



## **MCC COMPACT II TO GEORGIA**

### **Post Compact Monitoring and Evaluation Plan**

**Prepared by MCA-Georgia M&E Department  
August 2019**

## Content

<b>Preamble</b> .....	<b>4</b>
<b>List of Acronyms</b> .....	<b>5</b>
<b>1. Compact and Objective Overview</b> .....	<b>7</b>
<b>1.1 Introduction</b> .....	<b>7</b>
<b>1.2 Compact Successor Entity</b> .....	<b>Error! Bookmark not defined.</b>
<b>1.3 Program Logic</b> .....	<b>9</b>
<b>1.4 Improved Learning Environment Infrastructure Activity</b> .....	<b>9</b>
<b>1.4.1 General Description</b> .....	<b>9</b>
<b>1.4.2 Description of Outcomes</b> .....	<b>10</b>
<b>1.4.3 Description of Outputs</b> .....	<b>10</b>
<b>1.5 Training Educators for Excellence Activity</b> .....	<b>10</b>
<b>1.5.1 General Description</b> .....	<b>10</b>
<b>1.5.2 Description of Outcomes</b> .....	<b>11</b>
<b>1.5.3 Description of Outputs</b> .....	<b>11</b>
<b>1.6 Education Assessment Support Activity</b> .....	<b>11</b>
<b>1.6.1 General Description</b> .....	<b>11</b>
<b>1.6.2 Description of Outcomes</b> .....	<b>12</b>
<b>1.6.3 Description of Outputs</b> .....	<b>12</b>
<b>1.7 Industry-led Skills and Workforce Development Project</b> .....	<b>13</b>
<b>1.7.1 General Description</b> .....	<b>13</b>
<b>1.7.2 Description of Outcomes</b> .....	<b>13</b>
<b>1.7.3 Description of Outputs</b> .....	<b>14</b>
<b>1.8 STEM Higher Education Project</b> .....	<b>14</b>
<b>1.8.1 General Description</b> .....	<b>14</b>
<b>1.8.2 Description of Outcomes</b> .....	<b>15</b>
<b>1.8.3 Description of Outputs</b> .....	<b>15</b>
<b>1.8.4 Program Logic Visualization</b> .....	<b>15</b>
<b>1.9 Projected Economic Benefits</b> .....	<b>17</b>
<b>1.10 Program Beneficiaries</b> .....	<b>18</b>
<b>1.10.1 Improving General Education Quality Project</b> .....	<b>18</b>
<b>1.10.2 Industry-led Skills and Workforce Development Project</b> .....	<b>19</b>
<b>1.10.3 STEM Higher Education Project</b> .....	<b>19</b>

<b>2. Monitoring Component .....</b>	<b>19</b>
<b>2.1 Summary of Monitoring Strategy .....</b>	<b>20</b>
<b>2.1.1 Indicator Levels .....</b>	<b>20</b>
<b>2.1.2 Indicator Classification .....</b>	<b>20</b>
<b>2.1.3 Indicator Documentation Table .....</b>	<b>20</b>
<b>2.1.4 Table of Indicator Baselines and Targets .....</b>	<b>20</b>
<b>2.1.5 Disaggregation of Data .....</b>	<b>21</b>
<b>2.2 Standard Reporting Requirements .....</b>	<b>21</b>
<b>3. Evaluation Component .....</b>	<b>22</b>
<b>3.1 Summary of Evaluation Strategy .....</b>	<b>22</b>
<b>3.2 MCC Impact and Performance Evaluations .....</b>	<b>23</b>
<b>3.3 Specific Evaluation Plans .....</b>	<b>25</b>
<b>3.3.1 Improved Learning Environment Infrastructure Activity Evaluation .....</b>	<b>25</b>
<b>3.3.2 Training Educators for Excellence Activity Evaluation .....</b>	<b>26</b>
<b>3.3.3 Industry-led Skills and Workforce Development Project Evaluation .....</b>	<b>27</b>
<b>3.3.4 STEM Higher Education Project Evaluation .....</b>	<b>29</b>
<b>4. Implementation and Management of M&amp;E .....</b>	<b>30</b>
<b>5. M&amp;E Budget .....</b>	<b>30</b>
<b>Annex 1. Indicator Documentation Table .....</b>	<b>32</b>
<b>Annex 2. Indicator Baselines and Targets .....</b>	<b>36</b>
<b>Annex 3. M&amp;E Inventory List .....</b>	<b>39</b>
<b>Annex 4. PICG Grant Scheme .....</b>	<b>44</b>
<b>Annex 5. Description of the Schools Selection Criteria .....</b>	<b>46</b>
<b>Annex 6. Evaluation Data Collection Schedule .....</b>	<b>47</b>
<b>Annex 7. Georgia II Post Compact Data Collection .....</b>	<b>48</b>

## **Preamble**

This Post Compact Monitoring and Evaluation (M&E) Plan is required according to the MCC Policy on Monitoring and Evaluation of Compacts and Threshold Programs (M&E Policy) approved on March 15, 2017. As stated in the M&E Policy “In conjunction with the Program Closure Plan, MCC and MCA will develop a Post Compact monitoring and evaluation plan designed to observe the persistence of benefits created under the Compact. This plan should describe future monitoring and evaluation activities, identify the individuals and organizations that would undertake these activities, and provide a budget framework for future monitoring and evaluation which would draw upon both MCC and country resources.”

The Post Compact M&E Plan serves as a guide for monitoring Post Compact sustainability of Millennium Challenge Corporation (MCC) investments during the period 2019-2023. The Post Compact M&E Plan may be modified or amended based on the agreement between the designated representative and the Millennium Challenge Corporation.

## List of Acronyms

Abbreviations	Description
ABET	Accreditation Board for Engineering and Technology
ACS	Accrediting Commission for Schools
CCD	Compact Closure Date
CCP	Compact Closure Period
CED	Compact End Date
CS	Construction Supervision
NCLP	Compact Successor Entity
DLP	Defect Liability Period
E&S	Environment & Social
EASA	Education Assessment Support Activity
ESIDA	Education and Science Infrastructure Development Agency
ESMP	Environmental and Social Management Plan
FA	Fiscal Agent
FAP	Fiscal Accountability Plan
GBPR	Government, Business, and Public Relations
GRDF	Georgia Regional Development Fund
GSI	Gender and Social Inclusion
GoG	Government of Georgia
IE	Implementing Entity
IEA	Implementing Entity Agreement
ITT	Indicator Tracking Table
M&E	Monitoring and Evaluation
MCA	Millennium Challenge Account
MCC	Millennium Challenge Corporation
MIS	Management Information System
MoESCS	Ministry of Education, Science, Culture and Sport of Georgia
MoF	Ministry of Finance
NAEC	National Assessment and Examination Center
NCEQE	National Center for Education Quality Enhancement
O&M	Operations and Maintenance
OHS	Occupational Health and Safety
OM	Operational Manual
PA	Procurement Agent
PCG	Program Closure Guidelines
PCP	Program Closure Plan
PICG	Program Implementing Competitive Grants
PIP	Procurement Implementation Plan
PISA	Program for International Student Assessment
PIU	Program Implementation Unit
POC	Point of Contact
PPG	Program Procurement Guidelines
PPR	Procurement Performance Report

QFR	Quarterly Financial Report
RAP	Resettlement Action Plan
SDSU	San Diego State University
STEM	Science, Technology, Engineering and Mathematics
TIMSS	Trends in International Mathematics and Science Study
TPDC	Teachers' Professional Development Center
TVET	Technical Vocational Education and Training
WASC	Western Association of Schools and Colleges

## **1. Compact and Objective Overview**

### **1.1 Introduction**

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

- Gives details about post-compact monitoring. Under the Program Closure Plan (PCP), the Non-Commercial Legal Person (NCLP) (see Section 1.2 below) is responsible for on-going monitoring of a small set of indicators. The data themselves will be collected by various involved entities, while the NCLP will be responsible for collating and verifying the data. The Indicator Documentation Table in Annex 1 provides a detailed definition of each indicator, unit of measurement, source of data, responsible entity, and frequency of reporting.
- Discusses post-compact reporting requirements and other obligations. In accordance with the Post Compact M&E Plan, the NCLP is responsible for developing and submitting an Annual Summary Report. The report will include, amongst other things, the small set of monitoring indicators mentioned above. However, in the first year in the post compact period, the NCLP will submit a quarterly indicator tracking table to track progress of projects that remain to be completed. Additionally, the post-compact obligations include permitting any authorized MCC representative to conduct assessments, review, evaluate or audit, and inspect activities funded by MCC, and include providing documentation as may be requested from time to time by MCC.
- Provides information about post-compact evaluation, including independent evaluation resources. In addition to post-compact monitoring, MCC will be managing and publishing final evaluations after the compact. MCC contracted independent evaluators to conduct final evaluations of all compact activities. The NCLP is responsible for organizing and facilitating the presentations of the findings of the final evaluations as well as for spreading these results through local media and posting them on selected governmental web pages.

The Post Compact M&E Plan is a collaborative effort developed by MCA-Georgia and MCC. The Post Compact M&E Plan should be jointly agreed to by MCC and MCA-Georgia before the compact end date and implemented by NCLP. The agreed upon Post Compact M&E Plan should be made public by posting it on MCC's and the country's websites.

### **1.2 Non-Commercial Legal Person as a Post-Compact Unit**

To ensure post-compact follow up, monitoring and sustainability of the activities launched within the compact, the NCLP will be formed.

