Government of the People's Republic of Bangladesh

Ministry of Local Government Rural Development and Cooperatives

TERMS OF REFERENCE
OF THE
CONSULTANCY SERVICES FOR RESULTS AND IMPACTS
FOR
Western Economic Corridor & Regional Enhancement Program (WeCARE) Phase-I: Rural Connectivity, Market and Logistic Infrastructure Improvement Project (RCMLIIP)

March 2021

Local Government Engineering Department

TERMS OF REFERENCE

OF THE
RESULTS AND IMPACTS CONSULTANCY FOR WESTERN ECONOMIC CORRIDOR AND REGIONAL CONNECTIVITY ENHANCEMENT (WeCARE) PROGRAM

1. INTRODUCTION

INTRODUCTION

1.1 The Local Government Engineering Department (LGED) seeks to engage a qualified and experienced individual to provide support to the Project Implementation Unit (PIU) of WeCARE Phase – I for monitoring/assessment of specific results and impacts to be achieved by the implementation of this phase of the program.

BACKGROUND

1.2 WeCARE program is aimed at providing efficient, safe, and resilient connectivity along a section of a regional transport corridor in Western Bangladesh. To that end, intended outcomes of the program are: Reduced transport and logistics costs (including post-harvest losses) along a regional transport corridor in Western Bangladesh, Safer and resilient road network in Bangladesh, and Faster and reliable internet connectivity in Western Bangladesh, and

1.3 The WeCARE program will support the Bangladesh Roads and Highways Department (RHD) to upgrade 260 km of national highway from a two-lane single carriageway to four lanes which will reduce the time and cost of travel for passengers and freight. The local impacts of the corridor would be transmitted through investments in LGED managed rural roads, local markets, and agro-logistics in the ten districts through which the corridor passes. The World Bank and Asian Infrastructure Investment Bank (AIIB) are joint-financing for the Program.

1.4 WeCARE is a ten year long Multiphase Programmatic Approach (MPA) initiative. The program will consist of the following five phases:

- Phase 1: Upgrading of Jashore- Jhenaidah road section as a smart, resilient and safe highway; and local economic infrastructure in four districts

  Scope: This phase will upgrade the Jashore-Jhenaidah national highway (48km) from a two-lane single carriageway to four lane dual carriageway. It will include separate service lanes for slow moving vehicles and vulnerable users on both sides of the carriageway, installation of OFC, and deployment of ITS. It will also finance the upgrading of priority Upazila, Union, and village roads and complementary logistics infrastructure at rural markets (commonly referred to as growth centers) in the four (4) Program Districts of Jashore, Jhenaidah, Magura, and Chuadanga.

- Phase 2: Road Maintenance Financing; and Strengthening Road Sector Management & Institutional Capacity

  Scope: This phase will primarily focus on improving the management and maintenance regime of the primary road network, including the provision of seed funds to reduce the financing gap in the GoB's maintenance budget and operationalization of the road maintenance fund. This Phase will include the development of a Transport Sector Master Plan to enhance multi-modal transport integration and reduce institutional fragmentation in planning, implementation and operations; a comprehensive "Business Delivery Process Review"; and introduction and mainstreaming of good industry practices in areas of private sector financing and investment, contracting, road safety, value engineering, asset management, environment and social safeguards, climate resilience in design, construction and highway operations. The phase will also build on the reform efforts under the Bank's ongoing LGED portfolio, including reforming the maintenance regime of rural

economic infrastructure. Training and capacity building activities of the RHD and LGED as well as the industry (e.g. Consultant s, contractors) will also be financed under this Phase.

- Phase 3: Upgrading of Bhomra-Satkhira-Navaron section as a smart, resilient and safe highway; and local economic infrastructure in three districts

  Scope: This phase will upgrade the Bhomra-Satkhira-Navaron national highway (62km) from a two-lane single carriageway to four lane dual carriageway. It will include separate service lanes for slow moving vehicles and vulnerable users on both sides of the carriageway, installation of OFC, and deployment of ITS. It will also finance priority Upazila, Union, and village roads and complementary logistics infrastructure in the three (3) Program Districts of Sathkira, Natore, and Shirajganj.

- Phase 4: Upgrading of Local Economic Infrastructure in three districts

  Scope: This phase will upgrade priority Upazila, Union, and village roads and complementary logistics infrastructure in the three (3) Program Districts of Kushtia, Pabna, and Meherpur. It will also undertake a needs assessment for farmers benefiting from the investments made in all 10 Program Districts.

1.5 WeCARE Phase 1 has the following components:

- Component 1: Upgrading National Highway Corridor and enhancing digital connectivity: This component will upgrade Jhenaidah-Jashore highway to a four-lane divided carriageway and will install Intelligent Transportation System features and Optical Fiber Cable features along the highway. This will be implemented by Roads and Highways Department.
- Component 2(a) - Development and upgrading complementary logistics infrastructure and services: This sub-component will finance the development of about 15 selected markets and logistics infrastructure involving storage, grading, sorting, packaging, collecting and selling facilities for selected agriculture value chains and livestock/fishing; and associated amenities like parking, sheds, piped-water supply, toilets, sanitation, waste management, banking, real time display of commodity prices using ICT, etc. The component will also finance associated services, including but not limited to, surveys, investigations, data collection, feasibility, design, individual experts, supervision, market allocation and management, training and capacity building of stakeholders & M&E. An ex-ante prioritization approach, utilizing geospatial modelling, will be used to select growth centers and economic hubs that can be improved to stimulate inclusive local economic growth. An ongoing gender needs assessment aims to ensure that the logistics infrastructure and services are gender sensitive. Specific resilient norms for cyclones/flooding risks will also be incorporated in design and construction.
- Component 2(b) - Upgrading of secondary and tertiary road network serving selected markets: This sub-component will finance upgrading and development of about 500km of priority Upazila, Union, and village roads serving selected markets; and associated services, including but not limited to, surveys, investigations, data collection, feasibility, design, individual experts, NGOs, supervision and M&E. Specific attention will be given to ensure safety and resilience in design and construction through the use of cost-efficient alternatives, green and local pavement material able to withstand high temperatures; provision of sufficient numbers of culverts/ditches/cross drainage to address the risk of flooding based on site-specific hydrological studies results; safe provisions for the Vulnerable Road Users (VRUs) and non-motorized transport (NMT) will be addressed by including traffic calming measures like lateral shift, chicane, realigned intersection, traffic circle, speed hump, speed table, raised crosswalk, raised intersection, corner extension, and chokers. The roads will be selected to enhance the logistics efficiency for select value chains in the selected markets based on a multi criteria assessment and rigorous fieldwork that takes into account the location and area of influence of rural markets, difference in the levels of poverty and economic development, levels of existing road connectivity, and the potential to benefit women within the districts.
- Component 3 - Project implementation support and sustainability:

