA Projects (as defined in FMA). It considers both: TA funds used for the PC's and non-PC's	USD `000	SEAF Records	Quarterly	SEAF
Amount of Matching Contribution Provided by the Businesses for Receiving of Technical Assistance	Cumulative amount of matching contribution provided by the Portfolio and non-Portfolio companies for the	USD `000	SEAF Records	Quarterly	SEAF

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
	receiving of TA				
Outcome: Improved Economic Performance in Agribusinesses					
Jobs Created	Cumulative number of new jobs created by ADA grantees, including PPs, Vas, VCIs and FSCs	Number	Grantee reporting forms	Quarterly	CNFA
Household Net Income	Cumulative household net income earned by ADA Primary Producers, wage income earned by recipients of jobs created by ADA grantees (PP, VA, VCI, and FSC)	USD `000	Grantee reporting forms	Quarterly	CNFA
Firm Income	Cumulative amount of revenues received by: Vas, VCIs, and FSCs, to which are deducted all expenses before income tax	USD `000	Grantee reporting forms	Quarterly	CNFA
Beneficiaries	Cumulative number of beneficiaries (Direct and Indirect); includes: Direct Beneficiaries – number of direct grant recipients and new jobs created, plus indirect beneficiaries – clients for FSCs and suppliers of raw materials for VA/VCI	Number	Grantee reporting forms (direct beneficiaries) and ADA survey data (indirect beneficiaries)	Quarterly/Annually	CNFA/MCG

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
Activity/Process: Agribusiness Development Activity					
Selection Rounds Completed	Cumulative number of grant application selection rounds announced by the ADA Project	Number	CNFA reports	Quarterly	CNFA
Grant Agreements Signed (PP)	Cumulative number of grant agreements signed by the ADA Project with the Primary Producers	Number	CNFA reports	Quarterly	CNFA
Grant Agreements Signed (VA)	Cumulative number of grant agreements signed by the ADA Project with the Value Adding Enterprises	Number	CNFA reports	Quarterly	CNFA
Grant Agreements Signed (VCI)	Cumulative number of grant agreements signed by the ADA Project with the Value Chain Enterprises	Number	CNFA reports	Quarterly	CNFA
Total Value of Grant Agreements Signed	Cumulative total value of the signed grant agreements for all types of funded projects	USD `000	CNFA reports	Quarterly	CNFA
Amount of Grant Funds Disbursed	Cumulative amount of disbursed funds for the financing of the ADA projects	USD `000	CNFA reports	Quarterly	CNFA
Gross Sales of Agro-inputs and Services at Farm Service Centers	Cumulative amount of gross sales without deducting of any expenses or taxes generated by	USD `000	Grantee reporting forms	Quarterly	CNFA

Indicator	Definition	Unit of Measure	Data Source	Frequency of Reporting	Responsible Party
	the FSC				
Gross Sales of Products at Value Adding and Value Chain Enterprises	Gross sales without deducting of any expenses or taxes generated by the VA and VCI Enterprises	USD `000	Grantee reporting forms	Quarterly	CNFA
Number of Raw Material Suppliers to the Value Adding and Value Chain Enterprises	Cumulative number of farmers and entrepreneurs providing raw materials to the VA and VCI Enterprises	Number	Grantee reporting forms	Quarterly	CNFA
Value of Raw Material Supplies Delivered to the Value Adding and Value Chain Enterprises	Indicator defines the value and type of the agricultural products, which are purchased by the VA and VCI enterprises from the local suppliers	USD `000	Grantee reporting forms	Quarterly	CNFA

Annex III – Baselines and Targets

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Program Goal: Increased Economic Growth and Reduced Poverty in the Regions of Georgia									
Poverty Gap in the Samtskhe-Javakheti Region	%	2004	DS – Inte-grated Household Survey	20.7	n/a	n/a	n/a	n/a	19.9
Poverty incidence in the Samtskhe-Javakheti Region	%	2004	DS – Inte-grated Household Survey	55.9	n/a	n/a	n/a	n/a	50.0
Household Benefits Generated from Compact Interventions[5]	USD '000	2008	Aggregation made by MCG	0	n/a	n/a	n/a	n/a	38,405
Project Objective: Key Regional Infrastructure Rehabilitated									
Household Savings from Infrastructure Rehabilitation Activities	USD '000	2008	Aggregation made by MCG	0	n/a	n/a	n/a	8,246	30,796
Outcome: Improved Transport for Regional Trade and Access to Social Services									
Savings in Vehicle Operating Costs (VOC)	USD '000	2006	Feasibility study	0	0	0	0	157	13,177
International Roughness Index (IRI)	M/Km	2006	Feasibility study	16.6	16.6	16.6	16.6	14.3	2.5