The main mission of the NCLP will be to ensure that the outcomes of the compact are sustained and that activities launched with MCC funding continue to be implemented successfully. The activities to be performed by the NCLP are listed below:

- Conduct post-compact M&E activities, in support of MCC-financed Project and Activity evaluations (collecting data to report on the ITT and contribute to the Post Compact economic analysis etc.).
- Ensure that Improving General Education Quality Project investments are completed and sustained
  - Oversee the defect liability period (DLP) for schools rehabilitated under the Improved Learning Environment Activity
  - Ensure sustainability of Training Educators for Excellence Activity
  - Oversee public schools' Operation and Maintenance (O&M) plan implementation
- Work with the Ministry of Education, Science, Culture and Sport and its agencies to ensure that Industry-led Skills and Workforce Development (ISWD) Project outcomes are sustained and the Program Implementing Competitive Grant (PICG) grantees continue to offer compact funded programs (Annex 4)
- Continue or oversee implementation of annual Technical Vocational Education and Training (TVET) conferences and TVET National Awards
- Continue or oversee implementation of the Millennium Innovations Award (non-Compact funded activity launched by MCA-Georgia)
- Oversee implementation of San Diego State University (SDSU)-Georgia:
  - Support to Accreditation Board for Engineering and Technology (ABET) program
  - Support partner universities with American Chemical Society (ACS) certification process
  - Liaise between SDSU-Georgia and its partner universities to ensure that terms and conditions of the partner university agreements are implemented
- Coordinate implementation of all private sector donation agreements created as part of the Public-Private Partnership Fund of SDSU-Georgia, created upon request of MCA-Georgia. Work with the Government of Georgia and international partner organizations to ensure that compact outcomes are sustained and continued, across all projects.
- Coordinate implementation of student loans and other funding opportunities to ensure that SDSU-Georgia, SDSU Partner University and TVET programs launched through the compact funding are successfully implemented.

MCA-Georgia will be reorganized into a Non-Commercial Legal Person. The NCLP will have a charter and internal regulations. A supervisory body will be established, which will be comprised of five members: the individual holding the position of, or acting as, the Prime Minister (chairman of the Supervisory Board) or his/her designee; the individual holding the position of, or acting as, the Minister of Education, Science, Culture and Sport (deputy chairman of the Supervisory Board) or his/her designee; the individual holding the position of, or acting as, the Minister of Finance or his/her designee; one representative of a civil society organization; and one representative from the private sector.

The NCLP should attempt to retain the following positions of MCA-Georgia based on the current terms and conditions to ensure that compact projects and activities are sustained. The composition of the MCA-Georgia's successor entity shall at a minimum include: Chief Executive Officer (full-time), Chief Financial Officer (full-time), General Counsel (full-time), Senior Engineer (part-time), Government, Business, and Public Relations (GBPR) Director (part-time), M&E Director



(part-time), Tertiary Education Project Director (part-time), Procurement Consultant (part-time), Administrative Assistant (full-time), two Engineers (each part-time), O&M Consultant (part-time), and other support staff.

The NCLP will be financed with the portion of remaining Georgian Research and Development Fund (GRDF) proceeds of MCC Georgia Compact I. GRDF reflows will be used towards funding activities of the MCA-Georgia's successor entity to ensure sustainability of the Compact outcomes.

### **1.3 Program Logic**

The overall objective of the compact was to strengthen the quality of education in Georgia, with an emphasis on STEM education support through strategic investments in general education, TVET, and higher education.

The objective of the Program is to support strategic investments to: (a) improve general education quality in Georgia through infrastructure enhancements to the physical learning environment in schools, training for educators and school managers, and support to classroom, national and international education assessments; (b) strengthen the linkage between market-demanded skills and the supply of Georgians with technical skills relevant to the local economy; and (c) support delivery of high-quality STEM degree programs in Georgia.

The Post Compact M&E Plan is built on a logic model (Figures 1 and 2) that illustrates how the Projects and Activities contribute to the Compact Goal and the Project Objectives after the Compact End Date (CED) which is defined as July, 1 2019.

### **1.4 Improved Learning Environment Infrastructure Activity**

#### **1.4.1 General Description**

The Improved Learning Environment Infrastructure (ILEI) Activity rehabilitated rural public school facilities to address very poor physical conditions including internal utilities such as heating, electrical, water supply and sanitation systems.

The ILEI Activity involved the full internal and external rehabilitation of selected school facilities, utility upgrades, and provision of laboratories. Such an approach addresses the key elements that are thought to be correlated with improved educational performance, including human comfort, indoor air quality, and adequate lighting.

The selection of schools was based on a formula that prioritizes schools according to their physical condition (dilapidated physical infrastructure), social vulnerability (higher proportion of Socially Vulnerable students), number of students enrolled and utilization rate. The above criteria were chosen based on agreement between the Ministry of Education, Science, Culture and Sport, MCC and MCA-Georgia.

MCC's Independent Evaluator for the Improving General Education Quality Project,

Mathematica Policy Research (Mathematica), collaborated with MCC and MCA-Georgia to develop a process for selecting the schools eligible for rehabilitation. This process was expected to ensure that the package of schools selected would allow MCC and MCA-Georgia to meet key priorities for this project, including cost-effectiveness (i.e., meeting an ERR hurdle rate), targeting key beneficiaries, and ability to rigorously measure project outcomes and impacts through an impact evaluation.

In addition, ILEI included an O&M sub-activity in order to establish a viable public school O&M program at a national level. Under the school O&M sub-activity, the Government of Georgia (GoG), with and through MCA, developed a national school O&M framework plan, established a dedicated budget line for school O&M, conducted comprehensive inspections of most school buildings, developed software to plan and manage school O&M and minor repairs, designed and executed urgent repairs in two municipalities, and trained key personnel on school O&M good practices, including those necessary to operate and maintain new assets installed at rehabilitated schools, such as wastewater bio-treatment plants at schools lacking connections to municipal wastewater systems. MCC supported these and other efforts through a dedicated incentive fund within the Compact of up to US\$2,500,000.

#### **1.4.2 Description of Outcomes**

In the long run, the Improved Learning Environment Infrastructure Activity is expected to improve student learning outcomes through learning environments that facilitate increased time on task and increased attendance. This in turn shall provide students with better employment opportunities and higher incomes (outcome indicators, baselines and targets are given in Annexes 1 and 2).

#### **1.4.3 Description of Outputs**

In the short term the Improved Learning Environment Infrastructure Activity was expected to:

- Rehabilitate up to 91 public schools across the country,
- Introduce science laboratory classrooms and equipment in all rehabilitated public schools, and
- Improve school operation and maintenance practices for all public schools in Georgia.

All of the above-mentioned goals were implemented successfully. For more details on relevant post Compact indicators please refer to Annexes 1 and 2.

### **1.5 Training Educators for Excellence Activity**

#### **1.5.1 General Description**

The objectives of the Training Educators for Excellence (TEE) Activity were to: (1) improve math, science, information and communication technology (“ICT”), and English teaching in order to improve learning in grades 7-12; and (2) improve school management. To accomplish these objectives, the activity offered training to all 2085 public school principals in Georgia, at least

one school professional development facilitator per school, and every secondary school STEM, Geography, and English teacher in the country. The trainings covered leadership skills, student-centered pedagogy approaches, innovative and interactive teaching methods, subject matter expertise, science lab health and safety, and gender bias. The TEE Activity was expected to improve student learning outcomes through improved classroom teaching and improved management of the education system.

The Implementing Entity for the Training Educators for Excellence Activity is the Teachers' Professional Development Center (TPDC), the MoESCS entity responsible for managing teachers' professional development at the time of the Compact.

The main sub-activities of this Activity included:

- Secondary school math, science, geography, and English teachers professional development
- Refinement and support of the teachers' professional development system
- Professional development of public school principals
- Selection and training the school-based professional development facilitators
- Capacity building of TPDC staff.

### **1.5.2 Description of Outcomes**

In the long run, the Training Educators for Excellence Activity is expected to produce improved student learning outcomes through improved classroom teaching and improved management of the education system. Training that addresses teacher gender bias is expected to result in an increased number of girls pursuing STEM tertiary education. This in turn shall provide the students with better opportunities to seek further education, better employment and higher incomes (outcome indicators, baselines and targets are given in Annexes 1 and 2).

### **1.5.3 Description of Outputs**

In the short term, the Training Educators for Excellence Activity is expected to provide training for:

- Secondary school math, science, geography, and English teachers
- School-based Professional Development facilitators
- Public School principals
- TPDC staff.

For more details on relevant post Compact indicators please refer to Annexes 1 and 2.

## **1.6 Education Assessment Support Activity**

### **1.6.1 General Description**

A rigorous testing and assessment system is needed to track student progress as well as to hold teachers, administrators, and national authorities accountable to stakeholders for achieving outcomes. The Compact provided financing and technical support to the National Assessment and Examination Center (NAEC), the implementing entity of this activity, to carry out national and international assessments. The compact provided funding to support national assessments of secondary school student achievement in math, biology, chemistry, physics, and Georgian language (as second language). The compact also supported Georgia's participation in international assessments including two rounds of the Teaching and Learning International Survey (TALIS), the Trends in International Mathematics and Science Study (TIMSS), and the OECD's Program for International Student Assessment (PISA). GoG funded the Electronic Progress in International Reading Literacy Study (ePIRLS) as part of country contribution.

The aim of supporting these national and international assessments was to enable policymakers to observe trends in student achievement over time, both nationwide and as compared to other countries. Based on assessment outcomes, the Ministry of Education, Science, Culture and Sport would then be better positioned to plan, adjust and implement policy decisions to support improvement of the teaching quality.

The main sub-activities of the activity included:

- Supporting implementation of the national and international assessment
- NAEC staff capacity building.

### **1.6.2 Description of Outcomes**

Conducting national and international assessments will enable policy makers to see trends in student achievement over years, nationwide as well as compare results with other countries. Based on the assessment outcomes, the Ministry is able to plan, adjust and implement policy decisions to support improvement of the teaching quality.

In the long run, the Education Assessment Support Activity is expected to produce improved student learning outcomes through improved classroom teaching. This in turn shall provide the students with better opportunities to seek further education, better employment and higher incomes (outcome indicators, baselines and targets are given in Annexes 1 and 2).

### **1.6.3 Description of Outputs**

In the short term, the Education Assessment Support Activity was expected to provide the following reports:

- 9<sup>th</sup> grade 2015 math national assessment, report published in April 2016
- 9<sup>th</sup> grade 2018 math national assessment, report is expected to be published in June 2019
- 9<sup>th</sup> grade 2016 physics, chemistry and biology national assessment, report published in June 2018
- 7<sup>th</sup> grade 2016 Georgian as a second language national assessment, report published in

September 2018

- TALIS 2013 international assessment, the national report published in January 2015
- TALIS 2018 international assessment, the national report expected to be published in December 2019
- TIMSS 2015 international assessment, the national report published December 2016
- TIMSS 2019 international assessment, the national report expected to be published December 2020
- PISA 2015 international assessment , the national report published December 2016
- PISA 2018 international assessment, the national report is expected to be published December 2019

All of the above-mentioned goals were met successfully. For more details on relevant post Compact indicators please refer to Annexes 1 and 2.