This component will be implemented by both RHD and LGED and will finance associated services and goods for following sub-components:

a) Training and capacity building;
b) Strategic Environmental and Social Assessment (SESA);
c) Establishing a Fiduciary Advisory Panel;

d) Establishing a Transport Sector Integration and Coordination Platform (TSICP) and operationalizing the Road Maintenance Fund Board Act; and
e) Preparatory Activities for Subsequent Program Phases.

- Component 4 – COVID-19 Relief and Recovery

  This component will be implemented by both RHD and LGED and will support the following:

  (a) Designing and implementing a program to foster employment opportunities for vulnerable local populations, including, on routine maintenance of roads, clearing of water passages, and hygiene-related small works; and as relevant, the provision of working tools and personal protective equipment;
  (b) Supporting the development and dissemination of an emergency response plan for COVID-19 for RHD and LGED; and
  (c) Supporting the provision of necessary upgrades at RHD and LGED offices to ensure business continuity and improve work environment safety.

- Component 5 -Contingent Emergency Response:

  This component will provide immediate response to an Eligible Crisis or Emergency, as needed.

Notably under component 4 Labor Contracting Societies will be established. This will provide just-in-time livelihood support to vulnerable people in rural areas and act as stimulus to the local economy. Off pavement routine maintenance of rural roads through direct contracting with local vulnerable people forming Labor Contracting Society (LCS) has previously been used in Bangladesh, will be utilized to organize vulnerable local population into groups that are contracted to carry out the afore-mentioned works. These works are estimated to generate approximately 1.3 million days of rural employment in 24 months. They are expected to not only acess to rural markets and improved road connectivity but also have large poverty reduction impacts through job creation and capacity development of the vulnerable local population.

---

2. OBJECTIVE

The objective of this ToR is two fold: (a) M&E Framework Monitoring: Collect baseline, midline, and endline indicators for project progress monitoring as provided in the results framework and monitoring and evaluation (M&E) plan in the Project Appraisal Document (for component 2) and listed below; and (b) Impact Evaluation: Design and implement an impact evaluation to understand the economic and social impacts of Program Phase 1 (refered to as project henceforth) of LGED components.

2.1 M&E Framework Monitoring:

As part of the M&E Monitor the Consultant will monitor progress on the following indicators:

- Transportation costs for select value chains in project districts
- Post-harvest losses for select value chains in project districts
- Change in night time lights intensity in the vicinity of project investments
- Farmers benefiting from improved rural market facilities
- Waterlogging incidents in and around improved rural markets
- Direct beneficiaries of the project (of which female)
- User satisfaction with road condition and markets (of which females)

The Consultant is expected to develop methodologies, collect data through surveys and analyze the data using the developed methodologies to estimate the baseline, midline and endline values for each of the indicators outlined above. The estimated baseline values will provide a picture of the present situation in the Program Phase 1 areas in terms of the results outcome and act as a benchmark. By estimating benchmarks, the baseline surveys will initiate a process for continued monitoring to measure the impact of the planned interventions. The methodologies developed to estimate the indicators and the surveys conducted should be designed in such a way so that it can be replicated to conduct midline and endline surveys later in the project cycle. When midline and endline are measures, the Consultant is expected to compare and contrast the progress on each indicator.

2.2 Impact Evalution:

The Consultant is also expected to develop/design and implement an impact evaluation of the Program Phase 1. The impact evaluation will seek to examine whether the anticipated benefits have been generated by the investments made through the Program, and to identify any unintended effects, thereby allowing the project performance to be assessed in light of the evidence after implementation. A rigorous design is a precondition for the evaluation to deliver sound evidence. In this context the Consultant is expected to develop/design and implement an experimental or quasi-experimental evaluation method underpinned by an appropriate theoretical framework and estimate the outcomes and impacts (both intended and unintended) that have been caused by the intervention ruling out the influence of external factors. The results of the evaluation will have a key role in building the evidence base for future Program design and value for money assessment as well as support organizational learning to inform policymaking and subsequent investment decisions. The evaluation is also expected to reveal, through a range of outcomes, the impact that the Program Phase 1 has had on the surrounding project area. The evaluation results should provide rigorous measurements of the effect of the Program Phase 1, who or which segment of the population benefitted the most, how, and why.

---

3. SCOPE

3.1 Geographic Coverage

The geographic scope of the consultancy for both M&E Framework Monitoring and Impact Evaluation is the four districts of Jashore, Jhenaidah, Chudanga and Magura.[1] The table below contains the list of markets/growth centers that will be improved through the project. The bulk of the roads that will be improved are in the catchment area of these markets (4km radius around the markets).

