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IDA/R2018-0319/1

September 18, 2018

<p>Closing Date: Friday, October 5, 2018 at 6 p.m.</p>

FROM: Vice President and Corporate Secretary

Bangladesh - Second Rural Transport Improvement Project

Additional Financing

Project Paper

Attached is the Project Paper regarding a proposed additional credit to Bangladesh for a Second Rural Transport Improvement Project (IDA/R2018-0319), which is being processed on an absence-of-objection basis.

Distribution:

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President

Bank Group Senior Management

Vice Presidents, Bank, IFC and MIGA

Directors and Department Heads, Bank, IFC and MIGA

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Report No: PAD2766

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED ADDITIONAL CREDIT AND RESTRUCTURING

IN THE AMOUNT OF SDR 71.4 MILLION
(US\$ 100 MILLION EQUIVALENT)

TO THE

PEOPLE'S REPUBLIC OF BANGLADESH

FOR A

Second Rural Transport Improvement Project

September 14, 2018

Transport & Digital Development Global Practice
South Asia Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2018)

Currency Unit = Taka

84.566 Taka = US\$1

US\$1.40139 = SDR 1

FISCAL YEAR

JULY 1-JUNE 30

Regional Vice President: Hartwig Schafer

Country Director: Qimiao Fan

Senior Global Practice Director: Jose Luis Irigoyen

Practice Manager: Karla Gonzalez Carvajal

Task Team Leader(s): Dung Anh Hoang

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank	LGED	Local Government Engineering Department
DANIDA	Danish International Development Agency	OHS	Occupational Health and Safety
EA	Environmental Assessment	PBMC	Performance-Based Maintenance Contract
e-GP	Electronic Government Procurement	PDO	Project Development Objective
ePMS	Electronic Project Monitoring System	PMU	Project Management Unit
EMF	Environmental Management Framework	PMIS	Personal Information Management System
EMP	Environmental Management Plan	PPSD	Project Procurement Strategy for Development
ESHS	Environmental Social Health and Safety	RAP	Resettlement Action Plans
FMC	Financial Management Consultant	RTIP2	Second Rural Transport Improvement Project
GAP	Gender Action Plan	RMMS	Road Maintenance Management Systems
GBV	Gender Based Violence	RPM	Rehabilitation and Periodic Maintenance
GCM	Growth Center Markets	RTS	Rural Transport Safety
GIS	Geographical Information System	RWD	Rural Works Department
GoB	Government of Bangladesh	SIA	Social Impact Assessment
GRM	Grievance Redress Mechanism	SIMF	Social Impact Management Framework
GRS	Grievance Redress Service	SCD	Systematic Country Diagnostic
IDSS	Integrated Decision Support System	SDG	Sustainable Development Goals
IRR	Internal Rate of Return	SDR	Special Drawing Rights
IUFR	Interim Unaudited Financial Reports	UZR	Upazila Road
IRI	International Roughness Index		



BASIC INFORMATION – PARENT (Second Rural Transport Improvement Project - P123828)

Country Bangladesh	Product Line IBRD/IDA	Team Leader(s) Dung Anh Hoang		
Project ID P123828	Financing Instrument Investment Project Financing	Resp CC GTR06 (9384)	Req CC SACBD (7028)	Practice Area (Lead) Transport & Digital Development

Implementing Agency: Local Government Engineering Department (LGED)

Is this a regionally tagged project? No	
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Bank/IFC Collaboration No	
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Approval Date 20-Sep-2012	Closing Date 30-Apr-2019	Original Environmental Assessment Category Full Assessment (A)	Current EA Category Full Assessment (A)
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Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach [MPA]	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Disbursement-Linked Indicators (DLIs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a Non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	



Development Objective(s)

The proposed Project Development Objective is: To improve rural accessibility in project areas (covering 26 districts) and strengthen institutional capacity for sustainable rural road maintenance.

Ratings (from Parent ISR)

	Implementation					Latest ISR
	15-Jun-2015	16-Dec-2015	30-Jun-2016	13-Feb-2017	19-Sep-2017	05-Apr-2018
Progress towards achievement of PDO	MS	MS	MS	MS	MS	MS
Overall Implementation Progress (IP)	MS	MS	MS	MS	MS	MS
Overall Safeguards Rating	MS	MS	S	S	MS	MS
Overall Risk	S	S	S	S	S	S

BASIC INFORMATION – ADDITIONAL FINANCING (Additional Financing for Second Rural Transport Improvement Project - P166295)

Project ID P166295	Project Name Additional Financing for Second Rural Transport Improvement Project	Additional Financing Type Restructuring, Scale Up	Urgent Need or Capacity Constraints No
Financing instrument Investment Project Financing	Product line IBRD/IDA	Approval Date 05-Oct-2018	
Projected Date of Full Disbursement 29-Oct-2021	Bank/IFC Collaboration No		



Is this a regionally tagged project?	
No	

Financing & Implementation Modalities

<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Disbursement-Linked Indicators (DLIs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a Non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	
<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)	

Disbursement Summary (from Parent ISR)

Source of Funds	Net Commitments	Total Disbursed	Remaining Balance	Disbursed	
IBRD				<div style="width: 0%;"></div>	%
IDA	301.81	255.15	20.53	<div style="width: 93%;"></div>	93 %
Grants				<div style="width: 0%;"></div>	%

PROJECT FINANCING DATA – ADDITIONAL FINANCING (Additional Financing for Second Rural Transport Improvement Project - P166295)

FINANCING DATA (US\$, Millions)

SUMMARY (Total Financing)

	Current Financing	Proposed Additional Financing	Total Proposed Financing
Total Project Cost	417.00	170.00	587.00
Total Financing	417.00	170.00	587.00
of which IBRD/IDA	302.00	100.00	402.00



Financing Gap	0.00	0.00	0.00
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DETAILS - Additional Financing

World Bank Group Financing

International Development Association (IDA)	100.00
IDA Credit	100.00

Non-World Bank Group Financing

Counterpart Funding	70.00
Borrower	70.00

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Total Amount
National PBA	100.00	0.00	100.00
Total	100.00	0.00	100.00

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any other Policy waiver(s)?

Yes No

INSTITUTIONAL DATA

Practice Area (Lead)

Transport & Digital Development

Contributing Practice Areas

Climate Change

Gender

Social, Urban, Rural and Resilience Global Practice



Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Dung Anh Hoang	Team Leader (ADM Responsible)		GTR02
Rajesh Rohatgi	Team Leader		GTR06
Ishtiak Siddique	Procurement Specialist (ADM Responsible)		GGOPZ
Mohammad Reaz Uddin Chowdhury	Financial Management Specialist		GGOES
A.K. Farhad Ahmed	Team Member		GTR07
Dilshad Sultan Dossani	Team Member		SACBD
Iqbal Ahmed	Environmental Safeguards Specialist		GEN06
Kazi Shahazada Shahanewaz Hossain	Team Member		GTR06
Md Towshikur Rahman	Team Member		GTR06
Md. Akhtaruzzaman	Social Safeguards Specialist		GSU06



Md. Shehab Uddin	Team Member		GEN06
Rex Joseph Quiah	Team Member		SACBD
Tema Alawari Kio-Michael	Team Member		GTR06
Extended Team			
Name	Title	Organization	Location



BANGLADESH

ADDITIONAL FINANCING FOR SECOND RURAL TRANSPORT IMPROVEMENT PROJECT

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I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

A. Introduction

1. This Project Paper seeks the approval of the Board of Executive Directors to provide an additional Credit in the amount of SDR71.4 million (US\$100.0 million equivalent) to the Second Rural Transport Improvement Project (RTIP2 - the parent Project) [P123828; Cr. IDA-5107].
2. The Results Framework is restructured to reflect the impacts from additional works under the Additional Financing (AF) as well as to revise the End Target Date for indicators upon the new closing date of the parent project.
3. The proposed Additional Financing and Restructuring would support scale-up of the scope of activities that were covered under the parent project with the aim at enhancing development impact in the project area by providing climate-resilient rehabilitation for the roads that were damaged from last year’s heavy rainfall and floods. The Closing Date of the proposed Additional Financing will be June 30, 2021.
4. As of June 25, 2018, cumulative disbursement under the parent project was approximately 93 percent. Both Progress towards achievement of the Project Development Objective (PDO) and the Implementation Progress (IP) have been rated “Moderately Satisfactory” for more than twelve consecutive months. There are no outstanding audits and the parent Project complies with all legal covenants.