## **1.7 Industry-led Skills and Workforce Development Project**

### **1.7.1 General Description**

The Industry-led Skills and Workforce Development (ISWD) Project aimed to address the gaps between labor market demand for skilled workers and the supply of Georgians with technical skills relevant to the labor market through investments in technical and vocational education and training (TVET). The Project supported industry-relevant training and education programs and increased the capacity of education providers to deliver programs in accordance with international best practices. The Project placed an emphasis on supporting skills development in science, technology, engineering and mathematics-related (STEM) occupations, as well as in agriculture and tourism; all are growth industries where there were also significant gaps in the labor market.

The project consisted of two activities: (1) Program Improvement Competitive Grants (PICG) Activity and (2) Strengthening Sector Policy and Provider Practice Activity. This objective of the PICG activity was to provide an initial investment in TVET programs that develop and expand innovative and effective approaches to employment-oriented skills development through a competitive grants program. The objective of the Strengthening Sector Policy and Provider Practice Activity was to identify and promote good practices in industry engagement to foster linkages and responsiveness to labor market needs.

### **1.7.2 Description of Outcomes**

In the long run, the Industry-led Skills and Workforce Development Project is expected to provide increased industry engagement into the TVET sector to ensure the alignment of the TVET programs with the existing market demand. This in turn shall provide the students with better opportunities to seek further education, better employment and higher incomes (outcome indicators, baselines and targets are given in Annexes 1 and 2).

### 1.7.3 Description of Outputs

In the short term the Industry-led Skills and Workforce Development Project was expected to provide the following outputs, all of which was met successfully:

- Higher quality TVET programs
- Identification and promotion of the best practices among TVET programs
- Industry-oriented TVET policies

For more details on relevant post Compact indicators please refer to Annexes 1 and 2.

## 1.8 STEM Higher Education Project

### 1.8.1 General Description

The STEM Higher Education project was designed to deliver high-quality STEM Bachelor’s degrees in Georgia. The objective of this Project was to build capacity in three Georgian public universities and to offer international standard STEM degrees and/or ABET accreditation. San Diego State University (SDSU) was selected through a competitive process to offer U.S. accredited degrees in Tbilisi, Georgia and, in the fall semester of 2015, began offering SDSU Bachelor’s degrees in STEM fields, in partnership with three public Georgian universities: Tbilisi State University (TSU); Georgian Technical University (GTU); and Ilia State University (ISU).

MCA-Georgia signed a 15-month “pre-enrollment” agreement with SDSU under which SDSU undertook the necessary actions to enroll students starting July 2014, followed by a 45-month collaborative agreement to complete the remainder of the project activities through July 2019. Per this agreement, SDSU agreed to: (1) administer and offer academic programs that are professionally (ABET, ACS) and regionally (WASC) accredited and internationally recognized, (2) assist partner universities to achieve internationally-recognized accreditation for target degrees, (3) develop curricula and train Georgian faculty, (4) develop facilities that support implementation of the SDSU programs and (5) develop partnerships with industry. SDSU designed, developed, and delivered academic programs, as well as, required infrastructure improvements.

SDSU is implementing U.S. and Georgian bachelor’s dual degree programs in six disciplines (chemistry, computer science, computer engineering, electrical engineering, civil engineering, and construction engineering). Students who graduate from these university programs will receive two diplomas, from both SDSU and from the partner university indicated below.

Partner University	U.S. Degree Programs
<b>Tbilisi State University</b>	Chemistry (Biochemistry focus) Computer Engineering Electrical Engineering Computer Science
<b>Ilia State University</b>	Computer Engineering Electrical Engineering

Partner University	U.S. Degree Programs
Georgian Technical University	Chemistry Computer Engineering Electrical Engineering Civil Engineering Construction Engineering

### 1.8.2 Description of Outcomes

In the long run the STEM Higher Education Project is expected to provide firm-level productivity spillovers, reduce the need for Georgians to study abroad to obtain high-quality undergraduate STEM degrees, and reduce imports of human capital (foreign labor) to obtain skilled workers for STEM-related jobs. Program participants, who are university students, are expected to have better employment opportunities and higher incomes (outcome indicators, baselines and targets are given in Annexes 1 and 2).

### 1.8.3 Description of Outputs

In the short term, the STEM Higher Education Project was expected to provide the following outputs which were all achieved successfully:

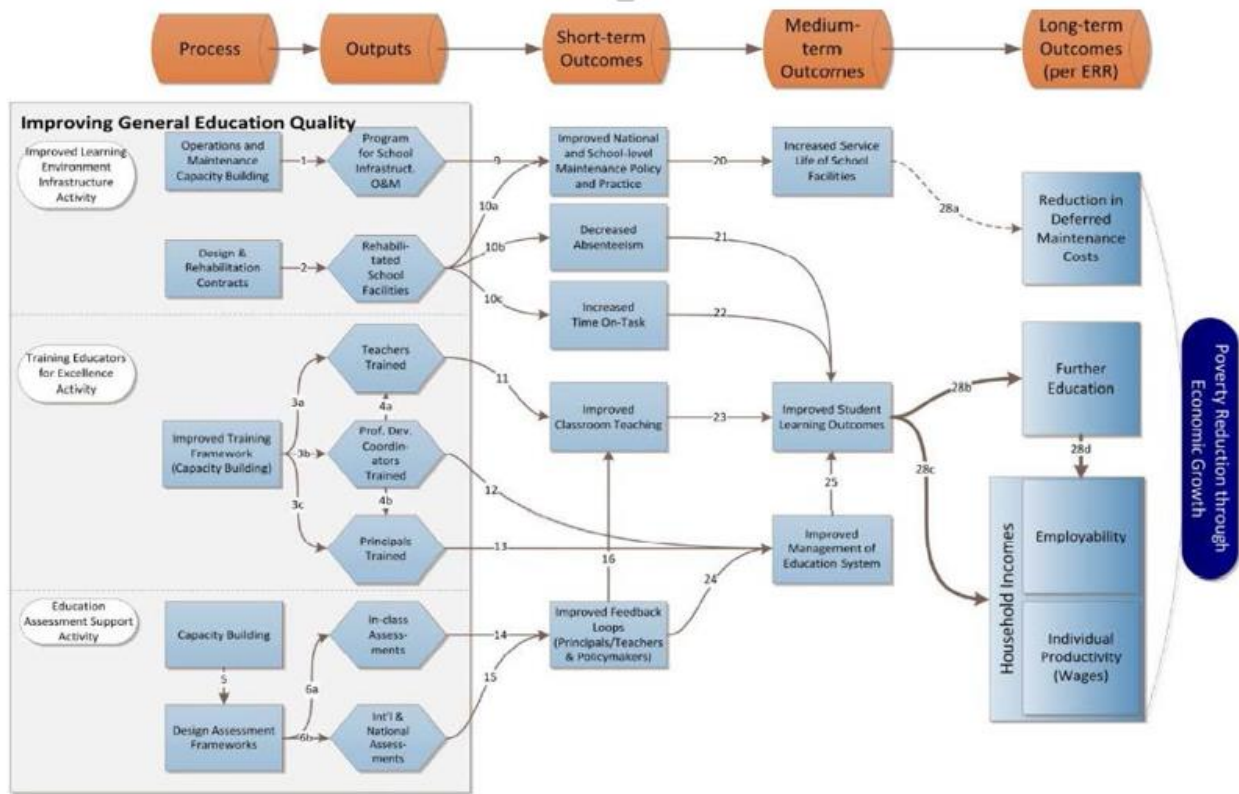
- Upgraded infrastructure and equipment
- Faculty development
- Improved curricula
- Inclusive outreach program to increase enrollment of underrepresented groups
- Import of professors, curricula and frameworks
- Internationally accredited science and engineering degree programs

For more details on relevant post Compact indicators please refer to Annexes 1 and 2.