[1] **The proposed methodology for the IE may require the Consultant to collect data from other districts for comparison. The Consultant should proposed this if needed.**

Table: The Project area and length of roads to be improved

Sl No	District	Upazila	Name of the Growth Center / Market	Length of Adjacent roads
1	Jashore	Sadar	Haibatpur	57.00km
2			Churamonkadhi	
3		Chawgasha	Arpara	56.00km
4			Narayanpur	
5		Jhikargacha	Bangdah	66.00km
6			Seordha	
7		Sharsha	Gorpara	38.00km
8		Monirampur	Rohita	33.00km
Sub-Total	1	5	8	250.00km
9	Magura	Sreepur	Nagobond	30.00km
10			Khamarpara	
11		Sadar	Katakhali	25.00km
12			Alomkhali	
13			Alukdia	
14		Shalikha	Singra	35.00km
15		Mohammodpur	Binodpur	
Sub-Total	1	4	7	90.00km
16	Chuadanga	Alomdanga	Munshigonj	33.00km
17			kulkhali	
18			JamJamihat	
19		Jibannagar	Andulbaria	15.00km
20		Sadar	Sarajgonj	23.00km
21			Hijolori hat	
22		Damurhuda	Dugdugihat	38.00km
23			Bogirathpur	
24			Karpasdanga	
Sub-Total	1	4	9	109.00km
25	Jenaidah	Sadar	Narkelbaria	22.00km
26			Hatgopalpur	
27		Shailakupa	Bhatai	46.00km
28		Kotchanpur	Sabdarpur	
29		Harinakundo	Bhabanipur	48.00km
30			Harinakundo	
31		Kaligonj	Kola	46.00km
32			Barobazar	
Sub-Total	1	5	8	162km
Grand Total	4	18	32	611km

3.2 M&E Framework Monitoring

Methodology:
The Consultant will develop appropriate statistically accepted methodologies to estimate the baseline, midline and endline

values of each of the indicators and conduct baseline, midline, and endline surveys accordingly. Developing the methodologies should entail a comprehensive review of available academic literatures, related documents provided by the client, and any other relevant information. Given the diverse nature of the indicators, it is expected that the methodological aspects would also vary across different indicators. Below is methodological guidance for each of the indicators that the Consultant is expected to follow. This guidance should be taken at the minimum standard and the Consultant is expected to improve upon it:

- Transportation costs for select value chains in project districts: Access to transport infrastructure is crucial for agricultural development. It matters for all actors in agricultural value chains and inadequacy increases marketing cost all along the value chain. By estimating the change in transport cost of products in selected value chains in the project area, this indicator will measure improvement in the connectivity of farms to rural markets that happened through the project intervention. The selected value chains include - Vegetables: (brinjals, cauliflower, tomatoes); Flora (cut flowers), Fruits (bananas), Fisheries. The transportation cost should be estimated for the production and sale of products of the selected value chains. The methodology may/should combine quantitative and qualitative data to derive transportation cost and try to incorporate the concepts of Vehicle Operating Cost (VOC) saving and Vehicle Operating Time (VOT) saving. Surveys and in-depth interviews (where needed) with stakeholders across the value chains including farmers, middlemen, and traders among others should be conducted to collect detailed cost and price data as well as any other relevant information. The methodology should be devised in a manner so that the data and information collected through the surveys can be aggregated into metric that is comparable across time.
- Post-harvest losses for select value chains in project districts: To measure the economic benefits of the improvement of rural markets, the LGED has successfully used the spoilage savings (SS) method which is also known as Quality Deterioration Savings (QDS).The spoilage savings is the measure of proportion of revenue lost to the seller as a result of deterioration of quality of the product. The underlying concept of this method is that lack of proper market and transportation infrastructure facilities can deteriorate the quality of perishable goods through delay in sales and unavailability of proper sheds and storage facility. Hence, the direct economic benefit of an improved and efficient markets would be a reduction of spoilage of due to better protection from the weather and faster sales turnover. The benefit is measured by the difference of spoilage savings of perishable goods in the market before and after development. In the developed market spoilage of commodities is less and the turnover of commodities is higher due to better interaction of market forces and protection to perishable commodities provided by selling sheds, developed internal roads and improved drainage system. The spoilage estimate is made from the surveys. Given that the method has been proven to be successful to measure the impact on post-harvest loss on other LGED projects, the Consultant will review the existing documentation to have a proper understanding of the method, make any upgradation if necessary and use the procedure to estimate the indicator. However, the Consultant can also use a different methodology provided that the Consultant can clearly point out the superiority of the new methodology in terms of theoretical concept, feasibility, cost efficiency, and application and the LGED is on board with it.
- Change in night time lights intensity in the vicinity of project investments: The indicator will measure local economic development in the hinterland of the corridor created by the project investments using nightlights data. Nightlights data is available at National Center for Environmental Informaiton. If this remote sensing data is discontinued by the agency then another suitable source of data should be used. The consultant will be responsible for acquiring the relvant nightlights data composite (and any costs involved in acquiring and cleaning the data). To calculate the change in nightlights, the sum of nightligths in the vicinity of logistics investments (that is, the rural markets that will be invested in) of the Project should be estimated at baseline, midline, and endline. The difference in nightlights between endline and baseline can be used to compute the change (with the midline acting as a robustness check). For each estimate (baseline, midline and endline) averaged/aggregated nightlights data for atleast 6-12 months prior should be used. The vicinity of the logistics investments/rural markets should be defined as the 2km radius around these markets.

- Farmers benefiting from improved rural market facilities: This indicator will measure the number of farmers whose produce were sold in the markets improved under the project. The Consultant should first identify the number of unions/upazillas the markets actually cater to through surveys and FGDs. Then a survey could be conducted to

estimate the number of farmers in area or it can be calculated using population data in the catchment area of market locations. Either way, the Consultant must be able to provide an estimate based on robust statistical analysis.