B. Background and Rationale for Additional Financing

(Parent) Project Background

5. Table 1 below shows the project’s key data:

Table 1: Parent Project Key Data

Board Approval	September 20, 2012
Effectiveness Date	November 28, 2012
Original Closing Date of IDA Credit	April 30, 2018
Revised Closing Date of IDA Credit	April 30, 2019
IDA Credit Amount	SDR 195m (original: US\$302m, current: US\$277m)
Amount Disbursed (as of June 25, 2018)	US\$255m

6. The Project Development Objective (PDO) of the parent project is to improve rural accessibility in project areas (covering 26 districts) and strengthen institutional capacity for sustainable rural road maintenance. The project consists of four components:



- **Component A - Accessibility Improvement:** The component finances: (i) improvement of about 450 km of Upazila roads (UZRs) and about 370 km of Union roads (UNRs) in 26 districts through upgrading earthen to paved roads standard; (ii) rehabilitation and periodic maintenance of about 4,428 km of Upazila and Union roads in 26 districts in which about 428 km of roads are maintained under the DANIDA model of Performance Based Maintenance Contracts (PBMC); (iii) a pilot inland waterways transport (IWT) sub-component on low impact dredging of two rural waterways using local technology and construction of river infrastructure (ghats, jetties) at about 10 locations; (iv) improvement and development of 33 growth center markets; and (v) project supervision and monitoring consultants.
- **Component B - Institutional Strengthening, Capacity Building and Governance Enhancement:** This component covers: (i) capacity building to enhance the Local Government Engineering Department (LGED) performance, governance and accountability; and (ii) performance monitoring and training.
- **Component C - Rural Transport Safety:** The Component includes: (i) technical assistance support for integrating road safety engineering measures and awareness building to ensure improved safety along project roads; and (ii) technical assistance for strengthening road safety capacity of the LGED.
- **Component D: Contingent Emergency Response Component (US\$0):** Zero component in case an adverse natural disaster event occurs that causes a major calamity, the Government of Bangladesh (GoB) may request the Bank to re-allocate project funds to support response and reconstruction.

(Parent) Project Performance

7. The project has been well implemented with 95 percent of contracts completed and the disbursement rate has reached 93 percent as of June 25, 2018. Out of total 700 contracts under project scope, there remains about 50 works contracts to be completed by the extended closing date of which 18 contracts might be cancelled due to non-performing (with no or slow progress trend in the last six months).

8. Most of activities under components B and C have been completed. Several activities are either on-going or completed but need to be formally operationalized by the Client. Road safety workshop at national level and some works contracts for ghats construction are among the on-going ones. Business Plan to support the roll out of maintenance policy was completed for some time but has not yet been formally implemented by LGED for operations. Another key activity is the IT-based Integrated Decision Support System (IDSS). Feasibility Study for IDSS was completed but the final IDSS activity has not been finalized due to incompleteness of its related software, such as Project Monitoring System (PMS), Financial Management System (FMS), Road and Structure Database Management System, Bridge Management System, and Personal Information Management System (PIMC). This software will be completed before end of calendar year 2018. Delayed completion of these activities has led to Moderately Satisfactory rating for the IP.

9. The closing date has been extended until April 30, 2019 to cover such extension of works contract time and also to facilitate the preparation of the AF. With the extended closing date, all the activities under the parent project will be completed and the parent credit will be closed. Extension of closing date was made through a Restructuring process which is separate from this AF.

10. **Achievement of Results Framework indicators:** Three out of the four PDO indicators are likely to be achieved by the extended project closing date. The second PDO indicator - “Increase of upazila roads and union roads under RPM and PBMC sub-components of RTIP2 in good condition (IRI below 7) in 26 project districts (4,428 km of paved roads)” – would need to



be revised with regard to its End Target Value before the final assessment is made. The current measurement of the related International Roughness Index (IRI) has been somehow problematic due to the applied methodology as well as the use of old equipment which leads to incorrect results. Timing to measure the IRI is another factor for consideration. With PBMC roads, it may not be problematic as the IRI can be measured at any time during the maintenance period. But for rehabilitated roads, measurements at different times after contract completion might lead to different results. The most correct time for measurement, done by the contractors, is during the 12 months of contract Defects Liability Period. The End Target Value has been identified under the Restructuring of the Results Framework included in this Additional Financing. Full assessment of the Results Framework indicators achievement will be carried out at the end of the AF implementation, for both parent project and the AF.

11. **Legal covenants:** The project complies with all legal covenants set forth in the Financing Agreement.

12. **Procurement:** The overall procurement and contract management performance has been rated “Satisfactory”. The project will further intensify the monitoring of the implementation of the remaining contracts under the parent project to ensure their satisfactory completion before the extended project closing date of April 30, 2019.

13. **Financial Management (FM)** performance has been judged as “Moderately Satisfactory”. There are no major issues. Mis-procurement issue was resolved and refund of the ineligible expenditure was made to the Bank in December 2017. The Interim Unaudited Financial Reports (IUFR) are submitted in a timely manner. There are no pending audit observations on the external audit of the project. The final internal audit (IA) report from an independent audit firm has also been received. The major findings of the IA report included weaknesses in the contract management such as delay in execution, delay in making payments to contractors, etc. Overall, internal control of the project was observed by the auditors. The project has successfully implemented the FY 2017-18 financial plan.

14. **Disbursement:** Disbursement of project was well implemented. The total disbursed amount now stands at 93 percent of the project financing (as of June 25, 2018). It is expected that the parent project financing will be fully disbursed by the new closing date.

15. **Environmental Safeguards:** The overall Environmental Management Plan (EMP) compliance status of the subprojects under Rehabilitation and Periodic Maintenance (RPMs), Growth Center Market (GCM) and River Jetty (RJ) is Moderately Satisfactory. However, this compliance status needs to be made for all subprojects. Specifications and estimates have been prepared for the environment laboratories for which the required budget provision has been kept in the revised Development Project Proposal (DPP). Close monitoring of each subproject sites will be made to ensure full compliance of workers’ health and safety requirements as well as the overall environmental safeguards.

16. **Social Safeguards:** Overall project performance on social safeguards is rated Moderately Satisfactory. The social compliance management has been following the project’s Social Impact Management Framework (SIMF). Payments for partial loss of physical assets have largely been completed under the Social Impact Management Plans (SIMP). The project has so far addressed grievances satisfactorily. However, the land acquisition process has been slow due to the prolonged detailed measurement survey (DMS) for compensation. LGED will closely coordinate with the Deputy Commissioners (DCs) for expediting land acquisition payments so that the social and resettlement action plans (SRAPs) can be completed in timely manner. This is expected to be completed by end September 2018.