### 1.8.4 Program Logic Visualization

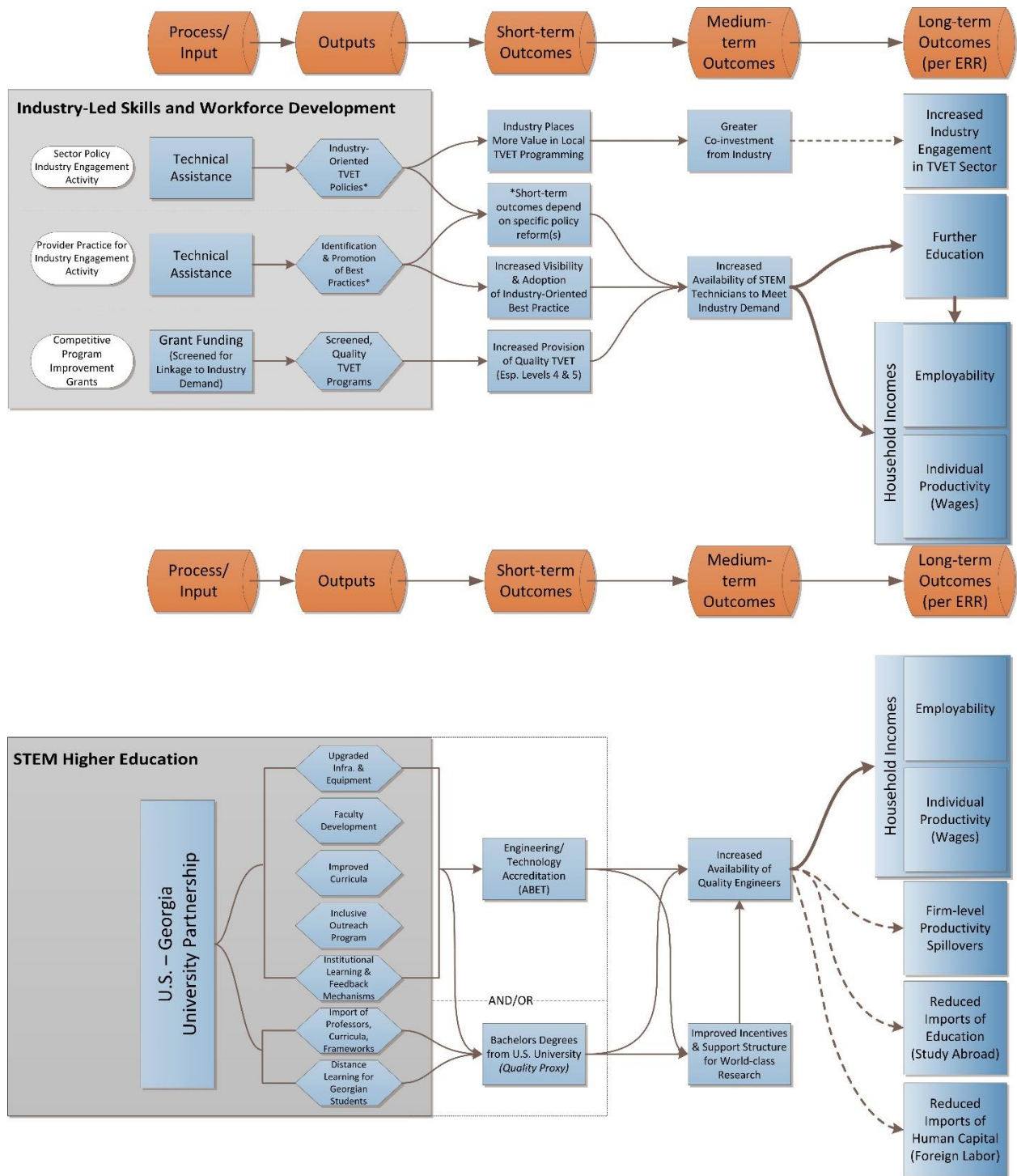
A visual description of the logic underlying the proposed Compact Projects is included in Figure 1 and 2 as follows:

Figure 1. Compact-wide Program Logic (1 of 2)





**Figure 2. Compact-wide Program Logic (2 of 2)**



**1.9 Projected Economic Benefits**

Component		ERR at EIF <sup>1</sup>	Estimated Beneficiaries	Evaluation ERR Date
I. Improving General Education Quality Project		11%	1.7 million	December 2021
	School rehabilitation activity (including O&M fund)	10%	348,000	December 2021
	Teacher training activity	18%	1.7 million	December 2021
	Assessment activity	no estimate <sup>2</sup>		
II. Industry-led Skills and Workforce Development Project		13%	25,000	January 2022
	Competitive grant activity	14%	25,000	January 2022
	Strengthening sector policy and provide practice	no estimate <sup>2</sup>		
III. STEM Higher Education Project		11%	47,000	March 2023

The estimated economic rate of return (ERR) and number of beneficiaries for each project is summarized in the table **below**, based on the estimates at the time of entry into force of the Compact in 2014. These estimates will be updated during the closure period.

## 1.10 Program Beneficiaries

### 1.10.1 Improving General Education Quality Project

In general, beneficiaries of the Improving General Education Quality Project were all Georgian students in grades K-12, who would benefit from both student assessments and teacher professional development. A smaller subset of students would also benefit from improvements to the physical infrastructure of their schools. The beneficiary estimates below are based on the CBA model updated at EIF, and therefore the available data and project design at that time.

*Activity 1: Improved Learning Environment Infrastructure Activity.* The CBA model at the time of EIF assumed MCA-Georgia would rehabilitate 107 schools, with an average enrollment of 350 students per school, the initial projected number of beneficiaries of this Activity during the compact implementation period would be 37,450 students. New students entering these schools each year would add to the total number of beneficiaries over a twenty year project lifetime. Most rehabilitated schools would have twelve grades; hence the average intake of new students each year would be approximately 3,121 students. Over a twenty year project lifetime this would add an additional 59,299 students for a total of 96,749 student beneficiaries. Including family members, total beneficiaries are estimated at approximately 348,296. These beneficiaries are a subset of Activity 2 beneficiaries.

While the target remains 130 schools, ultimately, MCA-Georgia is expected to complete the

<sup>1</sup> This estimate was calculated at EIF. An updated Closeout ERR will be provided by MCC in March 2020. Evaluation ERRs are conducted by third party, independent evaluators.

<sup>2</sup> The cost of the assessment activity is included in the project level ERR estimate.

rehabilitation of 91 schools during the compact period, which was justified due to an average of greater than 350 students per school; the number of beneficiaries is not expected to decrease substantially. The project is expected to reach the same number of beneficiaries as originally intended. The specific estimates will be recalculated during the closure period.

*Activity 2: Training Educators for Excellence Activity.* The beneficiaries of this Activity were students whose teachers take part in professional development. It is envisioned that all secondary school math, science, geography and English teachers would receive training, which would benefit all students in grades 7-12 over the twenty year expected lifetime of the project. In 2012, total enrollment in grades 7-9 was 134,882 and in grades 10-12, 113,602 students. Assuming a retention rate of 75%, 101,200 lower-secondary and 85,200 upper-secondary students (a total of 186,400 secondary students) would initially benefit from this program. With an annual intake into grade 7 of approximately 48,000 students and a 75% implementation rate, roughly 36,000 new student beneficiaries would enter secondary school each year. Over a twenty year project lifetime, this would add an additional 684,000 student beneficiaries for a total of 870,400 student beneficiaries. Including family members and adjusting for possible double counting, total beneficiaries are estimated at approximately 1.7 million individuals over twenty years. MCC estimates total beneficiaries to include all those within a household of a student beneficiary, based on the idea that an increase in household income will benefit not only the individual.

### **1.10.2 Industry-led Skills and Workforce Development Project**

The number of beneficiaries of the Industry-led Skills and Workforce Development Project was estimated to be 25,000 when the compact entered into force (EIF). Beneficiaries will likely be from poorer households, the population that has traditionally taken advantage of technical vocational training. This Project is also expected to strengthen sector policy, to facilitate the creation of new programs, and to promote the uptake of best practice throughout the sector.

### **1.10.3 STEM Higher Education Project**

The beneficiaries of the STEM Higher Education Project are students who will graduate from the new degree programs, including both the US degree programs and the programs that are expected to eventually attain ABET or ACS accreditation. At the time of EIF, the number of graduates was estimated from the annual intake numbers for each program as stated in the SDSU financial proposal of February 2014 and expected graduation rates. Over a 20-year period (or 20 cohorts) it was anticipated that 8,493 students will graduate from the US degree programs and 4,596 students will graduate from the ABET or equivalent accredited programs. Including family members, the total number of beneficiaries over twenty years was estimated at 47,124.

## **2. Monitoring Component**

Post-compact performance will be monitored systematically and progress will be reported regularly through a small set of indicators listed in the indicator tracking table (ITT) which is described by Annexes 1 and 2 of this Plan. Reporting shall be carried out by the NCLP as per Section 1.2 above.

## **2.1 Summary of Monitoring Strategy**

### **2.1.1 Indicator Levels**

The Post Compact M&E Plan is framed and constructed using the program logic framework approach that classifies indicators as process, output, outcome, and goal indicators. The Indicator Table included in the Post Compact M&E Plan is a small subset of the indicators used during implementation. The indicators were chosen as the most relevant to Post Compact work and project sustainability.

Goal indicators monitor progress on compact goals and help determine if the NCLP and MCC are meeting their founding principle of poverty reduction through economic growth and monitor the sustainability of the compact. Outcome indicators measure intermediate or medium-term effects of an intervention and are directly related through the Program Logic to the output indicators. Output indicators measure the direct result of the project activities—most commonly these are goods or services produced by the implementation of an activity. Process indicators record an event or a sign of progress toward the completion of project activities. They are a precursor to the achievement of Project Outputs and a way to ensure the work plan is proceeding on time to sufficiently guarantee that outcomes will be met as projected.

### **2.1.2 Indicator Classification**

According to MCC's M&E Policy all indicators must be classified as one of the following types:

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

### **2.1.3 Indicator Documentation Table**

The Indicator Documentation Table provides relevant details for each indicator by Project and can be found in Annex 1. It specifies each indicator's: (i) title; (ii) definition; (iii) unit of measurement; (iv) data source; (v) method of collection; (vi) the frequency of collection; and (vii) party or parties responsible.

### **2.1.4 Table of Indicator Baselines and Targets**

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

The targets reflect the underlying assumptions made in program design about what each activity would likely achieve. Baselines and target levels for each indicator are defined in the Table of

Indicator Baselines and Targets (Annex 2).

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

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

### 2.1.5 Disaggregation of Data

Where applicable, the data will be collected, analyzed, and reported by income level, gender, age groups, regions, etc. in order to portray the benefits accruing to the different constituencies of the population.

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

## 2.2 Standard Reporting Requirements

The NCLP shall be responsible for submitting a regular report to MCC on post-compact activities covering the period of October 29, 2019 – October 29, 2023. The Reports shall be submitted annually including Post Compact ITT data and narratives as follows:

Year	Post Compact ITT Submission	Annual Report	Party Providing Data
2020	Annual: March 31	March 31	NCLP
2021	Annual: March 31	March 31	NCLP
2022	Annual: March 31	March 31	NCLP
2023	Annual: March 31	March 31	NCLP
2023	Final: October 29	N/A	NCLP

The Annual Summary Report should include:

- A narrative summary of any activities undertaken or continued by the Government of Georgia Post Compact that relate to the sustainability of compact investments including any issues with operations and maintenance of infrastructure, if applicable.
- Post Compact ITT that includes all of the indicators included in Annexes 1 and 2 of the plan.
- Submission of any relevant administrative data as requested under each project or activity evaluation.

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

- Annual activity reports created by the NCLP. If applicable, these reports would include the status of outstanding issues for infrastructure components through the end of the defects liability period.
- Produced by the Implementing Entities (IEs) (e.g. TPDC, NAEC, SDSU etc.) and Consultants (if applicable) supporting the data stated in the ITT.

