

**Government of the People's Republic of Bangladesh
Local Government Engineering Department
Second Rural Transport Improvement Project:
Additional Financing (RTIP-II:AF)
LGED Bhaban, Level-11
Agargaon, Sher-e-Bangla Nagar, Dhaka-1207**

**Terms of References (ToR)
for
Satisfaction Survey of Road Users (SSRU) (End-Line)**

**Package No. AF-S18
Credit No. 6327-BD (P166295)**

January 2022

1. Background

The People's Republic of Bangladesh received a credit from the International Development Association (IDA) in 2012 for the Second Rural Transport Improvement Project (RTIP-II). This project has been successfully implemented since then by the Local Government Engineering Department (LGED) under the Local Government Division (LGD) of the Ministry of Local Government, Rural Development and Co-operatives (MLGRD&C). RTIP-II is aimed at improving rural transport-related infrastructure, including inland water transport in 26 districts, covering mainly the eastern parts of Bangladesh, excluding Chittagong Hill Tracts.

In 2017, Bangladesh experienced widespread, devastating and prolonged flooding due to the extensive rainfall and excessive water flow from the upstream rivers. The flood resulted in the interruption of the transportation network of Bangladesh, damaging numerous LGED roads, bridges and culverts constructed and maintained under RTIP-II and other projects. This circumstance required urgent rehabilitation and maintenance of rural infrastructure to support the smooth connectivity of road network in rural areas. As a result, IDA and GoB decided to come forward with additional financing under RTIP-II to rehabilitate or maintain the damaged roads with an aim to improve rural accessibility in 18 out of 26 RTIP-II project districts in Bangladesh. These districts are Pabna, Sirajgonj, Tangail, Dhaka, Manikgonj, Gazipur, Narayanganj, Narsingdi, Mymensingh, Jamalpur, Sherpur, Netrokona, Kishoregonj, Munshigonj, Sylhet, Habiganj, Sunamgonj and Moulvibazar. The total cost of the additional financing for RTIP-II is about US\$170 million, including US\$100 million from IDA and remaining US\$70 million from GoB funding.

The additional financing, through road rehabilitation and maintenance, improves connectivity as part of the Government's goal to create a well-maintained rural network for the benefit of the nation in the form of: i) savings in vehicle operating costs, ii) faster and comfortable journeys; iii) reduced fuel consumption; iv) safer travel; v) benefits to trade, especially in movement of perishable goods; vi) reduced road and vehicle maintenance cost; and vii) comprehensive development of areas.

The additional financing of RTIP-II is supporting scale-up of activities covered under the parent project (RTIP-II), with the aim to enhance development impact in the project area by providing climate-resilient rehabilitation for the 1,457 km of Upazila and Union roads.

GoB and its development partners have emphasized on meeting road users' expectations to measure road user satisfaction over time. In an attempt to measure the potential impact of the improved road network, the perception of road users' needs to be surveyed and analyzed, including the impact on non-motorized vehicles. This will also include an analysis of benefits and how transport needs have been supported for women, children, the elderly, and people with disabilities. LGED wishes to pursue such a study using the same approach.

As part of several activities designed to enhance service delivery, LGED intends to hire an **Individual Consultant** under the Additional Financing to carry out the end-line survey of roads of RTIP-II. This will allow the project team to compare user reactions to the baseline and final stage of the project. It is expected that such survey results will help provide inputs to future rural transport-related interventions.

2. Short description of satisfaction survey from road users

This Satisfaction Survey of Road Users (SSRU) is intended to assess the increase in level of satisfaction from road users in the project area on i) road attributes and ii) LGED's performance regarding the rehabilitated facilities built under the project. The survey will also evaluate the increase in population among those living within 2 km of all-season Upazila and Union roads rehabilitated under RTIP-II (AF) in 18 project districts. However, the improved connectivity may also have improved the project's impact on social, cultural, and economic developments. The findings of the survey will contribute to future strategic and operational decision-making by GoB/LGED and development partners. The proposed end-line survey will also help address the project's impact on people's access to socio-economic services in the project area over time. This end-line survey report will also assess targets set in the Results Framework under the Additional Financing for Second Rural Transport Improvement Project.