17. **Lessons Learnt:** Lessons from the implementation of parent project have been drawn by both the Client and the Bank, ranging from the technical design to implementation stage, including fiduciary management, as well as the institutional



improvement. Key lessons and measures that will be implemented under the AF to improve the quality of the project implementation are:

- **Climate-Resilient Technical Design:** climate-resilient factor was not considered under parent project and now will be incorporated into the roads design under AF (hydrological data will be measured and incorporated into design of drainage system; increase the use of cement concrete pavement; strengthen bank protection for flooded sections, etc.);
- **Improved Construction Quality:** poor quality of the construction works was one of the issues under the parent project. It was because of inappropriate level of supervision by consultants and thin layer of monitoring by the Client on both progress and quality of works. Use of technology for instant monitoring of works progress on site (photos taken on site are sent via phone apps to central database at PMU), sufficient allocation of supervision consultants to construction sites, training provided to local supervision engineers, training provided to counterpart engineers from district's LGED, increased participation in monitoring of construction works from the local community, etc. are among the measures to be taken under the AF to strengthen the supervision and monitoring activities;
- **Strengthened Fiduciary Management:** mis-procurement in two civil works contracts, late payment made to contractors, inability to prepare internal audit report, etc. were issues under parent project resulting from underdeveloped fiduciary management system. Various software was developed and the system was improved under the scope of parent project but these have not yet been used efficiently by LGED and/ or not yet been used due to late completion. IT-based fiduciary management will be strengthened (to replace paperwork-based system) under the scope of AF by institutionalizing these developed system and software.
- **Strengthened Safeguard Implementation to Better Protect People:** EMP implementation and monitoring was not properly managed under the parent project. This created potential risks to the worker's safety (not wearing the Personal Protective Equipment – PPE), to the traffic safety (poor work site fencing), or to the community safety (no labor influx risks were addressed), etc. These all will be addressed and implemented comprehensively under the AF, such as added specific items in contract for EMP, program for Gender-Based Violence (GBV), Citizen Engagement activities, etc.
- **Broadened Knowledge for Client on Road Asset Management:** knowledge building activities were supported under the parent project via abroad study tours mainly focused on technical aspects. Broader range of knowledge gaining, which covers not only technical aspects but also the sector management and sector development strategy, will be made under the AF from study tours to countries that have experiences in such areas.

Rationale for Additional Financing

18. Bangladesh is one among the most vulnerable countries to frequent flooding. Annually, flooding in Bangladesh has claimed hundreds of lives and caused serious damages to thousands of houses and public infrastructure, especially in transport sector. During last summer, rise of water levels in the various rivers in the northern part of the country due to heavy rainfalls as well as water flow from the upstream hills have led to the inundation of the river basin areas in the northern parts of Bangladesh. After the devastating floods of July 2017, second monsoon flooding occurred in August 2017 affecting 31 districts out of 64 districts of the country. Huge damages were recorded estimated at about US\$1 billion.

**Table 2: Damages from last year floods**

• # of union affected	1,200
• # of upazila	183
• # of districts/ total	31/64
• # of villages	8,746
• # people affected fully/ partially	238,843/ 6,536,509
• # households affected fully/ partially	50,042/ 1,305,257
• # households damaged fully/ partially	71,628/ 548,175
• # people died	121
• Area (hectare) of agricultural land inundated fully/ partially	15,529/ 562,594
• # educational institution damaged fully/ partially	34/ 3,134
• Length of road damaged fully/ partially	403/ 4,432
• # bridges damaged	268

19. Disasters have impacted the quality of life or well-being at the personal or household level, especially to more vulnerable groups, including women, children, and the elderly. There seems to be a correlation between low quality of life and vulnerability to external shocks: high exposure to disasters was found to coincide with a significant decline in post-disaster quality of life. Damages to roads and bridges, especially the core network in the rural areas in Bangladesh, has cut off the connectivity of the people to their daily provided services, such as schools, markets and clinics. Such no/ poor connectivity exists not only during the flooding time, ranging from few hours to a number of days, but also for months later until the damaged roads and bridges are repaired.

20. On September 26, 2017, the Government of Bangladesh sent a request to the World Bank Management for the Bank's continued support in providing funds to recover the rural accessibility from damages caused to the rural roads by the last year floods. The proposed AF responds to this request.

21. The Additional Financing will address the rural accessibility in a sustainable way under the climate change scenario. More than 5,000 km of rural roads have been improved/ rehabilitated under the scope of parent project. This improvement has provided a better year-round accessibility to millions of people in the project area. However, climate change has not been factored in the improvement/ rehabilitation works, posing a risk to the network, including the roads improved/ rehabilitated under parent project, to be more frequently and seriously damaged under the events of disaster. With the high level of vulnerability of the transport network to the climate change in Bangladesh, it is important to take into account the climate-resilient factor throughout the whole life of the infrastructure, from planning to technical design, implementation and maintenance. This will be addressed under the scope of the AF.

22. Further, successful implementation of the road safety program in RTIP1 and RTIP2 will be continued in the proposed AF to ensure traffic safety under the scenario of increasing motorization rate in rural area of Bangladesh. The most vulnerable road users – pedestrians, poor people and especially women and children -- suffer the most serious consequences of road crashes. Every year the traffic accidents claim close to 10,000 people's lives and about 15 percent of accidents occur on rural roads. This figure is increasing with the increase in the number and the speed of motorized vehicles passing through the rural areas. Further institutionalization of the traffic safety program will be promoted under scope of the proposed AF.



23. The proposed Additional Financing is fully aligned with the Government of Bangladesh’s Seventh Five-Year Plan (2016-2021). The Government has a national strategic vision – Vision 2021. It also has a Perspective Plan (2010-2021). This plan along with its forerunner (Sixth Five-Year Plan; 2011-2015) provides strategies for achieving economic and social outcomes of the Vision 2021 and the Perspective Plan. The Seventh Plan has identified the development of rural infrastructure as one of its priority areas. The development of upazila and union roads has been set as strategic priority areas by the plan.

24. The proposed Additional Financing is also fully aligned with the World Bank Group’s Country Partnership Framework (CPF) (FY 2016-2020). The CPF includes three strategic focus areas for Bank intervention – (i) growth and competitiveness, (ii) social inclusion, and (iii) climate and environment management. The Systematic Country Diagnostic (SCD), which underpins the CPF preparation process, has identified five transformational priority areas where concerted efforts would produce the highest returns for achieving sustainable growth and creating jobs. One of the five transformational areas is inland connectivity. The CPF has resolved that in order to remove the stubborn impediments to job creation and growth, the Bank will shift more financing towards energy and transport infrastructure.

II. DESCRIPTION OF ADDITIONAL FINANCING

25. The Additional Financing and Restructuring will entail the following changes to the Project: (i) project scope and associated costs; (ii) project financing plan; (iii) Results Framework; and (iv) use of the Bank’s new procurement framework of July 1, 2016 (under AF).

