

EVALUATION DESIGN REPORT

Millennium Challenge Cooperation
Ex-Post Performance Evaluation of Education Activities in Ghana

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ACRONYM LIST

BPA	Blanket Purchase Agreement
ECOSOC	UN Economic and Social Council
EDR	Evaluation Design Report
EMC	Evaluation Management Committee
EMIS	Education Management Information System
EQ	Evaluation Question
ERR	Economic Rate of Return
FARA	Fixed Amount Reimbursement Agreement
FBO	Farming Based Organization
FGD	Focus Group Discussions
G2G	Government to Government
GES	Ghana Education Service
GNI	Gross National Income
GoG	Government of Ghana
GRPS	Ghana Poverty Reduction Strategy
IDIQ	Indefinite Delivery, Indefinite Quantity
IE	Impact Evaluation
IMF	International Monetary Fund
IRB	Internal Review Board
JHS	Junior High School
KG	Kindergarten
MCA	Millennium Challenge Account
MiDA	Millennium Development Authority
MOE	Ministry of Education
NORC	National Opinion Research Centre
PBME	Ministry of Education-Planning Budgeting Monitoring and Evaluation
PE	Performance Evaluation
PI	Principal Investigator
PM	Program Manager
PRA	Participatory Rural Appraisal
PWC	Public Works Construction
RFP	Request for Proposal
SI	Social Impact, Inc.
UN	United Nations
US	United States
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Background

State of Education in Ghana

Since the inception of the Millennium Development Goals, the Government of Ghana (GoG) has prioritized increased access and quality of education throughout the country. Ghana has enacted a number of policies including a ten-year education strategic plan to improve and modernize the education system in order to provide universal primary education by the year 2015. The Capitation Grant (School Fee Abolition) program has been credited with the sharp increase in enrollment seen from 2006. Other contributing programs include the expansion of Early Childhood Development services, Nutrition and School Feeding programs, and the increase of Early Childhood Development services (Adamu-Issah, et al. 2007 p.9). These programs, along with the international donor community involvement, have led to early indication of progress, including increases in enrollment and completion, as well as substantial increases in literacy. Ghana has also improved its GPI for primary school enrollment to .99, and gender parity has been achieved at some levels, such as in kindergarten enrollment where more females are enrolled than males. However, there is still a disparity in gains amongst districts. Furthermore, while large gains have been realized in improving the education sector through rigorous efforts by GoG and the donor community, including investments in school infrastructure, effective management and oversight of initiatives will be fundamental to sustaining those gains, particularly in the more underperforming parts of the country and education system.

Compact I Overview

The first MCC compact with the Government of Ghana (GoG) was signed in August 2006 and implementation of the compact projects began in February 2007. MCC granted Ghana US \$547 million to carry out a country-owned program focusing on improving agricultural development (Millennium Development Authority [MiDA], 2012) over a period of five years. The Millennium Development Authority (MiDA), a statutory institution, was responsible for oversight and the management of implementation of the compact. MCC's compact with the GoG¹ intended to reduce poverty through economic growth by achieving two primary objectives:

1. Increase production and productivity of high-value food and cash crops in the intervention zones in Ghana.
2. Enhance the competitiveness of high-value food and cash crops in the local and international markets.

MCC and MiDA aimed to meet these objectives by implementing three primary projects consisting of twelve activities and sub-activities focused on three areas: improving agricultural production and profitability, reducing transportation costs, and improving community services and rural development. Overall, the Community Services Activity was designed to improve social

¹ <http://webapps01.un.org/nvp/indpolicy.action?id=130>, accessed on September 1, 2015.

infrastructure such as education facilities, water, and electrification. Specifically, the Community Services sub-activity aimed to, “Enhance the sustainability of the Agricultural Project by providing the necessary infrastructure to improve health of communities, to enhance skill development through the access to education, and to facilitate small scale post-harvest processing of agricultural products.”

Overview of the Education Sub-Activity

A theory of change for the sub-activity was not explicitly stated in many of the documents reviewed by SI. However, through the examination of several documents including the Economic Rate of Return (ERR) Analysis, the design reports developed by NORC, the Compact Completion Report, and the MASDAR Phase 2 Final Descriptive and Analytic Report, SI gathered that MCC and MiDA were operating on the hypothesis that an investment in education infrastructure would result in increased enrollment, reduced dropout, and higher completion rates. These intermediate outcomes could then be linked to the overarching programmatic objective of an increase in long term income earnings by increasing the education level of individuals in the community. This underlying theory was most explicitly explored in the ERR analysis which linked employment and income with years of education (completion of kindergarten (KG), primary, junior high school (JHS), and secondary).

The entire compact, including the education sub-activity, specifically targeted rural farmers and their families in three areas in Ghana: the Northern Agricultural Zone, the Southern Horticultural Zone, and the Afram Basin. While the intention was to rollout the education sub-activity alongside the other activities and sub-activities, it was determined early on that there was a need for a systematic environmental and needs assessment to select implementation sites. Therefore, the sub-activity ended up being rolled out in three phases (1a, 1b, and 2).

The first phase of the education sub-activity took place between 2007 and 2008 and focused on the rehabilitation of schools identified by the Community Service Activity under Ghana Compact I using the District Medium Term Development Plans. During Phase 1a, schools in six anchor districts - Sekyere East, Kwahu South, Kwahu North, Akwapim South, Awutu-Efutu-Senya and Gomoah - were selected to be rehabilitated. All of these districts were part of the Afram Basin and the Southern Horticultural Zone which fall in the southern part of the country. During Phase 1b additional districts and schools were added following flooding that caused substantial damage to schools in the Northern Region of Ghana. Phase 2 of the sub-activity began upon completion of the needs and environmental assessment which began with a list of 881 schools as potential candidates to receive new class blocks. From the initial list of 881, MiDA in consultation with Lamda used the criteria described in Overview of the Education Sub-Activity section of the report to select the schools where the construction of 175 classroom blocks would occur.

At the close of the compact, MiDA had overseen the rehabilitation and/or construction of 250² classroom blocks spread across 239 schools (approximately 44 blocks in 35 schools in Phase 1a, 31 blocks in 28 schools in Phase 1b, and 176 blocks in Phase 2).

² Note that there were discrepancies in the data files we received. The SI team is currently working to validate the school lists. However, our total numbers may be off by a margin of +/- five schools. Given that the team is

Evaluation Design

Evaluation Objectives and Questions

Drawing on its strong history of evaluations and focus on learning and accountability, MCC allocated nearly US \$7 million towards monitoring and evaluation (M&E). M&E activities were designed to track project outcomes and assess the program implementation and progress towards outputs and outcomes. This included a series of impact evaluations (IEs), including one of the education sub-activity that ultimately was determined to be infeasible as will be described in greater depth within the report. Understanding that long term tracking is key to future programming and the sustainability of program outcomes, MCC typically continues with monitoring and evaluation of MCC investment post-compact. However, for a number of reasons, a post-compact M&E plan was not put in place following Ghana- Compact-I. Despite the lack of a specific M&E plan, MCC decided to undertake an ex-post performance evaluation to better understand the education sub-activity and use it as a source of learning for future investments in education infrastructure, which is the focus of this design report.

The objectives in this ex-post performance evaluation target how the sub-activity was implemented, if and how it has been sustained, and the perceived outcomes. Therefore, the evaluation proposed herein focuses on investments in infrastructure and the subsequent life of those investments. To meet this objective, the SI team will answer four refined evaluation questions:³

- *EVALUATION QUESTION 2A: How might have the implementation process and/or maintenance post-completion contribute to current conditions of MCC investments?*
- *EVALUATION QUESTION 2B: How might other factors explain both perceived school level outcomes and the current conditions of schools?*
- *EVALUATION QUESTION 3A: What are the current conditions of MCC investments made for the Compact #1 Education Sub-Activity? How do the conditions of MCC investments compare to non-MCC supported sites?*
- *EVALUATION QUESTION 3B: What are the perceived outcomes of investments in school infrastructure?*

Methodology

Approach to Questions:

In order to answer the newly formulated evaluation questions and meet the objectives and goals, the team has developed a phased mixed methods approach that draws from existing data and involves two distinct data collection activities. Specifically, the team will conduct a school conditions survey with both MCC and non-MCC schools to answer EQ3A and examine sub-

suggesting a census of schools, we will validate the lists generated by MiDA in comparison with other lists shared by NORC.

³ Evaluation question 1 (EQ1) was addressed in the evaluability assessment completed by SI at the end of July 2015 (Annex V). Because of this, it is not included in the evaluation questions listed here.

activity outputs and sustainability. Upon completion and preliminary analysis of the conditions survey, the team will undertake nine case studies with cross-case analysis to answer EQ2A, EQ2B and EQ3B regarding the implementation of the education sub-activity and other drivers of the current school conditions and related facilities. These two data sets—conditions survey results and case study data—will be supplemented with existing data including monitoring data on enrollment, reports generated by MASDAR⁴ that describe overall community member satisfaction of the condition of schools, and, if feasible, Education Management Information System (EMIS) data on enrollment, attendance, completion, and learning outcomes.

Conditions Survey:

The conditions survey is a systematic examination of the current condition of school infrastructure using international standards, GoG building guidelines and the MiDA maintenance manual to grade conditions. The survey (see Annex VI) consists of one section that asks the respondent to provide basic background information regarding the school, including EMIS number, GIS information, approximate number of students it serves, and investments or upgrades that have taken place and by whom over the last five years. This background section will be followed by a series of items that enumerators will score on a scale of 1 to 5, with 1 being very poor condition and 5 being very good condition. The information provided will then be verified by submitting a photograph as back-up evidence.

The evaluation team has proposed undertaking a conditions census rather than collecting information from a sample of MCC-supported schools due to the low number of schools where implementation occurred (239), anticipated variability amongst schools with respect to conditions, and in order to track conditions to continue to contribute to MCC's understanding of the life of the investment following the evaluation. Given the large number of non-MCC schools, the team will use the original ranking from the environmental assessment as a cut-point and visit those schools that scored just above those that received support from MCC. This simulates the quasi-experimental approach that NORC planned to use had they moved forward with an IE of the sub-activity. SI will collect conditions surveys from a sample of 275 non-MCC schools of approximately 400 that received similar scores on the environmental needs assessment.⁵

To carry out the conditions census, the evaluation team will collaborate with a local data collection firm so that when necessary, the survey can be administered in local languages. The data will be collected electronically using tablets. Additionally, the enumerators will be required to provide photographic evidence for their responses on the checklist so that a percentage of the responses can be reviewed and assessed for validity. SI expects that the census will take approximately four

⁴ MASDAR is a local consulting firm that was responsible for gathering and analyzing monitoring data for the community services activity under Ghana Compact I.

⁵This sample size relies on several assumptions, including a 95% level of confidence and a 3.31% margin of error.

The margin of error was calculated using the following formula: $1.96 \left(\sqrt{(pq/n)(pq/n)} \right)$ where “p” represents a given proportion of respondents answering a question a particular way, and “q” = (1-p). “p” and “q” are assumed to be equal to 0.5 (occurring if 50% of the respondents agreed with a statement and 50% disagreed) and then adjusted to a population of 400 schools. The adjustment was made by taking the square root of the total population minus the sample divided by the total population minus one. This is a conservative estimate as less equal variation would result in smaller standard errors.

weeks to complete, including piloting, training, and data collection. Once the census data has been collected, the team will compile an aggregate condition score for each MCC-supported school. This information will then be used in combination with the background information provided during the brief survey in order to guide sample selection for the case studies.

Case Studies with Cross-Case Analysis:

The SI evaluation team proposed that following the conditions census and preliminary analyses of the data gathered through the process, we engage in nine in-depth case studies with cross-case analysis⁶ to answer EQ2A, EQ2B and EQ3B about the processes that may have led to the current conditions of school infrastructure, and perceptions of key stakeholders on the relationship between the investments made and school level outcomes such as enrollment, attendance, persistence and learning. The objective of the case studies is three-fold. First, the case studies will be structured to reconstruct the narratives around program implementation to help understand what role the implementation process played in the current condition of schools for MCC. Second, the case studies will map the process for maintenance of MCC and non MCC schools as well as other push and pull factors that may influence the conditions of schools such as the political, environmental, social and financial environment in which the schools are operating. Finally, the team will use the case studies as an opportunity to explore teacher, parent and student perceptions of the relationship between learning environment and learning outcomes and the contributions MCC investments made to that environment.

The evaluation team will be using a stratified purposive approach to select some of the best and worst cases for examination (districts with clusters of good schools or schools with poor conditions)⁷, with the expectation that they represent the extremes in the processes and practices which will provide for an opportunity to identify patterns of behavior or processes and describes the context/environment in which those behaviors or processes occur. In total, there will be three case studies in each of the three regions where MCC provided support. Two cases will focus on MCC-schools and the third will focus on non-MCC schools as a point of comparison. Overall, the team will select sites using a phased approach. Phase I will include a disaggregation of data by region to assess scores within particular districts or proximate districts (if multiple schools are not in the same district) for MCC schools. In the second phase we will examine the information on non-MCC schools that match MCC schools we are targeting in each region for case studies. We are especially interested in those cases that non-MCC schools scored similarly to the selected sites and that had equally positive conditions or have good conditions where MCC has poor conditions.

There are four categories of individuals with whom we will speak during the case study data collection process: individuals familiar with the implementation process, those familiar with

⁶ SI has recommended case studies of both MCC and non-MCC schools so that we can gather information about why the schools are in the condition they are. If the data from the survey indicate that there aren't major differences between MCC and non-MCC schools, then there is the option to eliminate non-MCC schools from the case studies. SI does not recommend this because comparisons will allow for some comparison of maintenance practices and decision making processes more broadly in Ghana regardless of their aggregate conditions score.

⁷ For more on the case study approach for evaluation see the GAO Guidelines for Case Study Evaluations (1990) http://www.gao.gov/special.pubs/10_1_9.pdf. And for more on case selection, see Linda Morra and Amy Friendlander's World Bank Guide on Case Study Evaluations: https://ieg.worldbankgroup.org/Data/reports/oed_wp1.pdf.

maintenance, those who can speak to social, political, economic and environmental climate of the area, and finally, those who can speak on the possible relationship between school conditions and school level outcomes. Respondents will likely include parents, students, teachers, school leaders, district education officers, individuals responsible for operations and management, construction consultants and implementers, MiDA and MCC staff, and representative from the Ministry of Education office of PBME. Data will be collected by two case study teams and using Key Informant Interviews (KII), Focus Group Discussions (FGD) and community score cards (CSC).

Analysis, Reporting, Dissemination

Analysis:

SI, at a minimum, will be working with two distinct sets of data: (i) school conditions data gathered by SI, and (ii) qualitative data in the form of key informant interviews, focus group discussions and CSC data gathered by SI. Each data set requires a unique approach to analysis that must have complementarities. To the degree possible, the team will also examine EMIS data for trends in enrollment. For the school conditions survey, the team will examine trends in current conditions and if and how those outcomes can be correlated with distinguishing features of the schools and communities.

Qualitative data gathered through the case studies will be coded using Atlas.ti using both inductive and deductive approaches. First the data will be coded by a team at SI using broad codes drawn from the interview/FGD/CSC guides and from a preliminary read of a sample of transcripts. The team will also develop codes that reflect potential steps in implementation and maintenance processes that will allow for a visual mapping of the actions taken to complete these processes. The SI team will also undertake narrative analysis to reconstruct the implementation process. Narrative analysis will be used to identify the steps that were taken to implement the MCC education sub-activity. Finally, theme analysis will be done to identify common successes and challenges in the implementation and how those may be linked to the current conditions of schools.

Reporting:

The evaluation team will present findings, conclusions and recommendations from both the conditions survey and case studies to answer all four evaluation questions in a single consolidated report. All findings will be supported by evidence from either existing or newly collected data. Broad conclusions regarding the current state of MCC schools and the factors that determine their conditions will be drawn. Finally, the team will provide targeted, actionable recommendations for future programming involving education infrastructure development.

Dissemination:

There are two primary methods of dissemination currently planned with this contract. First, key stakeholders will be asked to provide feedback on results from this evaluation. Feedback will be documented and SI will provide a written response that will accompany the deliverables. Additionally, the SI team plans to present the findings from the evaluation at the MCC office in Washington, DC. With MCC's permission, SI would also like to share the report with our

colleagues working on an education infrastructure project for USAID in Ghana and with the USAID/Ghana Mission to help inform their infrastructure investments as well.

INTRODUCTION

Background

Country Context and Compact I Overview:

According to the World Bank⁸, Ghana is currently a lower middle income country. But, at the time that the first MCC Compact with Ghana was signed in 2006, it was considered to be a low income country⁹ with a potential for economic growth due to its political stability and natural resources.

Between 2003 and 2005, the Government of Ghana (GoG) implemented Ghana Poverty Reduction Strategy (GPRS)-I,¹⁰ which according to the UN Economic and Social Council (ECOSOC) consisted of the following programs: developing infrastructure; modernizing agriculture based on rural development; enhancing social services; good governance; and private sector development.¹¹ Based on the success of GPRS-I, the GoG implemented a follow up program between 2005 and 2009, GPRS II¹² that emphasized agriculture as an important component of economic development which could build upon the improved macroeconomic space.

MCC, drawing from GPRS-II and a consultative process, worked with individuals from both the private sector and civil society at national and local levels, to develop its first compact with Ghana. This first MCC compact with GoG was signed in August 2006 and implementation of the compact projects began in February 2007. MCC granted Ghana US \$547 million to carry out a country-owned program focusing on improving agricultural development (Millennium Development Authority [MiDA], 2012) over a period of five years. The Millennium Development Authority (MiDA), a statutory institution, was responsible for oversight and the management of implementation of the compact. MCC's compact with the GoG¹³ intended to reduce poverty through economic growth by achieving two primary objectives (Figure 1):

1. Increase production and productivity of high-value food and cash crops in the intervention zones in Ghana.
2. Enhance the competitiveness of high-value food and cash crops in the local and international markets.

⁸ The World Bank. (2016). <http://data.worldbank.org/country/ghana>

⁹ According to the World Bank International Finance Corporation in 2007 Ghana had a GNI of US\$590.00 per capita, placing it in the low income category. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/11/13/000333037_20141113005135/Rend ered/PDF/923280WPOBox385365B00PUBLIC0Ghana02007.pdf Accessed on, September 5, 2015.

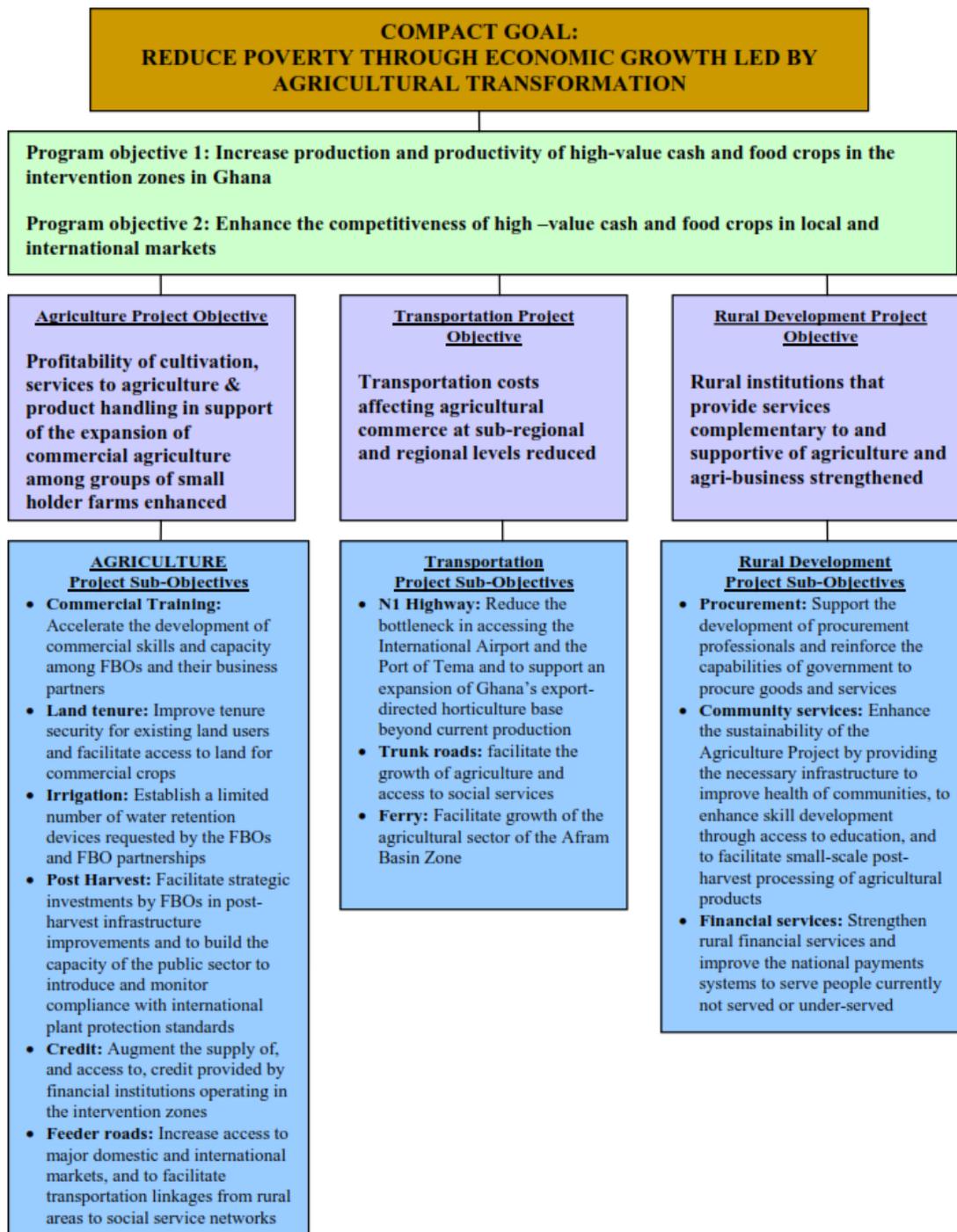
¹⁰ Ghana Poverty Reduction Strategy (GPRS I) 2003-2005. Volume I: Analysis and Policy Statement. Republic of Ghana. February 10, 2003. http://siteresources.worldbank.org/GHANAEXTN/Resources/Ghana_PRSP.pdf. Accessed on September 1, 2015.