[5] Indicator includes: VOC, HH expenditure savings from RID and HH income from GRDF and ADA (wages and net income generated by Primary Producers)

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Annual Average Daily Traffic (AADT)	Vehicle	2006	Feasibility study	612	612	612	612	612	1,183
Travel Time	Hours and minutes	2006	Feasibility study	8:13	8:13	8:13	8:13	5:33	2:45
Activity/Process: Samtskhe-Javakheti Road Rehabilitation									
Value of signed contracts for feasibility, design, supervision and management	USD `000	2006	MCG Legal Records	0	3,950[6]	5,690	11,980	11,980	11,980
Percent disbursed for contracted studies	%	2006	Fiscal Agent	0	3	5	10	40	100
Value of signed contracts for road works	USD `000	2007	MCG Legal Records	0	0	54,659	87,760	165,354	165,354
Percent of contracted roads works disbursed	%	2007	Fiscal Agent	0	0	3	7	40	100
Kilometers (km) of roads under works contracts	Km	2007	MCG Legal Records	0	0	71.7	123.1	220.2	220.2
Activity/Process: Samtskhe-Javakheti Road Rehabilitation (Contract I) Ashtrom									
Construction Works Initiated	Dates	2008	Construction works implementation plan	n/a	n/a	n/a	30 April 2008	n/a	n/a

[6] 3.95 Million for Kocks feasibility study was funded from 609g managed by MCC

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Construction Works completed	%	2008	Construction works im-plementation plan	0	0	0	25.0	56.0	100.0
Earthworks completed	%	2008	Construction works im-plementation plan	0	0	0	60.0	90.0	100.0
Drainage completed	%	2008	Construction works im-plementation plan	0	0	0	40.0	84.0	100.0
Ancillary works completed	%	2008	Construction works im-plementation plan	0	0	0	0	70.0	100.0
Kilometers (km) of roads completed	Km	2008	Construction works im-plementation plan	0	0	0	0	21.0	71.7
Activity/Process: Samtskhe-Javakheti Road Rehabilitation (Contract II) Black Sea Group									
Construction Works Initiated	Dates	2008	Construction works im-plementation plan	n/a	n/a	n/a	31 May 2008	n/a	n/a

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Construction Works Completed	%	2008	Construction works im-plementation plan	0	0	0	20.0	62.0	100.0
Earthworks Completed	%	2008	Construction works im-plementation plan	0	0	0	55.0	85.0	100.0
Drainage Completed	%	2008	Construction works im-plementation plan	0	0	0	40.0	80.0	100.0
Ancillary works completed	%	2008	Construction works im-plementation plan	0	0	0	0	65.0	100.0
Kilometers (km) of roads completed	Km	2008	Construction works im-plementation plan	0	0	0	0	25.0	51.4
Activity/Process: Samtskhe-Javakheti Road Rehabilitation (Contract III) Azerinsaatservis									
Construction Works Initiated	Dates	2009	Construction works im-plementation plan	n/a	n/a	n/a	22 April 2009	n/a	n/a

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Construction Works Completed	%	2009	Construction works im-plementation plan	0	0	0	0	48.0	100.0
Earthworks Completed	%	2009	Construction works im-plementation plan	0	0	0	0	65.0	100.0
Drainage Completed	%	2009	Construction works im-plementation plan	0	0	0	0	50.0	100.0
Ancillary works completed	%	2009	Construction works im-plementation plan	0	0	0	0	60.0	100.0
Kilometers (km) of roads completed	Km	2009	Construction works im-plementation plan	0	0	0	0	5.0	19.2
Activity/Process: Samtskhe-Javakheti Road Rehabilitation (Contract IV) Black Sea Group									
Construction Works Initiated	Dates	2009	Construction works im-plementation plan	n/a	n/a	n/a	24 April 2009	n/a	n/a

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Construction Works Completed	%	2009	Construction works im-plementation plan	0	0	0	0	53.0	100.0
Earthworks Completed	%	2009	Construction works im-plementation plan	0	0	0	0	65.0	100.0
Drainage Completed	%	2009	Construction works im-plementation plan	0	0	0	0	50.0	100.0
Ancillary works completed	%	2009	Construction works im-plementation plan	0	0	0	0	60.0	100.0
Kilometers (km) of roads completed	Km	2009	Construction works im-plementation plan	0	0	0	0	3.0	11.1
Activity/Process: Samtskhe-Javakheti Road Rehabilitation (Contract V) Azerinsaatservis									
Construction Works Initiated	Dates	2009	Construction works im-plementation	n/a	n/a	n/a	12 June 2009	n/a	n/a