26. **Revised Project Scope and Associated Costs.** The proposed AF will be a scale up of the on-going RTIP2 project. Priority will be given to 18 districts, among the 26 districts under RTIP2 project, which were affected either by the floods (12 districts) or heavy rainfalls (6 districts) last year. The rehabilitation works in remaining 8 project districts have already been covered under an ADB financed project and thus will not be included under the scope of this AF. Table 3 summarizes the activities proposed in the RTIP2 AF as well as the proposed allocation of funding for each activity:

Table 3: Proposed Activities and Indicative Allocation of Funds under AF

Component	Activity	Estimated cost (USD)
Component A: Accessibility Improvement	A.2.1. Climate-Resilient Rural Roads Rehabilitation	147,930,000
	A.6. Design, Construction Supervision and Monitoring	5,000,000
Component B: Institutional Strengthening, Capacity Building and Governance Enhancement	B.2.1. Project Implementation Support/ Institutional Strengthening	6,290,000
	B.2.2. Impacts Evaluation (including gender)	290,000
Component C: Rural Transport safety	Enhanced traffic safety in rural areas	800,000
Component D: Contingent Emergency Response (zero component)		0
Contingencies	Price contingency	5,780,000
	Physical Contingency	3,900,000
TOTAL		170,000,000

27. **Sub-component A.2.1. Climate-Resilient Rural Roads Rehabilitation.** This sub-component will target civil works to support climate-resilient rehabilitation for about 1,433 km of the core network of rural roads under UZR and UNR categories in eighteen (18) districts. Sub-projects will be selected based mainly on the similar criteria that were set under parent project with focus on the following criteria: (i) roads in rural areas of 18 districts and categorized under UZR and UNR; (ii) damaged



from last year floods and heavy rains; (ii) roads identified as core network will have higher priority; and (iii) no land acquisition requirements. List of sub-projects with total length of 1,433km has been identified by LGED and refinement will be made by the design and supervision consultant once the project is effective. The shortlist of sub-projects that will be designed under the 1st year work program, however, has been identified (among the above list) and will be decided before the AF is approved in order to advance the detailed design and bidding documents preparation. No land acquisition is required due to project design (e.g. no roads widening, geometrical corrections, etc.). There might be temporary use of private or public land by the contractors due to their construction method and the land will be taken on commercial lease term by the contractors using willing buyer and willing seller method. The Bank and the Client's teams will make sure that there is no involuntary displacement of people associated with the land lease. The project's environmental and social management plan will have specific guidance on the use of land by the contractors. In any case, temporary use of land on commercial lease-term shall be minimized and the related compensation/rent shall be fully born by Contractors. There won't be any land acquisition under the 1st year work program.

28. The proposed sub-component will focus on the investment needs in mainstreaming climate-resilience into the rural road infrastructure rehabilitation. The project will support key road segments to withstand/be resilient to the recurrent flood events. This will help reduce regular rehabilitation & maintenance costs and improve sustainable connectivity of communities to markets and basic services. Climate-resilient engineering designs solutions will be applied, such as appropriate hydrological study to design the sufficient drainage opening along the road, sustainable slope protections, etc. These works will be complemented with traffic safety measures along the road. Opportunities will be integrated to design resilient rural road network system by introducing the submersible roads where applicable specially in flush flood areas. The selection of the cement concrete pavement design will further make the road surface more resilient to potential flooding damages. An appropriate quality control system will be strengthened by improving the monitoring system.

29. **Sub-Component A.6. Engineering design, Construction Supervision and Monitoring:** This sub-component will include consultancy services on: (a) cost-effective climate-resilient engineering designs and related surveys and investigations; (b) supervision of civil works and independent quality monitoring; and (c) project performance audit.

30. **Sub-component B.2.1. Implementation Support/ Institutional Strengthening/ Governance Enhancement:** This sub-component will finance the PMU incremental cost, equipment to support PMU's daily project management activities, study tour for LGED/ PMU staff to other countries who have experiences in mainstreaming climate-resilience into the rural road asset management. Further capacity building for the Central Road Safety Unit (CRSU) and Geographical Information System (GIS) Section of ICT Unit within LGED, preparation of necessary guidelines/documents on socio-environment & climate change issues and training for sector staff with regards to sustainable road asset management, including PBMC contracts, will also be financed under this sub-component.

31. A Program that gathers all project-related agencies Client, Community, Consultants and Contractors – named “4C Program” – to prevent, mitigate, and, if the situation arises, expeditiously respond to project-related instances of gender-based violence, sexual exploitation and abuse, and violence during project implementation will be included under the scope of sub-component B.2.1. This program, as described in paragraph 69, will be designed and implemented by a Non-Government Organization (NGO) active in the country.

32. **Sub-Component B2.2. Impact Evaluation:** This activity will support impact studies of rural roads including contribution of rural roads towards poverty reduction, employment, income, health, education, and achieving Sustainable Development Goals (SDGs). Baseline data collection has been financed under the parent project and the AF will support a downstream activity to collect the end target data and prepare analytical and evaluation report. This activity will also cover



the citizen engagement surveys as well as the preparation of the Client’s project implementation completion report which is to evaluate the project performance for both parent project and the AF.

33. **Component C. Enhanced Traffic Safety in Rural Areas:** This is to scale up activities that have been developed and implemented under the last two generations of the Bank-financed rural transport projects. To enhance traffic safety, this component will undertake the following actions. The first action is to expand local accident data collection at Upazila and Union levels from the pilot eight districts to eighteen districts under AF. The collection of data will include at least the following parameters: type (car, bus, motor cyclist, cyclist, and pedestrian), timing and place of road accidents, number of fatalities, etc. All these parameters will be disaggregated by sex and age group. This approach will allow the program to help highlight the relative vulnerabilities across gender, age, type of user and locations from which measures to prevent/ reduce accidents can be proposed and implemented. The second action is to develop a road safety campaign. This campaign will address private as well as public transport users and cover all modes of transport and user groups (male, female, children, elderly). For instance, activities undertaken under this action could be the campaigns relating to the helmet wearing for motorbike riders, broader road safety program for school children (“Safe Journey to School”) as well as for women, who are however less familiar with public transportation and thus face a high risk of increased vulnerabilities and mortalities. This campaign shall be implemented in all schools and communities that have the project roads passing through. The third action undertaken by the project will be conducting road safety audits for all roads rehabilitated under AF. These audits will take into account safe and secure transportation for women aspects, in addition to the engineering consideration. The last action relating to this component is the institutionalization of an integrated rural transport safety program, especially under the scenario of increasing both number of vehicles and travel speed in Bangladesh’s rural areas. This will entail: (i) approval for Road Safety Audit guidelines and manual that have been produced under the parent project; (ii) regulate the road safety audit as a mandatory requirement throughout the roads life (planning, design, implementation, operations and maintenance); and (iii) regulate the road safety data collection for all LGED rural transport network with linkage to the vehicle registration under police’s database.

Table 4: Revised Project Components Cost (US\$ million)

Current Component Name	Original Cost	Revised Cost	Proposed AF	Total (Revised)
Component A: Accessibility Improvement	338.1	389.09	152.93	542.02
Component B: Institutional Strengthening, Capacity Building and Governance Enhancement	11.9	12.33	6.58	18.91
Component C: Rural Transport Safety	3.5	2.82	0.80	3.62
Component D: Contingent Emergency Response (zero component)	0.0	0.0	0.0	0.0
<i>Physical Contingency (10% under parent project)</i>	32.1	1.17	5.78	6.95
<i>Price Contingency (4% under parent project)</i>	12.8	1.28	3.90	5.18
<i>Other GoB Overhead Costs</i>	18.7	10.41		10.41
Total:	417.1	417.1	170.0	587.1

Note: Contingencies under AF are 2.3% for physical and 3.4% for price



Table 5: Revised Financing Plan (US\$ million)

Source(s)	Original Project Cost	Revised Project Cost	Additional Financing	Total
BORROWER	115.1	141.59	70.0	211.59
IDA	302.0	275.51	100.0	375.51
Total	417.1	417.1	170.0	587.1

Note: IDA and GoB funding is under joint co-financing arrangement as under the parent project PMU operating costs will be financed from GOB budget