¹¹ <http://webapps01.un.org/nvp/indpolicy.action?id=130>. Accessed on August 28, 2015

¹² Growth and Poverty Reduction Strategy (GPRS II). Republic of Ghana. National Development Planning Commission. 2005-2009. [http://siteresources.worldbank.org/INTPRS1/Resources/GhanaCostingofGPRS_2\(Nov-2005\).pdf](http://siteresources.worldbank.org/INTPRS1/Resources/GhanaCostingofGPRS_2(Nov-2005).pdf)

¹³ <http://webapps01.un.org/nvp/indpolicy.action?id=130>, accessed on September 1, 2015.

Figure 1: Ghana & MCC Compact Program Logic
 (Source: MCA-Ghana, MiDA Monitoring and Evaluation Plan, November 30, 2011)



As shown in Figure 1, to reach these objectives during the life of the compact, MiDA implemented three projects focused on agriculture, transportation and rural development. Each of these three large projects included a series of twelve activities as well as several sub-activities.

Agriculture Productivity and Value-Added Development Project

The Agriculture Project was designed to enhance profitability of cultivation, services to agriculture and product handling in support of the expansion of commercial agriculture among groups of smallholder farms (MiDA, 2012:2). It consisted of six activities including commercial farmers' training, irrigation facilities, land reform, post-harvest facilities, access to credit and feeder roads. The activities were designed to address a range of some of the major constraints farmers in Ghana faced, from poor access to credit to a need to enhance understanding of new farming technologies. While the Agriculture Project directly targeted relaxing the constraints faced by Ghanaian farmers, the second and third projects under the compact related to transportation and rural services addressed issues that could indirectly affect farm productivity.

Transportation Infrastructure Development Project

During the constraints analysis, MCC identified high costs of transportation as one of the factors that was limiting growth in agriculture in addition to economic growth (MiDA, 2012:116). Therefore, the objective of the Transportation Project was to "Reduce transportation costs affecting agricultural commerce at sub-regional and regional levels" (MiDA, 2012:2). It aimed to do so by improving the National -1 Highway (N-1) and Trunk Roads, and the Ferry infrastructure.¹⁴

Rural Services Development Project

The final project under the compact, the Rural Services Project was designed to "strengthen the rural institutions that provide services complementary to and supportive of, agricultural and agribusiness development" (MiDA, 2012:2), as individuals in rural areas had not had sufficient access to basic services. In order to bridge this gap and encourage further agricultural development in these areas, MiDA and its partners implemented three activities: procurement capacity building, improving financial services, and increasing community services.

Objectives of this Report

In addition to the projects and activities described above, drawing on its strong history of evaluations and focus on learning and accountability, MCC allocated nearly US \$7 million towards monitoring and evaluation (M&E) activities to track the outcomes of the projects and assess the implementation process and the program, activity and sub-activity outcomes and in some cases, impacts. Understanding that this information is key to future programming and the sustainability of program outcomes, MCC typically continues with systematic M&E post-closure using a well-defined M&E plan. However, for a number of reasons, a post-compact M&E plan was not put in place following Ghana- Compact-I. Despite the lack of a systematic plan, MCC has made efforts to learn from its past investments in Ghana in order to refine programming in the future. Therefore, MCC issued a Requests for Proposals (RFPs) to conduct a series of ex-post performance

¹⁴ According to the project completion report, nearly all of the interventions have been completed with the exception of three activities focused on irrigation, landing stages for the ferry, and the construction of floating dock for the RoRo Ferry.

evaluations of past projects. One of these is an ex-post performance evaluation of the education sub-activity that fell under the Community Services Activity within the Rural Development Project of Ghana Compact-I.

In the second half of the 2015 fiscal year, MCC awarded Social Impact, Inc. (SI) with a contract to conduct the ex-post performance evaluation of the education sub-activity. As part of the performance evaluation, SI has developed this evaluation design report that builds upon an initial evaluability assessment, and scoping visit to Ghana. As we will report, initially the ex-post performance evaluation was seen as an opportunity to re-examine existing data on outcomes and describe the implementation process, successes, challenges and sustainability of outcomes post-closure. However, during the planning process, the MCC education team advised that it would not be beneficial to re-examine the outcomes because the activity exclusively focused on infrastructure, and the team understood that in order to achieve positive education outcomes, their future programs would need to be more holistic. Because of that the evaluation team, in collaboration with MCC, identified potential areas for learning and devised objectives, questions, and approach that would reflect their current interest and needs. In the remaining sections, we describe the components and objectives of the education sub-activity, briefly discuss the state of education in Ghana and school climate and infrastructure development, define the original evaluation objectives, questions and sub-questions and how they have been restructured to enhance utilization, describe the methodological approach to the evaluation and data needs reflecting the new objectives and questions, and the plan that the evaluation team will follow in order complete the evaluation.

Overview of the Education Sub-Activity

The Education Sub-Activity was one of three sub-activities that fell under the Community Services Activity of the Rural Development Project. Overall, the Community Services Activity was designed to improve social infrastructure such as education facilities, water, and electrification. As described in the program logic above, the Community Services sub-activity aimed to, “Enhance the sustainability of the Agricultural Project by providing the necessary infrastructure to improve health of communities, to enhance skill development through the access to education, and to facilitate small scale post-harvest processing of agricultural products.”

During a preliminary scoping trip in August 2015, the evaluation team learned that when it was originally conceptualized, the Education Sub-Activity consisted not only of infrastructure improvements to school buildings, but also the construction of new classroom blocks, teacher facilities and accommodations, restroom facilities, provision of furniture, as well as providing enhanced learning materials in order to increase enrollment, attendance, learning outcomes, and increase income in agricultural communities. However, as the sub-activity evolved, it was determined that MiDA could not rely on pre-existing data, and would need to undertake independent formal needs and environmental assessments to select appropriate sites for investment. The study, which commenced in 2008 and was completed in 2009, meant a delay in the work. Therefore, the sub-activity was split into two phases and streamlined so that it focused exclusively on rehabilitation or new construction of classroom blocks, the construction of restroom facilities, the implementation of polytanks for rainwater catchment, and furnishing the newly constructed/rehabilitated spaces.

A theory of change for the sub-activity was not explicitly stated in many of the documents reviewed by SI. However, through the examination of several documents including the Economic Rate of Return (ERR) Analysis, the design reports developed by NORC, the Compact Completion Report, and the MASDAR Phase 2 Final Descriptive and Analytic Report, SI gathered that MCC and MiDA were operating on the hypothesis that an investment in education infrastructure would result in increased enrollment, reduced dropout, and higher completion rates. These intermediate outcomes could then be linked to the overarching programmatic objective of an increase in long term income earnings by increasing the education level of individuals in the community. This underlying theory was most explicitly explored in the

Theory of Change in NORC report: The Education Sub-Activity under the Rural Development Project funded the construction and rehabilitation of schools. Investing in educational facilities is expected to increase student enrollment and attendance and reduce drop-out rates by improving access (reducing travel time) and creating a better learning environment in the schools. Improved access to schools and conditions may also reduce absenteeism among teachers.

ERR analysis which linked employment with years of education (completion of kindergarten (KG), primary, junior high school (JHS), and secondary). While the linkage between education and economic growth more generally was implied, there was not an exploration of the explicit linkage to an increase in agricultural productivity. This was planned to be tested through an impact evaluation (IE). However, as will be discussed later, an IE was not feasible for a variety of reasons.

It should be noted that during the scoping trip, a second hypothesis regarding the linkage between improvements to school infrastructure and agricultural productivity was proffered. During numerous meetings with stakeholders, it was stated that by improving schools, farmers were more likely to stay in their communities. In other words, the infrastructure development projects were also seen as a possible detractor for those considering migrating from rural agricultural regions to urban areas. While this second hypothesis may have some credence, given the increases in enrollment, we could not find evidence of it articulated in any of the documentation and its validity was not tested in any way.

The first phase of the education sub-activity took place between 2007 and 2008 and focused on the rehabilitation of schools identified by the Community Service Activity under Ghana Compact I using the District Medium Term Development Plans. According to the NORC IE Design Report, the Community Service Activity team under Ghana Compact I drew from the list of schools identified by the district as having the greatest need for rehabilitation, but also those that had the fewest resources to rehabilitate their school. Rehabilitation included the replacement of roofs, repairing cracks, reinstalling locks on doors and windows, replacing doors and windows, and providing classrooms with a new chalkboard and furniture. During Phase 1a, schools in six anchor districts - Sekyere East, Kwahu South, Kwahu North, Akwapim South, Awutu-Efutu-Senya and Gomoah - were selected to be rehabilitated. All of these districts were part of the Afram Basin and the Southern Horticultural Zone which fall in the southern part of the country. During Phase 1b additional districts and schools were added following flooding that caused substantial damage to schools in the Northern Region of Ghana. While the selection of schools in the six anchor districts was described in a report issued by the Community Services Activity titled, "Report On: Validation

Mission to Select Educational Infrastructure for Fast Track Rehabilitation in Six Anchor Districts¹⁵,” SI was unable to locate any documentation of the selection criteria of schools in the North that were rehabilitated during Phase 1b. Upon completion of Phase 1, 75 school blocks had been rehabilitated at 65 schools; 35 schools in Phase 1a in the Afram Basin and Southern Horticultural Zone and 30 in the Northern Region during Phase Ib.

Phase 2 of the sub-activity began upon completion of the needs and environmental assessment which began with a list of 881 schools as potential candidates to receive new class blocks. The 881 were ranked at three levels: national, zonal and community. At the national level, the concentration of Farming Based Organizations (FBOs) was evaluated (this takes into consideration the proportion of the total number of FBOs in the Zone and the total number of FBOs under the MiDA project. The Zonal FBO ratio is then derived.¹⁶). At the zonal level, the team assessed the poverty index and the number of FBOs in the district. Finally, at the community level they examined the number of FBOs within a community, schools with sub-standard structures, and schools with inadequate or deficient facilities (lack of sufficient space to house all students, clean/safe latrines, and/or adequate furniture, lighting, and water). According to the Community Services Selection Criteria document issued by MiDA¹⁷, sub-standard facilities were given priority in the following order:

- Classes under trees
- Classrooms in unsafe structures (mud, open sheds, etc.)
- Uncompleted school structures
- Schools in rented accommodation
- Schools in unclad pavilions

Schools with insufficient facilities, according to Ministry of Education standards, were given priority in the following order:

- Schools with shortfalls in classroom accommodation
- Schools with shift system
- Schools without prescribed ancillary facilities, shall be provided with the following in order of priority:
 - Toilet and urinal,
 - Potable water facility
 - Staff accommodation
 - Library

¹⁵ The criteria used for selecting schools in the six anchor districts is not stated in the report. Some of the school details that were noted include number of classrooms, communal facilities, enrollment numbers and building materials. The validation methodology outlines that semi structured interviews were conducted with officials of the District Planning Coordinating Units and focus group discussions were done with stakeholders in the beneficiary communities.

¹⁶ Millenium Development Authority (MiDA). Millenium Challenge Account Program- Ghana. Community Services Activity (Project Selection Criteria). February 2009.

¹⁷ Millenium Development Authority (MiDA). Millenium Challenge Account Program- Ghana. Community Services Activity (Project Selection Criteria). February 2009.

- Computer laboratory
- Dining hall
- Sickbay
- Schools lacking recreational and sports facilities

The SI team has the spreadsheets where the ranking is identified. However, we were unable to secure a codebook to help decipher the ranking, nor were we able to reach the consulting firm, Lamda, for further explanation of how the ranking was applied¹⁸.

Using these criteria, MiDA in consultation with Lamda selected the schools where the construction of 175 classroom blocks would occur. During the scoping trip, SI learned that once the sites had been selected, the Community Service Manager issued an RFP for firms to bid on the design and construction of new classroom blocks following guidelines for school buildings developed by the MoE. The procurement process is clearly defined in the Operations Manual as it was a part of the capacity building efforts undertaken in Ghana.

At the close of the compact, MiDA had overseen the rehabilitation and/or construction of 250¹⁹ classroom blocks spread across 239 schools (approximately 44 blocks in 35 schools in Phase 1a, 31 blocks in 28 schools in Phase 1b, and 176 blocks in Phase 2). USAID contributed to the Compact by providing \$330,578.76 to build latrines and sanitation facilities at MCC schools in 5 Districts in the Northern Region (Tamale Metro, Savelugu Nanton, Karaga, West Mamprusi, and Tolon Kumbungu).

Program participants:

The Education Sub-Activity did not include direct services. Therefore, there were not program participants per se. However, the entire compact specifically targeted rural farmers and their families. Direct beneficiaries of the sub-activity included students, parents, teachers, and school leaders.

Geographic coverage:

Table 1: Geographic coverage of intervention schools

	Phase 1a	Phase 1b	Phase 2
Northern Agricultural Zone	5	28	47
Afram Basin Zone	15	0	83

¹⁸ SI contacted Lamda Consulting multiple times over the course of several months for information about the codebook and how the rankings were determined but did not receive a response. SI also sought to have a meeting with Lamda during the scoping visit. However, when SI contacted them, they did not return calls and stated that they were unavailable.

¹⁹ Note that there were discrepancies in the data files we received. The SI team is currently working to validate the school lists. However, our total numbers may be off by a margin of +/- five schools. Given that the team is suggesting a census of schools, we will validate the lists generated by MiDA in comparison with other lists shared by NORC.

Southern Horticultural Zone	15	0	46
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The overall program was implemented in 30 districts across the Northern Agricultural Zone (Northern Region), the Afram Basin Zone (Ashanti and Eastern Regions), and the Southern Horticultural Zone (South-East Coastal Plans). As described above, these sites were chosen due to the high percentage of farmers and income that enters the community as a result of farming. It should be noted that the program originally targeted 23 districts, but it was expanded to 30 following re-districting and the creation of new districts. During Phase 1a, MiDA and their partners rehabilitated schools in 40 communities. During Phase 1b, schools in 23 communities were rehabilitated. In total, during Phase 1, 63 communities were reached. During Phase 2, 176 school blocks were constructed in 151 communities. It should be noted, however, that some of the communities in Phase 1 and Phase 2 overlapped. See Annex IV for a complete list of zones, districts, communities and schools.

Key Program Indicators and How They Lead to Expected Outcomes.

Alongside the Compact, MiDA adopted a Monitoring and Evaluation (M&E) plan to maintain a results-based approach to programming with quantifiable targets.²⁰ In order to monitor the progress of the Education Sub-Activity, the M&E team at MiDA established the nine indicators defined below (MiDA, 2011:42)²¹:

- *Number of students enrolled in schools affected by the education sub-activity*: total number of pupils enrolled in school blocks constructed or rehabilitated by MiDA in all 30 operational districts. School levels include kindergarten, primary and junior high.
- *Additional female students enrolled in schools affected by Education Sub-Activity*: total of the incremental females enrolled in school blocks constructed or rehabilitated by MiDA in all 30 operational districts. School levels include kindergarten, primary and junior high.
- *Number of school blocks rehabilitated*: Number of school blocks rehabilitated under Phase 1a in ten of the thirty MiDA districts
- *Number of school blocks constructed*: Aggregated number of the 2-unit, 3-unit and 6-unit school blocks constructed under Phase 1b and Phase 2 in all MiDA Districts to acceptable standards specified in MiDA Educational facilities construction works orders.
- *Number of school blocks designed and diligenced*: Aggregated number of kindergarten, primary and junior high schools designed and diligenced. Designed and diligenced means MiDA has accepted the final report on Feasibility Studies by IDIQ Consultants on the schools.
- *Value of signed works contracts for MCC-supported educational facilities (construction and rehabilitation)*: Value of signed contracts, in US Dollars, for educational facility construction or rehabilitation.
- *Amount of signed contract sums for works (school construction/rehabilitation) disbursed*: The aggregate amounts disbursed of the total value of all signed contracts for education facility works.

²⁰ Millennium Development Authority (MiDA). Monitoring and Evaluation Plan. November 30, 2011.

https://assets.mcc.gov/documents/me_plan_-_Ghana.pdf

²¹ According to the Compact Completion Report, M&E staff made regular trips to the field to validate data gathered by M&E consultants, p. 215.

- *Percent of works contract sums (school construction/rehabilitation) disbursed:* The aggregate amounts disbursed divided by the total value of all signed contracts for education facility works. This is a proxy indicator for physical completion of education facility works. However, since the numerator includes industry standard advance payments and mobilization fees, it does not correlate perfectly with physical progress.
- *Shortlist of IDIQ consultants/contractors developed:* IDIQ Consultants for feasibility studies on basic schools' construction pre-qualified through the MiDA procurement process.

The indicators defined here were utilized to capture the procurement process and assess progress towards completing the construction as well as changes in enrollment rates.

In addition to the indicators developed as a part of the M&E plan, NORC was contracted by MCC to carry out a number of Impact Evaluations (IEs) on projects and activities under the Compact, for which they produced impact evaluation design reports. The first report developed for an IE of the education sub-activity that identified two sets of outcomes that would need to be assessed in order to determine the effectiveness of the education sub-activity and link it to the program objectives. The first set of outcomes are school level outcomes and include: enrollment, attendance, gender parity, student-teacher ratio, contact hours, seats per student, completion/repetition rates, and percentage of trained teachers. The second set of outcomes are household level indicators including household time allocation, labor productivity and income.²²

By examining design reports submitted by NORC, SI determined that the design of the IE was modified to center around school level outcomes rather than economic outcomes. They did not provide a justification for the shift in their report. The second design, submitted in 2013, revised the list of indicators that could be used to assess the impacts of the Education Sub-Activity to include: gross enrollment rate, net enrollment rates, gross attendance rates, and average percent of days that students attend school (NORC, 2013:16-17). NORC intended to carry out a regression discontinuity design (quasi-experiment) using the rankings provided by Lamda, comparing those schools right above the cut-off that received support from MCC and those just below that did not. To carry out this design, they needed to match schools from two rounds of EMIS data as well as match school enumeration areas to enumeration areas in the census.

From conversations with NORC and by examining the design reports, SI learned that ultimately NORC and MCC decided not to proceed with the IE due to several concerns. First, the data provided to NORC by Lamda and MiDA for the schools that were ranked did not include EMIS codes. In an effort to overcome this, they sought to match the list from MiDA and Lamda with the EMIS listing. However, the lists lacked alignment. NORC could have put effort into identifying the EMIS codes by contacting the schools by phone or in person and they did pilot this approach. As they were doing their piloting (which showed that they could gather the necessary codes through visits), they also examined the sample size they would need in order to draw conclusions regarding program impact. This led to a second issue- NORC had concerns regarding the level of attrition that could occur due to the matching approach they intended to take. At a maximum, they anticipated that they could construct a sample of 245 schools, and at a minimum, a sample of 188

²² See Annex II for a more robust description of NORC's evaluation design.

schools.²³ In either case, the sample would be insufficient to assess impacts. Due to the insufficient numbers, it would not have been prudent for the organizations to continue with an impact evaluation (See Annex II for more information of NORC's M&E role).