3. The goal and objectives of the end-line survey

The objectives of the end-line survey are to:

- (i) gather public perception of rehabilitated roads and facilities, LGED/agency performance and government policies;
- (ii) document the views in a comprehensible manner and present the findings of the survey to decision-makers and the general public; and
- (iii) compare the values of key indicators at the end-line survey with the baseline data.

4. Scope of services

The survey includes the following tasks, but not limited to:

- (a) Measure road users' satisfaction or other opinions through a set of major indicators for all roads listed under the additional financing and included in the baseline survey of RTIP-II (AF) roads. Each indicator will have a number of sub-indicators. All indicators should be aggregated into the Index (Road User Satisfaction Index) comparable with the baseline survey;
- (b) Measure road users' perception of LGED performance through a set of major indicators, with each indicator including a number of sub-indicators;
- (c) Measure road users' experience of using the project roads for their daily needs, including road safety issues and factors making driving safe;
- (d) Measure of road users to find if there is a difference in response by commuters and non-commuters.
- (e) Classify road users based on gender, age, disability, ethnicity, and other characteristics as needed.
- (f) Identify major issues faced or perceived by the road users so that suitable interventions can be implemented.

- (g) For the data collection of the end-line survey, collect secondary and primary data of roads rehabilitated under RTIP-II (AF) by engaging enumerators in the field;
- (h) Elicit views from a wide range of the local population and target groups. For conducting these surveys, the potential road-related representative bodies are described in annex-1;
- (i) Analyze data collected using formats acceptable to the client;
- (j) Prepare and submit the end-line survey report for the additional financing within the stipulated date; and
- (k) Any other tasks assigned by the client as needed over the course of this performance based maintenance contract.

5. Proposed methodology of the study

The planned survey is to be designed under a participatory approach using both quantitative and qualitative methods. The participatory approach requires that the process of the survey activities to include maximum involvement of the project's stakeholders and road users. For the qualitative study, focus group discussions with relevant groups will be conducted.

- a. **Review of project documents:** In order to finalize the methodology and format of the investigation, the Consultant will review project documents, including the project proposal, baseline data, and other supplementary documents available from the organization. Those documents will be collected and reviewed at least 10 days ahead of the actual start of the survey work at the field level.
- b. **Design of sampling technique and interviewing respondents:** In designing the sampling technique, considerations have to be given to the objectives of the study, the scope of work, entities to be covered, the duration of the study, etc., as mentioned in the ToRs, and person-months and budgetary provision for the study. The Consultant shall use focus group discussions, one-to-one interviews with households or people at roadsides, bus stops, truck/bus parks, fuel stations, bicycle parks, etc., covering the gender aspects as well. The survey shall be carried out on the "project roads" as well as on the "control roads" outside of the "road improvement area" to establish whether the effects are related to the actual improvement of the roads.

Study area

The Additional Financing of RTIP-II helps rehabilitate roads damaged by heavy rainfall and floods in 2017. This work includes 1,457 km of rehabilitation of Upazila and Union Roads in 18 districts.

This end-line survey will be conducted **in 10 districts** covering all **3 parts of the project area (central, north-eastern and south-eastern part)**. The number of roads (Annex-2) were randomly selected from different project districts as part of the baseline survey. The survey shall be carried out on the "project roads" as well as on the "control roads." Both project roads and control roads were selected from the same districts, but naturally, the control roads were selected outside of the "road influence area." The potential control roads are the nearest

roads similar to the project roads but are not covered by this project. For the survey, a project road and a non-project road must be chosen from each district.

c. Sample size:

2.3 Sample Size

Sample size will be selected for the quantitative survey following the formula below:

Formula (Cochran 1963)¹ has been given below:

For, Unlimited population: $n = \frac{z^2 \times \hat{p}(1-\hat{p})}{\epsilon^2}$

For, Finite population: $n' = \frac{n}{1 + \frac{z^2 \times \hat{p}(1-\hat{p})}{\epsilon^2 N}}$

where

z is the z score

ε is the margin of error

N is population size

ĥ is the population proportion

Z = Confidence level chosen for the study (that is our estimates, which are consistent in 95% of the cases. With a 95% probability, the value of z is 1.96. With a 99% probability, the value of z is 2.57).