### **3. Evaluation Component**

Evaluation is an essential element of the compact. One of the key features of the MCC's approach to development assistance is its strong commitment to conducting rigorous impact evaluations of its programs, which employ, whenever possible, methodologies that determine whether results can be reliably attributed to MCC interventions. In addition, evaluations can improve program management and provide lessons for future program design and implementation.

#### **3.1 Summary of Evaluation Strategy**

Evaluations assess as systematically and objectively as possible the Program's rationale, relevance, effectiveness, efficiency, merits, sustainability and impact. The evaluations will strive to estimate the impacts on the targeted beneficiaries and wider regional or national economy. The evaluations will provide MCC, MCA-Georgia and other stakeholders with information during the compact on whether or not the intended outcomes are likely to be achieved and at the compact's end or after on the impacts that are attributable to the Program.

The evaluation strategy is based upon scientific models that ensure the advantages of neutrality, accuracy, objectivity and the validity of the information. These models comprise experimental and quasi-experimental designs as well as statistical modeling. Methodologies are selected considering the cost-effectiveness of an evaluation's expected learning.

More than formal documentation of Program results, evaluation will serve as a learning tool in future compact design and implementation. MCC will strive to conduct evaluations in a participatory way to ensure their success and relevance while protecting the evaluations' objectivity. The participatory approach will also include continuous training for Program staff and stakeholders on evaluation methods. Participatory, qualitative evaluation will provide an opportunity to better understand stakeholders' perceptions of the results, engage a broad cross-section of stakeholders including by gender, and enhance ownership of the outcome of the development process.

While all MCC investments are designed with the goal of spurring economic growth to reduce poverty, the objectives of the Georgia II Compact investments are directed at learning outcomes

of students, meaning that household income gains are unlikely to be measurable during the life of the Compact. Fortunately, literature on the economics of education demonstrates the potential for positive income impacts from increased investments in education, and such gains will allow for the proxy measurement for the income gains from improvements in educational outcomes. Thus, the evaluation of impacts on potential beneficiaries’ incomes will be focused on an ex-post recalculation of the ERR, using Cost-Benefit Analysis, to obtain a sense for the cost-effectiveness and overall return on MCC’s investment. Therefore, beyond proxy-means measurement of income gains, the evaluation strategy of the Compact will be that of measuring the degree to which the project’s intermediate outcomes (such a learning gains) come to fruition, rather than attempting to measure income gains directly.

### 3.2 MCC Impact and Performance Evaluations

Impact and performance evaluations support two objectives derived from MCC’s core principles: accountability and learning. Accountability refers to MCC and MCA-Georgia’s obligations to report on their activities and attributable outcomes, accept responsibility for them, and disclose these findings in a public and transparent manner. Learning refers to improving the understanding of the causal relationships between interventions and changes in poverty and incomes. MCC advances the objectives of accountability and learning by selecting from a range of independent evaluation approaches. MCC currently distinguishes between two types of evaluations, impact and performance evaluations. At the minimum, each project should have an independent performance evaluation for accountability reasons.

The following table summarizes the specific evaluation plans:

Evaluation Name	Evaluation Type	Evaluator	Primary/ Secondary Methodology	Final Report Date
Improving General Education Project - Improving Learning Environment Infrastructure	Impact	Mathematica Policy Research	Randomized Control Trial	December 2021
Improving General Education Project – Training Educators for Excellence	Impact	Mathematica Policy Research	Matched Comparison	December 2021
Industry-led Skills and Workforce Development Project	Performance	Mathematica Policy Research	Performance	January 2022
STEM Higher Education Project	Performance	RAND Corporation	Performance	March 2023

**Independent Evaluations** MCA-Georgia has undertaken the following data collection efforts during the Compact. These tasks will continue after CED under the supervision of the Independent Evaluator for:

- **Improving General Education Quality Project** - The Improving Learning Environment Infrastructure (ILEI) Survey represents a rigorous impact evaluation study employing Randomized Control Trial (RCT) method, which was designed by the independent evaluator Mathematica Policy Research in close collaboration with the MCA Georgia

M&E Department. The survey includes five-year data collection rounds from March 2015 to June 2019. IPM has been contracted to perform local data collection, while NAEC has been assigned to conduct learning assessment for the evaluation purposes (1. Data collection contract with IPM- USD 504,666.40; 2. Learning assessment contract with NAEC – USD 330,000.00).

- **Improving General Education Quality Project** - The Training Educators for Excellence (TEE) Survey represents a mixed method study involving performance evaluation and matched comparison group design, prepared by the independent evaluator Mathematica Policy Research in close collaboration with the MCA Georgia M&E Department. The survey includes two-year data collection rounds from April 2017 to June 2018. IPM has been contracted to perform local data collection for the evaluation purposes (Data collection contract with IPM – USD 157,276.00).
- **Industry-led Skills and Workforce Development Project** - The Industry-led Skills and Workforce Development Survey employs performance evaluation method designed by the independent evaluator Mathematica Policy Research in close collaboration with the MCA Georgia M&E Department. The survey will consist of two-year data collection rounds under MCA Georgia management from March 2018 to June 2019 and two-year collection rounds under MPR’s direct supervision from December 2019 to June 2021 (Data collection contract with GORBI – USD 59,300.00. The contract shall be extended after CCD until June 15, 2021 under Mathematica’s direct management).
- **STEM Higher Education Project**
  - ✓ ABET Readiness Assessment is being performed by ABET Foundation Inc. which started in September 2017 and will be accomplished in May 2019 (ABET Readiness Assessment Contract – USD 288,500.00).
  - ✓ STEM Education Project survey represents a mixed method study involving performance evaluation and matched comparison group design, to be prepared by the independent evaluator RAND in close collaboration with the MCA Georgia M&E Department. The survey includes six months data collection round from January 2019.

In addition, STEM Higher Education Project shall be evaluated based on the proposed specific evaluation plan shown below in Section 3.4.

More detail on independent evaluations are given in Annex 3 (M&E Inventory List).



### 3.3 Specific Evaluation Plans

**Summary Table: Improving General Education Quality Project Evaluation**

Name	Summary	Methodology	Data Sources
<b>Improved Learning Environment Infrastructure Activity</b>	A stratified RCT design will be used to select treatment schools in different regions, from a pool of eligible schools	Stratified RCT	Administrative data on school condition, design plans, students' test scores, and surveys of the sample population.

Name	Summary	Methodology	Data Sources
<b>Training Educators for Excellence Activity/</b>	The primary methodology will be a matched comparison of teachers in Cohort 1 and teachers in Cohort 2. The evaluation will also include qualitative work to examine the efficacy of teacher training in improving classroom time use, pedagogical skills, and students test scores.	Performance Evaluation/ RCT	Classroom observation, Assessment Test, Administrative data, interview with teachers, school directors, and SPDFs

#### 3.3.1 Improved Learning Environment Infrastructure Activity Evaluation

##### *Evaluation Questions*

- Did students' attendance increase as a result of rehabilitation?
- Did teachers' attendance increase?
- Did the facility rehabilitation allow students to spend more time on learning related activities?
- Do learning and other behavioral outcomes change as a result of the school rehabilitations?
- Do students' test scores change as a result of the school rehabilitations?
- Have students in rehabilitated schools had a higher rate of further education (lower dropout, higher rates of graduation, etc.)? Differences due to increased productivity or some other factor (e.g. different choice of vocation)?
- Have students in rehabilitated schools who entered the workforce experienced lower rates of unemployment?
- Have students in rehabilitated schools who entered the workforce earned higher wages? If so, were wage differences due to increased productivity or some other factor (e.g. different choice of vocation)?

### *Evaluation Methodology Description*

The evaluation of the school rehabilitation activity will use stratified random assignment to treatment (rehabilitation) and control (no rehabilitation) at the school level. The randomization will be stratified by region, as detailed in Section 3.2.1. Schools for both treatment and control groups will be drawn from a pool of school deemed eligible based on cost-effectiveness, condition of the school, and targeting for minority languages.

The unit of analysis for the study will be on the individual student level. The study will follow participants and non-participants through secondary school and their entry into the labor market.

To allow for efficient contracting into individual, discrete construction phases (“Phases”), the impact evaluation design has been tailored to allow for each construction Phase to include the schools from a specific Region or group of Regions. The key threat to the evaluation design is that each construction Phase contains a specific group of Regions and that the beneficiary schools in a particular Region not be divided into separate phases. In other words, the schools from a given Region must all be constructed within the same construction season and this may reduce the number of schools overall that the intervention is able to reach. Any construction schedules which do not fall inside this design will require specific authorization from all key members of the MCA-Georgia and MCC core teams, as any deviation from this design has the potential to endanger the ability of the Independent Evaluator to assess the impact of the activity. The Evaluator should attempt to leverage variations in “exposure to treatment” to better evaluate the impacts of the school rehabilitations across regions and over time.

### *Data Sources*

Administrative data on school condition, design plans, students’ test scores, and surveys of the sample population.

## **3.3.2 Training Educators for Excellence Activity Evaluation**

### *Evaluation Questions*

- Do teacher training programs focused on science and technology improve teacher performance?
- Do teacher training programs improve learning outcomes for students?
- Does mentoring and follow-up with teachers have an impact on teacher behavior after they complete the training?
- Does teacher training in formative classroom assessment lead to improved student learning outcomes?
- Does the use of formative classroom assessment improve teacher quality?
- Do school directors have different perspectives on pedagogy?

*Evaluation Methodology Description*

For the TEE activity, the primary focus for the evaluation will be to compare teachers before and after the activity is implemented. To estimate the impacts of the training, we will utilize a matched comparison design, that compares teachers from Cohort 1, who have completed the training, to teachers from Cohort 2, who have not received the training yet. There will also be a qualitative component, including classroom observation in a subset of the schools.

*Data Sources*

The primary data source for the evaluation is a survey of teachers and school directors. The first round of the survey was implemented in September 2017, and the follow up is scheduled for September 2018. In addition, the evaluation will use the Stallings Classroom protocol, in which trained observers make periodic and unannounced visits to classrooms to collect information on use of time and teaching materials. The Stallings protocol will be used in a small sample of teachers, to triangulate the survey data. Finally, the evaluation will use focus groups and interviews with teachers, school directors, and potentially students, to understand the effects of the activity.