Link to ERR and Beneficiary Analysis

To assess the economic rate of return (ERR) for the Education Sub-Activity, MCC drew from enrollment rates, completion rates (drop-out rates), wage rates, employment rates, as well as school progression and survival rates in relationship to activity costs, exchange rate, inflation, and maintenance costs.²⁴ From the ERR analysis, we gather that MCC had estimated the life of the investment to last approximately 19 years, assuming a depreciation rate for regular wear and tear of the school infrastructure and a maintenance cost of 5% of construction cost. The ERR analysis also considered both the earning potential gained by a student persisting in school as well as the immediate opportunity costs in terms of wages lost due to a student being enrolled. Benefit streams included the differential earnings based on years of education completed. The years of wage earning potential of a cohort is assumed to be 32 years after leaving school. With these assumptions, MCC estimated an ERR of 11.4% at the time of project closure.

The ERR above is valid under the assumptions used in the analysis. However, any deviation in the assumption could alter the returns. While the evaluation proposed herein does not link directly to benefit streams, it can help in updating one of the major assumptions used in the analysis, namely the life of the investment. As stated above, an ERR of 11.4% assumed that the project schools will provide benefits to the students and the community in terms of improved access to education for 19 years. The ERR assumes that all students enrolled in the school during these 19 years will have increased their differential earnings based on the years of completion. However, the assumption on life of the investment is valid only if a number of factors including the quality of implementation (construction), actual maintenance costs, quality of maintenance so far and other external factors that were considered in the calculation remain unchanged. Any reduction in the life of the investment will result in fewer years to use the buildings and therefore fewer students to benefit from the project in terms of expected income gains from the investment.

In exploring the factors that determine the actual life of the investment, this evaluation seeks to provide learning that can guide future infrastructure investments. A more nuanced understanding of factors that affect infrastructure projects can help improve the design and implementation of such projects in the future.

Literature Review

State of Education in Ghana

Since the inception of the Millennium Development Goals, the Government of Ghana (GoG) has prioritized increased access and quality of education throughout the country. Ghana enacted a number of policies including a ten-year education strategic plan to improve and modernize the education system in order to provide universal primary education by the year 2015. These state

²³ Note, the report did not provide the assumptions around their calculation of sample size.

²⁴ Millennium Challenge Corporation (MCC). ERR Analysis. July 29, 2013.

driven interventions included policies such as Education Strategy Plan (ESP) for 2003-2015, the Free Compulsory Universal Basic Education Program, Growth Poverty Reduction Strategy, as well as other GoG initiatives. The Capitation Grant (School Fee Abolition) program has been credited with the sharp increase in enrollment seen from 2006. Other contributing programs include the expansion of Early Childhood Development services, Nutrition and School Feeding programs, and the increase of Early Childhood Development services (Adamu-Issah, et al. 2007 p.9).

These programs, along with the international donor community involvement, have led to early indication of progress. From 2004 to 2014, enrollment increased in primary schools by almost 30% (UNESCO Institute for Statistics), and the UNDP reports that some areas of the country have already met the Universal Primary Education goal with Gross Enrolment Ratio (GER) equaling 100%. The largest improvements in enrollment have been seen at the primary school level compared to junior and secondary schools. At the Junior High School level, the growth in enrolment from 2008/09 to 2013/14 was only 1.4 percentage points of GER (from 80.6% to 82.0%). In contrast, during this same time period primary school GER increased from 94% to 107.3%²⁵ (Education for All 2015 National Review Report: Ghana, 2014). Overall, the enrollment improvements have been very promising but there is still progress to be made as the overall Ghana GER rate for all school levels throughout the country in 2014 is 5.1% below the UPE goal of 100% (Achieve universal primary education, 2014).²⁶

Along with increases in enrollment, over the past ten years the completion and retention rates also rose. Completion of primary school increased from 69% in 2004, to 97% in 2014 as reported by The World Bank. The most recent youth (15- 24 years) literacy statistics from 2010 is at 85.7% which is an increase from 70.7% in 2000. It is estimated that in 2015 Ghana will report a youth literacy rate of 90.6% as younger children who benefited from the Universal Education programming move into the youth literacy age range (UIS, 2013 p.11).

While looking at these indicators, a large gender discrepancy is not seen at the country level. Ghana has improved its GPI for primary school enrollment to .99, and gender parity has been achieved at some levels, such as in kindergarten enrollment where more females are enrolled than males. Though these successes are notable, they are unevenly distributed across districts. There are 30 districts that have a GPI for primary school enrollment below .9 and three districts below .8. When this is expanded to Junior High School, the number of districts with a GPI below .8 increases to 32 (Education for All 2015 National Review Report: Ghana, 2014).

Increased enrollment, completion and literacy rates, through indicators of improved access to education, has also led to overcrowding in classrooms and many schools have had to operate without formal facilities to accommodate the students. In response to this situation the GoG increased the number of districts from 170 to 216 in order to distribute resources more effectively. In 2007, a report by UNICEF identified “Insufficiency of some school infrastructure (classrooms, sanitary facilities, etc.) in some places in the country” as a barrier to reaching the MDG of Universal Primary Completion by 2015 (Adamu-Issah, et al. 2007 p.11). Additionally, in the 2010-

²⁵ This number is over 100% due to a number of students enrolling who are not in the age bracket for primary school.

²⁶ <http://www.gh.undp.org/content/ghana/en/home/post-2015/mdgoverview/overview/mdg2.html>

2020 Education Strategic Plan, the GoG outlined that in order to achieve the policy objective to “Improve equitable access to and participation in quality education at the basic education level” all basic education schools need to “meet national norms in health, sanitation and safety.” The indicative target for this objective is 100% of schools with health and hygiene systems coverage by 2015 (Government of Ghana, 2010 p. 8).

Evidence from existing literature shows that there is a positive correlation between improved school infrastructure and learning outcomes²⁷, even though the effect of improved school infrastructure on enrollment and dropout rates remain inconclusive²⁸. In Ghana, large gains have been realized in improving the education sector through rigorous efforts by GoG and the donor community, including investments in school infrastructure, but effective management and oversight of initiatives will be fundamental to sustaining those gains, particularly in underperforming parts of the country and education system.

EVALUATION DESIGN

Policy Relevance of the Evaluation

While a number of evaluations and research studies have broadly examined the relationship between access to a positive learning environment and learning outcomes, this evaluation is more targeted and has a distinct angle. Originally, the study was imagined to re-examine activity outcomes by drawing on existing data and supplement that with qualitative information on the implementation of the sub-activity. This information would have fed into MCC’s programming in education. However, during the design phase, a number of key stakeholders indicated that the study was an opportunity to examine very specific outcomes, namely the conditions of schools, and the factors that drive conditions, including implementation. As such, the evaluation focuses on investments in infrastructure and the subsequent life of those investments. Specifically, through this evaluation, the SI team will assess the current conditions of MCC-funded school infrastructure projects (the construction and/or rehabilitation of classroom blocks, the implementation of toilet facilities, provision of furniture, and guidelines for maintenance), how they compare with the conditions of other Ghanaian schools, the factors that drive the life of these investments, and perceived learning outcomes. As described above, the life of investment is of central importance to MCC’s ERR analysis. The two primary factors that influence the life of the investment are the quality with which the work was implemented and the degree to which the investments were maintained over time. How the implementation process unfolded and whether or not schools were maintained, in particular, have important policy implications not only for MCC, but also for their local affiliate, MiDA, other international donors, as well as the GoG.

School Improvement Policy and Practice:

²⁷ Cynthia Uline, Megan Tschannen-Moran, (2008) "The walls speak: the interplay of quality facilities, school climate, and student achievement", Journal of Educational Administration, Vol. 46 Iss: 1, pp.55 - 73

²⁸ Handa, Sudhanshu, 1999. "Raising primary school enrollment in developing countries," FCND discussion papers 76, International Food Policy Research Institute (IFPRI).

Numerous international agencies including the UN, World Bank, and the Coalition for Global School Safety provide guidance on minimum standards that school buildings should meet. There are also specific building design codes in Ghana. However, there is a lack of clarity on how schools should be maintained, who is responsible, and what the governments' expectations are. This is evidenced through a performance evaluation of USAID's Public Works Construction Activity. This activity was a Government to Government (G2G) initiative to construct, furnish and maintain schools, which resulted in the construction of 159 educational structures by the Funds and Procurement Management Unit (FPMU) within the MoE. According to the PWC evaluation report, in past years the Ghana Education Service (GES) office provided capacitation grants to help maintain schools up until 2013. After 2013, the capacitation grants seem to have been discontinued. It is unclear what led to this change or what the systematic procedures are for Operations and Management (O&M), not only for MCC-supported schools but for schools generally in Ghana. Therefore, this ex-post performance evaluation will seek to understand current practices and provide policy guidance for both donors and the GoG on the political economy of school maintenance.

As the global community transitions to the Sustainable Development Goals (SDGs) with an emphasis on access, inclusion, lifelong learning and safe learning environments, the results from this evaluation could help guide education programming in terms of sustaining investments over time that encourage children to stay in school. The Ghana Ministry of Education is acutely aware of the upcoming changes and has committed to working towards meeting the newly set goals. As such, an assessment of the current conditions of MCC schools will aid in their understanding what additional supports need to be put in place in order to ensure that schools are well maintained. It is because of this that a large portion of our efforts will emphasize if/how schools are maintained and the processes through which the GoG undertakes maintenance.

MCC Education Policy and Programming:

This evaluation also holds importance for MCC internal policy. The objective of the sub-activity was to rehabilitate, construct and enhance schools in communities that were targeted as a part of the overall compact in order to increase enrollment, decrease dropout, and increase overall learning potential within the community. This theory of change is strongly linked to research that demonstrates that a safe, hospitable, and clean environment with sufficient space, furniture, and toilet facilities, is a key component of an overall favorable learning environment (Choi, H., Merriënboer, J. J., & Paas, F., 2014). MCC is currently refining its education programming so that it focuses not only on the physical structure, but also the other factors that are crucial for promoting a positive learning environment. An important part of program refinement will be understanding the successes and challenges faced with implementation, perceptions of program outcomes, and the role that various stakeholders have played in the maintenance of MCC investments.

In 2015, MCC issued a request for proposals under Blanket Purchase Agreement (BPA) MCC-13-BPA-0017 to have a contractor revisit a series of education activities or sub-activities for compacts that had already closed. The objective of these ex-post performance evaluations is to guide future programming and provide a learning opportunity not only for MCC but for those MCAs that are carrying out new compacts in the respective countries. Ghana is one such location. In the sections

that follow, SI will define the original evaluation questions and their modifications and propose a methodological approach that will meet the needs of MCC within the defined parameters.

Performance Evaluation Objectives and Questions

In the original scope of work in the RFP, MCC outlined the objectives of an ex-post performance evaluation as follows:

a study that seeks to answer descriptive questions, such as: what were the objectives of a particular project or program, what the project or program has achieved; how it has been implemented; how it is perceived and valued; whether expected results are occurring and are sustainable; and other questions that are pertinent to program design, management and operational decision making.

The objectives of primary focus in this ex-post performance evaluation target how the sub-activity was implemented, if and how it has been sustained, and the perceived outcomes. To meet these objectives, MCC issued three guiding questions that were to be answered through the ex-post performance evaluation of the education sub-activity in Ghana that focused on evaluability, implementation and outcomes:

EVALUATION QUESTION #1 (EQ1): Was the program evaluable?

EVALUATION QUESTION #2 (EQ2): Was the program implemented according to plan?

EVALUATION QUESTION #3 (EQ3): What were the program results on key outcomes?

As the evaluability was completed in order to answer EQ1, the evaluation team in collaboration with MCC, elected to enhance the original evaluation questions, drawing out specific details, while maintaining allegiance to an examination of implementation and outcomes. In the sections below, we describe each of the evaluation questions, the modifications to EQ2 and EQ3, and the explanation for the modifications.

Evaluation Question 1:

In the first phase of this contract, the SI evaluation team completed a formal evaluability assessment at the end of July 2015 (Annex V) in order to answer Evaluation Question #1 (EQ1). Through the evaluability assessment (EA), we confirmed NORC's initial assessment that an IE was not feasible due to unreliable pre-existing data (e.g. EMIS data), high risk for spillover, a field saturated by donors, and an insufficient sample to statistically detect programmatic impacts. While an impact evaluation is not advisable in this scenario, this does not mean that the sub-activity is not evaluable. The EA demonstrated that the education sub-activity meets the required dimensions outlined by MCC. Specifically, based on a review of program documents and conversations with key stakeholders, the evaluation team determined that there was sufficient evidence to support the program diagnostic; the overarching project objectives and theory of change had been clearly defined; project participants were clearly defined and justified in terms of geographic scope and

eligibility criteria; and the metrics for measuring results for both accountability and learning were clearly defined.²⁹

Refining Evaluation Questions 2 and 3:

Implementation:

Due to the aforementioned limitations, the current evaluation is not an impact evaluation, and therefore, does not permit us to attribute particular outcomes to the education sub-activity. That said, we are able to explore potential factors that have driven both perceptions of school level outcomes, school conditions, and the relationship between school level outcomes and the sub-activity using rigorous qualitative methods. One factor that can play a significant role in determining outcomes is the success or challenges faced during implementation, which is the central focus of original EQ2.

An examination of implementation alone is unlikely to fully describe all possible drivers of school level outcomes and school conditions. An additional factor that may drive outcomes is the degree to which the MCC investments were maintained. A maintenance manual was developed for those schools that benefitted from the education sub-activity. But we do not know if maintenance took place and what the potential drivers are for maintenance. In other words, if maintenance did take place, how was it implemented? In addition to implementation and maintenance there may be additional factors that drive both school level outcomes and school conditions. Therefore, the evaluation team modified EQ2 to focus on the potential drivers for outcomes, while specifically targeting both implementation and maintenance processes. Table 3, below shows the updated questions.

Table 2: Revisions to Evaluation Question 2

Original Evaluation Question 2	Revised Questions
Was the program implemented according to plan?	EVALUATION QUESTION 2a (EQ2A): How might have the implementation process and/or maintenance post-completion contributed to current conditions of schools?
	EVALUATION QUESTIONS 2b (EQ2B): How might other factors explain both perceived school level outcomes and the current conditions of schools?

Targeted Outcomes:

In EQ3, the MCC requested an examination of “key outcomes.” Drawing from both the Compact Closure report and the design reports developed by NORC, the evaluation team determined that the key outcomes that were to be improved through the intervention are the school level outcomes, including enrollment, attendance, and persistence. However, while the initial evaluability

²⁹ Overall the program and sub-activity met 4 out of 5 dimensions outlined by MCC. It was not possible to assess what risk mitigation plan was put in place for the sub-activity.

assessment determined that the education sub-activity was evaluable, it also revealed possible roadblocks the evaluation team could encounter while attempting to further investigate school level outcomes. MCC suspected and NORC confirmed that accessing EMIS data would be challenging, and that there was a potential lack of validity and reliability of EMIS data from the time period immediately prior to and during the implementation of Compact I. Furthermore, based on feedback from the MCC Education Team the evaluation team determined that the potential benefit to examining school level outcomes alone would not maximize the potential of the evaluation. Therefore, the team recommended two questions refinements. First, was a shift from actual school level outcomes as reported by EMIS to perceived outcomes described by students, parents, teachers and school leaders.

Second, as the evaluation team continued to work with MCC, an additional outcome of the sub-activity surfaced as a potential source of important information, school conditions. Specifically, during the design phase MCC raised concerns about the current conditions of schools and the degree to which they were accurate in their prediction of the life of schools. This is an especially important issue for MCC because is an input into their calculation for the economic rate of return. Therefore, in addition to examining school level outcomes, the team recommends examining school conditions as an additional “outcome.”³⁰

To reflect these distinct, yet equally important outcomes, the team broke the original EQ3 into two questions:

Table 3: Revisions to Evaluation Question 3

Original Evaluation Question 3	Revised Questions
What were the program results on key outcomes?	EVALUATION QUESTION #3a (EQ3A): What are the current conditions of MCC investments made for the Compact #1 Education Sub-Activity? How do the conditions of MCC investments compare to non-MCC supported sites?
	EVALUATION QUESTION #3b (EQ3B): What are the perceived education outcomes of investments in school infrastructure?

In addition to refining the evaluation questions, the team also suggests a modified objective with three specific goals. The new objective is to explore school level outcomes, school conditions, and potential drivers of the two in order to understand the life of the investment potential benefit of the education sub-activity. The three goals are: *to examine outcomes of investment including both the physical structure as well as perceived educational outcomes; to assess differences in conditions for MCC-supported schools and non-MCC-supported schools in reference to both MCC and GoG*

³⁰ Technically speaking, new infrastructure can be seen as an output of the intervention with school conditions as an intermediate outcome that could potentially impact long term school level outcomes.

Guidelines; and to map the influences on current conditions of MCC-supported schools, specifically targeting implementation and maintenance processes.

In the sections below we detail EQ2A, EQ2B, EQ3A, and EQ3B, define the methodological approach we will employ to answer these questions including an examination of data needs, sampling and data collection, data prep and analysis and the process for sharing findings.

METHODOLOGY

Approach to Questions:

In order to answer the newly formulated evaluation questions and meet the objective and goals, the team determined that it will not be able to solely use existing data as was originally anticipated. The team proposes supplementing existing data with two distinct but related data collection activities. The team will conduct both a school conditions survey to answer EQ3A and supplement that survey with cross case studies to answer EQ2A, EQ2B and EQ3B. In Table 4 below, we have summarized the methodological approach including where the design has data available and what requires new data collection. Following the table, we detail our approach to respond to each of the evaluation questions. It should be noted that in some cases we have provided MCC with multiple options for data collection followed by a recommendation by the SI evaluation team in order to help provide the thought process associated with our recommendation.

Table 4: Methodology Summary

Evaluation Question #	Evaluation Objective	Evaluation Question	Existing Data	Data Needs
EQ2A	Describe implementation and if and how outcomes sustained.	How might have the implementation process and/or maintenance post-completion contributed to current conditions of schools?	Monitoring data regarding implementation of sub-activity and MASDAR reports Maintenance manual	In-depth information on how the sub-activity was implemented and successes and challenges of implementation In-depth information on how maintenance is done in Ghana including understanding roles and responsibilities as well as funding streams

EQ2B	Describe perceived outcomes and explanations for outputs (school conditions)	How might other factors explain both perceived school level outcomes and the current conditions of schools?	Compact completion report Existing reports on environmental and economic changes in Ghana Studies on school improvement in Ghana and school outcomes	Qualitative data on political, economic and social conditions in areas where implementation occurred. Same information for comparison sites
EQ3A	Describe outputs	What are the current conditions of MCC investments made for the Compact #1 Education Sub-Activity? How do the conditions of MCC investments compare to non-MCC supported sites?	Monitoring data on sub-activity completion and components implemented per site GoG data guidance on infrastructure requirements Ranking of schools from environmental needs assessment No data to assess current conditions of non-MCC sites	Descriptive data on current conditions with information regarding other investments Descriptive information on current conditions of non-MCC supported sites
EQ3B	Perceived outcomes and value	What are the perceived outcomes of investments in school infrastructure	If available, EMIS data on school enrollment, attendance and completion*	Perceptions of different stakeholder on the value and outcomes of investments using CSC

**Note, EMIS data must be requested from the Ministry of Education. To do so, the team must have up to date EMIS codes for the schools that were listed in the environmental needs assessment.*

The ordering of the evaluation questions reflects the numbering of the original questions. However, as will be demonstrated, it will be necessary for us to answer EQ3A and EQ3B before we can

tackle the remaining questions. Therefore, we will begin our discussion with EQ3A and then move to EQ2A and EQ2B.

EVALUATION QUESTION 3A: What are the current conditions of MCC investments made for the Compact #1 Education Sub-Activity? How do the conditions of MCC investments compare to non-MCC supported sites?

The first half of the updated EQ3A, aims to assess the current conditions of the MCC investments including the rehabilitated or newly constructed classroom blocks, the toilet facilities and furniture. It explores whether or not variations in linkages are correlated with specific environmental factors including: score on the needs assessment, region in which implementation occurred, whether it was rehabilitation or new construction, phase of the sub-activity, implementation partner, and other donor activity within the same school complex. The second component of EQ3A makes a similar assessment, but with non-MCC-supported schools. The evaluation team has drawn information from the environmental needs assessment, GoG guidelines on infrastructure development, monitoring data on the implementation of the sub-activity, and the maintenance to formulate a survey that will be used to assess the current conditions of both MCC and non-MCC supported schools. This survey, which we refer to as a “conditions survey,” will include both the scoring of the physical structures and ask questions regarding additional investments and maintenance.