ε = The maximum deviation from the true proportions that can be tolerated in the study (that is the margin of error can be defined for any desired confidence level, but usually a level of 95% is chosen).

The margin of error is the level of precision required. This is the range in which the true proportion is estimated to be and should be expressed in percentage points (e.g., ±5%). A lower margin of error requires a larger sample size with 95% confidence, and a margin of error of 5%. Assume a population proportion of 0.5 and unlimited population size, where **z** for a 95% confidence level is 1.96.

$$n = \frac{z^2 \times \hat{p}(1-\hat{p})}{\epsilon^2}$$

$$n = \frac{1.96^2 \times 0.5(1-0.5)}{0.05^2} = 384.16$$

Thus, for the case above, a sample size of at least 385 people would be necessary.

Here, the research team will follow the ToRs to determine the sample size. As per the ToR, 30 samples will be taken from the project roads and another 30 from the control roads of each district. Thus this end line survey will cover total (30 X 10) = 300 from the project roads and another 300 from the control roads. So the total sample will be 600 which is more than the

¹ Cochran, W. G. 1963. Sampling Techniques, 2nd Ed., New York: John Wiley and Sons, Inc.

required number as per formula of sample size. The sample size shall include about 30% female respondents.

For the survey, both project roads and non-project roads were selected randomly in each district. The project roads, as mentioned above, are in 18 districts in the project area of the additional financing of RTIP-II. Considering the time frame for the purpose of the users' survey, a representative number of project roads and non-project roads were selected based on the agreed methodology.

The size of the required samples and survey scope, along with the amount of data, time and resources allocated, will define whether representation will be achieved based on road user type, gender, and district level. The survey shall be conducted over a week, including holidays, at locations including stop areas, fuel stations, local markets, religious/cultural centers, urban/rural households, local employment centers, etc.

d. Respondents of the study

The followings are the potential respondents of the proposed perception survey(30% respondents will be female):

Types of respondents	Number
1. Truck and lorry operators and drivers	2
2. Interurban bus service operators and drivers	2
3. Rickshaw, taxi and hired car operators and drivers	3
4. Private car owners	1
5. Households living adjacent to roads	3
6. School children, school teachers, doctors, health center representatives	3
7. Pedestrians, cyclists, non-motorized vehicle users, passengers	3
8. Farmers or others producers of agricultural/horticultural commodity	2
9. Market Management Committee representatives	1
10. Permanent and temporary shopkeepers and traders	2
11. Emergency service representatives	1
12. Manufacturers and repair workshop representatives of vehicles, including bicycles	1
13. NGOs related to roads, plus vulnerable groups, such as the disabled	1
14. Local government bodies/public representatives, i.e. Upazila parishad, Union parishad	2
15. District LGED officers and nation-building departments	1
16. Local elites/ socially important persons	1
17. Journalists and media representatives	1
Total:	30

e. **Preparation of questionnaire and checklists, and pre-testing:** The consultant will use the questionnaires for interview and checklists for FGD, the same as used for baseline survey.

f. **Data processing and analysis:** Data will be collected and analyzed by the consultant. Summary statistics for the entire sample and district-based data will be provided by the consultant. The consultant will be responsible for conducting data analyses, preferably with SPSS, producing a detailed report of survey outcomes (with sufficient narrative contents to facilitate the understanding and utilization by those with necessary statistical background), and providing a draft to the client for review and comment.

The consultant shall submit the survey findings in a written report to LGED.

-- The findings shall be presented in a written report, which shall use charts and diagrams wherever possible.

-- A summary of the qualitative and quantitative findings, and specific findings from qualitative methods, will be given.

-- The data analysis shall cover the comparison of men and women's perception and satisfaction levels with respect to identified indicators, as well as a comparison to baseline data.