**3.3.3 Industry-led Skills and Workforce Development Project Evaluation**

**Summary Table: Industry-led Skills and Workforce Development Project Evaluation**

<b>Evaluation Name</b>	<b>Summary</b>	<b>Methodology</b>	<b>Data Sources</b>
<b>Program Improvement Competitive Grants (PICG)</b>	The evaluation will assess the efficacy of the competitive grants process in incentivizing higher quality, and better targeted TVET programs that match labor market needs.	Performance Evaluation /Longitudinal study	Information on TVET programs gathered during the bidding process, Administrative data, Surveys of earnings of participants post-graduation
<b>Strengthening TVET Provider Practice, Strengthening TVET Sector Policy, and Annual TVET Conference</b>	The evaluation will assess the use of best practices, the uptake of those local best practices and their effect on the quality of TVET programs in	Longitudinal study, Qualitative Methods, Performance Evaluation	Administrative data from TVET programs, Surveys and/or interviews with TVET students, Surveys of TVET programs and certification standards,

*Evaluation Questions*

- How did the implemented PICG courses compare with the original grant proposals, and what were the reasons for any deviations?

- Did trainees enroll in PICG-supported courses and graduate from them at targeted levels?
- What were the labor market outcomes (employment and wages) for graduates from PICG-supported courses?
- What were employer perceptions of the graduates from the PICG-supported courses, and how did the availability of these graduates affect their hiring and training plans?
- Will PICG-supported courses be sustained after the compact?
- What are TVET providers' perceptions of the best practices identified and disseminated by the project, to what extent have they adopted them, and what are the main barriers to doing so?
- To what extent have the Ministry of Education and Science and its agencies adopted the policy reforms supported by the project, (for example, those related to industry engagement, marketing of TVET, and quality improvement) and what have been the main challenges in doing so?
- How and to what extent has the annual TVET conference influenced providers, employers, the Ministry of Education and Science, and other TVET sector stakeholders?

### *Evaluation Methodology*

The evaluation monitors the progress over time with regards to increasing the number and quality of TVET programs that target skills needed in the labor market. It also monitors sector support for these programs and the reputation of TVET programs in Georgia among employers.

The evaluation will assess uptake of best practices regarding the structure and management of TVET programs nationally. As a counterfactual will be difficult to establish the evaluation of this activity will be a performance evaluation, noting progress over time.

The ISWD evaluation will compare outcomes of the trainees in PICG-supported courses to trainees who attended non-supported courses. In addition, the evaluation will use a pre-post design for the 15 PICG-supported courses that were improved (rather than introduced as new courses), and compare the outcomes of trainees in these course with those of earlier cohorts in the same courses before they were improved.

The evaluation will also include a qualitative study that will draw primarily on interviews and focus groups with key stakeholders, complemented by contextual information from grantee documents, administrative data, and grantee financial records.

### *Data Sources*

Administrative data from TVET programs, and Surveys, focus groups, and/or key informant interview with TVET students, private firms, and TVET providers.

Administrative data from TVET programs, surveys of participants, tracer studies, and information gathered of firms involved after bidding process, and interviews and focus groups with

stakeholders.

### 3.3.4 STEM Higher Education Project Evaluation

**Summary Table: STEM Higher Education Project Evaluation**

Evaluation Name	Summary	Methodology	Data Sources
<b>US-Georgia University Partnership</b>	Longitudinal case study to assess the efficacy of university partnerships in fostering technical standards for Georgia university, and the impact of US degrees for participants in their income post-graduation	Performance Evaluation/ Longitudinal Studies	Administrative data, results from secondary school exit exams, tracer studies, surveys of participants and non-participants after graduation from the university program, qualitative research on stakeholder interaction

#### *Evaluation Questions*

- Were the activities implemented through the STEM Higher Education Partnership Program aligned with the program design, as documented in the logic model?
- To what extent are the STEM Higher Education Partnership Program activities sustainable?
- What is the impact of the STEM Higher Education Partnership program on outcomes in income, better skill match to employers, and a greater share of students choosing to pursue graduate education? Does the impact of the program differ between males and females, students from different economic backgrounds and from different countries?
- What is the post-compact economic rate of return? How accurate were the original estimates and assumptions?

#### *Evaluation Methodology*

An interim study using ABET accreditation criteria as a way to assess the SDSU program may be useful in assessing successes and areas for improvement in implementation. In addition, a longitudinal study will be used to evaluate the impact of the project on employment opportunities and levels of income for the US Bachelor’s program graduates. While such an impact is expected to take place far beyond the lifespan of the project, specifically designed tracer studies might be conducted to create a reliable data base of the program participants for further analysis.

In addition, the independent evaluation will use a case study methodology to assess the project logic, provide a rich analysis of project implementation, and distill lessons that can be valuable to: 1) the Georgian government in its objectives to improve STEM higher education quality; 2) MCC in future investments in tertiary education partnerships; 3) U.S. higher education

institutions and associations; and 4) to the international donor community more broadly. The evaluation will be outcome/impact oriented and focus on uncovering concrete evidence on what worked, challenges, and opportunities for improvement.

The Evaluator will, in dialogue with the Millennium Challenge Account-Georgia (MCA-G) and MCC, and in liaison with various stakeholders and partners, document the preparatory project development, process, successes, and lessons learned focusing on key outcomes of interest laid out in the project logic.

#### *Data Sources*

Administrative Data, Tracer studies, surveys of participants and non-participants after graduation, labor market surveys, and key informant interviews.

#### **4. Implementation and Management of M&E**

The Post Compact M&E activities shall be carried out by the NCLP as described in Section 1.2. The NCLP M&E Director shall be in charge to fulfill tasks as follows:

- direct implementation of all activities laid out in the Post Compact M&E Plan and ensure all requirements of the M&E Plan are met by the NCLP
- submit to MCC an Annual Summary Report as per Section 2.3
- check data quality of agreed to indicators, ensuring that reported indicators have proper documentation
- provide assistance to evaluators in organizing and running primary data collection activities post-Compact
- coordinate the review among relevant government agencies and provide an official government response to each evaluation
- disseminate results including organizing in-country presentations with stakeholders and posting evaluations on a government website
- identify opportunities to apply the learning from the evaluations to project design and implementation; and
- maintain stable communications with MCC on topics pertaining to the evaluation of projects implemented by MCA Georgia.

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

#### **5. M&E Budget**

The NCLP is expected to dedicate staff time to post-compact M&E activities. It will facilitate dissemination of interim and final evaluation findings via presentations and other modalities (e.g. brochures) as well as any data quality review that the NCLP undertakes. The post compact M&E budget shall be defined as follows:

Activities that are anticipated to take place in the post compact period (October 29, 2019 - 2023) are stated as follows:

- Administrative expenses of the NCLP M&E Director (or Consultant)
- M&E outreach
- Reporting and dissemination
- Quality review, findings discussions, etc.
- Other: (i) post-compact ERR calculation-related surveys, ad-hoc studies and small surveys.

**Annex 1. Indicator Documentation Table**

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Disaggregation	Primary Data Source	Responsible Party	Reporting Frequency	Additional Information
<b>Improving General Education Project: Improved Learning Environment Infrastructure Activity</b>									
E-4	Output	Educational facilities constructed or rehabilitated	The number of educational facilities constructed or rehabilitated according to standards stipulated in MCA contracts signed with implementers.	Number		ESIDA	ESIDA/CSE	Annual	Those are secondary schools (grade 1-12)
	Output	Science labs installed and equipped	The total number of science labs installed through MCC-funded school rehabilitations. Science lab must be operational in order to be counted	Number		ESIDA	ESIDA/CSE	Annual	
	Output	Students benefitting from MCC-rehabilitated school buildings	The number of students benefitting from MCC-rehabilitated school buildings	Number	Gender	ESIDA	ESIDA/CSE	Annual	
	Output	Schools with outstanding defects under the defect liability period (DLP)	Number of MCC-rehabilitated schools that have been identified to have outstanding defects in the DLP. Identified through site visits quarterly visits to all the schools.	Number	Phase of Rehabilitation (Phase 1, Phase 2, Phase 3)	ESIDA	ESIDA/CSE	Annual	
	Output	Schools under the defect liability period (DLP) that have completed fixes within this period	Number of MCC-rehabilitated schools that have completed fixes in the DLP period (0-12 months after rehabilitation is	Number	Phase of Rehabilitation (Phase 1, Phase 2, Phase 3)	ESIDA	ESIDA/CSE	Annual	



Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Disaggregation	Primary Data Source	Responsible Party	Reporting Frequency	Additional Information
			complete). Letter will certify.						
	Output	Wastewater treatment plant maintenance agreement signed	Number of maintenance agreements signed annually.	Number	N/A	ESIDA	ESIDA/CSE	Annual	ESIDA facilitates the requests from the vender and the principal signing agreement and would provide the maintenance agreement.  There were 40 wastewater treatment plants funded by MCC during the life of the compact. The number of maintenance agreements should not exceed 40.
<b>Improving General Education Project: O&amp;M</b>									
	Output	O&M Replacement Value	The cost to replace the entire inventory of Georgian public schools (in GEL calculated by multiplying unit cost [in GEL per gross square meter] by total area [measured in gross square meters])	Level	N/A	ESIDA/MoESCS	CSE/ESIDA/MoESCS	Annual	Data can be sourced from condition assessment database funded through the compact or real property inventory funded under GoG

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Disaggregation	Primary Data Source	Responsible Party	Reporting Frequency	Additional Information
									contribution towards O&M Incentive Fund
	Output	O&M Expenditure	Annual O&M budget (in GEL)	Level	N/A	MoESCS/Ministry of Finance	CSE	Annual	Budget cycle is January to January. Can report January budget data in annual ITT due in March.
<b>Improving General Education Project: Education Assessment Activity</b>									
	Output	International assessment results published	The number of reports published of international assessments funded by MCC.	Number	N/A	NAEC	NAEC/CSE	Annual	Indicator will be counted upon completion of full reporting cycle specific to each international assessment (TIMSS, PISA, and TALIS)
	Output	International Assessments implemented	The number of international assessments implemented with MCC funding.	Number	N/A	NAEC	NAEC/CSE	Annual	
<b>Industry-led Skills and Workforce Development Project</b>									
	Output	Number of PICG programs	Number of PICG-grant recipients' programs that continue to accept students	Number	N/A	Partner TVET grant recipient institutions	CSE	Annual	