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
			plan						
Construction Works Completed	%	2009	Construction works implementation plan	0	0	0	0	50.0	100.0
Earthworks Completed	%	2009	Construction works implementation plan	0	0	0	0	60.0	100.0
Drainage Completed	%	2009	Construction works implementation plan	0	0	0	0	50.0	100.0
Ancillary works completed	%	2009	Construction works implementation plan	0	0	0	0	55.0	100.0
Kilometers (km) of roads completed	Km	2009	Construction works implementation plan	0	0	0	0	8.0	19.0
Activity/Process: Samtskhe-Javakheti Road Rehabilitation (Contract VI) Azerinsaatservis									
Construction Works Initiated	Dates	2009	Construction works im-	n/a	n/a	n/a	10 August	n/a	n/a

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
			plementation plan				2009		
Construction Works Completed	%	2009	Construction works im-plementation plan	0	0	0	0	16.0	100.0
Earthworks Completed	%	2009	Construction works im-plementation plan	0	0	0	0	35.0	100.0
Drainage Completed	%	2009	Construction works im-plementation plan	0	0	0	0	30.0	100.0
Ancillary works completed	%	2009	Construction works im-plementation plan	0	0	0	0	25.0	100.0
Kilometers (km) of roads completed	Km	2009	Construction works im-plementation plan	0	0	0	0	0	47.8
Outcome: Reliable Supply of Energy									
Sites Rehabilitated	Number	2006	IEA between MCG and	0	0	6	15	23	23

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
			GOGC						
Collection Rate	%	2006	IEA between MCG and GOGC	47	50	95	95	95	95
Activity/Process: Gas Pipeline Rehabilitation (Phase II)									
Contracts for Materials Signed	number	2007	Pipes Supply Agreement & IEA (for TA)	0	0	1	2	2	2
Total Goods and Materials Delivered	Dates	2007	Pipes Supply Agreement	n/a	n/a	n/a	01 August 2008	n/a	n/a
The Equipment Delivered (TA component for GOGC)	Dates	2007	IEA between MCG and GOGC	n/a	n/a	n/a	31 December 2008	n/a	n/a
Construction Works RfP Published	Dates	2007	MCG bidding document	n/a	n/a	n/a	08 April 2008	n/a	n/a
Construction Mobilization Completed	Dates	2007	MCG bidding document	n/a	n/a	n/a	07 September 2008	n/a	n/a
RAP Implementation Completed (through negotiations and payment of compensation, and land allocation)	Dates	2007	IEA between MCG and GOGC	n/a	n/a	n/a	01 September 2008	n/a	n/a
Construction Works Completed	%	2007	MCG bidding document	0	0	0	100.0	100.0	100.0

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Land Restoration Activities Completed	Dates	2007	MCG bidding document	n/a	n/a	n/a	31 March 2009	n/a	n/a
Activity/Process: Gas Pipeline Rehabilitation (Phase III)									
Design Accepted	Dates	2008	Project Execution Plan	n/a	n/a	n/a	31 October 2008	n/a	n/a
Contracts for Materials Signed	Number	2008	Pipes Supply Agreement	0	0	0	1	1	1
Total Goods and Materials Delivered	Dates	2008	Pipes Supply Agreement	n/a	n/a	n/a	n/a	01 May 2009	n/a
Construction Works RfP Published	Dates	2008	MCG bidding document	n/a	n/a	n/a	01 December 2008	n/a	n/a
Construction Mobilization Completed	Dates	2008	MCG bidding document	n/a	n/a	n/a	n/a	20 May 2009	n/a
RAP Implementation Completed (through negotiations and payment of Compensation, and land allocation)	Dates	2008	IEA between MCG and GOGC	n/a	n/a	n/a	n/a	30 April 2009	n/a
Construction Works Completed	%	2008	MCG bidding document	0	0	0	0	100.0	100.0
Land Restoration Activities Completed	Dates	2008	MCG bidding document	n/a	n/a	n/a	n/a	01 March 2010	n/a
Outcome: Improved Potable Water Supply									
Savings in Household Expenditures	USD	2006	Feasibility	0	0	0	0	8,089	17,619

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
for all RID Sub-projects	'000		Studies						
Population Served by all RID Sub-projects	Number	2006	Feasibility Studies	0	0	0	42,000	228,000	265,964
Activity/Process: Regional Infrastructure Development									
Board Memos Approved	Number	2006	IEA between MCG and MDF	0	0	6	8	8	8
Grant Agreements Signed With MDF	Number	2006	IEA between MCG and MDF	0	0	6	8	8	8
Value of Grant Agreements Signed	USD '000	2006	IEA between MCG and MDF	0	0	29,092	38,892	54,600	54,600
EIA/Technical Designs Completed	Number	2006	IEA between MCG and MDF	0	0	1	5	5	5
International Tenders Announced	Number	2006	IEA between MCG and MDF	0	0	5	14	20	20
Works and Goods Contracts Signed	Number	2006	IEA between MCG and MDF	0	0	3	10	17	17
Value of Construction Contracts Signed	USD '000	2006	IEA between MCG and MDF	0	0	5,500	28,800	54,600	54,600