EVALUATION QUESTION 3B: What are the perceived outcomes of investments in school infrastructure?

As was described earlier in this report, at the inception of the education sub-activity, MCC had contracted NORC to undertake an impact evaluation to determine if the sub-activity had an impact on income as well as school level outcomes. However, it was determined that such an evaluation was not feasible. This is not to say, however, that it is impossible to examine outcomes. In fact, MCC did so in the final compact closure report by examining monitoring data they had gathered on attendance. In addition to drawing from those data, the evaluation team will examine stakeholders’ perceptions of how the investments in school infrastructure may have affected school level outcomes. While this will not allow the team to determine a causal relationship, it can provide insight into how MCC might improve education programming moving forward. The evaluation team intends to gather this information through key informant interviews and focus group discussions that take place during the cross case study. Specifically, the team will ask stakeholders including teachers, parents, and if possible, students, what their perceptions are of the quality of infrastructure investment and how that may have influenced enrollment, attendance, and learning outcomes.

In addition to examining school level outcomes, the team will also examine the structural quality of schools including the degree to which it is safe, hospitable and has a clean environment with sufficient space, furniture, and toilet facilities. Research on school climate has made direct linkages between the learning environment and student outcomes. And publications by such organizations as the International Network for Education in Emergencies (INEE), the United Nations High Commission for Refugees (UNHCR), United Nations Educational, Scientific, and Cultural Organization (UNESCO), the World Bank, and the Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector have attempted to establish guidelines for a positive

learning environment. There are numerous factors that go into the creation of a positive learning environment including well trained staff, time spent on instruction, functioning organizational and social structure, as well as a safe and secure physical structure, which precedes all else. Without a roof over head, good lighting, access to water, access to safe and clean toilet facilities, students and the teachers are either discouraged from attending or prevented from performing at their best. A poor infrastructure can lead to staff attrition, dropout, and time off task.

EVALUATION QUESTION 2A: How might have the implementation process and/or maintenance post-completion contribute to current conditions of MCC investments?

While EQ3A examines the current conditions of MCC investments in comparison to those that did not receive support, EQ2A aims to understand why school infrastructure is in its current state by examining the process by which the sub-activity was implemented and upon completion the process by which the investments were maintained since the closure of Ghana Compact I for MCC schools. To do so, the evaluation will undertake a cross-case study to understand the implementation process, the successes and challenges encountered with implementation, the role various stakeholders in the maintenance of school infrastructure, how resources are allocated and decisions made regarding maintenance, and successes and challenges faced with maintenance. Given the qualitative nature of this inquiry, the evaluation team will employ a variety of methods to collect data on these processes and procedures including key informant interviews (KIIs), focus group discussions (FGDs), and community score cards (CSCs) to map implementation and maintenance in a sub-set of sites. The team will supplement this information with data gathered through MASDAR and the maintenance manual developed by MiDA.

EVALUATION QUESTION 2B: How might other factors explain both perceived school level outcomes and the current conditions of schools?

It is important to note that while the team believes that the implementation of the sub-activity and the maintenance of investments are the two key components in understanding why schools are in their current condition, we also understand that there may be some unanticipated reasons. By using a cross-case study approach, the evaluation team will have more freedom to explore unexpected influences or explanations. In fact, the team will actually attempt to uncover some of those explanations through additional data collection activities. For example, we will hold KIIs with individuals with experience and information regarding climate change to understand how weather conditions may have influenced school infrastructure. Similarly, we will meet with other donors in the area to understand how their programming may differ from MCC's sub-activity. Furthermore, during our FGDs and CSCs with parents, students and teachers, we will ask about the drivers of both conditions as well as learning outcomes to assess the relationship between outcomes and school conditions.

Data Needs:

Existing Data:

When originally conceptualized, it was expected that the evaluation team would be able to carry out the evaluation relying primarily on existing data, such as EMIS data and data gathered through

project monitoring. In fact, in the call for proposals and the responses to offerors' questions, MCC emphasized that the evaluation would call for minimal data collection. During the scoping trip, the PI learned that Ghana Compact I was one of the earlier compacts and did not have as refined an M&E system as other MCC initiatives. This resulted in incomplete monitoring data and a lack of detailed information regarding program implementation. For example, typically a post-Compact M&E plan is developed and staff are kept on to carry this work through. However, this was not the case in Ghana. Additionally, the teams working to implement the various projects, activities and sub-activities were not fully integrated with the M&E teams. Therefore, there were occasions during which the M&E team found out about an activity "too late" to build systems around the activity or collect baseline data. There was also a lack of integration between the team overseeing the implementation and the M&E team, which resulted in the M&E team playing a very minor role in the ranking of communities and implementation sites. While there is a spreadsheet that lists each of the 881 schools and describes their attributes, the M&E team was unable to get clarification from the local consultant regarding the ranking process, the selections of schools, and was not provided a codebook to decipher the spreadsheet.³¹ And it appears that this information was not systematically collected.

During the scoping trip the evaluation team was able to obtain some existing datasets and make inroads to gather pre-existing data that would shed some light on the implementation of the education sub-activity. Specifically, the team was able to secure complete lists of the schools that were considered for the education sub-activity, a complete list of each of the interventions implemented at the selected schools, baseline, midline and endline enrollment data, as well as reports generated by MASDAR³² that describe overall community member satisfaction of the condition of schools. While this data will provide partial insights into program implementation, it leaves out details on the implementation of the education sub-activity, information on the condition of schools immediately following the completion of the activity, and information on the implementation of maintenance procedures. Therefore, the SI team in consultation with MCC, has decided not to rely exclusively on pre-existing data, but rather, to implement two substantial data collection activities that will allow them to answer the evaluation questions with greater validity and reliability, and make recommendations that will link directly to MCC procurement processes and operations and maintenance policies on the whole. However, wherever possible, the team will use existing literature to explore possible explanations for trends in the data.

Conditions Survey:

What is a conditions survey?

A conditions survey is a systematic examination of the current conditions of school infrastructure using international standards, GoG building guidelines and the MiDA maintenance manual to grade conditions. The survey (see Annex VI) consists of one section that asks the respondent to provide basic background information regarding the school, including EMIS number, GIS

³¹ Both during and following our visit we have attempted to collect this information from Lamda both through MiDA staff and direct phone calls. However, so far, we have been unsuccessful in gathering this information.

³² MASDAR is a local consulting firm that was responsible for gathering and analyzing monitoring data for the community services activity under Ghana Compact I.

information, approximate number of students it serves, and investments or upgrades that have taken place and by whom over the last five years. This background section will be followed by a series of items that enumerators will score on a scale of 1 to 5, with 1 being very poor condition and 5 being very good condition. The information provided will then be verified by submitting a photograph as back-up evidence. For example, in one item the enumerator is asked if there is peeling or distempered paint. Regardless of the score the enumerator ascribes, he or she will then provide photographic evidence for that score. This will also permit MCC to monitor conditions over time by creating a collection of photographs. The largest investment occurs at the baseline. But once the photos exist, it will be easier to follow up at regular intervals with additional photographs.

Sampling Frame:

The evaluation team suggests undertaking a conditions census rather than collecting information from a sample of MCC-supported schools for several reasons. First, given the n is relatively small at just 239 schools, a census of all schools is feasible. Second, based on preliminary visits to schools during the scoping trip and through consultation with local partners, the evaluation team anticipates that there will be substantial variability in conditions. Even without disaggregating the data by region, rehabilitation versus new construction, phase of implementation, and selected implementer, to identify statistically significant findings- assuming a confidence level of .05 and a confidence interval of 3-we would need to visit a minimum of 197 schools. Third, post-closure, MCC and MiDA did not systematically collect information regarding the conditions of MiDA investments. Without doing so, it is difficult to track the life of investments. By collecting systematic information of all MiDA education sub-activity investments, MCC will be able to monitor conditions over time. Finally, by collecting data from all of the MiDA schools, the evaluation team will be able to make more informed decisions as it selects the sites that will be visited as a part of the cross case studies.

While the team suggests a census for the MCC-supported schools, there are two approaches that could be taken with the remaining 642 schools that were ranked through the environmental assessment. First, the team could **visit all 881 schools** that were a part of the needs assessment. This would permit the team to draw broader conclusions and may allow them to re-examine the process that was used to score them during the original needs assessment. Furthermore, it allows for schools that are “similar” to those that received MCC support to be extracted from the full data set and analyzed. Taking this approach would prevent the team from having to rely on a ranking system that was not validated to select a sample, and also would allow the team to examine schools where they are now, rather than on the score they received four years ago.

The second approach, conducting the conditions survey at a **sample of non-MCC-supported schools** would save both time and money. The team will use the original ranking from the needs assessment, to the degree possible, as a cut-point and visit those schools that scored just above those that received support from MCC. This simulates the quasi-experimental approach that NORC planned to use had they moved forward with the IE. While this approach has the advantage of targeting schools that had been determined to be similar to schools that received MCC funding at the baseline, it assumes that ranking was valid and that there were no fundamental changes that would make the schools qualitatively different currently.

Despite this concern, the SI team recommends moving forward with collecting surveys from a sample of 275 non-MCC schools of approximately 400 that received similar scores on the environmental needs assessment.³³ The team is confident in this approach because it will allow us to target schools and sites with similar characteristics. And while the validity and reliability of the ranking is in question, by sampling schools that can preliminarily be matched through ranking, the team will be able to undertake statistical matching on key variables post data collection. In other words, this sample size will provide sufficient power to report findings with a high degree of precision while simultaneously permitting us to target schools that are similar to MCC-schools. This has the added advantage of saving funds so that we can also investigate the drivers of conditions in non-MCC schools through case studies.

Data collection

To carry out the conditions census, the evaluation team will collaborate with a local data collection firm so that when necessary, the survey can be administered in local languages and the data can be collected electronically. To do so, SI will release a procurement in 2016. Upon award confirmation from MCC, the evaluation team will send two representatives to Ghana to oversee instrument piloting and the training of enumerators. A training guide will be developed by SI HQ staff in collaboration with a local consultant and will include photographs that will help enumerators complete the checklist with high levels of accuracy that can be used during the training and referenced throughout data collection. Additionally, the enumerators will be required to provide photographic evidence for their responses on the checklist so that a percentage of the responses can be reviewed and assessed for validity. These photographs may also serve as additional data that MCC may draw from in the future to continue to assess the life of education infrastructure investments in Ghana.

In the cases where enumerators are visiting schools that have received MCC investments, the enumerators will be required to engage with a representative at the school who is familiar with the MCC project and can guide them to the MCC investments to the degree possible. If the evaluation team finds that there are few who can identify MCC-specific investments, the enumerators will be asked to complete the survey without this guidance and the evaluation team will match information gathered to the list of projects completed as found during program monitoring.

While the evaluation team members from SI's headquarters will depart from Ghana following the training and piloting and continue to provide remote oversight, SI's local consultant will provide on the ground quality assurance and oversight. He/she will conduct visits to make sure that the checklist and questionnaire are being completed properly and will spot check data as it comes in. The data will also be remotely monitored by SI's PM, who will give the PI regular updates. SI

³³This sample size relies on several assumptions, including a 95% level of confidence and a 3.31% margin of error. The margin of error was calculated using the following formula: $1.96 \left(\sqrt{(pq/n)(pq/n)} \right)$ where "p" represents a given proportion of respondents answering a question a particular way, and "q" = (1-p). "p" and "q" are assumed to be equal to 0.5 (occurring if 50% of the respondents agreed with a statement and 50% disagreed) and then adjusted to a population of 400 schools. The adjustment was made by taking the square root of the total population minus the sample divided by the total population minus one. This is a conservative estimate; as less equal variation would result in smaller standard errors.

expects that the census will take approximately four weeks to complete, including the piloting, training, and data collection.

Preliminary Analysis

Once the census data have been collected, the team will compile an aggregate condition score for each MCC-supported school. This information will then be used in combination with the information provided during the brief survey in order to guide sample selection for the case studies. Upon completion of the second phase of data collection, the team will formulate a more targeted analysis plan that reflects preliminary findings from the cross-case studies. This will aid in our ability to triangulate findings.\

Case Studies with Cross-Case Analysis:

Objectives:

The SI evaluation team is recommending that following the conditions census and preliminary analyses of the data gathered through the process, we engage in up to ten in-depth case studies with cross-case analysis³⁴ to answer EQ2A, EQ2B and EQ3B about the processes that may have led to the current conditions of school infrastructure, and perceptions of key stakeholders on the relationship between the investments made and school level outcomes such as enrollment, attendance, persistence and learning.

The objective of the case study is three-fold. First, the case studies will be structured to reconstruct the narratives around program implementation to help understand what role the implementation process played in the current condition of schools for MCC. Because systematic data was not collected on the implementation process and because there are substantial gaps in the narrative, it is important to delve into the ranking of schools and school selection, the implementation process including successes and challenges encountered by the contractors with either rehabilitation or building new structures, as well as the experience of teachers, students, parents and school leaders with the process of implementation. For non-MCC schools, it will allow us an opportunity to explore how and why schools are in the condition they are.

Second, the case studies will map the process for maintenance of MCC investments as well as other push and pull factors that may influence the conditions of schools such as the political, environmental, social and financial environment in which the schools are operating. With respect to maintenance, the team will collect qualitative information on processes that are used in Ghana to maintain schools including leadership, roles and responsibilities around operations and maintenance, and the funding streams for ensuring schools are maintained so that the investment has a long lasting effect. By comparing MCC to non-MCC sites will allow us to identify

³⁴ SI has recommended case studies of both MCC and non-MCC schools so that we can gather information about why the schools are in the condition they are. If the data from the survey indicate that there aren't major differences between MCC and non-MCC schools, then there is the option to eliminate non-MCC schools from the case studies. SI does not recommend this because comparisons will allow for some comparison of maintenance practices and decision making processes more broadly in Ghana regardless of their aggregate conditions score.

differences in maintenance practices and if the development of the MCC manual may have played a role in how schools are maintained.

Finally, the team will use the case studies as an opportunity to explore teacher, parent and student perceptions of the learning environment and the contributions MCC investments made to that environment. We will compare this information to perceptions of learning environment in non-MCC schools.

Why a case study approach?

While determining the conditions of MCC's investment will not always be easy, it is fairly straightforward. Using visual cues, the team will be able to grade the conditions on a scale of 1-5. And while we anticipate there will be some subjectivity, we are optimistic that through proper training and data validation, we will be able to reduce subjectivity. However, the construction of narratives or the mapping of processes is a much more complex undertaking, especially when asking a variety of stakeholders to recall activities that occurred in the past.

Our intent with the case studies is not generalizability, but rather an exploration of the factors that lead schools to be in their current state, with the goal of locating common themes within the data to provide guidance on how to increase the life of investments in the future. As evaluators we anticipate, based on preliminary conversations, that the conditions are likely linked to both the implementation process and the maintenance of investments. However, the case study approach is one that is open enough to allow for additional explanations. Processes, perceptions, and dynamic systems are inherently difficult to quantify. But through narrative reconstruction and process mapping (reconstructing the steps taken to both implement and maintain schools), we will be able to provide MCC with insights into what worked and what didn't in terms of implementation, and map a variety of maintenance processes so that those may be taken into consideration for future program design and to help on a broader policy level, to institutionalize some of the practices that participants were more successful in keeping investments in good condition.

Number of Cases and Sample Selection

Because the primary intent of the case studies is to reveal the processes that lead to either poor or good conditions, our primary driver of sample selection is the condition of the schools. While school score will be the primary driver for sampling, it should be noted that we are defining a case as a district or proximate districts that have schools in varying conditions in order to trace the implementation and maintenance processes and compare to build hypotheses around the drivers of conditions. The evaluation team will be using a stratified purposive approach to select some of the best and worst cases for examination (districts with clusters of good schools or bad schools)³⁵, with the expectation that they represent the extremes in the processes and practices which will provide for an opportunity for "thick description." Thick description is a process that allow us to

³⁵ For more on the case study approach for evaluation see the GAO Guidelines for Case Study Evaluations (1990) http://www.gao.gov/special.pubs/10_1_9.pdf. And for more on case selection, see Linda Morra and Amy Friendlander's World Bank Guide on Case Study Evaluations: https://ieg.worldbankgroup.org/Data/reports/oed_wp1.pdf.

identify patterns of behavior or processes, but also describes the context/environment in which that occurs (Geertz, 1973).

The evaluation team proposes undertaking **a total of nine case studies**, three in each of the regions where implementation occurred, and a tenth case study to pilot and refine instruments and approaches. Overall, the team will select sites using a phased approach. Phase I will include a disaggregation of conditions survey data by region to assess scores within particular district or proximate districts (if multiple schools are not in the same district) for MCC schools. In the second phase we will examine the information on non-MCC schools that match MCC schools we are targeting in each region for case studies. We are especially interested in those cases that non-MCC schools scored similarly to the selected sites and that had equally positive conditions or have good conditions where MCC has poor conditions.

In total, there will be three case studies in each of the three zones where MCC provided support Northern Agricultural Zone, Afram Basin and the Southern Horticultural Zone. Two cases will focus on MCC-schools and the third will focus on non-MCC schools as a comparison group. Should the team find that schools located in a single district or proximate districts do not differ greatly in their conditions score, this is in and of itself a finding, as it may indicate that there are fundamental differences between districts. If this is the case, we will modify the approach to examine three districts with schools with good conditions and three districts with schools in poor conditions. The team has chosen to draw cases from each of the three regions anticipating that there are distinct conditions in each related to access to resources, political processes, and leadership, as well as variations in climate.

The SI team will also use the information gleaned through the conditions survey to aid in selection. So while the current condition of schools and its location will be the primary drive for selection, we may find patterns in the survey data that warrant us targeting a site for an important reason. For example, we may decide that schools that have not received additional upgrades following their implementation warrant investigation. It is important at this stage that the evaluation team allow for some flexibility in selection criteria until the conditions survey has been completed. Upon completion, the SI team will share its sampling strategy for the case studies with MCC for their review.

Respondent Groups:

There are four categories of individuals with whom we will speak during the case study data collection process: individuals familiar with the implementation process, those familiar with maintenance, those who can speak to social, political, economic and environmental climate of the area, and finally, those who can speak on the possible relationship between school conditions and school level outcomes.

Implementation Informants: Representatives from MCC, MCA and MiDA will give insight into the selection process and how the contractors were selected as well as the roll out of the various phases. The contractors who were responsible for rehabilitation and/or new construction of classroom blocks and toilet facilities will be able to discuss how they came to learn of the opportunity, undertook the design, standards or guidelines they drew from, and success and

challenges faced during implementation. District personnel will be able to discuss their involvement in the implementation process and speak to other infrastructure projects in the area, the similarities and differences of those projects, and the roles district staff has played in implementation. In order to enhance the information gathered, and avoid the bias of recall data, the evaluation team will also request any documentation the districts or MoE has on school infrastructure development and investments to compare newly collected data with formal documents, should they be available.

Maintenance Informants: Second, are individual who can speak about the maintenance of schools either as someone play an active role in maintenance, directing resources towards maintenance or who have observed the processes. The team will be seeking to trace funding sources and streams, uncover maintenance guidelines, compare to national standards, and define the roles and responsibilities of maintenance as it currently occurs. Additionally, the team will explore MCC’s expectations for maintenance and seek background on the development and implementation of the maintenance manual. In some communities, we anticipate that parents and community members will play an active role in maintaining schools, while in other communities that will fall to district or school level staff. Therefore, stakeholder groups with whom the team will speak include representatives from the Ministry of Education, district staff, school leaders, community groups, parents and students.

Community Context Informants: Third, are those individuals who can speak to potential political, social, environmental, and economic factors that may influence both school conditions and school level outcomes. We do anticipate that some of this will be covered by those individuals we speak with about implementation and maintenance. However, they may be other key figures such as representatives from the agricultural community, tribal leaders, representatives from local or district government structures, and/or community service organizations.

Direct and Indirect Beneficiaries: Finally, through our case studies we will also target those individuals who can speak to the effects of school infrastructure on the learning environment. Specifically, we will speak with school leaders, teachers, parents and students about the conditions for learning prior to and following the changes in infrastructure and what aspects need additional improvements in order to encourage not only increases in enrollment, but also in persistence and completion. In Table 5 below, we provide a list of possible respondents and illustrative examples of questions they will be asked.