Table 6: Proposed Changes of the Results Framework

Revisions to the Results Framework		Rationale for Change/ Comments
Current	Areas of change	
PDO		
To improve rural accessibility in project areas (covering 26 districts) and strengthen institutional capacity for sustainable rural road maintenance	No change	
PDO Indicators		
Increase in population living within 2 km of all season upazila and union roads improved under RTIP2 in 26 project districts	End Target Value (2.8%) is unchanged but End Target Date is revised to as the new closing date of parent project, which is April 30, 2019	<ul style="list-style-type: none"> Measurement will be made at completion of the parent project but assessment will be included in the project Implementation and Completion Results Report (ICR) at completion of the AF
Increase of upazila and union roads under RPM and PBMC sub-components of RTIP2 in good condition (IRI below 7) in 26 project districts (4,428 km of paved roads)	<ul style="list-style-type: none"> Indicator name is revised to read as <i>“Increase of upazila and union roads under RPM and PBMC sub-components of RTIP2 in good condition (IRI below 7, measured within the Defects Liability Period) in 26 project districts (about 5,861 km of paved roads)”</i> to take into account of 	<ul style="list-style-type: none"> The total km of paved roads, about 5,861km, includes 4,428 km under parent project and 1,433 km under AF Measurement of IRI for roads was/ will be made during DLP and assessment will be made at completion of the AF to assess the impacts from both parent project and AF Measurement of the related IRI has been somehow problematic due to the applied methodology as well as the use of old equipment which leads to incorrect results. Timing to



Revisions to the Results Framework		Rationale for Change/ Comments
Current	Areas of change	
	<p>1,433 km of roads rehabilitated under the AF;</p> <ul style="list-style-type: none"> ▪ End Target Date is revised to as closing date of the AF, which is June 30, 2021; ▪ End Target Value is revised as per identified by the Client before negotiations, which is 75%. 	<p>measure the IRI is another factor for consideration. With PBMC roads, it may not be problematic as the IRI may be measured at any time during the maintenance period. But for rehabilitated roads, measurements at different time after contract completion might lead to different results. The most correct time for measurement is during the 12 months of Defects Liability Period (DLP).</p>
Increase in level of satisfaction from road users in the project influence area	End Target Date is revised to as the new closing date of the parent project, which is April 30, 2019	<ul style="list-style-type: none"> ▪ Measurement will be made at completion of the parent project but assessment will be included in the project ICR at completion of the AF
Increase in maintenance budget needs met for the rural roads	End Target Date is revised to as the new closing date of the AF, which is June 30, 2021 to maintain Client's effort in making maintenance funds sustainable	<ul style="list-style-type: none"> ▪ Measurement will be made at completion of the AF.
Intermediate Results Indicators (under scope of parent project)		
(i) Upgrading of UZR (ii) Improvement of UNRs	End Target Date is revised to as the new closing date of the parent project, which is April 30, 2019	<ul style="list-style-type: none"> ▪ Works under this component are on-going and will be completed before the new closing date (April 30, 2019)
Rehabilitation and periodic maintenance: (i) RPM roads and (ii) Performance Based Maintenance Contract roads	End Target Date is revised to as the new closing date of the parent project, which is April 30, 2019	<ul style="list-style-type: none"> ▪ Works under this component are on-going and will be completed before the new closing date (April 30, 2019)
Construction of ghats (river jetties)	End Target Date is revised to as the new closing date of the parent project, which is April 30, 2019	<ul style="list-style-type: none"> ▪ Works under this component are on-going and will be completed before the new closing date (April 30, 2019)
Rehabilitation of inland waterways (dredging contracts completed)	<p>Unit of Measurement has been changed to "Km" to better reflect the nature of activity. The End Target Value has therefore been changed accordingly.</p> <p>End Target Date is revised to as the</p>	<ul style="list-style-type: none"> ▪ Works under this component were completed by the original closing date (April 30, 2018)



Revisions to the Results Framework		Rationale for Change/ Comments
Current	Areas of change	
	original closing date of the parent project, which is April 30, 2018	
Business Plan developed for the Maintenance Policy	<p>End Target Date is revised to as the new closing date of the parent project, which is April 30, 2019.</p> <p>End Target Value is revised to "Business Plan Operational" to reflect the operationalization of the activity.</p>	<ul style="list-style-type: none"> Business Plan has been developed but not yet approved and put under operations by LGED. The activity is therefore considered on-going and will be completed before the new closing date (April 30, 2019)
Implementation of key MIP (ORA) actions	End Target Date is revised to as the new closing date of the parent project, which is April 30, 2019	<ul style="list-style-type: none"> The activity is on-going and will be completed before the new closing date (April 30, 2019)
LGED implementation of Integrated Decision Support System (IDSS)	End Target Date is revised to as the new closing date of the parent project, which is April 30, 2019	<ul style="list-style-type: none"> Software (PMIS, ePMS & uFMS), developed to help prepare the IDSS, have not been completed. The activity is therefore considered on-going and will be completed before the new closing date (April 30, 2019)
LGED implementation of comprehensive IT-based maintenance management system	End Target Date is revised to as the new closing date of the parent project, which is April 30, 2019	<ul style="list-style-type: none"> Maintenance Management System software (MMS) has not yet been completed. The activity is therefore considered on-going and will be completed before the new closing date (April 30, 2019)
Intermediate Results Indicators (under scope of AF)		
None	<p>New indicator:</p> <p><i>Climate-resilient Rehabilitation of roads (UZRs and UNRs)</i></p>	<ul style="list-style-type: none"> Indicator added to reflect the climate-resilient rehabilitation works for UZRs and UNRs under the AF
None	<p>New indicator:</p> <p><i>Percentage of women employed in road works (relative to total labor force employed in road construction)</i></p>	<ul style="list-style-type: none"> Indicator added to assess the implementation of gender action plan
None	<p>New indicator:</p> <p><i>Contractor's workforce trained on ESHS, OHS and GBV Code of Conduct</i></p>	<ul style="list-style-type: none"> Indicator added to assess the measures to improve environmental and social safeguard during project implementation



Revisions to the Results Framework		Rationale for Change/ Comments
Current	Areas of change	
None	New indicator: <i>GRM in place and active at all time in all works contracts</i>	<ul style="list-style-type: none"> Indicator added to assess the measures to strengthen the citizen-engagement during project implementation
None	New indicator: <i>Road safety audit carried out for all roads rehabilitated under AF, incorporating safety and security in transportation for women</i>	<ul style="list-style-type: none"> Indicator added to assess the project implementation with regard to road safety aspects
None	New indicator: <i>Sub-project wise participation of direct beneficiaries and project affected people in citizen engagement process</i>	<ul style="list-style-type: none"> Indicator added to measure the rate of direct beneficiaries and project affected people participating in the Citizen Engagement process.

34. **Closing Date of the Additional Financing:** The closing date of the additional financing is June 30, 2021 providing about 30 months to implement the activities proposed under the Additional Financing. All key activities under the Additional Financing are planned to be procured within the next 6 to 12 months, leaving about 30 months for implementation. The civil works contracts are for 12-18 months implementation and 12 months for defects liability period.

35. The Environmental Assessment (EA) category of the original project is classified as “A” in consideration of subprojects for inland waterways rehabilitation through dredging. Though the waterways dredging sub-component has been excluded from the AF scope, the EA category for the AF is retained as “A” to be consistent with the original project. It is expected that roads rehabilitation activities under the AF will not pose any significant impact on the environment. There will be no changes to the PDO, implementation arrangements nor financial management arrangements currently in place for the Project. However, the OP/BP 4.36 on Forests has newly been triggered to the AF as opposed to the parent project.