- Waterlogging incidents in and around improved rural markets: This indicator intends to capture the climate resilience of rural markets. Waterlogging is a hazard in many of the rural market areas. It not only disrupts communication but also increases cost in terms of both time and money by denying access to markets to the different market actors at the time of need. With respect to this project, waterlogging is defined as the incidents which continue for half day or more, within the market or access roads to markets (within 500m radius from the markets). Reduction or elimination of such incidences in the market area would show the positive impact that the infrastructure and logistic improvements have had on the market. The Consultant is expected to interview primarily the market management committee as well as the different markets actors and calculate the number of such water logging incidents in all the rural markets being improved by the project. It is also expected that the Consultant will also give its best effort to provide visual confirmation of such incidences.
- Direct and indirect beneficiaries of the project (of which female): Direct beneficiaries for road related investments typically include the current and new users (normal, diverted, and generated traffic) of the road who will benefit from reductions in cost and time to travel and/or improvements in safety, quality, comfort. This would be reported as average daily traffic, multiplied by an appropriate contextual occupancy factor per passenger car unit. Separate estimation for direct and indirect beneficiaries for the market investments should also be done. The consultant should also identify a way of estimating the total number of direct and indirect beneficiaries (road and market investments) while removing double counting. All estimates should be decomposed by gender.
- User satisfaction with road condition and markets (of which females): This indicator will measure the satisfaction of the users of the improved roads and markets under the project. The indicator should reflect the perceptions, experience and expectations of the users from the roads and markets. Measures to estimate user satisfaction should be developed based on survey estimates that are comparable overtime. The Consultant will work with the client to identify and develop suitable performance areas/ indicators and sub-indicators to estimate user satisfaction. Some examples of such indicators (but not limited to) include commute time, safety, condition of road surfaces, condition and cleanliness of road signs, access to running water in the market, availability of proper toilets, presence of market sheds etc. The agreed-upon indicators would be converted into an index by using a statistically acceptable methodology for reporting purposes and comparability. To get information on the agreed upon performance indicators, the Consultant will conduct surveys on roads and market users based on statistically acceptable qualitative and quantitative methods. The survey respondents should be disaggregated according to gender to get to get a measure of the impact on female users separately. As part an assessment of a separate component of the WeCare project, the RHD is going to conduct a Road User Satisfaction Survey. The Consultant may use parts or the whole methodology used by the RHD to measure the road user satisfaction, provided that a detailed evaluation of the RHD methodology is conducted beforehand to assess its applicability to this task and the necessary customization is made. To estimate the user satisfaction of the markets, the Consultant would need to survey all the rural markets improved by the project. For the road user satisfaction, the segments of the road to be included can be derived as a proportion of the total length of the project and the length of each segment will be determined by the number of unions/markets along the roads. The surveys would aim to achieve interviews evenly across each of the segments. The Consultant will work with the client to identify and agree on the coverage area before deploying the survey.The user satisfaction indicator should be estimated separately for roads and markets and a scientficially acceptable way of creating a composite indicator combining satisfaction across roads and market investments should also be created.

Sampling:

The sample was stratified evenly across districts based on the spatial distribution of markets and length of roads improved in the districts. The sample size should be determined according to the desired precision of survey estimates which by good industry standard allows for a 5 percent margin for error at 0.05 level of significance. It is expected that the sample size would be at least XX or more under these conditions for each of the indicators.

Commented [u1]: The sample size should be methodically chosen once the population is finalized. However, it should be mutually agreed with PMU as werll as WB

Collection of data and other relevant information:

As the data and information need for the different indicators are different, surveys for the different baseline, midline and endline indicators will also vary. It is expected the Consultant will conduct the surveys using different mechanisms

including physical quantitiave and qualitiative interviews, FGD and so on at different project locations such as the project markets, roadside locations, household surveys in unions/villages to get an accurate estimate of the baseline. It is the responsibility of the Consultant to any identify other possible existing mechanisms for collecting information and inform the client if those mechanisms are going to be implemented. The Consultant may also refer to any other existing surveys that maybe useful in estimating the baseline data. To get a clear picture of existing situation of baseline indicators in the area and validate the estimated baseline, the Consultant should have meetings and discussion with relevant external stakeholders and other government agencies (such as Department of Agriculture Extension) before and after administering the survey.

3.3 Impact Evaluation:

The approach of the impact evaluation should be such that the outcomes and impact can be attributed to the interventions of the project with a clear causal link. The project document has already proposed a theory of change(ToC) describing the causal effect of the project linking to several outcomes of interest (see Annex 1). The Consultant , while designing the impact evaluation, must review and give due consideration to the ToC and revise the ToC if necessary. The impact evaluation, should at a minimum consider the following attributes:

- Be able to estimate the transport and logistics costs reduction from the interventions made under the project.
- Be able to assess the impact of market improvement and road development on select agricultural value chains.
- Be able to assess the welfare impacts on households and firms of the interventions through the attributes mentioned in (a) or (b) or through any other links, including but not limited to the impact on: (a) household consumption, transportation patterns, assets, educational, health, and jobs outcomes for different household member; (b) on business (agriculture, manufacturing, services/shops) in terms of profits, prices for inputs and outputs, revenues, costs, logostics choices and costs, and so on; and (c) transportation service provision and usage patterns.
- Be able to estimate the poverty reduction and welfare enhancing impacts of Labor Contracting Societies.
- Identify any unintended consequences or impact of the project.

It is envisaged that the proposed impact evaluation will entail a significant amount of data collection through household, intercept, and/or Consultant level surveys.