Table 5: Respondent Group and Sample Questions

Respondent Group	Sample Questions
Parents	<ul style="list-style-type: none"> • How do you rate the current condition of schools? • Are you involved in the maintenance of school? • What are some of the factors that determine if you send your child to school? Does gender of the child matter? • What are some of the safety issues you or your child face while attending school?

Students	<ul style="list-style-type: none"> • How do you rate the current condition of your school? • What types of improvements have been made? What types of improvements need to be made? • Are there other issues that need to be addressed to help improve the overall environment?
Teachers	<ul style="list-style-type: none"> • Were you teaching at this school prior to the improvements? If so, what changes were made? • Are there additional improvements that need to be made? If so, what are they and why? (probe for any gender related issue) • How is the school being maintained? Who is responsible for maintenance? • Why is it or is it not being maintained? • Have you seen changes in enrollment? What are some of the factors that may influence whether or not a family enrolls his/her child? Do they differ by gender of the child? • Do you have sufficient space for all of your students?
School Leaders	<p>Same questions as teachers, but also the following:</p> <ul style="list-style-type: none"> • Following the completion of the construction/rehabilitation project, were you trained on maintenance? • Are there standards for maintenance set by the district? • What are the primary sources for funding O&M?
Individuals responsible for O&M	<ul style="list-style-type: none"> • How would you rate the current conditions of this school? • Have you received any guidance on how to maintain the school? If so, where is the guidance from? • What are some of the ways in which you have been able to improve the school? • Are there particular challenges or barriers you face in school maintenance? • Who is responsible for financing the maintenance?
District Education Officer	<p>Same questions for O&M individual, with the objective of tracing funds and the decision making process.</p> <ul style="list-style-type: none"> • What are some of the past, current and future objectives with respect to education in your community? And how did that drive your decision regarding the implementation of reform initiatives in your district? • How does the district address infrastructure needs?
Construction Contractor/ Lamda	<ul style="list-style-type: none"> • Please explain the steps undertaken for the environmental and needs assessments? Please help us understand the process for the ranking? • What were some of the most common structural challenges you faced in rehabilitating schools and/or constructing new blocks? • What was the basis of your design approach? Did it align with district standards? • Did you provide guidance on maintenance? Please explain.
MiDA Project Manager	<ul style="list-style-type: none"> • If you had to redesign the education sub activity, what would you do differently? What would stay the same?

	<ul style="list-style-type: none"> • What was your experience working with the contractors who constructed and rehabilitated schools? • Were schools trained on maintaining the buildings, structures, and furniture provided by MCC?
MCC/Ghana Staff	Same questions as MiDA PM
MoE PBME Rep	<ul style="list-style-type: none"> • What role does the MoE play in the maintenance of schools? • Are there guidelines you provide for school structure, organization and management? • What is the primary funding stream for school maintenance? • What are some of the primary challenges facing education in Ghana today?

Data Collection Approach

The Case Study team will use a variety of data collection methods: Key Informant Interviews (KII), Focus Group Discussions (FGD) and community score cards (CSC). By varying the approaches, will provide for some circumstances in which individuals may speak with an interviewer one-on-one in a “safe” environment when discussing sensitive issues such as the role toilet facilities play in the choice of whether or not to send a girl child to school or the decision-making process around funding. In communal discussions through FGD using CSC, the group may collaborate and come up with group responses, and build off of one another such that the power is distributed amongst participants. The team anticipates that each case study will last approximately five days and will include three to five KIIs with the school leader, district representative, representative of local contractor responsible for the construction, and an individual responsible for school maintenance. We also expect we will carry out four FGDs with teachers (two per school) and CSC FGDs with two groups of parents and community members and two groups of students (two per school). The goal will be to reach saturation, to the degree possible.

By combining these methods, we will be able to accomplish several things. First, we will be able to triangulate our findings across sources and build alternative narratives around implementation. Second, the CSC approach will allow respondents to indicate their satisfaction with processes using a numeric figure, but then qualify that response. This will be particularly useful in helping us understand, from different stakeholder perspectives, what works.

In most cases, each KII will be conducted as a single-visit interview and could include a maximum of two respondents. KIIs are an important qualitative data collection technique as they can be used to ask sensitive questions in a safe environment. Furthermore, high level officials are often better suited for KIIs rather than serving as participants in a focus group discussion where their power may influence other participants. The informants will be asked targeted information regarding the implementation of programming as well as questions relevant to their particular role. KIIs also provide a setting in which we may ask respondents more sensitive questions that may not be appropriate for a group setting. For example, KIIs either a parent or a community member may be asked about safety or security issues faced by their child at school.

In a group setting, the team will use a community score cards. In this situation the evaluator/researcher is not the one driving the conversation, but rather serves as a moderator and observer. The score card will be used to help assess parent, teacher and student perceptions of the implementation process and score their satisfaction with current school conditions similar to the information gathered for the MASDAR reports. The use of the score card is not to gather quantitative information regarding satisfaction, but rather, to gather stakeholders' qualitative perceptions of the implementation process and the maintenance of schools.

Focus Group Discussions (FGDs) will be used both as an independent tool and as a complement the CSCs. FGDs will be used independently so that groups of common individuals may respond to inquiries that will provide possible explanations for specific outcomes, such as the overall learning environment. For example, we recommend undertaking an FGD with community youth groups in order better understand their perceptions of school climate and conditions for learning. We will structure these groups in such a way that they will be able to provide input into how a meaningful education reform would be structured from their point of view.

While the team anticipates that much of the data collection will be able to occur in English, teach team will be staffed with two individuals, a lead researcher and an individual who will take notes or serve as an interpreter during the interviews, CSCs and FGDs. The data will be digitally recorded and transcribed by the local data collection we procure for the enumeration of the conditions survey. All the data, regardless of the language used for the collection process, will be transcribed in English.

Analysis Plan

SI will, at a minimum, be working with two distinct sets of data: (i) school conditions data gathered by SI, and (ii) qualitative data in the form of key informant interviews, focus group discussions and CSC data gathered by SI. Each data set requires a unique approach to analysis that must have complementarities. To the degree possible, the team will also examine EMIS data for trends in enrollment. Though, we have committed minimal resources to do so given past challenges securing reliable data from the ministry.

For the school conditions census, the team will examine trends in current conditions and if and how those outcomes can be correlated with distinguishing features of the schools and communities. To do so, the evaluation team will break down the data by the following characteristics:

- Zone
- District
- Grade Level (KG, Primary, JHS)
- Phase (1a, 1b, 2)
- Type of Work (New construction, rehabilitation, facilities and other amenities)
- Size of the job (as indicated by monetary value of intervention or number and size of project completed at a particular school)
- Geographic region (peri-urban, rural)

The evaluation team will then compare rates of enrollment and completion to district level and national rates for the same time periods using EMIS data if the team is able to collect up to date, accurate EMIS codes for the MCC-supported schools and the MoE grants access to the data. Given that facilities were also built in order to encourage families to enroll their girls, to the degree possible, the evaluation team will disaggregate the findings by gender.

Similar to the exercise for the existing data on enrollment, we will clean and analyze the conditions survey data gathered that report the current conditions of the schools that received treatment. This information will be examined to see if there are any significant relationships between the current condition of the school and relevant categories listed above. For example, the evaluation team will seek to examine if there is a relationship between the current condition and the type of work and the size of the job. The data collected through this exercise will also look at whether or not schools received additional infrastructure development from other donors. If so, the evaluation team may be able to exclude them from our analysis to isolate the contribution of MCC and the life of the MCC investment.

Following transcription, the data will be coded using Atlas.ti using both inductive and deductive approaches. First the data will be coded by a team at SI using broad codes drawn from the interview/FGD/CSC guides and from a preliminary read of a sample of transcripts. Furthermore, the team will develop codes that reflect potential steps in implementation and maintenance processes that will allow for a visual mapping of the actions taken to complete these processes.

For the data that describes the current conditions of schools and experiences with schooling drawn out of the CSC approach, senior analysts will use an inductive coding approach to locate major themes in the data. Finally, the SI team will also undertake narrative analysis to reconstruct the implementation process. Narrative analysis will also be used to identify the steps that were taken to implement the MCC education sub-activity, and then theme analysis to identify common successes and challenges in the implementation and how those may be linked to the current conditions of schools.

Timeframe of Evaluation

The evaluation design described in this report is an ex-post performance evaluation that would be conducted 4-7 years after the construction of the school blocks at the center of this evaluation.

By conducting the evaluation after time has passed since construction, the evaluation team will be able to assess the policy element of school maintenance. Since school blocks, like all infrastructure, depreciate as a function in time in terms of value and structural quality, an ex-post evaluation allows SI to examine the extent to which maintenance was or was not performed, and what effect that has had on the structures' longevity. Here, an evaluation done several years after project completion is privy to trends that could not be detected had the evaluation followed soon after construction.

Limitations and Potential Challenges in Conducting the Evaluation

There are three primary challenges the team will face undertaking this study. These challenges and limitations include challenges with the timeline, a lack of baseline data, and an inability to generalize findings.

Timeline

This evaluation is currently scheduled to be completed by March 2017. Based on the current timeline, we anticipate that school census will begin in June during the third school term in Ghana. While SI is not undertaking classroom observations, SI does propose to hold focus group discussions with students and parents as a part of the case study. Due to timing, we will not be able to begin case studies until September 2016. This lag may mean improvements may occur while we are awaiting the next school year to begin. To mitigate this, we will also be asking schools during the survey if there are updates to school infrastructure that will take place during the summer break.

Availability of Data

Possibly the most significant challenge that the team faces is the lack of a comprehensive set of photographs of all funded schools and a conditions checklist that were collected either prior to or upon completion of the work³⁶. Therefore, it will be difficult if not impossible for the team to evaluate how the current condition of schools compare to the state of schools prior to the intervention and then upon completion of the work. While it may be possible to collect information on schools that were not selected to benefit from the sub-activity, during the scoping trip, it was made clear that there were questions regarding the reliability of the ranking that was completed. Therefore, we cannot be sure if the intervention schools are comparable to those that were not selected. And, unfortunately, without photographic or other evidence, it would be impossible to reconstruct this at this point with any reliability.

To address this limitation, the team suggests assessing current conditions under the assumption that schools were in perfect condition upon completion of work, which can provide insights into the lifespan of the investment. Furthermore, by undertaking a census of school conditions, MCC could theoretically use this as a new baseline to continue to monitor the conditions of schools moving forward.

Threats to Internal Validity

In addition to the risks and limitations described above, there is also a threat to internal validity due to the small sample size on which SI will focus for the qualitative component of the study. While the data gathered through the census may provide us with findings that have a high degree of internal validity, the information gathered through the case studies cannot be generalized to the sub-activity as a whole. That said, the team will work towards saturation. That is, the team will trace leads to the degree possible to the point that they aren't learning anything new or have spoken to all available stakeholders. Taking this approach will allow us to provide insights into a variety of hypotheses regarding the causes of current conditions. Additionally, the data will also help us

³⁶ MiDA has confirmed that before-after photographs of some schools are available, although not all and the evaluation team will try to utilize these photographs during the evaluation, particularly for enumerator training.

interpret the trends in the enrollment and completion data and the factors that may influence the outside of maintenance and implementation of schools. These findings can also lead to program testing in the future that may take a more comprehensive and holistic approach to education interventions.

ADMINISTRATIVE

Summary of IRB requirements and clearances

IRB Requirements

The SI evaluation team consulted SI's internal Institutional Review Board (IRB) bylaws regarding the evaluation proposed in this report. Given the evaluation design, the project team has submitted an IRB application to gain all approval required to conduct the study. All IRB documentation will also be shared with MCC for their record.

Country Clearance

Prior to travelling to Ghana, the evaluation team members will secure Ghana country clearance from the US Embassy. SI will submit the required information (i.e full itinerary, passport details, photos) for this clearance to MCC along with the Travel SOW (see work plan for dates). SI will also secure the appropriate country visas for entry to Ghana before travel. This process will be repeated if additional trips are required to Ghana.

Data Collection Plan

Drawing from our current timeline and prescribed period of performance, both the data gathered through the census and the case studies will occur sequentially. The SI PM will be in Accra to train the enumerators on the survey tools for the census and to oversee piloting and soft rollout of data collection. After this, the PM will continue to provide remote oversight while a local consultant will provide on the ground data quality assurance. Once the census is completed and the sample for the case studies is selected, the PI will fly to Accra to train the case study teams on qualitative approaches and pilot techniques as needed. The PI will remain in Ghana for the duration of data collection for the case studies.

Preparing Data Files for Access, Privacy and Documentation

In accordance with section J5 of the Contract, SI will clean, prepare, document and share the primary data with MCC. For all original quantitative data, including data derived from review of school photos, the datasets will be cleaned, labeled in English, and saved first as "Raw, Original" dataset and then as a "Public Use" data set after anonymization and the addition of a codebook. This data will satisfy the requirements in the Data Anonymization Worksheet and will be shared in Excel.

Transcribed qualitative transcripts will be shared along with the qualitative codebook. To preserve the full use of the dataset, the coded data itself is best shared in the format of Atlas.ti qualitative

coding software. If a simplified version in Excel is required, this can be shared as well upon request. In either case, data will follow the same anonymization requirements as the quantitative data before being shared as a Public Use database.

Dissemination Plan

There are two primary methods of dissemination currently planned with this contract. The first comes in the form of stakeholder feedback. At each stage of the evaluation, starting with this EDR, key stakeholders will be asked to provide feedback on the design and results from this evaluation. Feedback will be documents and SI will provide a written response that will accompany the deliverables. Additionally, the SI team will develop a power point presentation on the findings from the evaluation. The current budget does not provide for a return visit to Ghana to present findings. However, SI plans to hold a presentation at MCC in Washington, DC. With MCC's permission, SI would also like to share the report with our colleagues working on an education infrastructure project for USAID in Ghana and with the USAID/Ghana Mission to help inform their infrastructure developments as well.

Evaluation Team Roles and Responsibilities

An updated table of the SI Evaluation Team roles is presented below.

Table 6: SI Evaluation Team Roles

POSITION	RESPONSIBILITIES	TRAVEL
Principal Investigator, Dr. Sarah Jones <u>Labor Category:</u> M&E Advisor	As the Principal Investigator, Dr. Jones will be responsible for development of successful deliverables and will manage the program review, evaluation design and implementation process. Dr. Jones will work also to train local evaluators.	Dr. Jones will travel to Ghana for initial assessments, scoping and data collection.
Senior Technical Advisor, Dr. Geetha Nagarajan <u>Labor Category:</u> Program Manager	Dr. Nagarajan will provide oversight and advice to Dr. Jones as necessary and play a significant role in quality assurance of deliverables and support around the development of evaluation processes.	No travel anticipated.
Project Manager, Fahmina Rahman <u>Labor Category:</u> Project Manager	The HQ PM will support Dr. Jones in organizing and facilitating coordination, assisting with document review, evaluation design, data collection methodology and instrument development, and provide substantial effort towards report writing, data analysis and cleaning, and report reviews and dissemination. The PM will also train and oversee local surveyors for data collection as needed.	The PM will travel to Ghana for data collection training and oversight.

Research Assistant, TBD <u>Labor Category:</u> Research Assistant	The HQ RA will provide support to Dr. Jones and the PM to organize meetings, and provide travel arrangements and logistics coordination. The RA will assist the team in data cleaning and analysis, reviewing and editing reports, quality assurance checks and other tasks as assigned.	No travel anticipated.
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Procurement Plan

Upon receipt of the data collection SOW from MCC, SI issued a request for proposals (RFP) for firms to conduct data collection activities in early 2016. SI solicited qualitative and quantitative data collection activities as they are described in this report by sending the RFP to a limited number of data collection firms that have undergone preliminary vetting and are known organizations that have completed such work in the past.

All proposals have been assessed on a set point system that reflects technical approach, past performance, personnel, and cost and SI’s recommendation has been shared with MCC for formal consent from the contracting team.

SI will not subcontract any firm for data collection until an amendment is fully executed between MCC and SI that allocates sufficient funding for the services. Throughout the process, SI will continue to keep the MCC Program Manager and Contract Office Representative updated on progress and any changes to the timeline.

Evaluation Timeline

See Annex III for complete evaluation timeline.

Reporting Schedule

The planned timeline for key deliverables is presented below. To see these deliverables in the context of the evaluation timeline see Annex III.

Table 7: Reporting Schedule

Deliverable	Date
Evaluability Assessment	31-Jul 2015
Travel SOW (as required)	3-Aug 2015
Ghana Work Plan, EDR, and draft instruments	17-Aug 2015
"Documentation" of stakeholder feedback.	30 Apr 2016
Response to Stakeholder and MCC feedback & Confirmation of Commitment to Evaluation Design, Final EDR and Instruments	30 Apr 2016
Final English & translated instruments	20 May 2016
IRB package, if required	15 May 2016

Travel SOW (as required)	TBD
Draft Final Report	8 Dec 2016
Re-submit to Local Stakeholders for Stakeholder Statement and to EMC for review	19 Jan 2017
Response to MCC feedback and FER	3 Mar 2017
Anonymized raw data sets & analysis files	10 Mar 2017
PPTs for presentation	15 Mar 2017

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ANNEXES

I. Stakeholder Comments and Evaluator Responses

Evaluation Design Report for Compact I Education Sub-Activity Composite Comments

1. General Comments

Overall Design

On the basis of how the interventions under the Education Sub-Activity were implemented, the outcomes that the study seek to measure are realistic. Overall, the proposed evaluation design is appropriate for the objective of the study.

Case Studies Sample Questions

The following may be considered to improve the flow of information.

- Avoid closed-end questions
- Find a way of simplifying questions requiring extensive re-call.

SI Response: Thank you. We recognize that re-call is not ideal. Unfortunately, we have to rely on it somewhat to help us make comparisons without baseline data. We are in the process of refining our qualitative data collection tools, and we will keep this in mind as we do so and try to simplify to the degree possible. The current report only provides sample questions, and we will submit more refined instruments for the qualitative component upon completion of the conditions survey.

As a way of linking data collection and analysis so as to be more efficient, the following are proposed.

- Relate the questions to be asked to the overall evaluation questions as well as the objectives of the case study.
- Rearrange the questions to show the respondent group for a given set of questions. For example, looking at the following objective “the case studies will be structured to reconstruct the narratives around program implementation to help understand what role the implementation process played in the current condition of schools for MCC” most of the information can be gleaned from reports or people who were teaching in the school or in the in the community or district offices. Re-align the questions in such a way that in this particular example, the right people are answering the right questions.

SI Response: We have added an objectives column in. Upon completion of the conditions survey we will develop more robust qualitative data collection instruments from the case studies. We have also attached draft qualitative instruments by respondent group.

Sampling for Case Studies

Provide some clarification on the sampling process for the case studies.