36. **AF Implementation Readiness:** Sub-projects (road link that may include bridge on the link) under the 1st year rehabilitation work program has been identified. Contract for detailed design consultant who is currently hired under the original project will be amended to prepare the detailed design and bidding documents for these sub-projects. In order to ensure the quality of the detailed design documents with climate-resilience consideration, an experienced advisor will be mobilized by the Bank to provide guidance to the consultant’s designing team right after the contract is signed. Terms of Reference (TOR) for detailed design and supervision consultant responsible for the remaining works has been prepared and cleared by the Bank with the aim at having this consultant mobilized once the AF gets effective.

III. KEY RISKS

37. The overall Risk Rating is **Substantial** with key risks on the following areas:

38. **Political and Governance - Substantial:** With the national election likely to be held in end 2018, the political environment remains complex. In the run up to the election, country may face street protests and political uncertainty.



Although the country has made some progress in improving governance indicators, corruption and low institutional capacity remains a major challenge for the country. By ensuring accountability and transparency the governance situation can be improved.

39. **Technical Design of Project - Substantial:** Technical design for rural roads has been conducted by LGED for years but this is the first time the climate-resilient factor is taken into account. Design standard has been improved under the parent project with the inclusion of climate-resilience requirement but has not been institutionalized by LGED for nation-wide application. These pose risks to the quality of the technical design and later on to the climate-resilience capacity of the rehabilitated roads. In order to ensure the quality of the detailed design documents with climate-resilience consideration, an internationally-experienced engineering advisor will be mobilized by the Bank to provide guidance to the consultant's designing team right after the detailed design contract is signed. The Bank will also ensure that the improved design standard will be approved for implementation by LGED.

40. **Institutional Capacity for Implementation and Sustainability - Substantial:** LGED is considered one of the best public-sector agencies in the country. It has a remarkable record of implementation of government and development partner-supported projects and programs. LGED has substantial experience in rural roads maintenance works. However, lack of systematic and strategic planning for roads network rehabilitation, lack of experiences in designing climate-resilient rural roads/ bridges as well as insufficient allocation of funds for maintenance after the roads/ bridges are rehabilitated are the areas of weakness of LGED that pose risks to the project implementation and sustainability. Training for staff, knowledge gaining through study tour to countries that have experiences in these areas are the mitigation measures for those identified risks. Considering these factors this risk is assessed as "Substantial".

41. **Fiduciary - Substantial:** Fiduciary risk of the project has been assessed as "Substantial". The main procurement risks are: (i) lack of strategic procurement analysis and planning to determine the optimum procurement package size, procurement method, contracting modality, and duration of the contract leading non-completion of contracts within the desired time and cost, (ii) inappropriate bidding practices undertaken by the bidders, and (iii) ineffective contract management resulting time and cost over-runs during contract implementation while the AF duration is only three (3) years. Mis-procurement, declared in 2015 against two small value contracts under the implementation of RTIP2 project, though was resolved (the ineligible expenditures were returned to the Bank), still poses a potential risk that needs high level of attention. Some of the key procurement risk mitigation measures that are already in place or will be put in place for the Additional Financing are: (i) having larger and fewer procurement packages (preferably one road rehabilitation contract in an Upazila) to ensure value for money; (ii) continue to use e-Government Procurement (e-GP) in processing all national competitive procurements including e-Contract Management Module (if available); (iii) continue to use fraud and corruption checklist as part of bid evaluation report for all national competitive procurement and procurement using request for quotations methods; (iv) continue to monitor implementation of procurement and contracts using the contract monitoring tool developed under RTIP2 project; and (v) using Systematic Tracking of Exchanges in Procurement (STEP) to manage procurement plan and procurement transactions.

42. With regard to the financial management arrangement, engagement of various layers at the field has caused delays in processing payments by the project to contractors which leads to delays in disbursement of project financing. Also, underdeveloped capacity of the LGED's internal audit department could lead to a risk of non-compliance in the financial management of the project. Further periodic training on IT-based financial management system, on-the-job training for internal audit department, procurement and contract management for LGED and PMU staff that uses the software developed under the parent project are among the mitigation measures for this risk.



43. **Environment and Social - Substantial:** Combined social and environmental risk is rated “Substantial”. Despite relatively low influx of workers to the construction sites, the project still faces a high risk of gender-based violence due to the prevalence of high levels of poverty and current high rates of gender-based violence (GBV), including Sex Exploitation and Abuse (SEA). While these risks cannot be eliminated, the project is undertaking specific measures to reduce, minimize and/or mitigate the risks related to gender-based violence, such as requirements for local hiring, use codes of conduct, and other specific measures. Also, the contract conditions will include performance standards for environmental and social safeguard compliance for construction activities, under strengthened Environment, Social and Health Safety (ESHS) and Occupational Health Safety (OHS) implementation by contractors in all works contracts. The project will mitigate the risk of traffic accidents through specific road safety interventions on the project roads based on road safety audit practices during the roads design and operations, further capacity building activities for CRSU under LGED, awareness campaign provided to the road users, and enforcement by the police.

IV. APPRAISAL SUMMARY

A. Economic and Financial Analysis¹.

44. The present economic analysis covers the additional financing component of RTIP2 covering 18 districts, with a total length of 1,433 km. Earlier economic analysis for the RTIP2 (2012)² was based on the ‘production surplus’ approach in which increase in rural household income was considered as project benefits. However, this production surplus approach is recommended to be appropriate for low volume roads with about less than 100 vehicles per day (Dr Richard Robinson, 2012).³ Beyond this level of traffic, use of ‘consumer surplus’ approach with the projected vehicular trips based benefits (against the benefits considered in the production surplus approach) is considered better due to the following reasons: (i) well-defined methodology of benefit estimation; (ii) relatively easy to get input data like daily traffic count; and (iii) It assigns priorities that reflect economic and social considerations because people travel for a wide variety of reasons. The average daily traffic level was found to be at 1,994 vehicles on an average in a day per road, consisting of 39 percent motorised passenger vehicles, 34 percent motorised goods vehicles, and 27 percent slow moving non-motorized vehicles along pedestrians. Also, the recent Bank funded rural roads projects in India in Bihar and Madhya Pradesh have followed the ‘consumer surplus’ approach for economic analysis. In the light of the above arguments, the present economic analysis for the additional financing is based on ‘consumer surplus’ approach, deviating from the approach followed in the RTIP2 (2012).

45. The present economic analysis was undertaken for the road network of 1,433 km identified for additional financing spread in eighteen districts, consisting of 170 roads with an average length of 8.83 km⁴. The climate-resilient factor was taken into analysis under an increase of 20 percent in cost for rehabilitation works. The primary benefits estimated in the economic appraisal are: (a) the reduction in vehicle operating costs (VOCs); (b) travel time savings for vehicle occupants; and (c) a reduction in carbon emissions from vehicles using the improved roads⁵.

¹ Detailed analysis is given in Annex 1

² Project Appraisal Document (PAD) of Second Rural Transport Improvement Project (RTIP-2), 21 August 2012.

³ ‘A New Approach to quantifying economic and social benefits for low-volume roads in developing countries’, Dr Richard Robinson, *Impact Assessment and Project Appraisal*, Volume 17, 1999 - Issue 2, Published on 20 February 2012. <http://dx.doi.org/10.3152/147154699781767891>

⁴ The key assumptions include annual growth rate of traffic of five percent; average cost of construction of US\$0.11 million per km (economic cost US\$0.088 million per km); 3 years construction period; incremental maintenance cost of US\$4177/km for routine and periodic maintenance for bitumen road, and 3-year periodic maintenance cycles along with 9 percent social discount rate.