The Consultant is also collecting baseline, midline, and endline data for the impact evaluation. The Consultant is encouraged to design an impact evaluation that puts in systems to collect high frequency data in addition to more traditional methods of data collection. The Consultant is expected to analyze the data at baseline, midline, and endline to understand patterns in each of the waves and analyze the three datasets together to identify the causal impacts of the project investments.

---

4. TASKS

4.1 M&E Framework Monitoring

Inception meeting
The Consultant will have an inception meeting with the client to get an overview of the assignment. Discussions regarding the project, proposed methodologies, survey plan, and timeline, survey area, training for data enumerator, indicators, experience about past surveys, main challenges, online data collection system, etc. will be made in the meeting. The meeting will give an idea about the activity and surveys, clarify any misconception, and ensure the client and the Consultant starts on the same page.

Plan submission
Based on discussions during inception meeting and reviewed documents, the Consultant will submit a comprehensive and complete plan along with a statically accepted methodologies for both qualitative and quantitative data for the survey implementation. Timeline and key responsible person/s should be mentioned in the plan as appropriate. The plan will include:

- Detailed methodology
- Sampling plan
- Plan for survey team composition, responsibilities and hiring process
- Training plan for enumerators
- Movement and field data collection plan
- Data quality and supervision plan
- Data collection and management plan
- Context of analysis and reporting plan

Survey instrument/questionnaire preparation
Data collection instrument development is a critical part of the survey. The Consultant should declare the resource person/s who will be fully involved in the tools development process. The tools will be prepared in both Bangla and English language.

Survey tools pre-testing and finalization
Survey instruments will be pre-tested to determine:

- The respondent's ability to understand and respond to the questions
- Flow and internal arrangement of questions
- Questions that may be viewed as insensitive or unnecessary
- Weaknesses in the interviewer instructions

The Consultant shall pilot/pre-test the proposed survey mechanisms and research topics and indicators on a small sample to refine them both before finalization and use in the main survey stage. A short report on the outcome of this pilot survey and the changes necessary shall be prepared and the instruments will be finalized accordingly.

Manual/Guideline

It is important to have specific guidelines for different stages of a survey implementation process to maintain standards and have a common understanding among the survey team. The suggested guidelines may include but not be limited to:

- Guidelines for different data collection tools
- Training manual comprising basic understanding on baseline survey tools, field survey process
- Guideline on survey supervision
- Precise responsibilities of survey staff by category
- Guideline on data entry and cleaning process

Training of survey team

Proper training for survey teams is pre-requisite for quality data collection. The Consultant will be responsible to train survey team members (e.g., enumerators, supervisors, quality controller, etc.) on data collection tools, survey methods, field tests, feedback, and if applicable how to collect data using CAPI (or other similar techniques). Providing basic knowledge of the project, its goal and objective, and the indicators to be measured to the survey team will also be a core content of the training.

Conducting survey and data management

The Consultant shall administer the refined survey instrument to the agreed sample of various target groups and follow up as necessary to maximize response. The Consultant shall collect, collate, sort, clean, enter, and analyze the data received. The Consultant will have full control over the management of data collection from the field. There will also be a rigorous step by step data checking process. The Consultant must ensure the quality of collected information from the field, cross-check the validity of information collected, and verify/revise where needed. The Consultant will share regular updates on the progress of fieldwork with the client on agreed upon intervals.

Report and presentation

The Consultant shall present the baseline survey findings to PIU in the prescribed format. The findings shall be presented both in a well-written report, in both text and electronic format, and as a formal oral presentation. Wherever relevant, the contents of the above material shall include charts, infographics, relevant video/animation clips, and diagrams. This report should contain the necessary information to fill up the project's M&E framework. The report should mention any issue that need to be considered (methodological, logistics, or any other) for future midline and endline surveys. The Consultant will also provide a clean version of the survey data in Stata/Excel/SPSS format.

4.2 Impact Evaluation:

Evaluation design

At the inception phase, the Consultant will prepare a detailed operational plan which would include evaluation methodology, fieldwork, and reporting guidelines. This would be considered as the inception report. The inception phase will provide the Consultant with the opportunity and responsibility to discuss methodological specificities, fieldwork activities, and reporting strategy with LGED and if required obtain approval from them. The evaluation design should present an overall logical framework of the interventions describing the linkages between inputs, activities, outputs, outcomes that are intended to be measured to evaluate the overall impact, and the data collection needs. As mentioned before, the evaluation method is expected to be experimental or quasi-experimental, grounded on a strong theoretical foundation, and addressing the reliability and validity issue. The model/s to be estimated for the evaluation could be new or any existing recognized model. As such, an in-depth review of relevant literature to develop the evaluation methodology is part of the task. Furthermore, the Consultant will also review the existence of any relevant data, surveys that might be leveraged for this impact evaluation, and include a summary of the findings in the inception report. The Consultant is also required to address any issue on the coordination and supervision of the data collection activity that would be conducted by the data collection firm.

Questionnaire design

Based on the design of the evaluation the Consultant will prepare draft survey instruments or questionnaires that will be tested in the field by the data collecting firm. The questionnaires should be grounded on a thorough review of relevant literature and give due consideration to the proposed theory of change given in the project document. While designing the questionnaires, careful consideration should be placed on the outcomes that need to be measured. For certain indicators, there may be measurement challenges such as nuanced definitions, abstract concepts, and issues regarding estimation. The Consultant needs to anticipate such challenges beforehand and find solutions to resolve such challenges. The final draft of the instruments that will be tested in the field should have the following aspects:

- Informed consent. The instrument should start with an informed consent section. The interview cannot continue if the respondent refuses to participate in the interview.
- Unique ID. Identify each respondent and each completed instrument with a unique ID.
- Introductory script. There should be an introductory script for each module, to guide the flow of the interview.
- Correctly code answer choices. All questions should have answer choices that are correctly and consistently coded. The answer choices should be complete, that is, they must cover all possible responses that can exist for a question.
- Helpful hints. The questionnaires should include hints wherever necessary to help the enumerator. These hints should typically appear in italics to clarify that they are not part of the question that is read to the respondent.