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Percent of Contracted Water & Sanitation Works Disbursed	%	2006	IEA between MCG and MDF	0	0	0	10.0	45.0	100.0
Sub-projects with Works Initiated	Number	2006	IEA between MCG and MDF	0	0	1	4	5	5
Funding Contribution from other Donors	USD '000	2006	IEA between MCG and MDF	0	0	21,117	24,207	24,207	24,207
Funding Contribution from Govt. of Georgia	USD '000	2006	IEA between MCG and MDF	0	0	9,036	11,646	16,000	16,000
RID Funding Contribution as Share of Total Funding	%	2006	IEA between MCG and MDF	0	0	0	52.0	52.0	52.0
Sub-projects Completed	Number	2006	IEA between MCG and MDF	0	0	0	1	1	5
Project Objective: Enterprises in the Regions Developed									
Jobs Created from Enterprise Development Project	Number	2006	Aggregation made by MCG	0	0	674	2,043	3,700	5,269
Household Net Income	USD `000	2006	Aggregation made by MCG	0	0	137	1,543	5,581	7,609

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Number of Enterprises Assisted	Number	2006	Aggregation made by MCG	0	12	99	208	290	296
Outcome: Increased Investment in Small and Medium Enterprises									
Increase in Gross Revenues of Portfo-lio Companies (PCs)	USD `000	2007	Activity Monitoring Plan	0	0	250	5,310	16,890	22,200
Increase in PC Employees	Number	2007	Activity Monitoring Plan	0	0	6	378	1,250	1,892
Increase in Local Suppliers to the PCs	Number	2007	Activity Monitoring Plan	0	0	5	501	2,007	2,508
Increase in Wages Paid to the PC Em-ployees	USD `000	2007	Activity Monitoring Plan	0	0	22	623	2,495	3,118
Increase in Locally Sourced Goods and Services Purchased by the PCs	USD `000	2007	Activity Monitoring Plan	0	0	12	1,266	5,065	6,332
Activity/Process: Georgia Regional Development Fund									
Board Meetings	Number	2006	SEAF workplan	0	0	2	6	10	14
Funds Committed to the PCs	USD `000	2006	SEAF workplan	0	0	3,000	8,500	14,750	22,000

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Funds Disbursed to the PCs	USD `000	2006	SEAF workplan	0	0	1,700	4,250	11,800	22,000
Value of Agricultural and Rural Loans	USD `000	2009	SEAF workplan	0	0	2,000	5,000	12,000	20,000
Debt Investments into PCs	USD `000	2007	Activity Monitoring Plan	0	0	2,750	6,800	11,250	15,750
Equity Investments into PCs	USD `000	2007	Activity Monitoring Plan	0	0	250	1,700	3,500	6,250
Applicant Businesses	Number	2007	Activity Monitoring Plan	0	10	40	120	160	220
Portfolio Companies (PC)	Number	2007	Activity Monitoring Plan	0	0	3	8	14	20
Businesses Receiving Technical Assis-tance(TA)	Number	2007	Activity Monitoring Plan	0	0	5	9	16	27
Amount of Technical Assistance Pro-vided by the TA Facility	USD `000	2007	Activity Monitoring Plan	0	0	200	350	1,100	1,700
Amount of Matching Contribution Provided by the Businesses for Receiv-ing of Technical Assistance	USD `000	2007	Activity Monitoring Plan	0	0	44	77	224	334

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Outcome: Improved Economic Performance in Agribusiness (ADA)									
Jobs Created	Number	2007	Activity Monitoring Plan	0	0	668	1,665	2,450	3,377
Household Net Income	USD `000	2007	Activity Monitoring Plan	0	0	115	920	3,086	4,491
Firm Income	USD `000	2007	Activity Monitoring Plan	0	0	13	189	525	1,046
Beneficiaries (Direct and Indirect)	Number	2007	Activity Monitoring Plan	0	0	6,494	25,242	50,991	75,996
Activity/Process: Agribusiness Development Activity									
Selection Rounds Completed	Number	2006	CNFA workplan	0	3	6	9	9	9
Grant Agreements Signed (PP)	Number	2006	CNFA workplan	0	9	65	125	185	185
Grant Agreements Signed (VA)	Number	2006	CNFA workplan	0	0	8	16	18	18
Grant Agreements Signed (VCI)	Number	2006	CNFA workplan	0	0	10	33	41	41
Grant Agreements Signed (FSC)	Number	2006	CNFA workplan	0	3	13	26	32	32