-- It will also include mobility findings by gender, age, and the difference in response across different income groups (including at least two major income groups) to see how poor road users are affected.

-- An analysis will be provided on barriers for women, children, and elderly people in transport use and what provisions would be included.

-- This report and presentation shall be structured to demonstrate the opportunities and priorities for improvements in service delivery.

-- Incorporating all the comments and feedback, additional analyses should be made and final report would be produced. The consultant should document and clearly describe the strategy followed and keep a record of all steps followed to carry out the survey.

-- The consultants need to engage editors and others of a quality assurance team to provide adequate editing to this important report. Content of the document, including terminology and the use of graphics, should be consistent throughout. The final report should be accompanied by a PPT or other easily understood products for meetings with the client and other stakeholders.

6. Time frame

The end-line survey will begin immediately after the signing the contract and it should be completed by 3 (three) months.

Sl. No.	Major Activities	No. of working days required
01.	Participate in a planning meeting with PMU, RTIP-II(AF) and collect and review relevant documents.	3
02.	Develop appropriate & suitable questionnaires, checklist & guidelines, methods & techniques for collecting both quantitative and qualitative data from different groups of stakeholders.	4
03.	Recruit and train the required number of enumerators for field work	8
04.	Gather data, including questionnaires and FGDs	8
05.	Data editing, data entry, processing & output generation	11
06.	Prepare draft report with clear, concise language and assistance from professional editors, submit it for review and share results	12
07.	Edit and prepare final report incorporating feedback	3
08.	Final report submission to PMU, RTIP-II(AF) Project;	1

Sl. No.	Major Activities	No. of working days required
	Present the report in easily understandable format, such as PPTs with photos and graphics, in meetings with clients and other stakeholders	
	Total	49

7. Deliverables:

The consultant will provide the following outputs:

Sl. No.	Output	Due date (Weeks) from Start
1	Submission of inception report including detailed work plan and methodology	Within 2 week from signing of the contract
2	Report on data collection on end-line survey	Within 5 weeks from signing the contract
3	Draft end-line survey report	Within 8 weeks
4	Final end-line survey report including electronic version of the questionnaire and database	Within 11 weeks

8. Data, local services and facilities to be provided by the government:

Study reports, traffic and technical Data: The project will provide the consultants with all available data as and when required:

- The Feasibility Study Report
- Maps of the country and its road networks, including existing road inventory data of UZR Roads and Rural Road systems.
- Baseline data of the perception survey and report
- Reports of the earlier Impact/Socio-Economic Study
- GoB's pertinent Rules and Regulations like Rights to Information Act, etc.

9. Professional staffing input:

It is anticipated that 3.0 staff-months (SM) of an individual consultant, including necessary support staff as stated below, would be required to accomplish the tasks stated in the TORs.

10. Consultant qualifications:

Socio-economic survey specialist: The consultant should have master's degree in social science or equivalent from a reputable public university with at least 15 years of work experience in carrying out Social/Socio-economic survey in various infrastructure development projects, including development partners assisted projects. S/He must have substantial field experience in statistical analysis and reporting.

10. Support services:

The consultant will manage communications facilities (phone, internet, survey devices etc.) and transport, for the effective conduct of the assignment. Cost for support staff, and operation and maintenance of transport will be included in the financial proposal.

11. Reporting Obligations and Payment Schedule

Sl. No.	Deliverables	Duration	Indicative Payment Schedule
01	Inception Report: includes the detail work plan and methodology	Within 2 weeks from signing of the contract.	20%
02	Upon submission of draft survey report to the satisfaction of client	Within 8 weeks after acceptance of the pilot survey report	50%
03	Upon acceptance of final base and end-line survey report including electronic version of the questionnaires and database	Within 11weeks	30%