After the field testing of the questionnaire, the data collecting Consultant will finalize the survey instruments under the guidance of the Consultant .

Sampling

It is the responsibility of the Consultant to create a statistically valid and representative sampling design with sufficient sample size and power. The Consultant will develop mechanisms to select the relevant treatment and comparison groups

ensuring that the selection of the control and comparison group is free of bias. The Consultant will provide the sampling information (sample size, survey area, etc) to the data collection Consultant that will administer the data collection.

Survey Preparation

The Consultant will be expected to and responsible for:

- Acquisition of clearance to conduct the survey: The Consultant is responsible for acquiring all clearances and permissions necessary for conducting the survey. They will also be responsible for adhering to local formalities and obtaining any required permits related to survey implementation. Additionally, if there is any need to obtain ethical clearance, it will be the firm's responsibility to obtain it by submitting the necessary documentation.
- Pre-testing of the questionnaire: Pre-testing the questionnaire in the field is important to check the length of the questionnaire as well as verifying its consistency and comprehensiveness to precisely measure the necessary information. As such, pre-testing the questionnaire and adaptation of the questionnaire accordingly is a crucial part of this consultancy task. The Consultant will pre-test the questionnaires, test the format for any other formatting option, and adapt the questionnaire accordingly. This will include adapting the phrasing of questions and adaptation of response codes, so they are appropriate to the local context. If CAPI is being used, the Consultant must ensure the questionnaires are successfully installed on tablets before testing the questionnaire instruments in the field, and testing should be conducted by CAPI. If the questionnaire is provided in English, the Consultant will be responsible for the translation into Bengali before the pre-test is conducted so that, the field test can also be used to test the quality of the translation. The pre-test phase will last at least 10 days and will take place in unions out of the study sample. Final modalities for the pre-test will be defined and agreed upon in consultation between the survey Consultant and the evaluation team. Based on the pre-test results, the Consultant will finalize the questionnaires. The Consultant will also produce a manual for field staff for each questionnaire. The field manual will contain detailed information on how to conduct an interview based on the questionnaire and should discuss special cases that may arise and how to deal with them. The deliverable for this step will include a pre-test report, final survey instruments, and field manual all of which must be approved by the PIU before the start of the survey.
- Field Procedure Plan: The field procedure plan should outline in detail all aspects of the fieldwork to be conducted by the firm. The field procedure plan should discuss the following (but not limited to):
    - Composition of teams, expected profiles, tasks, and responsibilities of each member of the team,
    - Guidelines and protocols for sampling and survey data collection
    - The quality control protocol
    - Outline of a progress report to be shared with the impact evaluation team on a monthly basis.
    - Detailed calendar of activities/workplan
    - Travel logistics plan
    - Possible challenges and contingency plans
- Training of field teams: The purpose of providing training to the field team is to ensure that all field staff knows all the survey protocols and understand their duties. It will also ensure that enumerators understand all questions in the survey instrument and the objective of each question and are comfortable using tablets for CAPI, or paper-based questionnaire. The Consultant will prepare a training curriculum outlining how the training will be organized covering the above aspects as well as how the testing in real field conditions will be undertaken. In coordination with the evaluation team, the survey Consultant will provide training to field teams. The date of the training and number of days will be decided based upon the discussion with the PIU. However, it is expected that the training program will for at least 5 days. To the extent possible, training of supervisors and enumerators should occur simultaneously in a central location so that at least one member of the PIU can observe the training and if necessary provide the training. The survey Consultant will be responsible for the logistics and transportations of the field staff. The training program should include theoretical training (on questionnaires and field protocols), classroom practice, small group exercises as well as field exercises. After training, the enumerators will go on the for a field test, during which each interviewer will administer at least 5 complete questionnaires. Testing and training should be used primarily to simulate the administration of the questionnaire in real circumstances. The pilot phase will also evaluate the organization of the investigation team, logistics, and other strategies for data collection in place. The Consultant will send the CVs of key personnel preselected for coordination/supervisory and IT/programming positions at least two weeks before the training. Following the training, interviewers and supervisors should go through a written evaluation and selected based on their performance at the test and during the pilot. The Consultant will share the evaluation in a pilot report, including a full listing of training participants and a full ranking of their performance. The Consultant should be prepared to have replacements of field staff who have unsatisfactory performance during the training.

Data collection

The Consultant will be expected to and responsible for:

- Launch of survey data collection and re-training: After the training of the field staff, data collection will start. It is expected that field teams will be grouped in nearby locations for the first week of data collection, to allow thorough quality control and monitoring. At the end of the first week, a one or two-day re-training session will be organized (depending on need) to take stock of difficulties and give consistent instructions to all field teams. After the re-training, and conditional on quality being high, field teams will then be deployed independently.

- Data/Survey collection: During data collection, the survey Consultant will be responsible for:
    - Providing the field staff with the necessary equipment and materials for data collection (e.g., printed questionnaire or tablets, enumerator manual, field protocols, identification cards, etc.).
    - Ensuring the safe transportation of field staff for all field activities as well as their safety and security in the field.
    - Managing the field staff team to collect the data.
    - Ensuring implementation of field procedure plan, survey and quality control protocols.
    - Ensuring that only the correct survey units are interviewed.
    - Ensuring that the questionnaire (and digitized data) records respondents' refusal to answer any questions during the interview.
    - Ensuring that all enumerators perform consistency checks of the questionnaire to ensure that questionnaires are fully consistent and complete before they leave the respondent's household

  The Consultant will make every effort to contact each household and respondent selected and complete all interviews. It is expected that the minimum response rate would be 95 percent.