Indicator	Unit	Base-line Year	Baseline Source	Baseline	PY1	PY2	PY3	PY4	PY5
Total Value of Grant Agreements Signed	USD `000	2006	CNFA workplan	0	379	3,743	8,702	16,251	16,251
Amount of Grant Funds Disbursed	USD `000	2006	CNFA workplan	0	114	1,497	4,786	10,270	16,251
Gross Sales of Agro-inputs and Services at Farm Service Centers	USD `000	2007	Activity Monitoring Plan	0	0	35	176	1,870	2,338
Gross Sales of Products at Value Add-ing and Value Chain Enterprises	USD `000	2007	Activity Monitoring Plan	0	0	18	108	2,205	2,757
Number of Raw Material Suppliers to the Value Adding and Value Chain Enterprises	Number	2007	Activity Monitoring Plan	0	0	6	27	693	866
Value of Raw Material Supplies Deli-vered to the Value Adding and Value Chain Enterprises	USD `000	2007	Activity Monitoring Plan	0	0	11	65	984	1,230

Annex IV – Detailed Description of Impact Evaluations

ADA

Key Question
How did the provision of ADA grants to farmers and farm-related businesses impact household poverty levels and create jobs, and how might this project affect these goals if extended nationally?

Methodology
The impact evaluation was designed to assess the program's impact on increasing income, reducing poverty, and creating jobs for direct and indirect beneficiaries. The goal of the impact evaluation is to measure the net impact of the ADA activity – i.e., what happened with the program versus what would have happened if the Activity had not been implemented (also known as the "counterfactual") – and to determine those results that can be reasonably attributed to the Program, rather than other factors. Most importantly, the evaluation was designed to measure the difference in the change in income of direct beneficiaries, the treatment group (grantees and individuals who receive new jobs created by the grants), as compared to a statistically similar group, the comparison group. Currently, the team is assessing the extent to which it remains feasible to measure change in income for any of the groups assessed given the data collected thus far.

The following is a brief description of the particular evaluation methodology for each type of grant. Specific issues, such as selection procedures, data collection, etc., will be discussed in a later section.

Primary Producers: The original plan was to evaluate Primary Producer (PP) component using an experimental design. This meant that eligible PP grant applicants (those who receive a passing score) were to be randomly selected from among the qualified pool to receive an actual grant (the treatment group). Those who were not selected were to be put into a control group to compare against the treatment group. The performance of each group were to be tracked for a period of time, and then members of the control group would be released (so they can be provided a grant) after the difference (if any) between the two groups was measured to determine the program's net impact. However, due to program changes, control cases were released and randomization was discontinued. With the release of some of the control cases prematurely and discontinuation of the randomization process, the evaluation moved towards the use of the comparison group in a quasi-experimental approach.

The treatment group will demonstrate what happens as a result of the program, and the control group will represent the counterfactual, or what would have happened in the absence of the program. The evaluation will determine if there are any differences between the two that have statistical significance; if that is the case, those differences can be attributed to the ADA activity and its impact. In the case of a quasi-experimental design, the comparison group is an inaccurate approximation of

the counterfactual. Therefore, any differences between the treatment and comparison group can only be associated with the program and not directly attributed to the ADA activity.

This methodology was designed to be applied to all PP applicants scoring between 70 and 85. Alternative methodologies using statistical modeling techniques will be used in addition to evaluate cases scoring 86 or more and not affected by randomization.

Value-Adders and Value Chain Initiative: The Value-Adder (VA) and Value Chain Initiative (VCI) component will be evaluated together using a quasi-experimental design that relies on statistical models, as there are not enough qualified applicants to make it possible to use random selection. CNFA will select applicants through the scoring process only where applicants scoring 70 or more are deemed eligible, and those applicants will them be tracked against a matched "comparison" group during and after the life of the program. The evaluator will oversee the formulation of the comparison group using statistical matching techniques. The measured difference between the two groups will be used to estimate the impact of this component.

Farm Service Centers: The Farm Service Center (FSC) component also will be evaluated using a quasi-experimental design that relies on statistical models. CNFA will select applicants through the scoring process only. Then, the impact of the FSC on the surrounding community will be tracked against a "comparison" group of similar communities during and after the life of the program. The evaluator will oversee the formulation of the comparison group, using statistical matching techniques. The measured difference between the two groups will be used to estimate the impact of this component at the community level.

Selection Procedures for Primary Producers
Selection rounds for Primary Producers took place three times a year, on July 31, November 30, and March 31.