⁵ Estimated using the guidelines: (i) GHG Analysis Road Improvement, Guidance Note, World Bank Group, February 2016, (ii) Social Value of Carbon in project appraisal, Guidance note to the World Bank Group staff



46. The analysis showed that the project passed the economic viability test at the given SDR of 9 percent. The Internal Rate of Return (IRR) for the overall project is 20.5 percent with Net Present Value (NPV) of USD 168.57 million at 2018 prices. Hence the project is found to be socially profitable. In view of the sensitivity analysis results, investment costs should be monitored carefully during project implementation and close attention should be paid to facility quality and efficient transport services, and the promotion of their use.

47. Fiscal Analysis: The government of Bangladesh has committed to providing the counterpart fund requirements during project implementation of about US\$ 70 million. To maintain operational sustainability, the national government would need to allocate an average of about BDT 1,366 million/year for operation and maintenance over the period 2022 to 2038. National government have confirmed that such levels of support will be maintained.

48. Carbon Emission Reduction Benefits Estimates: Using the working model developed for the economic analysis, carbon emission reduction estimates have been derived for the 1,433 km of RTIP2 Additional Financing roads. The estimates take account of improved fuel consumption⁶ rates due to road improvements, the carbon emission rate (0.0023 ton/ litre)⁷, carbon cost (US\$ 38 / ton in 2022)⁸ and the traffic levels under 'without' and 'with' project scenarios. Though traffic on project improved roads would increase, the reduced fuel consumption and carbon emission rates result in a marginal net decrease in carbon and Greenhouse Gas (GHG) emissions.

B. Technical

49. The project will emphasize a 'build back better' approach in rehabilitating damaged infrastructure. This implies that rehabilitation will focus on all phases of the infrastructure lifecycle, including design, construction, and maintenance. 'Building back better' includes more than design standard improvement. Under this project there will be emphasis on a better design alternative, a better quality for construction, and adequate funding for maintenance. A combination of solid evidence-based planning, design and engineering solutions, information technology, adequate allocation of financial resources, and enabling the institutional environment can potentially yield significant economic benefits by maximizing the network integrity and minimizing negative economic and social impacts and human loss-related disastrous events.

50. The Additional Financing will emphasize on adequate climate resilience for project roads by including adequate measures in their design and rehabilitation. Those measures could be the improved drainage system and submersible roads for easy passage of flood water in flood affected areas; use of bio-engineering measures, and concrete pavements or improved material specifications for roads in high rainfall areas. For drainage system (including bridges), adequate hydrological calculations will be made to ensure the drainage capacity.

C. Financial Management

51. A financial management (FM) assessment was carried out to evaluate the overall financial management systems as well as management capacity of the Client considering their experiences with the Bank funded operations in LGED. With substantial experience on the Bank's financial management and disbursement procedures gained under previous projects by the project staffs, the financial management arrangement under the AF will remain as same as under RTIP2. LGED will implement the proposed project through a PMU, under the leadership of a Project Director. The PMU will have a FM section

⁶ Reduced fuel consumption estimated by assuming that travel speed will increase by 20 percent.

⁷ GHG Analysis Road Improvement, Guidance Note, World Bank Group, February 2016.

⁸ Estimated based on 'Guidance Note on Shadow Price of Carbon in Economic Analysis, 12 November 2017, World Bank Group'.



headed by a Financial Management Consultant (FMC). The FMC will be a qualified Chartered Accountant (or equivalent) with adequate knowledge of project financial management requirements of the World Bank and the GoB and proven experience in working with computerized accounting systems.

52. The Bank's fund will flow to a Designated Account (DA) in the form of Convertible Taka Special Account (CONTASA), to be opened in a branch of a commercial bank acceptable to the Bank. However, separate set of accounts and presence of separate budgets for parent project and AF will be maintained.

53. The project will continue to follow report-based disbursement. IUFs will be prepared for submission to the Bank within 45 days from the end of each quarter. The formats of the IUFs agreed for RTIP2 will be applicable for additional financing. The PMU will generate two separate set of IUFs for both original and additional financing projects. External audit will be prepared and submitted within six months from the end of the financial year. The system and software developed under RTIP2 are targeted to be operationalized before end 2019.

D. Procurement

54. All goods, works, non-consulting services and consulting services under Additional Financing shall be procured in accordance with the requirements set forth or referred to in the World Bank's "Procurement Regulations for Borrowers under Investment Project Financing", dated July 1, 2016 (Revised November 2017) (Procurement Regulations). A Project Procurement Strategy for Development (PPSD) has been developed by LGED in agreement with the Bank, taking into account the nature of the procurement activities, capacity of LGED in managing procurement and contract management activities, prevailing market conditions, activity level risks etc. The PPSD document spelled out the detailed procurement arrangements (e.g., procurement packaging strategy, method, bid evaluation methodology of the major packages, timeline, contracting arrangements etc.) for the Project including the risk mitigation measures. PPSD is a live document and it is to be updated at least annually. As an output of the PPSD exercise, initial Procurement Plan for the Additional Financing has also been prepared containing all contracts to be financed under the Additional Financing, the different selection methods for procurement, market approach, contracting arrangements, estimated costs, Bank's prior review requirements, time line of the procurement process, and other procurement related conditions applicable to the Project.

55. Some of the key procurement risk mitigation measures that are already in place or will be put in place for the Additional Financing are: (i) having larger and fewer procurement packages (preferably one road rehabilitation contract in an Upazila) to ensure value for money; (ii) continue to use electronic Government Procurement (e-GP) in processing all national competitive procurements including e-Contract Management Module (if available); (iii) continue to use fraud and corruption checklist as part of bid evaluation report for all national competitive procurement and procurement using request for quotations methods; (iv) continue to monitor implementation of procurement and contracts using the contract monitoring tool developed under RTIP2 project; and (v) using Systematic Tracking of Exchanges in Procurement (STEP) to manage procurement plan and procurement transactions. Requirements with regard to the implementation of ESHS, OHS, gender equality as well as minimizing the labor influx will be strengthened in the bidding documents and conditions of works contracts under the AF, such as adding requirements for local hiring, use codes of conduct, and other specific measures.

E. Environment and Social (including Safeguards):

56. RTIP2, the parent project is classified as a Category "A" due to the complexity of environmental issues associated with the waterways improvement component and the undefined impacts of the subprojects in a wider geographical area. Land acquisition and population displacement are avoided in all components under RTIP2 except in critical circumstances of improvement of Upazila Roads. LGED has adopted and using an Environmental Management Framework (EMF) and a Social



Impact Management Framework (SIMF) including a Resettlement Policy Framework (RPF) and a Framework for Small Ethnic Community Plan (Indigenous Peoples Planning Framework) for managing safeguards compliance of subprojects under RTIP2. The EMF provides guidance on environmental screening, impact assessment and preparation of Environmental Management Plans (EMP). Likewise, the SIMF provides procedures for social screening, social impact assessment and preparation of Social Impact Management Plan (SIMP), Resettlement Action Plan (RAP) and Small Ethnic Community Development Plan (or Indigenous Peoples Plan), where applicable. An all-inclusive consultative process is followed for identification, design and implementation of subprojects including management of the associated environmental and social issues. Land acquisition has been minimum and there is no physical displacement of people in any subproject under the parent project. There are no outstanding safeguards issues except that land acquisition compensation payment is slow and can only be completed in September 2018.