- Survey Monitoring/Supervision and weekly progress reports The Consultant will ensure data quality assurance based on established quality control procedures. The Consultant will be responsible to undertake internal quality control procedures and engage in regular supervision activities to ensure all questionnaires are comprehensive, consistent, and accurate. This will include:

    - Checking of all the tablets or questionnaires by supervisors at the end of each workday. Questionnaires with missing or inconsistent responses will need to be completed going back to the respondent/household.
    - Random quality control by supervisors and IT specialists (in case of use of tablets) during and after the interviews to ensure proper procedures and protocols are being strictly followed.
    - Random quality control by supervisors by re-visiting households and verifying the accuracy of a random sub-sample of questions (e.g. for 10% of questionnaires).
    - Random quality control by quality controllers of the Consultant according to established procedures.

  Provide all necessary documentation to allow the PIU to verify all information collected. In particular, the PIU should be given access to all fieldwork operations and be allowed to perform random checks at all stages of data collection and data processing.

- Data processing and management: The Consultant will apply good data management practices for collecting and recording data, storing data securely, cleaning data, transferring data, effectively presenting data, and making data accessible for verification and use for the analysis. The survey Consultant will be responsible for delivering a final dataset in the prescribed format (Stata/SPSS) which will be properly organized, with variables named and labeled and appropriate identifiers that permit seamless merging between databases. The final dataset will accompany a final data collection report which will summarize the overall data collection process, issues faced and provide any qualitative information that could not be captured by the survey instrument.

Data analysis

After receiving the data from the data collection firm, the Consultant will clean the data further if necessary, and conduct the analysis based on the developed methodology. The evaluation findings will be prepared and presented in a well-written report, in both text and electronic format. The report should provide robust quantitative and qualitative evidence on the outcomes and impacts of the project- not only for what changes it produced but also why and how these changes came about. If the evaluation doesn't find evidence of any significant impact of the project, the report should identify the reasons behind it and provide recommendations to inform future project design.

4. DELIVERABLES

4.1 M&E Framework Monitoring

The specific reporting deliverables under this task is given below

4.2 Impact Evalution

The

Deliverable	**Deadline (after commencement of service)**	**Hard Copies Required**
Inception Report (M&E Framework)	**Within 1 month**	**10**
Survey plan report including detailed methodology, data collection and training plan, and proposed survey instruments	**Within 2 months**	**10**
Report containing final survey instruments (after pre-testing) and manual	**Within 3 months**	**10**
Baseline Data and companion report	**Within 6 months**	**10**
Midline Data and companion report (combining findings of baseline and midline)	**Within 3 years**	**10**
Endline Data and companion report (combining findings across baseline, midline and endline)	**Within 5 years**	**10**

specific reporting deliverables under this task is given below

4.5

Deliverable	**Deadline (after commencement of service)**	**Hard Copies Required**
Inception Report (IE)	**Within 1 month**	**10**
Survey plan report including detailed methodology, data collection and training plan, and proposed survey instruments	**Within 3 months**	**10**
Report containing final survey instruments (after pre-testing) and manual	**Within 5 months**	**10**
Baseline Data and companion report	**Within 10 months**	**10**

Deliverables

The specific reporting deliverables under this task is given below:

Deliverable	Deadline (after the commencement of service)	Hard Copies Required
Impact Evaluation Design		
Inception report with evaluation design	Within 1 months	10
Final impact evaluation design report	Within 2 months	10
Baseline Data Collection		
Baseline draft survey questionnaire, sampling plan, field manual	Within 3 months	10
Obtain relevant authorizations for data collection	Within 4 months	
Field procedure plan and pilot test report	Within 5 months	10
Training manual to train the field team	Within 6 months	10
Monthly progress reports on data collection	Ongoing (6 months to 12 months)	10
Final baseline dataset, data collection report, and analysis report	Within 1 year	10
Midline Data Collection		
Midline draft survey questionnaire, sampling plan, field manual	Within 2 years 3 months	10
Obtain relevant authorizations for data collection	Within 2 years 4 months	
Field procedure plan and pilot test report	Within 2 years 5 months	10
Training manual to train the field team	Within 2 years 6 months	10
Monthly progress reports on data collection	Ongoing (2 years 6 months to 12 months)	10
Final midline dataset, data collection report, and analysis report	Within 3 year	10
Endline Data Collection		
Endline draft survey questionnaire, sampling plan, field manual	Within 4 years 3 months	10
Obtain relevant authorizations for data collection	Within 4 years 4 months	
Field procedure plan and pilot test report	Within 4 years 5 months	10
Training manual to train the field team	Within 4 years 6 months	10
Monthly progress reports on data collection	Ongoing (4 years 6	10

	months to 12 months)	
Final endline dataset, data collection report, and Impact Evaluation report	**Within 5 year**	**10**

5. QUALIFICATION

The Consultant team should consist, at a minimum, the following personnel (number of personnel given in brackets):

To achieve the objectives of consultant services under this Terms of Reference and in accordance with the scope of works as stated, the Consultant should have the following:

- A local or international firm with at least 8 years of experience in designing impact evaluations and conducting quantitative surveys, preferably for development projects.
- Demonstrated experience (at least 3 surveys) in conducting surveys of a scale and complexity similar to those envisaged by the ToR.
- Experience in household and other surveys Globally and in South Asia, preferably Bangladesh. Proven experience in data collection with a low rate of non-response will be an added advantage
- Proven capacity and experience in planning and organizing survey logistics.
- A good network of enumerators with significant experience
- Strong capacity in data management and statistics.
- Must have achieved minimum annual turnover of Taka. 5 crore or more in any of the last 3 completed financial years.
- Be ready to assume work as soon as possible.