Potential Road Related Representative/Users Characteristics

1. Truck and lorry operators and drivers
2. Inter-urban bus service operators and drivers
3. Rickshaw, taxi and hired car operators and drivers
4. Private car owners
5. Households living adjacent to roads
6. School children, schoolteachers, doctors, health center representatives
7. Pedestrians, cycle rider, non-motorized vehicle user, passengers
8. Farmers/ agricultural/horticultural commodity producers
9. Market Management Committee representatives
10. Permanent and temporary shopkeepers and traders
11. Emergency service representatives
12. Vehicle, including bicycle, manufacturers and repair workshop representatives
13. NGOs situated related to roads plus vulnerable groups such as women, children, elderly, and the disabled
14. Local government bodies/public representatives i.e. Upazila parishad, Union parishad
15. District LGED officers and nation building departments
16. Local elites/ social important persons
17. Journalists and media representatives

Annex-2

Selected Districts for this End-line Survey					
		Project Road		Control Road	
District	Upazila	Package no & Road ID	Road name	Road ID	Road name
Dhaka	Savar	DHA/AF-1 (ID-326723026)	Bhakurta UP-Mugrakanda-Mohammadpur City protection embankment Road (Ch. 1+020-5+570 Km.)	326723004	Ashulia UP Office-Rustumpur bazar road (Ch. 0+000-3+325 Km.)
Gazipur	Kaliakoir	GAZ/AF-40 (ID-333322005)	NHW Mowchak - Fulbaria GC. (Ch. 2+050-21+200 Km.)	333322002	Safipur-Boraibari Road (Ch. 0+000-9+270 Km.)
Kishoreganj	Bajitpur	KIS/AF-51 (ID-348062012)	Sararchar GC - Pirijpur Bazar RHD (Ch. 0+000-4+850 Km.)	348063009	Sararchar-Pirijpur Bazar (Ch. 0+000-5+100 Km.)
Narshingdi	Narshingdi -S	NAR/AF-74 (ID-368602005)	Bhatpara GC-Kandail RHD via Panchdona&Amdia UP Office Road (Ch. 0+000-13+800 Km.)	368603010	Mohisasura UP Office-Madhabdi GC Rd. (Ch. 0+000-2+900 Km.)
Mymensingh	Bhaluka	MYM/AF-32 (ID-361132007)	Dhaka-Mym. H/Way (Seed Store GC)-Shakhipur H/Q.road(Bhaluka portion) (Ch. 0+000-13+700 Km.)	361132003	Dhaka-Mymensingh H/W-Mollikbary GC (Ch. 0+000-5+870 Km.)
Moulvibazar	Moulvibazar-S	MOU/AF-63 (ID-658742007)	Shahbondar-Dighirpar-ShomshargonjRoad . (Ch. 0+117-2+135 & 8+600-14+385 km)	658742002	Begum DurrehSamadRahman road (Ch. 0+000-16+960 Km.)
Habiganj	Madhabpur	HAB/AF-36 (ID-636712011)	Chatian bazar-Bagasura Bazar-Shahajibazar road (Ch. 0+000-10+153 Km.)	636712001	Madhabpur-Chowmohoni Bazar (Ch. 0+000-6+000 Km.)
Tangail	Madhupur	TAN/AF-109 (ID-393572012)	Narkora RHD-Keshoreganj GC (Fulbaria) via Kuralia hat road	393572011	Birtibari R&H (ModhupurUpazila) - Dhanbari GC via Zagirachala road (Ch. 0+000-8+500 Km.)
Pabna	Santhia	PAB/AF-83 (ID-176722011)	Nandanpur UP (Zorgacha R&H) - Selondah GC Via HapaniaGopalpur H/O Upazila Chairman B.F.F Sheikh Nizamuddin&MonsurAlam& HoludghorKhedirgram road (Ch. 0+000-4+400 & 6+700-11+770 (Effective Length = 9.470))	176722004	Ataikula GC - Demra GC road (Ch. 0+000-15+610 Km.)
Sirajganj	Raiganj	SER/AF-87 (ID-188613005)	Dhubil U.P. Office-Bhuyagati Hat. (Ch. 0+000-6+000 Km.)	188613006	Dangora UP at Raigonj-Baikanthapur bazar (Ch. 0+000-6+048 Km.)