The following guidelines for random selection were followed for rounds 1 through 7, and will be applied to all qualified applications scoring between 70 and 85.

a. Following each round of scoring, all applicants who score between 70 and 85 will participate in the random selection process. The specific procedures for the process itself are codified in, "Policies and Procedures on Primary Producer Selection," that is part of the ADA Operations Manual. Additional information for applicants about the procedure is documented in "Frequently Asked Questions – ADA Primary Producer Selection."
b. During each round, 50 percent of the applicants will be selected through the above mentioned process to receive a grant (and join the treatment group), and the other 50 percent will be included in the control group. These selection rates for each group are fixed.

c. If there are more than 5 (i.e., at least 6) applicants in a given round, those applicants also will participate in the random selection process, according to the guidelines outlined above. If there are five or fewer, they will also receive grants.

These procedures have changed over the course of the program resulting in releasing controls and discontinuing the randomization for rounds 8 and 9 of the program.

S-J Road Rehabilitation

Key Question

How does the road rehabilitation effect/cause economic development, new businesses, and economic and social integration in the region?

Methodology

The planned methodology is to perform a comparison of before and after indicators at villages that are near to selected improvement road sections (treatment), versus villages in a comparable area of Georgia that are not near to selected improvement road sections, but are similar in all observable respects (based on statistical matching, such as PSM) to the treatment villages (including similarity in observed economic indicator variables, in terms of accessibility to nearby roads, and in terms of physiographic (elevation, soils, rainfall) conditions). We will use the technique of differences-in-differences combined with PSM (or an alternative statistical matching technique), which will remove both selection bias due to observed differences between the treated and comparison communities (PSM) and possible bias due to differences in time-invariant unobserved characteristics (double differences).

The standard approach to calculating double differences with respect to road construction is based on the two situations faced by households or communities: those that have a new/rehabilitated road and those that do not. The first difference is between the pre-treatment and post-treatment situations. The second difference is the comparison of average values for the outcome variables in the communities without a road (or with an existing un-rehabilitated road) and the same variables in the communities that have received the new/rehabilitated road. For the first, a baseline survey is undertaken before the road is constructed or improved, covering the area to be affected by the road investment and a comparison zone of similar households or communities. Second, after the project is completed, one or more follow-up surveys are undertaken. These should be highly comparable to the baseline survey, both in terms of the questionnaire and the sampled observations (ideally the same sampled observations as the baseline survey). Third, the mean difference between the pre- and post-treatment values of the outcome indicators for each of the treatment and comparison groups is calculated. Finally, the difference between these two mean differences of differences is calculated to obtain the estimate of the impact of the program.

Propensity Score Matching is useful when the aim of matching between control and treatment groups is to find the closest comparison group from a sample of communities not receiving treatment to the sample of communities receiving treatment. "Closest" is measured in terms of observable characteristics. The main steps in matching based on propensity scores are as follows. First, obtain a representative sample of eligible treatment and non-treatment communities; the larger the sample of eligible comparison communities the better, to facilitate matching. Second, pool the two samples and estimate a probit or logit regression model of participation as a function of all available variables that are likely to determine participation. Third, create the predicted values of the probability of participation from the estimated regression; these are the propensity scores (one for each sampled community). Fourth, exclude non-treatment communities in the sample if they have a propensity score that is outside the range (typically too low) found for the treatment sample. Finally, for each community in the treatment sample, find the observation in the non-treatment sample that has the closest propensity score, as measured by the absolute difference in scores. This is called the "nearest neighbor." More precise estimates can be obtained by comparing the mean of multiple nearest neighbors for each treatment observation.

If selection of a treatment community were based purely on observable characteristics and the model highly predictive, then a propensity-score matching (PSM) method, like that just described, would remove the selection bias due to differences between communities that were and were not affected by the road investment. The propensity score measures the probability that a project is implemented in a community as a function of that community's observed pre-investment characteristics. If treatment and comparison communities have the same propensity scores and all characteristics relevant to assignment of treatment are captured in the propensity score (i.e., the relevant characteristics are all observable), then the difference in their outcomes yields an unbiased estimate of the intervention's impact.

However, some unobserved characteristics of the community that correlate with investment outcomes might also correlate with investment placement, which can introduce bias in the estimation of investment impact. As long as the pre-investment differences between the control and treated villages are the result of unobservable characteristics omitted from the propensity score that do not change over time in their impact on outcomes, then the double difference method will correct for the possible bias. The impact of the investment is the change in the outcome indicators between matched communities from the treatment and comparison groups.

GIS data will play a direct role in the SJ evaluation, by allowing for the creation of "accessibility" (including travel-time) indices and variables for all Georgian settlements, and by providing additional descriptive variables (such as physiographic descriptors) that can improve the matching of treatment and control groups. Using the GIS and the Georgian GIS road network, as well as additional data such as topographic variation, travel-time for each settlement to the SJ road improvement segments and to other comparison roads can be calculated. This will help to deli-

neate treatment and comparison groups, and improve the matching of treatment settlements to comparison settlements. Furthermore, the same methodology will allow us to control for positive economic impacts from other ongoing and planned road construction projects, elsewhere, that might also have an impact on the treatment villages. Finally, the models combined with the extensive GIS database that will be built will allow for the prediction of economic impacts of potential future road or infrastructure improvements, which is likely to prove useful for the Georgian government beyond the life of this project.