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Disaggregation	Primary Data Source	Responsible Party	Reporting Frequency	Additional Information
E-6	Outcome	Students participating in MCC-supported education programs	The number of students enrolled in MCC-supported technical/vocational educational schooling programs	Number	Gender	Partner TVET grant recipient institutions	CSE	Annual	The number of students enrolled MCC-supported TVET programs
E-7	Outcome	Graduates from MCC-supported education activities	The number of students graduating from the highest grade (year) for that educational level in MCC-supported technical/vocational education schooling programs	Number	Gender	Partner TVET grant recipient institutions	CSE	Annual	
<b>STEM Higher Education Project</b>									
E-6	Outcome	Students participating in MCC-supported education activities	The number of students enrolled or participating in MCC-supported educational schooling programs.	Number	Gender	SDSU and Partner Universities	CSE	Annual	The number of students enrolled in MCC-supported US Bachelor's programs. For Common Indicator reporting purposes, all students included here should be considered "Tertiary"
	Outcome	ABET-track program(s)	Number of programs on track that have submitted a preliminary successful self-study readiness report to ABET and received an e-mail from ABET stating readiness for accreditation	Number	None	SDSU and Partner Universities	CSE	Annual	Describe university and program in the notes.

Common Indicator Code	Indicator Level	Indicator Name	Definition	Unit of Measure	Disaggregation	Primary Data Source	Responsible Party	Reporting Frequency	Additional Information
	Outcome	ABET-certified program(s)	Number of programs that have final ABET accreditation	Number	None	SDSU and Partner Universities	CSE	Annual	Describe university and program in the notes.
	Outcome	ACS-track program(s)	Number of programs that have submitted English language Chemistry program to NCEQE	Number	None	SDSU and Partner Universities	CSE	Annual	
	Outcome	ACS-certificate program(s)	Number of programs that have full ACS certification	Number	None	SDSU and Partner Universities	CSE	Annual	

## Annex 2. Indicator Baselines and Targets

N	Common Indicator Code	Indicator Level	Indicator Name	Unit of Measure	Indicator Classification	Baseline 2019	2020	2021	2022	2023	2024	Note
<b>Improving General Education Project: Improved Learning Environment Infrastructure Activity</b>												
1	E-4	Output	Educational facilities constructed or rehabilitated	Number	Cumulative	91						

2		Output	Science labs installed and equipped	Number	Cumulative	80						
3		Output	Students benefitting from MCC-rehabilitated school buildings	Number	Level	37,801						As per ERR assumptions (see Section 3.3.4).
4		Output	Schools with outstanding defects under the defect liability period (DLP)	Number	Level	31						Phase II (three schools were not completed and moved to phase III) and Phase III schools
5		Output	Schools under the defect liability period (DLP) that have completed fixes within this period	Number	Level	0						
7		Output	Wastewater treatment plant maintenance agreement signed	Number	Level	34						
<b>Improving General Education Project: O&amp;M</b>												
8		Output	O&M Replacement Value	Number	Level	5,805,000,000						ESIDA is basing this estimate on school building inventory data that is their new database of record, called "MNE," and their rule of thumb on average unit cost of replacement.
9		Output	O&M Expenditure	Number	Level	4,000,000						

Improving General Education Project: Education Assessment Activity												
10		Output	International assessments implemented	Number	Cumulative	6					6	
11		Output	International assessment results published	Number	Cumulative	3					6	
Industry-led Skills and Workforce Development Project												
12		Output	Number of PICG programs	Number	Level	51						
13	E-6	Outcome	Students participating in MCC-supported education programs	Number	Cumulative	1,935						
14	E-7	Outcome	Graduates from MCC-supported education activities	Number	Cumulative	727						
STEM Higher Education Project												
15		Outcome	Students participating in MCC-supported education activities	Number	Cumulative	642						
16		Outcome	ABET-track program(s)	Number	Level	2						

17		Outcome	ABET-certified program(s)	Number	Level	0						
18		Outcome	ACS-track program(s)	Number	Level	1						
19		Outcome	ACS-certificate program(s)	Number	Level	0						

### Annex 3. M&E Inventory List

Survey Name	Survey Type (Baseline, Follow-up)	Implementing Entity	Survey Start Date (MM/DD/YY)	Survey End Date (MM/DD/YY)	Deliverable Description	Format	Transfer Date from MCA G to MCC (MM/DD/YY)	Status	Notes
<b>Improving General Education Project</b>									
Improving Learning Environment Infrastructure Survey	Baseline	IPM, MPR	3/2/2015	9/15/2015	Baseline Datasets, Codebooks, Survey Instruments, Training Manuals, Data Collection Completion Reports	SPSS, Excel, Word	09/15/2019	Completed	

Survey Name	Survey Type (Baseline, Follow-up)	Implementing Entity	Survey Start Date (MM/DD/YY)	Survey End Date (MM/DD/YY)	Deliverable Description	Format	Transfer Date from MCA G to MCC (MM/DD/YY)	Status	Notes
	Follow-up, OY1	IPM, MPR	2/1/2016	6/15/2016	Datasets, Codebooks, Survey Instruments, Training Manuals, Data Collection Completion Reports	SPSS, Excel, Word	09/15/2019	Completed	
	Follow-up, OY2	IPM, MPR	3/30/2017	6/15/2017	Datasets, Codebooks, Survey Instruments, Training Manuals, Data Collection Completion Reports	SPSS, Excel, Word	09/15/2019	Completed	
	Follow-up, OY3	IPM, MPR	2/1/2018	6/15/2018	Datasets, Codebooks, Survey Instruments, Training Manuals, Data Collection Completion Reports	SPSS, Excel, Word	09/15/2019	To be completed	
	Follow-up, OY4	IPM, MPR	2/1/2019	6/15/2019	Datasets, Codebooks, Survey Instruments, Training Manuals, Data Collection Completion Reports	SPSS, Excel, Word	09/15/2019	To be completed	



Survey Name	Survey Type (Baseline, Follow-up)	Implementing Entity	Survey Start Date (MM/DD/YY)	Survey End Date (MM/DD/YY)	Deliverable Description	Format	Transfer Date from MCA G to MCC (MM/DD/YY)	Status	Notes
Improving Learning Environment Infrastructure (Learning Assessment) Survey	Baseline	NAEC, MPR	5/10/2015	8/30/2015	Assessment Questions, Datasets, Codebooks, Completion Report	Excel, Word	09/15/2019	Completed	
	Follow-up, OY1	NAEC, MPR	6/30/2016	8/30/2016	Assessment Questions, Datasets, Codebooks, Completion Report	Excel, Word	09/15/2019	Completed	
	Follow-up, OY2	NAEC, MPR	4/30/2017	8/30/2017	Assessment Questions, Datasets, Codebooks, Completion Report	Excel, Word	09/15/2019	Completed	
	Follow-up, OY3	NAEC, MPR	6/30/2018	8/30/2018	Assessment Questions, Datasets, Codebooks, Completion Report	Excel, Word	09/15/2019	To be completed	
	Follow-up, OY4	NAEC, MPR	6/30/2019	8/30/2019	Assessment Questions, Datasets, Codebooks, Completion Report	Excel, Word	09/15/2019	To be completed	

Survey Name	Survey Type (Baseline, Follow-up)	Implementing Entity	Survey Start Date (MM/DD/YY)	Survey End Date (MM/DD/YY)	Deliverable Description	Format	Transfer Date from MCA G to MCC (MM/DD/YY)	Status	Notes
Training Educators for Excellence Survey	Baseline	IPM, MPR	4/1/2017	11/30/2017	Baseline Datasets, Codebooks, Survey Instruments, Training Manuals, Data Collection Completion Reports	SPSS, Excel, Word	09/15/2019	Completed	
	Follow-up, OY1	IPM, MPR	2/1/2018	6/15/2018	Baseline Datasets, Codebooks, Survey Instruments, Training Manuals, Data Collection Completion Reports	SPSS, Excel, Word	09/15/2019	To be completed	
<b>Industry-led Skills and Workforce Development Project</b>									
Industry-led Skills and Workforce Development Survey	Baseline	MPR	3/31/2018	9/15/2018	Baseline Datasets, Codebooks, Survey Instruments, Training Manuals, Data Collection Completion Reports	SPSS, Excel, Word	09/15/2019	To be completed	
	Follow-up, OY1	MPR	3/31/2019	6/15/2019	Baseline Datasets, Codebooks, Survey Instruments, Training Manuals, Data Collection Completion Reports	SPSS, Excel, Word	09/15/2019	To be completed	

Survey Name	Survey Type (Baseline, Follow-up)	Implementing Entity	Survey Start Date (MM/DD/YY)	Survey End Date (MM/DD/YY)	Deliverable Description	Format	Transfer Date from MCA G to MCC (MM/DD/YY)	Status	Notes
<b>STEM Higher Education Project</b>									
Student Satisfaction Study	Baseline	ACT	3/9/2017	4/13/2017	Survey Instruments, Datasets, Codebooks, Completion Reports	Word, Excel	09/15/2019	Completed	
ABET Readiness Assessment	Baseline	ABET Foundation, Inc.	9/18/2017	11/1/2017	Assessment reports, Recommendations	Word	09/15/2019	Completed	
	OY1	ABET Foundation, Inc.	4/9/2018	5/25/2018	Assessment reports, Recommendations	Word	09/15/2019	To be completed	
	OY2	ABET Foundation, Inc.	4/9/2019	5/24/2019	Assessment reports, Recommendations	Word	09/15/2019	To be completed	