Analysis

Expand and deepen the analysis section so that it is clear which variables are needed for which evaluation questions

2. Specific Comments

Page	Section	Item	Comment	SI Response
1	Background: Country Context and Compact I Overview	According to the International Monetary Fund (IMF), Ghana is currently advancing towards upper middle income status	Please check. From the publication, it appears that it is in the governance and business indicators that Ghana is above those of its peers (lower-middle income countries) and accelerating past even the average upper-middle income country.	We have cross checked with information from the World Bank and Ghana is currently a lower middle income country. This is what we will reference in the EDR.
5	Overview of Education Sub-Activity	In response to this situation, the GoG has increased the number of districts from 170 to 216 in order to distribute resources more effectively.	<p>What is the reference to support the statement?</p> <p>What is the connection? The creation of district is based on different factors and not necessarily on overcrowding in schools. Think carefully about this hypothesis</p> <p>The argument that the creation of more districts increases resources available for the</p>	We agree that this statement is problematic. Therefore, we removed the reference to how the decision was made to increase the number of districts. The second hypothesis basically states that if the facilities are there, folks will be more likely to stay in the community. The fact that there were increases in enrollment and completion may be a source of evidence for this. Again, it is a hypothesis to be proven, but we feel it is worth mentioning, as a couple of people during the scoping trip used it as the

			education facilities is a contentious issue	preliminary hypothesis in the theory of change.
6	Overview of Education Sub-Activity	The first phase of the education sub-activity took place between 2007 and 2008 and focused on the rehabilitation of schools identified by the Community Service Project Department	Change the “Community Service Project Department” to “Community Services Project under the Compact” to avoid confusion with the GoG Community Services Department.:	We have changed the wording here and throughout to state “Community Services Activity under Compact I” in order to reduce/avoid confusion
7	Overview of Education Sub-Activity	It is unclear whether sub-standard facilities were given priority over schools with insufficient facilities.	It was schools with insufficient facilities that were given priority	We removed this statement and added additional information on which schools were selected. According to a design report by NORC, the schools that were a part of Phase I were selected using the District Medium Term Development Goals. We have specified this on p. 5 of the document.
9	Key Program Indicators and How They Lead to Expected Outcomes	<i>Additional female students enrolled in schools affected by Education Sub-Activity:</i> total of the incremental females enrolled in school blocks constructed or rehabilitated by MiDA in all 30 operational districts. School levels include kindergarten,	Latrines and sanitation facilities have an impact on this as well	We agree with this. However, we don’t have data from this specific initiative showing this, and we have drawn directly from the MiDA WP on this. Therefore, we did not add it here. Additionally, it should be noted that toilet facilities were constructed at every site where schools received new classroom blocks or where classroom blocks were rehabilitated. This was either provided by MCC or supplemented by USAID/Ghana.

		primary and junior high		
9		“ ... match school zones/localities to zones/localities in the census Use of	For census, the terminology GSS uses is enumeration areas (EAs), not zones	We have made this change. When we use the term Zone, we are referencing the three zones in which they were operating, Norther, Southern and Afram Basin.
12	Policy Relevance of the Evaluation	“Specifically, through this evaluation, the SI team will assess the current conditions of MCC-funded school infrastructure projects (the construction and/or rehabilitation of classroom blocks, the implementation of WASH facilities, provision of furniture, and guidelines for maintenance) ...	The provision of water harvesting and storage facilities like Polytanks, toilets and urinals (for Phase 2 schools only), without education and sensitization program on hygiene targeting the school kids, perhaps do not qualify the intervention as a WASH.	We agree and have change the terminology to “toilet facilities” throughout the document.
14	Performance Evaluation Objectives and Questions	Evaluation Question 1	It is important to mention the reason why there was no baseline data for the evaluation of the Education sub-activity. MCC commissioned NORC to commence a baseline study for Impact Evaluation.	We have removed the portion referencing the baseline data. There was no pre-existing data that could be used as a baseline measure and it was determined for a variety of reasons not to invest in an IE. So baseline data was not collected for an IE. The way it was worded was misleading. It wasn’t a lack of baseline data that made

			I remember NORC started the process before end of Compact but curtailed it for reasons I presume best known to MCC.	an IE not feasible, but rather that a lack of an IE that further contributed to a lack of baseline information.
16	Refining Evaluation Questions 2 and 3: Implementation	One factor that can play a significant role in determining outcomes is the success or challenges faced during implementation, which is the central focus of original EQ2.	Periodic monitoring reports, quarterly narrative reports to MCC, quarterly progress reports, and the Compact I Completion Report have some information on the success or challenges faced during implementation	<p>We absolutely agree. We have reviewed the monitoring reports we have received. Given that these reports had to cover a large number of activities and sub-activities, they are limited in depth. Through the new data collection activities, we will be exploring implementation in further depth as well as other factors that may influence a school's current condition.</p> <p>That said, if MiDA has additional reports or data to share, we would greatly appreciate it. A full list of the materials shared or that we have access to can be found in the references section of the report.</p>
17	Methodology: Evaluation Question 2A	In-depth information on how the sub-activity was implemented and successes and challenges of implementation	In case that has not been done in detail, MiDA monthly and quarterly reports are important sources of information, especially reports from consultants to Project Management Support Consultant, and quarterly reports from MiDA	We have reviewed a number of reports. If the current list we have does not reflect the actual reports, please do let us know and we will add them to our data sources and use them for analysis and sample selection purposes for the case studies.

			Community Services Project Manager.	
17	Methodology: Evaluation Question 2B	Existing Data: Existing reports on environmental and economic changes in Ghana Studies on school improvement in Ghana and school outcomes	This is a broad area. Can you be more specific? Did the literature review produce any such studies? How sure are you that there are no gaps for which more data will be needed?	The primary goal of the case studies will be two-fold. First, will be for stakeholder to provide their perspectives on learning outcomes and student outcomes. Second, the case studies will be used to examine the factors that may influence the current conditions of schools. We have intentionally left the approach fairly broad because we don't want to rule out any potential influences over school conditions. We are combing different methods to construct a sample for the case studies. First, we are using composite condition scores to identify schools in good condition and those in poor condition. Then we will meet with a set of consistent stakeholder across sites including local contractors, school leaders, teachers, parents, students, community leaders, and representatives from the district. To help cover for any gaps in this strategy, we have allowed for some flexibility (using snowball sampling) to speak with individuals who may not fall into those categories, but who have been identified as having relevant information. We anticipate that for some

				cases we will need to conduct more interviews than anticipated and in others, fewer. We have allowed for five weeks for qualitative data collection so that there is a cushion to collect the information and materials we need.
	Methodology: Evaluation Question 3A	Descriptive information on current conditions of non-MCC supported sites	How are you going to select these – any reference to NORCs work?	On page 22 we explain the sampling approach we are taking for the conditions survey. To the degree possible, the SI team will use the original needs and environmental assessment ranking as a basis for selecting non-MCC schools. There are a number of schools that have not been identified or have not received a ranking. Those schools will be removed from the sample.
19	Methodology: Evaluation Question 2A		Very good idea of using qualitative methods to augment the quantitative studies	Thank you. We are excited about this approach and believe it will provide useful information to MiDA and MCC.
20	Methodology: Evaluation Question 2B	Using a cross-case study approach, to explore unexpected influences or explanations	The cross case study approach is a good methodology to use. However, care must be taken in the calculation of the sample size so as to achieve generalizability	The findings from the cross case studies will not be generalizable as that is not the primary objective of the case studies. Ideally, we are working towards a construct widely used in qualitative research called saturation. The team will know it has reached saturation, when team members are not learning any “new” information. For example, when speaking with district

				<p>officials, when we no longer hear explanations for the provisions of funding that are unique, we will know we have hit saturation. The goal of qualitative research is to capture as many voice, explanation and differences as possible and then find the commonalities as well. The intent is to identify possible explanations and then test solutions against those explanations.</p> <p>While we are not aiming towards generalizability, we have put careful thought into our approach so that we will be able to answer the evaluation questions as described.</p>
23	Conditions Survey: Data Collection	Enumerators will be required to engage with a representative at the school who is familiar with the MCC project and can guide them to the MCC investments to the degree possible	The maps showing the GPS locations of the project sites will offer a better way of identifying the MCC investments. MiDA can provide a spreadsheet showing all the detailed facilities per school. The challenge will be the non MCC ones.	<p>We currently have a spreadsheet with all the schools that received MCC investments as well as a list of schools that went through the environmental and needs assessment. We will be providing the enumerators with the list of which facilities the school should have received as a starting point.</p> <p>The reason we will ask enumerators to have someone at the school guide them is because we will not only be asking about MCC investments, but any other work that may have been done following MCC work. Based on our scoping visit, we know that in some cases it can be challenging, just</p>

				<p>by looking at the classrooms to determine which ones were funded by MCC.</p> <p>In your comments you mentioned the GPS coordinates of each MCC school. SI has not received that list nor the map. Would MiDA be willing to provide that information prior to fielding?</p>
23	Conditions Survey: Data Collection	While the evaluation team members from SI's headquarters will depart from Ghana following the training and piloting and continue to provide remote oversight, SI's local consultant will provide on the ground quality assurance and oversight.	How will the local consultant on the ground ensure quality of the data collected?	SI has developed an in house Data Quality Assurance System (DQAS), part of which includes protocols for local consultants to ensure data quality. This includes conducting spot checks (unannounced visits) to randomly selected data collection sites to observe enumerators' performance and the data collection process. Issues observed are addressed with the data collection firm directly. He/she also supports the data collection firm to find solutions to problems/challenges that may come up during data collection. SI provides the local consultant with protocols on how to conduct spot checks and take corrective measures. The consultant also reports on all issues observed to the SI program manager.
23	Conditions Survey: Data Collection	We should also note that in order to save time, if needed, the team can be	How feasible/practical will this be if the MCC school and the non MCC	We have removed this statement, as we now have an updated timeline that allows sufficient time to complete the conditions

		asked to collect information from the MCC-supported schools first and then follow on with the non-MCC-supported schools	school are close to each other?	survey and do preliminary analysis prior to the case study data collection.
24	Case Studies with Cross-Case Analysis	Objectives	Break this section into smaller paragraphs	We have divided this up some.
33	Case Studies with Cross-Case Analysis: Number of Cases and Sample Selection	Anticipate that there are climate differences, which may lead to particular challenges	How is this factored into the selection? Is that the only problem identified? Other possible problems associated with case studies should be identified in the initial stages and possible mitigation factors put in place before commencement of the studies.	To clarify, we don't anticipate climate difference will be a problem for the case study. But rather, that climate differences may influence the current conditions of schools. The objective of the case studies is to figure out what other factors determine conditions. Therefore, using factors that are not grounded in data for sample selection is problematic. Again, our goal here is not to have generalizable findings for the case studies, but to identify the variety of explanations that may be out there. The prevalence of these explanations would need to be examined in a subsequent study. However, the information gathered during the case study will provide the information needed in order to conduct such research.
26	Case Studies with Cross-Case Analysis:	Information gleaned through the conditions	More clarifications needed. Is it (or is it not) the case that	The conditions survey will produce an aggregate score that will be used to

	Number of Cases and Sample Selection	survey to aid in selection	the conditions survey will be used to determine the best/worst schools?	determine those schools in the best and those in the worst condition. We have added in some language to make this more clear.
26	Case Studies with Cross-Case Analysis: Number of Cases and Sample Selection	It is important at this stage that the evaluation team allow for some flexibility in selection criteria until the conditions survey has been completed	Please clarify this point	<p>This is a phased study. In the first portion, the SI team will carry out a conditions survey to score MCC and non-MCC schools as demonstrated in the draft survey instrument. Once the conditions survey is completed and the data have undergone preliminary analysis, the sites for case studies will be selected.</p> <p>Because we do not have the findings from the survey yet, it is important for us to allow for some flexibility in the criteria used to select sites for the case studies. We have added language in here that states once SI has refined their selection approach for the case studies it will be shared with MCC for review.</p>
36	Timeframe for Evaluation: Availability of Data	Possibly the most significant challenge that the team faces is that there are no photographs or conditions checklists that were collected either prior to nor upon completion of the work.	Some before and after pictures are available, but not for all the schools. Contact MiDA during fieldwork for some before and after pictures.	This is really helpful to know. And we are eager to receive these. Is there any way to share some of these prior to fielding a conditions survey? This would be very valuable for enumerator training.

II. Previous Impact Evaluation Design developed by NORC

MCC has a history of complimenting its compacts with large scale impact evaluations to assess whether or not their interventions have had an impact on a pre-defined set of outcomes. MCC does this by contracting independent evaluators to undertake rigorous impact evaluations (IEs). This was also the case for the education sub-activity in Ghana. However, following a design assessment, it was determined that an impact evaluation of the sub-activity was not feasible. In this section, we describe the background of Monitoring and Evaluation in Ghana and build on the decision making process regarding the unrealized impact evaluation of the Education Sub-Activity.

When implementation of the various programs, projects, activities and sub-activities for Ghana Compact I started in 2007 they were accompanied by a complimentary M&E activity that was to be carried out by three implementing entities and seven implementing consultants. The overarching M&E plan was a living document that aimed to monitor progress toward the Compact Goal and Objectives and outlined a series of discrete evaluations to determine the impact and sustainability of outcomes.

In 2011, MCC contracted National Opinion Research Centre (NORC) at the University of Chicago to carry out five impact evaluations, including one of the Education Sub-Activity. In a report generated by NORC in 2011 summarizing available information and data, they proposed the following two evaluation questions (p.7):

- What are the effects of an improved learning environment, in the form of improved or new educational infrastructure on school-level outcomes?
- How does the activity affect household economic activities, such as time available on the farm, labor productivity, and general income levels?

In the 2011 report, as well as a follow-up report issued June 2013, NORC explained, as summarized above, that the schools that were rehabilitated during Phase 1 (a and b) were not selected based on a strict set of criteria, but rather, were selected by the Community Services Activity under Ghana Compact I. The one hundred seventy-five Phase 2 schools were selected after comprehensive needs and environmental assessments were completed and schools were ranked on a number of dimensions, including an alignment with the District Medium Term Development Plan, poverty index, proximity to Farming Based Organizations (FBOs) that were participating in the agricultural project under Compact I, quality of school structure, quality of facilities, and insufficient space to house the number of students enrolled.

When NORC began its work, implementation of Phase 1a and 1b had been completed and the implementation of Phase 2 was well under way. Therefore, it was not possible for them to implement a randomized control trial (RCT). While randomization was not an option, NORC could utilize selection criteria applied to a list of 881 schools to implement a quasi-experimental impact evaluation using a regression discontinuity design to look at the impacts of infrastructure development on school-level outcomes (enrollment, attendance, gender parity, student-teacher ratio, contact hours, seats per student, completion rates, repetition rates, percentage of trained

teachers, and progress rates), as well as household level indicators (household time allocation, labor productivity, and income).³⁷

As the process evolved, NORC shifted its emphasis to school level outcomes, and abandoned the idea of also collecting household level outcomes. It is unclear from the report as to why this decision was made. It may have been that given the period of performance, an impact evaluation would not have been able to detect changes in household level income and productivity. Furthermore, the type of education-related outcomes, such as enrollment of school-aged children, that would have been most relevant to the evaluation was not gathered at the baseline and given shifts in the population, it could not be reconstructed.

By the time the second report was developed, NORC had encountered several issues the availability and quality of EMIS and census data that prevented them from moving forward with an impact evaluation, as described in the body of this report.

In the report, NORC did recommend an alternative qualitative approach to assess the effectiveness of infrastructure project, if not its impact. They suggested examining if new/better facilities translated into increased enrollment, lower absenteeism, and improved girls' attendance through qualitative data collection (key informant interviews and focus group discussions). Despite the recommendation, at the time, MCC opted not to move in that direction.

To follow up on the challenges presented the report, the PI for the current evaluation held an informal conversation with the NORC team. NORC verified that the lack of access to EMIS data was a major hindrance. They explained that while they had a list of schools, they did not have the EMIS codes. They did an initial exercise working with their local partners and were able to match EMIS codes with approximately 1/3 of their overall sample (both treatment and controls). NORC undertook a pilot to see if with additional efforts including phone calls and schools visits if they could obtain the EMIS codes and if it was worthwhile moving forward with their collection. The pilot revealed that with field efforts the codes could be secured. However, the decision was made along with MCC not to undertake this initiative primarily due to the insufficient sample coupled with the MoE's unwillingness to release the necessary EMIS data for them to move forward

³⁷ It should be noted that by the time the second report was submitted, the team had narrowed the theory of change, only linking infrastructure development to school level outcomes rather than both school level and household level outcomes.

III. Evaluation Timeline

Draft MCC Education Work Plan - Ghana updated 04/27/16			
	Activity	Start Date	End Date
Phase 1: Evaluability and Design			
Task 1	Finalize/clarify contract dates	29-Jun-15	asap
	Drafting preliminary Timeline/Workplan	30-Jun-15	7-Jul-15
	Review preliminary Timeline/Workplan	13-Jul-15	13-Jul-15
	Submit preliminary work plan	13-Jul-15	13-Jul-15
	Submit Quality Control Plan	-	-
	Materials review	9-Jul-15	13-Jul-15
	Reviewers send Sarah notes and questions from review	10-Jul-15	13-Jul-15
	Identify additional materials needed	7-Jul-15	13-Jul-15
	Call(s) with Jennifer Gerst & Hana F. to clarify their objectives and ask questions regarding materials provided	13-Jul-15	13-Jul-15
	Write first draft of EA	13-Jul-15	28-Jul-15
	Review of draft EA	29-Jul-15	29-Jul-15
	Final edits to first draft EA	30-Jul-15	30-Jul-15
	Formatting and copy editing of EA	30-Jul-15	30-Jul-15
	Deliverable: Evaluability Assessment	31-Jul-15	31-Jul-15
	MCC Reviews Evaluability Assessment	29-Jul-15	2-Aug-15
	MCC Approves Evaluability Assessment	2-Aug-15	6-Aug-15
Task 2	Make travel arrangements	27-Jul-15	3-Aug-15
	Deliverable: Travel SOW (as required)	3-Aug-15	3-Aug-15
	Field Mission	17-Aug-15	24-Aug-15
	Set Evaluation Design Report (EDR) Outline	26-Aug-15	26-Aug-15
	Write first draft of EDR	26-Aug-15	9-Sep-15
	Instrument development for primary data collection	26-Aug-15	9-Sep-15

	Review of draft EDR	14-Sep-15	14-Sep-15
	Final edits to first draft EDR	15-Sep-15	15-Sep-15
	Formatting and copy editing of EDR	15-Sep-15	16-Sep-15
	Deliverable: Ghana Work Plan, EDR, and draft instruments	17-Aug-15	17-Sep-15
	Hana Review of EDR before it goes to EMC	18-Sep-15	25-Sep-15
	Internal Edits based on Hana's Feedback submit for review	25-Sep-15	1-Oct-15
	EMC Review of EDR	12-Oct-15	19-Oct-15
	EMC feedback SI	20-Oct-15	10-Nov-15
	Modify EDR based on feedback	11-Nov-15	15-Dec-15
	Hana and Lauren review Draft 3	16-Dec-15	21-Jan-16
	Final Modifications of EDR by SI	21-Jan-16	25-Jan-16
	Summary for EMC approval for Mod	25-Jan-16	29-Jan-16
	Stakeholder Review	25-Jan-16	5-Feb-16
	Deliverable: "Documentation" of stakeholder feedback.	8-Feb-16	12-Feb-16
	Deliverables: Response to Stakeholder and MCC feedback & Confirmation of Commitment to Evaluation Design, Final EDR and Instruments	April 2016	
	Deliverable: Final English & translated instruments	April 2016	
	Deliverable: IRB package, if required	April 2016	
	Official Approval of EDR	April 2016	
Phase 2: Evaluation Materials/Data Collection			
Task 3	Contracting of Data Collection firm and Consultant	2-May-16	6-May-16
	School Census enumerator training	6-Jun-16	10-Jun-16
	School Conditions Census	13-Jun-16	8-Jul-16
	Analysis of census data, selection of Case Study sites from Census data	22-Jul-16	12-Aug-16
	Deliverable: Travel SOW (as required)		
	Training for case study	8-Sep-16	9-Sep-16
	Field Collection of Primary Data for Case Studies	12-Sep-16	14-Oct-16
	Revise Data Analysis Plan	17-Oct-16	21-Oct-16
	Prepping Data (coding, cleaning, merging, etc.)	24-Oct-16	4-Nov-16

Task 4	Data Analysis	7-Nov-16	18-Nov-16
	Write first draft of draft final Report	21-Nov-16	25-Nov-16
	Review of draft final report	28-Nov-16	30-Nov-16
	Final edits to first draft final report	1-Dec-16	2-Dec-16
	Formatting and copy editing of draft final report	5-Dec-16	6-Dec-16
	Deliverable: Draft Final Report	8-Dec-16	
	First round review by Sarah L	9-Dec-16	16-Dec-16
	SI edits based on review	19-Dec-16	23-Dec-16
	Local Stakeholder Review	26-Dec-16	6-Jan-17
	Response to local stakeholders	9-Jan-17	13-Jan-17
	Geetha Reviews Response	16-Jan-17	17-Jan-17
	Re-submit to Local Stakeholders for Stakeholder Statement and to EMC for review	19-Jan-17	
	Stakeholder Statement	20-Jan-17	27-Jan-17
	EMC review draft final report and response to stakeholder feedback	19-Jan-17	3-Feb-17
	Writing response document to MCC feedback	6-Feb-17	10-Feb-17
	Write revisions to final report	13-Feb-17	17-Feb-17
	Review of revised FER	20-Feb-17	21-Feb-17
	Final edits to revised FER	22-Feb-17	28-Feb-17
	Formatting and copy editing of FER	1-Mar-17	2-Mar-17
	Deliverable: Response to MCC feedback and FER	3-Mar-17	
	Anonymize data according to MCC Regulations	6-Mar-17	9-Mar-17
	Deliverable: anonymized raw data sets & analysis files	10-Mar-17	
	Deliverable: PPTs for presentation	15-Mar-17	
	MCC Draft Response	TBD	
	Official Government Response	TBD	
	MCC VP Clearance	TBD	