The groups of direct beneficiaries are households and businesses in villages near SJ road. However, due to the fact that the Georgian road system is in reality a network, then it is likely that most cities, towns and even villages throughout Georgia are likely to benefit from the SJ road improvement, and will thus constitute indirect beneficiaries. That is, while improvement to the SJ road will of course benefit villages and households close to the improvement area, it will also benefit businesses and markets that rely on the SJ road for transportation of goods (for example, trade in goods between Turkey and Tbilisi that is shipped along the SJ road). In this latter case, businesses, households, or cities/towns far from the SJ road improvement (for example in eastern or western Georgia in the case that goods are shipped from those locations along the SJ road).

Thus, ideally, benefits at the village level (as measured by before/after changes in key indicators) should be monitored not just for villages "near" to SJ, but throughout Georgia. While evaluation surveys are limited by budgetary scope and may not be able to sample all regions of Georgia, use of the DS Integrated Household Survey, the SIS survey, as well as a special targeted survey managed by NORC will measure indicator improvements in other regions of Georgia. These data, combined with a survey of traffic using the SJ road, will help to provide a more comprehensive picture of the relative impact of the improvement for the direct (close to the road) beneficiaries, as well as for the indirect (in other regions of Georgia) beneficiaries.

Furthermore, the GIS database that has been constructed includes geo-locations of all regions of Georgia, and a complete Georgian road network dataset. Thus, it will be possible to use predictive models to predict likely impacts throughout Georgia – and analyze the spatial variation across Georgia in the degree of impact – through use of empirically derived model coefficients or parameters, which can then be applied in predictive models. In these cases, predictions for villages or cities in areas that have not been sampled can be made, because the GIS combined with the SIS, IHS and other data will provide extensive sets of observable characteristics for villages and households out of sample (including physiographic and accessibility characteristics derived from the GIS, which may not be present in DS census or household data).

The analysis approach for the group of direct beneficiaries will likely include the following:

- descriptive and inferential statistics,

- spatio-temporal modeling, using GIS (analysis of spatial trends, comparison of changes in key indicators (e.g. income) with variation in accessibility, etc.);
- propensity score with double differences, as described above.

For the SJ road impact evaluation, a randomized design is not a viable option, since the location of the SJ road improvements have been predetermined (i.e. the main road investment follows a pre-determined route and phasing based on geographic and engineering considerations). Thus, the treatment and control zones obviously cannot be randomly assigned or randomly phased in. Because of the non-random placement of the road investment, a simple comparison of changes in key indicators in market that benefit directly from SJ improvements (the treatment group) and in villages that do not directly (the comparison group) would not correctly measure the impact of the investment.

Thus, neither random selection of communities within and outside the treatment area nor the comparison of communities in different stages of the project can provide unbiased comparisons of outcomes between communities in the treatment and non-treatment groups. In such a case, a non-experimental (quasi-experimental) approach to the evaluation is a valid alternative.[7]

Consequently, we have proposed the method described above as a quasi-experimental design providing best possible control for biases, given the SJ road construction situation.

RID

Key Question

How does RID project affect poverty levels and economic growth, costs for household and business, health and productivity of people living in target communities?

Methodology

At the outset of RID Impact Evaluation Project it was envisaged that standard impact assessment methods, such as baseline and ex-post surveys and suitable treatment and control analysis would be used. With these analytical methods most analysis of impact could only be done after ex-post surveys in Phase III. At the same time, these methods could only measure direct effects of RID intervention, while illuminating indirect and induced effects at a limited level. The proposed methodology expanded upon this by tentatively adding in CGE analysis to forecast likely impact beyond the time remaining before the expiration of Compact. Apart from CGE analysis, Micro Simulation analysis, Micro Models, Water Audit and

[7] See, for example, Paul R. Rosenbaum, *Observational Studies (2nd Edition)*, New York: Springer Verlag, 2002 and "Howard Wainer, "Non Random Sampling, " in B. Everitt and D. Howell (eds.), *Encyclopedia of Statistics in Behavioral Sciences (Volume 3)*. London: Wiley, 2005, pps. 1430-1433.