## Annex 4. PICG Grant Scheme

PICG “Large” Grants (signed September 2016)						
#	Grantee	Project Title	Partners	MCC Grant (\$)	Co-financing (\$)	End Date
1	Agricultural University of Georgia	Addressing the most urgent skill gaps of Georgia’s agricultural sector by establishing the most market-oriented, innovative and sustainable ATVET programs in Georgia	Free University of Tbilisi, Wageningen University, Centre for Development Innovation, Georgian Farmers Association, ELVA, Imereti Greenery, Nergeta, Testing Fields of Agricultural University	744,815	131,977	11/30/18
2	LEPL Batumi State Maritime Academy	Georgia Workforce Assistance and Vocational Education Strategy (G-WAVES)	Pearson Education Limited (UK)	1,373,735	287,300	11/30/18
3	Georgian Aviation University LTD	Advancement of TVET Programs in Georgian Civil Aviation	Air Company “Tusheti,” Georgia	770,097	133,290	11/30/18
4	Georgian Institute of Public Affairs (GIPA)	Developing a Level-V TVET in General Health, Safety and Environment Management	RRC International Training and Consultancy Limited UK	655,020	66,650	11/30/18
5	Georgian Mountain Guide Association (GMGA)	Adventure Tourism School (ATS)	Swiss Mountain Guide Association (SMGA), Switzerland; Technical University of Munich (TUM), Germany; Georgian Incoming Tour Operators Association (GITO) Georgian National Tourism Administration Professional College “Tetnaldi” Ltd. Bethlemi Hut Svaneti Tourism Center Mt. Kazbegi Tourism House	562,369	266,820	8/31/18

**PICG “Large” Grants (signed September 2016)**

<b>#</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Partners</b>	<b>MCC Grant (\$)</b>	<b>Co-financing (\$)</b>	<b>End Date</b>
6	LEPL Georgian Technical University	Georgian Technical Training Center	BP Exploration (Caspian Sea) Ltd. and its Oil and Gas Co-ventures	2,362,910	3,199,879	11/30/18
7	LEPL Vocational College Phazisi	Establishment of Innovative Vocational Education in Georgian Fishing Industry	University of Eastern Finland (Finland); Black Sea Aquaculture Company (Georgia); Foundation Georgian Federation of Children Education, Science and Technological Development TS Foundation for Tomorrow’s Success (Georgia)	829,000	100,000	8/31/18
8	N(E)LE Railway Transport College	Development of Dual Vocational Education Method in Railway Sector	JSC Georgian Railway, Georgia Deutsche Bahn International GmbH, Germany Iowa State University, USA	2,291,900	1,829,141	11/30/18
9	LEPL - Vocational College Tetnuldi	Introduction of Unified Teaching Model in IT	CISCO Academies Support Center	395,035	60,000	11/30/18
10	LEPL Community College Spektri	Improving the Quality of TVET Programmes in Engineering	Pearson Education Limited (UK) LEPL Community College „Akhali Talgha“	2,071,119	1,129,800	8/31/18

## Annex 5. Description of the Schools Selection Criteria

The Improved Learning Environment Infrastructure Activity rehabilitated rural public school facilities in order to address very poor physical conditions including internal utilities such as heating, electrical, water supply and sanitation systems.

The Improved Learning Environment Infrastructure Activity involved the full internal and external rehabilitation of selected school facilities, utility upgrades, and provision of laboratories--addressing the key elements correlating with improved educational performance, including human comfort, indoor air quality, and adequate lighting.

The selection of schools was carried out in two stages. Eligibility criteria for stage I, which comprised 1692 schools in total are as follows:

- Only public schools were eligible for rehabilitation
- Schools located in the Capital were not eligible
- Schools with serious infrastructural flaws were not eligible
- Schools that pertain to MoESCS 2014-2019 rehabilitation plan were not eligible.

Phase II schools (425 in total) were selected based on a formula that prioritizes schools according to their physical condition (dilapidated physical infrastructure), social vulnerability (higher proportion of Socially Vulnerable students), number of students enrolled and utilization rate. The criteria were selected based on agreement between the Ministry of Education, Science, Culture and Sport, MCC and MCA Georgia.

MCC's independent Evaluator for the Improving General Education Quality Project, Mathematica Policy Research (Mathematica), collaborated with MCC and MCA-Georgia to develop a process for selecting the schools eligible for rehabilitation. This process insured that the selection of schools allowed MCC and MCA-Georgia to meet key priorities for this project, including cost-effectiveness (i.e. meeting an ERR hurdle rate), targeting of key beneficiaries, and ability to rigorously measure project outcomes and impacts through an impact evaluation.

The selection process began by selecting a pool of 425 eligible schools. The first step in this process was calculating a ranking score for each of Georgia's schools that serve secondary grades (7 to 12), using the following formula<sup>3</sup>:

$\text{Ranking Score}_i = (-0.5\lambda + 0.1\gamma - 0.3\mu + 1.5\beta - 0.3\sigma)/5$
--

$\lambda$  = School Condition (aggregate which includes roof, windows, exterior walls, etc.)

$\gamma$  = % Socially vulnerable students,  $\left(\frac{\# \text{ Socially vulnerable}}{\text{Total \# of students}}\right)$

$\mu$  = M<sup>2</sup> per student, a measure of underutilization  $\left(\frac{\text{Total facility M}^2}{\text{Total \# of students}}\right)$

$\beta$  = Total # of students

---

<sup>3</sup>The weights attached to each variable were chosen to meet specific targets on factors including ERR, social vulnerability, and space utilization. Assigning a positive or negative sign to each item allows a variable to be maximized or minimized, respectively. All variables were calculated as standard normal (z-scores) of the natural log of the original values in the school-level data.

$\sigma$  = Standard deviation<sup>4</sup> across each school's  $\lambda$ ,  $\gamma$ ,  $\mu$ ,  $\beta$

The best ranking schools then were randomly assigned to the treatment (schools that were rehabilitated) and control (schools that were used as a comparison group in RCT design) groups (approximately 200 schools). The remaining schools served as a reserve group schools that were used for replacement in case structural flaws were found out during geo-technical assessment in the treatment group schools.

## **Annex 6. Evaluation Data Collection Schedule**

---

<sup>4</sup> Minimizing the standard deviation helps avoid the inclusion of schools which rank highly on some variables but do not fulfill other criteria (e.g. a school with a large number of students and low  $M^2$  but with low % of socially vulnerable and good condition of facilities).

<b>Evaluation Name</b>	<b>Evaluation Type</b>	<b>Evaluator</b>	<b>Primary/ Secondary Methodology</b>	<b>Final Report Date</b>
<b>Improving General Education Project - Improving Learning Environment Infrastructure</b>	Impact	Mathematica Policy Research	Randomized Control Trial	December 2021
<b>Improving General Education Project – Training Educators for Excellence</b>	Impact	Mathematica Policy Research	Matched Comparison	December 2021
<b>Industry-led Skills and Workforce Development Project</b>	Performance	Mathematica Policy Research	Performance	January 2022
<b>STEM Higher Education Project</b>	Performance	RAND Corporation	Performance	October 2023

**Annex 7. Georgia II Post Compact Data Collection**



<b>Data Collection Dates</b>	<b>Evaluation</b>	<b>Evaluator</b>	<b>Data Collection Type</b>
<b>March – June 2015</b>	ILEI	MPR	Phase I (rehabilitation completed in 2016) Baseline Data Collection with Grade 8 and Grade 10 students
<b>March – June 2015</b>	ILEI	MPR	Phase I (rehabilitation completed in 2017) Baseline Data Collection with Grade 8 and Grade 10 students
<b>March – June 2016</b>	ILEI	MPR	Phase II Baseline Data Collection with Grade 8 and Grade 10 students
<b>March – June 2017</b>	ILEI	MPR	Phase I (rehabilitation completed in 2016) one-year follow-up with Grade 9 and Grade 11 students
<b>March – June 2017</b>	ILEI	MPR	Phase III Baseline Data Collection with Grade 8 and Grade 10 students
<b>September 2017</b>	TEE	MPR	Cohort 1 teachers: initial outcome survey
<b>September 2017</b>	TEE	MPR	Cohort 2 teachers: baseline survey
<b>September 2017</b>	TEE	MPR	School directors and SPDFs: initial outcome survey
<b>2017 – 2018</b>	TEE	MPR	Cohort 1: teacher focus groups and classroom observations
<b>2017 – 2018</b>	TEE	MPR	School directors and SPDFs: in-depth interviews
<b>2018 (intermittent throughout the year on the phone)</b>	ISWD	MPR	Interim round of data collection
<b>March – June 2018</b>	ILEI	MPR	Phase I (rehabilitation completed in 2016) Two-year follow-up with grade 10 and 12 students. Qualitative data collection
<b>March – June 2018</b>	ILEI	MPR	Phase I (rehabilitation completed in 2017) One-year follow-up with grade 9 and 11 students
<b>March – June 2018</b>	ILEI	MPR	Phase II One-year follow-up with grade 9 and 11 students
<b>September 2018</b>	TEE	MPR	Cohort 1 teachers: Final outcome survey
<b>September 2018</b>	TEE	MPR	Cohort 2 teachers: Initial outcome survey
<b>September 2018</b>	TEE	MPR	School directors and SPDFs: Final outcome survey
<b>March – June 2019</b>	ILEI	MPR	Phase I (rehabilitation completed in 2017) Two-year follow-up with grade 10 and 12 students. Qualitative data collection
<b>March – June 2019</b>	ILEI	MPR	Phase II Two-year follow-up with grade 10 and 12 students. Qualitative data collection
<b>March – June 2019</b>	ILEI	MPR	Phase III One-year follow-up with grade 9 and 11 students
<b>January – March 2019</b>	Higher Ed	Rand	Baseline collection: interview and focus group data
<b>April – May 2019</b>	Higher Ed	Rand	Baseline collection: survey data
<b>September 2019</b>	TEE	MPR	Cohort I 2-year Follow-up; Cohort II 1-year Follow-up Survey
<b>November 2019 – April 2023</b>	Higher Ed	Rand	Interim/Endline Data Collection
<b>March – June 2020</b>	ILEI	MPR	Phase III Two-year follow-up with grade 10 and 12 students. Qualitative data collection
<b>2021 (intermittent throughout the year on the phone)</b>	ISWD	MPR	Final round of data collection