IV. List of Schools and Projects Completed

PHASE I PROJECTS

Phase	School	Community	District	Status of Construction
1A	Anhuntem Darmang Presby 'A'	Darmang	Akwapim South	Complete
1A	Nsaba Pokrom Presby	Pokrom-Nsaba	Akwapim South	Complete
1A	Nsakyee L/A JHS	Nsakyee	Akwapim South	Complete
1A	Nsakyee Presby Primary	Nsakyee	Akwapim South	Complete
1A	Pakro Methodist Basic	Pakro	Akwapim South	Complete
1A	Pakro Presby	Pakro	Akwapim South	Complete
1A	Bawjiase D/A JHS A, B, &C	Bawjiase	Awutu Senya	Complete
1A	Chochoe St. Johns Aglican JHS	Awutu Chochoe	Awutu Senya	Complete
1A	Senya D/A Primary A&B	Korle-Bu	Awutu Senya	Complete
1A	Awutu-Breku Primary	Akotoakoto Awutu	Awutu Senya	Complete
1A	Bewadze-Amenfi Basic School	Bewadze	Gomoa West	Complete
1A	Gomoa Nsuaem D/A Primary & JHS	Gomoa Nsuaem	Gomoa East	Complete
1A	Gomoa Oguan D/A Primary 'A' & 'B'	Gomoa Oguan	Gomoa West	Complete
1A	Nyanyano D/A Primary 'A' & 'B'	Gomoa Nyanyano	Gomoa West	Complete
1A	Ojobi D/A Primary	Ojobi	Gomoa East	Complete
1A	Amankwakrom RC Primary & JHS	Amankwakrom	Kwahu North	Complete
1A	Ekye-Amanfrom L/A Primary & JHS	Ekye-Amanfrom	Kwahu North	Complete
1A	Kwame Dwamena D/A Primary & JHS	Kwame Dwamena	Kwahu North	Complete
1A	Mem Chemfe R/C Primary	Mem Chemfre	Kwahu North	Complete
1A	Somsie DA Primary & JHS	Somsie	Kwahu North	Complete
1A	Ahinase R/C Primary School	Ahinase	Kwahu East	Complete
1A	Asubone-Odumase Primary	Asubone-Mangoase	Kwahu South	Complete
1A	Kotoso DA Primary School	Kotoso	Kwahu East	Complete
1A	Nketepa Primary School	Nketepa	Kwahu South	Complete
1A	Oframase DA Primary & JHS	Oframase	Kwahu South	Complete
1A	Diare Radiyya E/A Primary	Diare	Savelugu Nanton	Complete
1A	Janjori-Kukuo AME Zion	Janjori-Kukuo	Savelugu Nanton	Complete
1A	Savelugu Experimental Primary	Savelugu	Savelugu Nanton	Complete
1A	Tampion D/A Primary	Tampion	Savelugu Nanton	Complete
1A	Zoggu D/A Primary	Zoggu	Savelugu Nanton	Complete
1A	Ahwerewa/Feyiase D/A Primary	Ahwerewa	Sekyere East	Complete
1A	Aninagya Methodist Primary	Aninagya	Sekyere Afram Plains	Complete
1A	Anyinofi SDA Basic School	Anyinofi	Sekyere Afram Plains	Complete
1A	Kumawu Presby Primary	Kumawu	Sekyere Afram Plains	Complete
1A	Seniagya Methodist JHS	Seniagya-Adum	Sekyere East	Complete
1B	Bagkuli L/A Primary	Bagkuli	Karaga	Complete
1B	Bagli Methodist Primary	Bagli	Karaga	Complete
1B	Ditani L/A Primary	Ditani	Karaga	Complete
1B	Gbanlua L/A Primary	Gbanlua	Karaga	Complete

1B	Kokpulga L/A Primary	Kokpulea	Karaga	Complete
1B	Kpaliguma L/A Primary	Kpaligumah-Yema	Karaga	Complete
1B	Lulugu L/A Primary	Lulugu	Karaga	<i>Incomplete</i>

Phase	School	Community	District	Status of Construction
1B	Molizegu E/A Primary	Molizegu	Karaga	Complete
1B	Nakundugu L/A Primary	Nakundugu	Karaga	Complete
1B	Napoligu AME Zion Primary	Napoligu	Karaga	<i>Incomplete</i>
1B	Tamaligu AME Zion Primary	Tamaligu	Karaga	Complete
1B	Safam L/A Primary	Safam	Savelugu Nanton	Complete
1B	Zonchagni/Asibinili Methodist Primary	Zonchagni	Savelugu Nanton	Complete
1B	Changnayili Presby Primary	Changnayili	Tamale Metro	Complete
1B	Fuo Matoria Ahamediya Primary Sch	Fuo	Tamale Metro	Complete
1B	Gumani Nuri Islam KG/Primary	Gumani	Tamale Metro	Complete
1B	Lamashegu SDA Primary A	Kaladan	Tamale Metro	Complete
1B	Garizegu Presby Primary	Garizegu	Tolon-Kumbungu	Complete
1B	Gbanjogla D/A	Gbanjogla	Tolon-Kumbungu	Complete
1B	Golinga Presby	Golinga	Tolon-Kumbungu	Complete
1B	Kanfehiliyi E/A	Kanfehiliyi	Tolon-Kumbungu	Complete
1B	Nyankpali Nawaria E/A	Nyankpali	Tolon-Kumbungu	Complete
1B	Yipelgu AME Zion	Yipelgu	Tolon-Kumbungu	Complete
1B	Zantani D/A Primary	Zantani	Tolon-Kumbungu	Complete
1B	Bulbia L/A Primary	Bulbia	West Mamprusi	Complete
1B	Dibisi L/A Primary	Dibisi	West Mamprusi	Complete
1B	Kinkandina L/A Primary	Kinkandina	West Mamprusi	Complete
1B	Mishio L/A Primary	Mishio	West Mamprusi	Complete
1B	Yama Ric Primary/JHS	Yama	West Mamprusi	Complete
1B	Zuah D/A Primary	Zuah	West Mamprusi	Complete

Summary of Phase I Projects

Number of Districts that benefitted from educational facilities constructed	14
Number of Communities that benefitted from educational facilities constructed	63
Total Number of School Blocks Reconstructed/Rehabilitated	74
-# 3-Unit Classroom Block	47
-# 4-Unit Classroom Block	9
-# 5-Unit Classroom Block	2
-# 6-Unit Classroom Block	15
-# 8-Unit Classroom Block	1

PHASE II PROJECTS

Zone/District/Community/School	2-Unit	3-Unit	6-Unit	Teachers' Accommodation	Toilet
Afram Basin Zone	53	16	14		79
EJURA SEKYEDUMASE	4	5	3		12
<i>Aframso</i>					
AFRAMSO DA PRIMARY SCH			1		1
<i>Ahonhoboano</i>					
AHONHOBOANO DA EXPERIMENTAL PRIM			1		1
<i>Appiadwaa</i>					
APPIADWAA DA PIMARY SCH	1				1
<i>Ashakoko</i>					
ASHAKOKO DA PRIMARY SCH	1				1
<i>Ayinasu</i>					
AYINASU DA PRIMARY SCH		1			1
<i>Bayere Nkwanta</i>					
BAYERE NKWAANTA RC PRIMARY SCH	1				1
<i>Ejura Sabonline</i>					
SABONLINE TI AHMADIYYA JHS		1			1
<i>Hiawoanwu</i>					
HIAWOANWU DA PRIMARY SCH	1				1
<i>Kasei</i>					
KASEI DA PRIMARY SCH			1		1
<i>Kobriti</i>					
KOBRITI TI AHMADIYYA LOWER PRIM SCH		1			1
<i>Nokwareasa</i>					
NOKWAREASA RC PRIMARY SCH		1			1
<i>Zabrama Akura</i>					
ZABRAMA AKURA DA UPPER PRIM SCH		1			1
FANTEAKWA	8	2	1		10
<i>Abodobi/Yayaso</i>					
ABODOBI/YAYASO DA KG	1				1
<i>Akrumso</i>					
AKRUMSO DA PRIMARY		1			1
<i>Begoro</i>					
BEGORO DA KG	1				1
<i>Dedesawireko</i>					
DEDESAWIREKO ANGLICAN KG	1				1
<i>Dua Police</i>					

DUA POLICE DA KG	1				1
Zone/District/Community/School	2-Unit	3-Unit	6-Unit	Teachers' Accommodation	Toilet
<i>Mpaem</i>					
MPAEM DA KG	1				1
<i>Nkankama</i>					
NKANKAMA DA JHS	1	1			1
<i>Osubenbuom</i>					
OSUBENBUOM PRESBY KG	1				1
<i>Owusukrom</i>					
OWUSUKROM DA PRIMARY			1		1
<i>Sonukpo</i>					
SONUKPO PRESBY KG	1				1
KWAHU EAST	4		2		6
<i>Dwerebease</i>					
DWEREBEASE PRESBY KG	1				1
<i>Hweehwee</i>					
HWEEHWEE KG	1				1
<i>Kotoso</i>					
KOTOSO DA PRIMARY	1				1
<i>Nkwatia</i>					
Nkwatia RC PRIMARY			1		1
<i>Nteso</i>					
NTESO ANGLICAN KG	1				1
<i>Sempoah</i>					
SEMPOAH DA KG			1		1
KWAHU NORTH	14	1			15
<i>Abotanso</i>					
ABOTANSO NO1 RC PRIMARY	1				1
<i>Asanyanso</i>					
ASANYANSO DA KG	1				1
<i>Asukese</i>					
ASUKESE DA KG	1				1
<i>Boakyekrom</i>					
BOAKYEKROM DA KG	1				1
<i>Bruben</i>					
BRUBEN RC KG/JHS	1				1
<i>Dome</i>					
DOME DA KG/JHS		1			1
<i>Ekye Amanfrom</i>					
EKYE AMANFROM DA PRIMARY	1				1

<i>Hwanyanso</i>					
Zone/District/Community/School	2-Unit	3-Unit	6-Unit	Teachers' Accommodation	Toilet
HWANYASO DA KG	1				1
<i>Koranteng Krachi</i>					
KORANTENG KRACHI DA KG	1				1
<i>Kwahu Foso</i>					
KWAHU FOSO DA KG/BASIC SCH	1				1
<i>Kwame Dwamena</i>					
KWAME DWAMENA DA KG	1				1
<i>Kwasi Fante</i>					
KWASI FANTE DA SCH	1				1
<i>Maame Krobo</i>					
MAAME KROBO DA KG	1				1
<i>Ntonaboma</i>					
NTONABOMA RC KG	1				1
<i>Supom</i>					
SUPOM OBOSOMANO DA KG	1				1
KWAHU SOUTH	7	1	1		9
<i>Adawso</i>					
ADAWSO DA PRIMARY SCHOOL	1				1
<i>Bepong</i>					
Bepong RC Primary School			1		1
<i>Kwahu Amanfrom</i>					
KWAHU AMANFROM DA PRIMARY AND	1				1
<i>Kwahu Praso No. 1</i>					
KWAHU PRASO NO1 RC KG	1				1
<i>Kwahu Praso No. 2</i>					
KWAHU PRASO NO2 PRESBY B KG	1				1
<i>Mpraeso</i>					
MPRAESO NANA AMPADU DA KG	1				1
<i>New Oworonbong</i>					
NEW OWORONBONG DA PRIMARY	1				1
<i>Nketepa</i>					
NKETEPA DA PRIMARY SCHOOL	1				1
<i>Ntomem</i>					
NTOMEM DA JHS		1			1
MAMPONG MUNICIPAL	3		3		6
<i>Adidwan</i>					
ADIDWAN DA PRIMARY SCH			1		1
<i>Aframso No. 3</i>					

AFRAMSO NO3 RC KG	1				1
Zone/District/Community/School	2-Unit	3-Unit	6-Unit	Teachers' Accommodation	Toilet
<i>Atonsuagya</i>					
ATONSUAGYA RC SCHOOL			1		1
<i>Bosomkyekye</i>					
BOSOMKYEKYE PRESBY UPPER PRIM/JHS			1		1
<i>Kofiase</i>					
KOFIASE DAMASCUS KG	1				1
<i>Woraso</i>					
WORASO PRESBY STREAM B	1				1
SEKYERE AFRAM PLAINS	4		3		7
<i>Bodomase</i>					
BODOMASE METHODIST KG			1		1
BODOMASE SDA KG	1				
<i>Dagomba</i>					
BODOMASE SDA KG					1
DAGOMBA DA KG	1				1
<i>Drobonso</i>					
DROBONSO DA KG			1		1
<i>Oyoko</i>					
OYOKO METHODIST PRIMARY	1				1
<i>Pepease</i>					
PEPEASE DA KG	1				1
PEPEASE METHODIST LOWER PRIMARY			1		1
SEKYERE CENTRAL	3	5			7
<i>Apaah</i>					
APAAH METHODIST PRIMARY SCH	1	1			1
<i>Beposo</i>					
BEPOSO DA BASIC BASIC SCH	1				1
<i>Bimma</i>					
BIMMA METHODIST JHS		1			1
<i>Gariba Nkwanta</i>					
GARIBA NKWANTA SCHOOL		1			1
<i>Kwamang</i>					
KWAMANG ANGLICAN JHS		1			1
<i>Nkojua</i>					
NKOJUA AME ZION SCH		1			1
<i>Nsuta</i>					
NSUTA DA BASIC SCH	1				1
SEKYERE EAST	6	2	1		7

<i>Akuakrom</i>					
Zone/District/Community/School	2-Unit	3-Unit	6-Unit	Teachers' Accommodation	Toilet
AKUAKROM PRESBY JHS	1	1			1
<i>Asokore</i>					
ASOKORE DA TRINITY KG	1	1			1
<i>Asukokoo</i>					
ASUKOKOO DA KG	1				1
<i>Attakrom</i>					
ATTAKROM KG	1				1
<i>Nkwankwanua</i>					
NKWANKWANUA PRIMARY SCH	1				1
<i>Okaikrom</i>					
OKAIKROM KG	1				1
<i>Seniagya</i>					
SENIAGYA METHODIST PRIMARY SCH			1		1
Northern Agricultural Zone	33	8	6	1	36
Karaga	5	3	1	1	5
<i>Langogu</i>					
LANGOGU DA JHS	1			1	1
<i>Nambrugu</i>					
NAMBRUGU DA PRI & JHS	1		1		1
<i>Nyewnsoba</i>					
NYEWNSOBA DA PRIMARY	1	1			1
<i>Nyong Nayili</i>					
NYONG NAYILI DA KG	1	1			1
<i>Yemo-Karaga</i>					
YEMO- KARAGA DA PRIMARY	1	1			1
Savelugu-Nanton	6	1	2		7
<i>Balshei</i>					
Balshei District Assembly Primary School	1				1
<i>Diare</i>					
Diare E/A Primary School	1		1		1
<i>Dipale</i>					
Dipale Ahmadiyya Primary School	1				1
<i>Duko</i>					
Duko Anglican Primary School	1				1
<i>Kambontooni</i>					
Kambontooni Al-Markazia E/A Primary School			1		1
<i>Tindang</i>					
Tindang Methodist Primary School	1	1			1

<i>Zoosali</i>					
Zone/District/Community/School	2-Unit	3-Unit	6-Unit	Teachers' Accommodation	Toilet
Zoosali Primary School	1				1
Tamale Metro	4	1	2		5
<i>Dohini</i>					
Dohini Metropolitan Assembly Islamic School	1	1			1
<i>Dungu</i>					
Dungu Anglican Primary School	1				1
<i>Kunyevilla</i>					
Kunyevilla T.I. Ahmadiyya Primary School	1				1
<i>Nyohini</i>					
Nyohini Ansar-Ur-D-een E/A Primary School			1		1
<i>Tuu-Tingly</i>					
Tuu-Tingly Nuri Imman E/A School	1		1		1
Tolon-Kumbungu	8	1			8
<i>Dalun Kukuo</i>					
Dalun Kukuo District Assembly Primary School	1				1
<i>Galinkpegu</i>					
Galinkpegu E/A Primary School	1				1
<i>Gingani</i>					
Gingani District Assembly School	1				1
<i>Gizaa</i>					
Gizaa Gudaa Primary School	1				1
<i>Kpalisogukpana</i>					
Kpalisogukpana Primary School	1				1
<i>Sabegu</i>					
Sabegu District Assembly Primary School	1				1
<i>Wayamba</i>					
Wayamba District Assembly Primary School	1				1
<i>Yoggu</i>					
Yoggu District Assembly School	1	1			1
West Mamprusi	10	2	1		11
<i>Duu</i>					
DUU PRIMARY SCH	1				1
<i>Janga</i>					
JANGA AHMADIYA PRIMARY SCH	1				1
JANGA KUYISIGA PRIMARY SCH	1				1
JANGA NURIA PRIMARY SCH	1				1
<i>Kperiga</i>					
KPERIGA DA PRIMARY SCH	1				1

<i>Kunkua</i>					
Zone/District/Community/School	2-Unit	3-Unit	6-Unit	Teachers' Accommodation	Toilet
KUNKWA DA PRIMARY SCHA	1				1
<i>Nasia</i>					
NASIA DA PRIMARY SCH	1	1			1
<i>Wulugu</i>					
WULUGU DA PRIMARY	1				1
<i>Wungu</i>					
WUNGU DA PRIMARY	1				1
WUNGU TI AHMADIYA PRIMARY SCH			1		1
<i>Yama</i>					
YAMA DA PRIMARY	1	1			1
Southern Horticultural Belt (East)	8	11	3		17
Akatsi	1	2			3
<i>Agomor Agado</i>					
Agomor Agado Primary School	1				1
<i>Ave Havi</i>					
Ave Havi DA Basic School		1			1
<i>Kpohega/ Ayitikope</i>					
Kpohega/ Ayitikope DA Primary School		1			1
Hohoe	1		1		1
<i>Akpafu Mempeasem</i>					
Akpafu Mempeasem DA Primary	1				1
<i>Akpafu Odomi</i>					
Akpafu Odomi DA Primary and JHS			1		
Keta	2	2			3
<i>Afiadeniyigba</i>					
Afiadeniyigba RC Basic School	1				1
<i>Agove/Avume (Angloga)</i>					
Agove/Avume (Angloga) Aseco Basic School		1			1
<i>Ashiata (Tegbi)</i>					
Ashiata (Tegbi) RC School	1	1			1
Ketu North	1	1	1		3
<i>Dzodze Fiagbedu</i>					
Dzodze Fiagbedu RC Primary School			1		1
<i>Ehi</i>					
Ehi EP JHS		1			1
<i>Penyi</i>					
Penyi Zion No.1 KG	1				1
Ketu South	1	1	1		3

<i>Aflao Sepenukope</i>					
Zone/District/Community/School	2-Unit	3-Unit	6-Unit	Teachers' Accommodation	Toilet
Aflao Sepenukope KG School	1				1
<i>Agbodzume/Babanawokope</i>					
Agbodzume/Babanawokope Primary School			1		1
<i>Hatsukope /Gblafedo</i>					
Hatsukope /Gblafedo RC School		1			1
North Dayi	1	2			2
<i>Kpando Torkor</i>					
Torkor DA JHS		1			1
<i>Vakpo New Adomi</i>					
Vakpo New Adomi DA School	1				
<i>Vakpo-Aneta</i>					
Vakpo – Aneta JHS		1			1
South Tongu	1	3			2
<i>Awuyakope</i>					
Awuyakope DA Upper Primary School		1			1
<i>Fieve Dugame</i>					
Fieve Dugame DA School		1			1
<i>Kpotame</i>					
Kpotame Presby KG and Basic School	1	1			
Southern Horticultural Belt (West)	12	6	6		21
Akwapim South					
<i>Aburi</i>					
ABURI PRESBY JHS		1			1
ABURI ANGLICAN SCHOOL KG	1				1
<i>Fotobi</i>					
FOTOBI - DA SCHOOL KG	1				1
Awutu Senya					
<i>Bontrase</i>					
Bontrase Salmaninye Islamic Basic School			1		1
<i>Senya</i>					
Senya DA Primary			1		
Dangme West	3				3
<i>Dodowa-Djabletey</i>					
DODOWA-DJABLETEY RC PRIMARY	1				1
<i>Kortoko</i>					
KORTOKO PRESBY PRIMARY & KG	1				1
<i>Osuwem</i>					
OSUWEM RC PRIMARY	1				1

Efutu Municipal	1	2	1		2
Zone/District/Community/School	2-Unit	3-Unit	6-Unit	Teachers' Accommodation	Toilet
<i>Asanfro</i>					
ASANFRO DA PRIMARY SCHOOL	1	1			1
<i>New Winneba</i>					
NEW WINNEBA DA SCHOOL		1	1		1
Gomoa East			2		2
<i>Brofoyedu</i>					
BROFOYEDU RC PRIMARY			1		1
<i>Ojobi</i>					
OJOBI DA PRIMARY			1		1
Gomoa West		1	1		2
<i>Bewadze</i>					
BEWADZE DA PRIMARY		1			1
<i>Odina</i>					
ODINA OGUA DA PRIMARY			1		1
Lower Manya Krobo	3				3
<i>Kpong</i>					
KPONG PRESBY PRIMARY	1				1
<i>Nuoso</i>					
NUOSO RC PRIMARY	1				1
<i>Oblemanya</i>					
OBLEMANYA DA PRIMARY	1				1
Upper Manya Krobo	3				3
<i>Akateng Manya</i>					
AKATENG MANYA DA PRIMARY SCH	1				1
<i>Akokoma Sisi</i>					
AKOKOMA SISI DA PRIMARY SCH	1				1
<i>Akotoe</i>					
AKOTOE RC PRIMARY	1				1
Yilo Krobo		2			2
<i>Aboa Besease</i>					
Aboa Besease RC JHS		1			1
<i>Oterkpolu</i>					
Oterkpolu Presby JHS		1			1
Grand Total	106	41	29	1	153

Note: Communities where educational facilities are being constructed are in italics.