Case Studies were added to Evaluation Design to cover all the potential impact areas. To the end, following analytical methods will be used for RID Impact Evaluation Project:

- Baseline and ex-post survey analysis – interviews will be conducted with households, businesses, governmental institutions, water utilities, public health system representatives to collect relevant information on impact areas. List of data elements to be collected using surveys will be developed based on an extensive list of metrics, which come out of all the various analytical methods

- Treatment and control analysis – households and businesses will be interviewed and compared across treatment and control cities using Propensity Score Matching (PSM). Given the fact that surveys will be conducted twice, baseline and ex-post, Impact Evaluation Methodology will combine PSM with double differences

- Micro-model analysis – Extensive on sight interviews and focus groups have been conducted to understand all the details of water and sewer coping strategies and costs, time and inconvenience, health problems associated with unreliable water supply and sewer service. Micro Models have been developed based on this information, which models cost structure, behavior, non-monetary expenses of households, businesses and water utilities. During interviews physical quantities (*e.g.* number and type of pumps, average operating hours) will be collected and put into micro models. As a result, we expect to estimate various metrics/indicators (*e.g.* total spending on water, time spent) more accurately, both during baseline and ex-post surveys

- Social Accounting Matrix (SAM) and Computable General Equilibrium (CGE) analysis – in order to capture indirect and induced effects of RID intervention Computable General Equilibrium analysis was introduced to impact evaluation methodology. Using SAM and CGE RID IEP team will be able to capture effects of water and sanitation intervention on overall economy. Utilization of SAM and CGE will also enable RID IEP to forecast the impact of water and sanitation intervention in the future. This is an important and attractive feature of CGE since a part of potential effects of RID will be accrued to different impact areas during a certain period of time in the future

- Micro-Simulation analysis – was added to the Design to better assess the distributional impact of increased economic growth (*i.e.* poverty and inequality). Inequality can be assessed at the level of the individual households with suitable aggregation methods. Micro Simulations will be used together with CGE

- Case study analysis – all effects cannot be measured using quantitative analysis. We have introduced case studies to assess impact of RID on investors,

public health system, governmental organization and other MCG activities (*e.g.* ADA)

- Water Audit – will enable the RID IEP Team to closely estimate the water consumption level in households. Given the fact that water consumption is an important indicator for water and sanitation related intervention evaluation projects introduction of Water Audit was necessary, since no other reliable water consumption indicators are available in Georgia. Generally, impact evaluation studies do not include measures of water consumption from municipal system unless there are individual meters. This is because individuals are poor estimators of their own level of water consumption. Another methodology is to assess water consumption at supply level, but this is not a satisfactory approach for RID cities because this measure includes very large leakages from water network. As a result, Water Audit was added to RID Impact Evaluation Design

Final impact evaluation design of RID project is also very expansive in the field of Impact Areas, while initially both the number and scope of each impact area was limited. Effect of RID intervention on households, businesses, local water utilities and government were limited to a specific list of impact areas and other impact areas such as Public Health Institutions, Investors, Military Bases and Prisons and Overall Economy were not included in the scope of RID Impact Evaluation Project. Finally, both the number of impact areas and scope of impact measurement in each area were expanded significantly and are categorized into the following impact groups:

- Direct impact on individual households: monetary costs of water and sewer services, willingness to switch to the new water systems, coping time, water consumption, water-borne disease, perceptions of safety and physical properties of water, access to public sanitation information, individual sanitation practices, time and inconvenience of less than 24/7 water and gender issues

- Direct impact on individual firms: monetary costs of water and sewer services, willingness to switch to the new water systems, water consumption and the new water systems as enablers of growing existing companies or creating new companies

- Direct impact on water utilities: supply and demand of water and sewer services, water quality, cost structure, financial viability and efficiency

- Direct impact on Governmental institutions: the public health system and large Governmental users of water (*i.e.*, prison, military bases)

- Direct, indirect and induced impact on the overall economy: output (GDP, productivity), prices (real prices and inflation), poverty (employment, wages, household expenditures), inequality (household expenditures, gender issues, wealth) and national accounts (current account, capital account, public finance)

- Complementary impact between the RID projects and other MCG initiatives (*e.g.* ADA)

In addition, the Design fully integrates sewer system impacts as equal to water impacts; sewer system issues were given very limited attention, since the rehabilitation of sewer systems have been approved for three cities after commencement of RID IEP project.

The expansion of impact areas and types of beneficiaries was done to more fully capture overall impact related to the unique features of each RID city. For example, at the outset of Impact Evaluation project the Team didn't know that prison and military base in Kutaisi are major users of water. As a result, in order to estimate impact on these types of organizations new analytical methods, metrics and data elements were introduced.

In addition to RID impact measurement, information to be collected and analytical methods to be used during this project will help MCG and other stakeholders to examine the effect of a broad range of policy decisions (*e.g.* taxes, infrastructure development) across various impact groups. That is, many impact measurements will be very helpful when MCG and others need to make practical decisions in the future (*e.g.*, tariff rates).