The Consultant team should be multi-disciplinary team comprising of professionals. The multidisciplinary team will consist of a Team Leader and identified key experts with relevant operational experience and qualifications to undertake the work. The Team Leader should have the following qualifications and experiences.

- Ph.D in Economics with a specialization in Development Economics, Agricultural Economics, or Public Policy.
- At least 15 years of experience in designing and conducting impact evaluation of development projects. Experience in conducting impact evaluation globally as well as in South Asia (expeirnce in Bangladesh will be an added advantage).
- Experience in the implementation and management of large-scale surveys, including design, testing, micro-econometric data analysis, and interpretation for policy purpose.
- Demonstrated ability and experience in designing and delivering training and capacity building activities
- Demonstrated record of having peer-reviewed publication in top ranking academic journals and/or impact evaluation reports for international organizations or bi-lateral donors desirable.

The Consultant team should include, but not limited to:

- Rural Development Expert cum Economists, having minimum a master's degree with 10 years' experience on participatory monitoring and applied research in rural economy, business, community and poverty,
- Survey Manager/statistician with excellent statistical and analytical skills and at least 10 years relevant experience, particularly in sample design and frame. Minimum Masters (Ph.D preferred) in Economics with a specialization in Development Economics, Agricultural Economics or Public Policy. Experience in the implementation and management of large-scale surveys, including design, testing, micro-econometric data analysis, and interpretation for policy purpose. Demonstrated ability and experience in designing and delivering training and capacity building activities.

- The key professionals are Team Leader, Rural Development Expert cum Economists and Survey Manager/statistician

- Field Work Managers, having qualification in Social Sciences with at least 10 years professional experience on management of field surveys both quantitative and qualitative,
- Database Managers with a minimum of 10 years of experience in IT, database management, data entry programming design, and programming for data collection using tablets. He or she should hold at least a master's degree and familiar data entry, database management and statistical software (including STATA). He or she will be responsible for overall data management, a software appropriate for data entry and to ensure data quality, tabulation and calculation of required parameters, coding open-ended questions, and verification of data, generating reports indicating missing data etc,
- Data Entry/Processing Operators with at least 5 years of working experience on data entry, data cleaning and processing,
- Field Supervisors with 4-year experience in supervision of field level data collection of quantitative and qualitative nature;
- Field Enumerators with 2 years of experience in data collection.

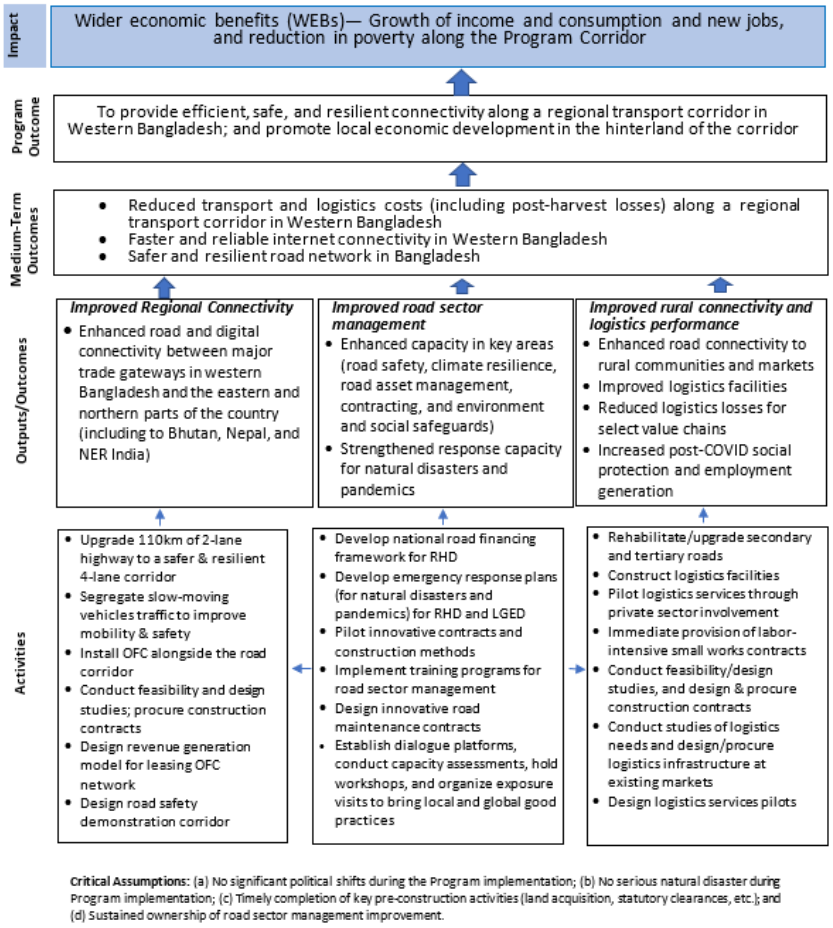
CVs for the core staff are expected to be included in the technical proposal.

---

6. DURATION

Duration of the consultancy services would be approximately 18 (eighteen)) months, for Baseline, MTR and Terminal data collection and analysis having a duration 6 months each of Phase I of the WeCARE project and could be extended on mutually agreed terms, if required.

Annex 1: Program Theory of Change



Critical Assumptions: (a) No significant political shifts during the Program implementation; (b) No serious natural disaster during Program implementation; (c) Timely completion of key pre-construction activities (land acquisition, statutory clearances, etc.); and (d) Sustained ownership of road sector management improvement.