Summary of Phase II Projects

Number of Districts benefiting from Education Facilities under Construction	30
Number of Communities benefiting from Education Facilities under Construction	151
Total Number of School Blocks under Construction	176
- # 2-Unit Classroom Blocks	106
- # 3-Unit Classroom Block	41
- # 6-Unit Classroom Block	29
- # Toilet/Urinal	153
- #Teacher Accommodation	1

V. Evaluability Assessment

Introduction

Beginning in 2005 the United States, through the Millennium Challenge Corporation (MCC), entered into an agreement with the Government of Ghana (GOG) to increase opportunities for economic development in Ghana. Specifically, MCC's Ghana 1 Compact Program³⁸ intended to reduce poverty through economic growth by achieving two primary objectives (Figure 1):

1. Increase production and productivity of high-value food and cash crops in the intervention zones in Ghana.
2. Enhance the competitiveness of high-value food and cash crops in the local and international markets.

To reach these objectives during the life of the compact that was signed August 2006 and ended on February 2012, the Millennium Development Authority (MiDA) implemented three projects focused on agriculture, transportation and rural development in 30 districts across the Northern Agricultural Zone (Northern Region), the Afram Basin Zone (Ashanti and Eastern Regions), and the Southern Horticultural Belt (South-East Coastal Plans). Each of these three large projects included a series of twelve activities as well as several sub-activities. According to the project completion report submitted by MiDA (Sept. 2012), nearly all of the interventions have been completed with the exception of three activities focused on irrigation, landing stages for the ferry, and the construction of floating dock for the RoRo Ferry. Alongside the Compact, MiDA adopted a Monitoring and Evaluation (M&E) plan to maintain a results-based approach to programming with quantifiable targets.³⁹ Drawing from these data and independent evaluations, the compact was considered a success as it met many of the targets it had intended.

Now that the compact has closed, MCC is interested in revisiting a number of the activities to gain insight into the uptake of services and goods provided and how they have enhanced life of the direct beneficiaries. One activity that is of particular interest to MCC is the education sub-activity. MCC has contracted Social Impact (SI) to undertake an ex-post performance evaluation of the Ghana education sub-activity to compliment performance evaluations being undertaken on all education programs, projects and activities in order to revamp and revise their education programming moving forward.

Education Sub-Activity

The education sub-activity from the Ghana I Compact falls under the community service activity and the rural development project. The objective of the rural development project was to strengthen rural institutions that provide services that are complimentary to agriculture and agri-business. The sub-activity, which focused on the rehabilitation of school infrastructure and the construction of new schools, operated on the theory of change that stated that improvements to schools and increases in classrooms would result in higher matriculation rates in agricultural communities. Additionally, by providing supplemental materials including furniture and new latrines, it was

³⁸ It should be noted that since the closure of the compact, a second compact has been approved and activated in Ghana.

³⁹ Millennium Development Authority (MiDA). Monitoring and Evaluation Plan. November 30, 2011. https://assets.mcc.gov/documents/me_plan_-_Ghana.pdf

argued that student would not only enroll in school but that attendance would increase and dropout would decrease. The theory of change further argued that the amount of time that there is a direct relationship between the number of years a child or youth stays in school and their earning potential over a lifetime. In other words, the greater the number of years of schooling, the greater their earning potential.⁴⁰By keeping children and youth in school, the education sub-activity had the potential to improve the economic conditions of the entire community.

Prior to undertaking a performance evaluation of the education sub-activity, MCC has asked SI to assess the overall evaluability of the sub-activity. This report outlines our assessment of the evaluability along five dimensions and assesses project logic and causal links.⁴¹ These five dimensions include: 1) whether there is sufficient evidence to support the program diagnostic, 2) the clarity of definition of the theory of change and project logic, 3) the outline of potential risk mitigation strategies for project risks and assumptions, 4) the definition and justification of project participants, and 5) the existence of metrics to measure results for learning and accountability. The last dimension also examines indicators and data sources for monitoring project implementation and results, and whether the evaluation is designed to maximize learning and accountability. As part of the assessment of each dimension, any concerns or questions within each area are documented

⁴⁰ According to the Operations Manual for MiDA Community Services Volume 4: Technical Specifications, research shows that “farmers in sub-Saharan Africa with five or more years of basic education are 9 percent more productive than those without” p. 4-1.

⁴¹ Following the guidance of the Millennium Challenge Corporation Project Evaluability Assessment table template.

Evaluability Dimensions Education Sub-Activity

Questions	Assessment	Concerns for the evaluation and questions for the scoping trip
Dimension 1: Is there sufficient evidence to support the program diagnostic?		
<ul style="list-style-type: none"> • Is there quantitative evidence regarding constraints to and sources of economic growth? • Is the problem clearly understood and identified? • Is there sufficient evidence/quantitative data available to support the problem identification? • Is the institutional context and the political economy understood? • Is there a clear understanding of how gender and social dynamics may be influenced by or 	<p>In order to assess the evidence to support the program diagnostic, SI turned to the Ghana Constraints Analysis prepared by the Joint USG-GoG Technical Team. However, this document focused on the program as a whole and did not address the education sub-activity directly. The technical team identified five constraints that are prohibiting growth in Ghana. These constraints included: a low level of private investment, low level of credit to the private sector, inadequate power supply to keep up with the demand, insecure property rights, and insufficient development of roads. The program was designed to help Ghana overcome a number of these constraints including the development of roads, improving conditions for agricultural development including increase in the availability of credit, and improvement in the general conditions in agricultural communities including improvement to schools, health care, and secure financial systems.</p> <p>In relation to education, the MiDA team adequately demonstrated a need to increase enrollment and attendance and reduce drop out of students in agriculture based communities as supported by the EMIS data that showed enrollment and attendance rates were too low and drop-out was too high in both primary and secondary schools. Additionally, MiDA drew information from a school mapping activity undertaken by MoESS, the Univeristy of Cape Coast,</p>	<p>Discuss the underlying theory of change or literature used to support the hypothesis that education will help reduce poverty through economic growth? Has economic activity increased and poverty decreased overall since the closure of Compact I? Meet with community representatives in agricultural development regarding role of children and youth in agriculture Secure school level EMIS data for MiDA schools and at community level (minimum for non-MiDA schools).</p>

<p>influence the problem identified?</p>	<p>UNESCO, and UNICEF, EMIS Data as well as a CC&M study in the 23 targeted districts⁴² to assess education facility needs.</p> <p>It is possible that the political economy and the institutional context surrounding schooling in Ghana may have changed since the closure of the compact. Ghana has received substantial funding for education related initiatives not only from MCC but from other large donors including USAID. As such, the evaluation team will need to explore if/how the MCC support schools have come in contact with other programs since the compact ended.</p> <p>There was no well-stated goal regarding gender and social dynamics surrounding schools in the diagnostics. However, improvements to bathroom facilities were intended to improve the schooling experience for girls in particular (Operations Manual, Volume 4, p. 28).</p>	<p>Seek clarity on gender targets through meeting with MiDA reps</p> <p>Explore other education initiatives that are taking place in same communities since completion of the compact</p> <p>Meet with MOESS PBME rep regarding school construction and maintenance</p>
<p>Dimension 2: Are the project objectives and theory of change/logic clearly defined?</p>		
<ul style="list-style-type: none"> • Are the program/activity goals and objectives clearly stated and linked to the economic analysis? • Do activities within a project all contribute to a common project objective? Likewise for sub-activities as part of an activity? • Are the inputs, outputs, and outcomes clearly defined? 	<p>As described in the introduction, the sub-activity was built on a clearly defined and articulated theory of change. The argument was that school improvements would result in increased school enrollment and attendance. Further, school persistence would have a positive impact on earning potential for students. According to an early design report developed by NORC for an impact evaluation, there were two types of outcomes targeted for the activity: economic outcomes and school level outcomes. Specifically, the report states, “Construction and rehabilitation of educational facilities with the aim of improving education indicators such as enrollment, assistance (in particular for girls), and household economic activity (labor allocation, labor productivity)” (NORC, 2011, p. 7). While there is a clear linkage between the design of the sub-activity and school level outcomes, in the materials reviewed, there was limited evidence that directly linked school improvements to economic outcomes (household time allocation, labor productivity, and income). This may be the reason why in a follow-up design report issued by NORC in 2013, they</p>	<p>Need further information from MiDA reps on if additional education activities were implemented along with repairs and classroom construction. There are inconsistencies in the report to determine if this was the case.</p> <p>Discuss education needs in farming communities</p> <p>What was the timeline? And follow-up? Speak with org or individuals</p>

⁴² Originally, 23 districts were targeted. That number was increased to 30 districts over the period of performance.

<ul style="list-style-type: none"> • Is the program causal logic clearly defined (link between inputs, outputs, and outcomes) the program goal? • Are the proposed program results clear, plausible and based on existing evidence? • Is there a strong enough intervention relative to the severity of the problem in order to expect impact? • Is the timeline for expected results clear and based on evidence? • Is it clear whether or not benefits are expected to be sustained beyond the life of the threshold program? 	<p>removed the economic impacts of the sub-activity from their evaluation design. Ultimately an impact evaluation of the sub-activity proved not to be feasible due to the inability to identify an appropriate counterfactual and poor quality of EMIS data which made the opportunity for statistical matching for a quasi-experimental design impossible.</p> <p>It should be mentioned that the MiDA technical team undertook demand analysis in order to ensure that there was in fact a substantial demand in the community. The demand analysis drew from the Population Census as well as Enrollment Figures supplied by EMIS (Operations Manual Volume 4).</p> <p>To link the education sub-activity to poverty reduction, the technical team developed a set of criteria for selecting communities. The first two criteria that were used were the number of FBOs and Poverty Index. In others words, MiDA sought to implement the program in communities with a high percentage of Farming Based Organizations and high levels of poverty.</p> <p>A manual was developed to help maintain the schools. However, it was unclear from the documents as to what role GoG will play upon closure of the compact and sub-activity. For example, will they continue to build schools and improve existing structures? If so, what is their plan to do so? Will they be working to create a direct linkage between education and agriculture? Research shows that as education levels increase in agricultural communities, they may experience a “flight” to more urban areas for employment.</p>	<p>involved with follow-up check-ins post-compact. Speak with ag expert in Ghana on gender roles in agriculture.</p> <p>Meet with MOESS PBME rep regarding school construction and maintenance Meet with MOE official on follow up.</p>
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Dimension 3: Are the risks and assumptions clearly defined with potential risk mitigation strategies?

<ul style="list-style-type: none"> • Are the risks to achieving expected results clear, with clearly defined risk mitigation strategies? • Is it clear how risks will be monitored? • Is it clear how design and implementation may be altered as information on new risks/realization of risks occurs? • Is there a clear understanding of the assumptions underlying the program logic? • Is there sufficient evidence to suggest these assumptions will hold? What are the identified risks to these assumptions? 	<p>Risk mitigation strategies for the education sub-activity were not described in the primary reports. The biggest modification made during the life of the compact was the change to the evaluation strategy for the education sub-activity. Additional research must be undertaken to understand exactly what risk mitigation strategies were put in place.</p>	<p>Risk mitigation strategies used for this sub-activity need to be discussed with representatives from MiDA.</p> <p>Meet with contractors to discuss what measures were put in place to maintain schools. Discuss with MiDA the expected life of the investment. Visit schools to assess current state of repairs, construction, etc and speak with school leaders to understand maintenance program.</p>
<p>Dimension 4: Are project participants clearly defined and justified in terms of geographic scope and eligibility criteria?</p>		
<ul style="list-style-type: none"> • Is the selection criteria for program participants clearly defined? Are any 	<p>Selection criteria for the both the program and the sub-activity are very well defined and documented. As described earlier, for the program overall, sought communities with significant number of FBOs and substantial poverty. MiDA then developed selection criteria for each activity. According to the report</p>	<p>Site visits to a minimum of 2 schools for scoping trip. One identified at baseline with sub-standards structures and</p>

<p>necessary specific demographics defined?</p> <ul style="list-style-type: none"> • Is there information to assess if interventions will vary across sites or is the intervention uniform across sites? Is there justification for the proposed approach? 	<p>“Community Services Activity: Project Selection Criteria” (Feb 2009), general criteria for selection included:</p> <ul style="list-style-type: none"> • Priority given to communities with more than 2 FBOs • FBO communities along the ag value chain that have qualified for MiDA interventions • Selected in collaboration with Ministries, Agencies and District Assemblies • Meet norms and standards of Ministries and Agencies • Channeled through Area Councils (ACs) to the District Assemblies and presented in the Districts’ Medium Term Development Plans (MTDPs) • Environmentally sustainable • Beneficiary responsibilities assigned at all levels-stakeholders, national and zonal levels <p>According to the selection criteria document (p. 3) the goal was to improve current schools rather than build new ones. To identify sites the following criteria were taken into consideration:</p> <ul style="list-style-type: none"> • Number of FBOs (communities with highest number received priority) • Schools with sub-standard structures • Schools with inadequate facilities <p>The guidance provided was explicit. For example, in schools with sub-standard structures priority was given to the following (selection criteria, p.3):</p> <ul style="list-style-type: none"> • Classes under trees • Classrooms in unsafe structures • Uncompleted school structures • Schools in rented accommodations • Schools in unclad pavilions. 	<p>one with inadequate facilities</p> <p>Meet with MoESS about implementation process and progress at National Level of school improvement</p> <p>Meet with teachers to discuss changes in teaching post-improvement</p>
<p>Dimension 5: Are the metrics for measuring results for both accountability and learning clearly defined?</p>		

<ul style="list-style-type: none"> • Are there clearly defined indicators for measuring expected results (inputs, outputs, outcomes)? • Is there sufficient information to set appropriate and feasible targets for key outputs and outcomes? • Is the evaluation clearly defined for maximizing learning and accountability? 	<p>There are a set of clearly defined monitoring data that were collected. The Indicator Tracking Table was used to track the following for the education sub-activity:</p> <ul style="list-style-type: none"> • # of students enrolled in MiDA improved schools • # of female students enrolled in MiDA improved schools • # of school blocks rehabilitated • # of school blocks constructed • # of school blocks designed and diligence • Value of signed contracts • Amount of signed contract sums dispersed • Percent works contract sums dispersed • Shortlist of IDIQ consultants/contractor developed <p>In addition to the ITT data, MiDA also had a contract with MASDAR for data collection support. This contract was used to gather information regarding the implementation of their projects, activities and sub-activities. These were delivered to MiDA quarterly and reported the progress of the education sub-activity. To supplement this information, the SI team intends to draw from EMIS data for enrollment, attendance, and dropout rates, if available, and from GLSS5+ data for income, labor productivity and time allocation within the HH).</p>	<p>Ask MoESS, are data available on teacher attendance? Meet with the contractors who undertook the work to develop a checklist to assess current conditions</p>
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Summary of Evaluability

While it was demonstrated by NORC that an IE of the education sub-activity may not be feasible, there are opportunities to learn from the activity. Overall, the education sub-activity is operating under a clearly defined theory of change and while implemented some time ago, the processes used to identify the problem, develop a solution, link the overarching program components, and site selection have been clearly documented. Possible questions to be addressed as a part of the performance evaluation include the following:

- A. Are there higher rates of enrollment and attendance in schools that received improvements or new facilities in comparison to other schools in the community?
- B. Have the improvements been maintained, and what is the overall quality?
- C. What are perceptions of teachers, students, parents, school leaders and district officials of the effect improvements have had on the quality of education?
- D. What were some of the success and challenges encountered during implementation?

VI. School Conditions Survey

(DRAFT)
MCC Ghana Education Sub-Activity Evaluation
School Conditions Survey
February 2016

Instructions: Meet with the Head Teacher and tell him/her you want to observe the school buildings and grounds to survey the maintenance efforts and needs in MCC-funded blocks. Let the Head Teacher know that you will be taking pictures to document your checks, but that the staff and students will not be the subjects of these pictures.

Enumerator: COMPLETE A SEPARATE CHECKLIST FOR EACH BLOCK

1. Questionnaire ID: _____
2. Enumerator Name: _____
3. Date: _____
4. District: _____
5. Community Name: _____
6. School Name: _____
7. School EMIS ID Number: _____
8. Block is used for (Circle One): Kindergarten / Primary / JHS / Teacher's space / Not in use
9. Block was (Circle One): Constructed / Refurbished
10. Number of Classrooms in Block: _____
11. Block is number ___ of ___ blocks surveyed at this school.
12. GPS Coordinates:
13. Current number of students enrolled: _____
14. Is there sufficient space for the students who are currently enrolled? ___ Yes ___ No ___ Don't know
15. Does the size of the school currently meet the demands, in terms of space, based on the population size of the surrounding community? ___ Yes ___ No ___ Don't Know

A. Questionnaire for Head Teacher

Instructions: If the head teacher is not available, the Enumerator can ask any teacher with knowledge about school maintenance.

16. Has the school population increased, decreased or stayed the same since 2012?.

17. Has the school received any additional rehabilitation or new construction?
_____? If yes, who undertook the improvements? Who funded the improvements? When were they completed?
18. Has the school obtained new furniture or chalkboards? If yes, who provided the new furniture and/or chalkboard? When were they provided?
19. Have the toilet facilities received updates or been newly constructed? If yes, who provided those facilities? ?
20. _____
21. Is there a particular organization or individual who is responsible for carrying out maintenance? If so, who? _____
22. Is there a particular organization or individual that is responsible for funding the maintenance of school buildings, grounds, toilet facilities, and furniture?
23. School maintenance checks are done: Regularly / Reactively / Not at all
24. How are conditions in and around the school block during extreme weather, (i.e heavy rains, wind, etc.)
25. Describe any repairs needed to the block, and who performed them:

In the following sections, please state whether or not the stated item or condition is present, then rate the condition of the named items on a scale of 1-5, with 1 being very low quality and 5 being pristine quality. Beginning with section C, only score those items that were provided by MiDA/MCC. If something is not visible, not provided by MiDA, or you don't know, select, don't know

	Yes	No	1	2	3	4	5	Don't Know
B. SCHOOL GROUNDS								
Signs of Soil Erosion around structure								
Erosion prevention measures in place								

Tall Weeds and Grass are cut								
Rubbish on the grounds								
Trees are maintained with no low branches that could injure children								
Standing water or puddles								
Other (specify)								
CLASSROOM BLOCK CONDITIONS								
Exposed building foundations								
Cracked or damaged floors								
Cracked or damaged external or internal walls								
Windows missing or in disrepair								
Doors missing or in disrepair								
Building has visible roof leakage or holes								

Rotten timber members in roof								
Peeling paint or distempered finishes								
Defective drainage								
Sharp wooden or metal corner or protrusions that could injure someone								
Sufficient space for number of students								
Overall structurally sound								
Other (specify)								
EQUIPMENT, FURNITURE, AND OTHER ITEMS INSIDE STRUCTURE								
Students desks are present								
Student chairs or benches are present								
Student desks are safe to use								
Student desks are functioning properly								

There is a chalkboard or dry erase board present								
The chalkboard or white board is affixed to the wall?								
There is chalk for the chalkboard or markers for the dry erase board.								
MCC signage is visible.								
Other (Specify)								
TOILET FACILITIES								
There are separate toilets for boys and girls that are clearly marked								
Girls and boys do not have to wait in the same area to use the toilet								
Toilets are clean and have clear signs of being maintained								
There are doors to the individual latrines for privacy								
Polytanks are in place for harvesting rain water								