57. The additional financing (AF) will cover similar subprojects as under RTIP-2 but focus only on rehabilitation of rural roads reportedly damaged by the last year floods and heavy rains. Based on experience under the parent project, no significant and/or irreversible adverse environmental and social impacts are anticipated with the subproject design and implementation under the AF. The AF will be undertaking activities mainly for rehabilitation of rural roads and though the waterways dredging sub-component excluded from its scope, the EA category of the AF is retained as “A” to be consistent with the parent project. The likely impacts are mostly construction related and these may include, contamination of land and water, loss of trees, noise from operation of construction machinery, air quality deterioration, worker’s health and safety, etc. No land acquisition and displacement of people nor issues of tribal peoples will be required under AF. However, to incorporate lessons from the ongoing project on land acquisition (if any) and managing issues of labor influx, occupational health and safety and gender, the EMF and SIMF documents have been updated for the AF. A separate Environment and Social Unit (ESU) is proposed to be part of LGED organogram. The updated EMF and SIMF documents for the AF have been disclosed in the LGED website on September 11, 2018 and on Bank external website on September 12, 2018.

58. The contract conditions for works contracts will include performance standards (service levels) for environmental and social safeguard compliance. Payments under rehabilitation works will be linked to service levels realized, for example, (a) preparation of environmental, social, health, and safety plan and establishing baseline indicators before start of construction, and (b) completion of periodic mandatory training of all workers on GBV and SEA issues. Under the contract, the contractor will also be responsible for continuous monitoring and control of road conditions and service levels for all roads or road sections included in the contract. This will not only be necessary to fulfill the contract requirements, but it will also provide the contractor with the information needed (a) to ascertain the degree of its own compliance with service level requirements; and (b) for timely defining and planning of all interventions required to ensure that service quality indicators never fall below the prescribed thresholds. The role of the monitoring consultant will be responsible for verifying compliance with the agreed service levels and with all applicable legislation and regulations.

59. The Grievance Redress Mechanism (GRM) procedure will be expanded and enhanced to cover all project related impacts, including GBV, and improve its accessibility and systematic monitoring prior to signing the first road civil works contract. The GRM procedure will be disseminated in affected communities to create awareness and enable project-affected people to file complaints. The process of responding to complaints will be monitored by the project liaison committee. A web-based grievance registration system will be developed under the project and will be integrated to the sector-wise system at later stage. Additionally, the project would need to identify an NGO active in the country to implement the “4C Program”. This NGO shall have demonstrated capacity addressing GBV and related challenges in the project area, ensuring GBV survivors receive proper care and raising community awareness and access to information. This NGO will monitor the project-linked gender-based violence complaints, train stakeholders (contractors, communities, client), to assist and refer survivors to



appropriate service providers, and monitor implementation of the GBV prevention and response measures. The gathered information will be monitored and reported to the World Bank and other stakeholders by the implementing agency.

Gender

60. To ensure that the benefits of the program are equitably distributed, the program will address the needs of women as both transport users and transport providers and thus contribute towards gender equality. The AF will continue to facilitate equal access to benefits and participation of men and women in all aspects of policy formulation and adoption, advocacy, gender gap analysis, employment and working environment, training and capacity building, participation and empowerment. LGED has its own gender policy and adopted the Gender Equality Strategy 2016 – 2021 (GES). An in-house advocacy forum within LGED operates for supervision and monitoring gender mainstreaming process in its own operation irrespective of sources of finance. Destitute women are being employed under the parent project through Labor Contracting Societies (LCS) by the contractors. A Gender Action Plan (GAP) has been designed under the parent project to promote increased participation of women in project process and employment in construction and maintenance works on an equal pay for equal work term. Activities under this GAP will continue to be implemented under a GAP prepared for the AF which will become effective within 3 months after the AF is effective. A full assessment on this Program will be prepared at the end of the AF.

61. Even though Bangladesh has made considerable progress in closing the gap in the employment rates between men and women, significant gaps still remain, especially within the transport sector. Nationally, of the total number of people employed in the transport, storage and communications sector in Bangladesh, only 8.1 percent are women (according to International Labor Organization - ILO). Of the women employed in rural areas 72 percent are employed as unpaid family workers. Both these statistics point to the low levels of participation of women in the formal sector in rural areas as well as the transport sector. Breaking through the barriers that create gendered divisions of work will be necessary for women's full participation in the working world—one key barrier is safety in the workplace.

62. Currently female participation within the rural transport sector is 13 percent. The Program will endeavor to fill this gender gap by employing women in the rehabilitation and periodic maintenance of about 6,000 km of Upazila and Union road under the both parent project and the AF. Through this Program, women will acquire technical skills (e.g. women's participation in construction, rehabilitation, maintenance, monitoring and management of transport infrastructure) and management skills (like, managing their finances and control over their own income, better supportive for their families, etc.). All these skills will add to the human capital of the employed women and will benefit them even after the completion of this Program. To ensure that the Program provides a safe work environment for women, it will take measures for mitigating sexual exploitation and abuse related risks (as highlighted in the exposition relating to Labor Influx and SEA).

63. As users, women's mobility needs have increased over the years. This is due to more women entering the workforce while remaining primarily responsible for accessing basic services (e.g., bringing children to school and health facilities, going to the market, etc.) for their families. The resulting weakening of social barriers such as purdah or seclusion has also allowed more girls and women to go out of their houses and communities to study, visit relatives, do outdoor household tasks and other outdoor activities. These social norm changes and economic challenges have pushed women to travel in unfriendly, hostile, and unsafe environments.

64. However, many barriers to women's mobility remain. In rural areas, women travel short distances by foot or non-motorized transport. Roads are unsafe and often underdeveloped. Data on road accidents and pedestrian casualty by gender shows that as the number of women on the move increases, the number of women having accidents also increases. The Accident Research Institute of Bangladesh University of Engineering and Technology in 2003 showed that 10.32 percent of



the total casualties were women. This increased to 20.16 percent in 2013, doubling road accidents of women. There is lack of accessibility to social services and low-cost transport services. For long-distance travel, bus is the only transport. Rural women find it difficult to travel even in emergency needs. Young girls have problems going to high schools and colleges far away from home, with sexual harassment being a common problem. Safety and security aspects of transport for women and girls, need to be strengthened and brought into public knowledge and cognizance by planners, implementers, and monitors.

65. To address the barriers that women face as transport users and transport providers and in compliance with LGED’s gender strategy and Bank’s policy on gender, the project proposes the following action plan to identify, implement and monitor gender actions in respect of subproject interventions. The action plan will: (i) address the gender issues from both perspectives women as transport service providers (to fill the gender gap in transport works employment) and women as transport users (to improve safe and secure transportation for women), (ii) involve all project-related agencies, and (iii) be implemented throughout the project implementation stages:

Action Areas	Responsible Agency	Monitoring Agency
Sector Policy Development		
Review and amend existing policies/ regulations to promote women’s representation in the transport sector at all levels, including management workers, and to integrate gender considerations	LGED/ PMU	LGD/ World Bank
Institutional Development of Government Agencies		
Increase women’s participation and representation in transport sector institutions by having more female staffs working in RTIP2 PMU and building a plan to promote at least one female staff to management position	LGD/ LGED/ PMU	LGD/ World Bank
Sub-projects Design		
Carry out intensive consultation with the affected women and their communities, NGOs and civil society organizations, professionals, and the like to identify the impact details, including safe and secure transport for women and girls, and propose the most appropriate mitigation measures which shall be taken into revision of the design documents, if required. Safety and security definitions should be broadened to include physical safety (e.g., not being injured in any type of traffic accident) as well as freedom from fear of sexual violence and harassment in transport.	Detailed Design Consultants	PMU/ LGED/ World Bank
Encourage the detailed design consultants to hire female workers, especially technical staffs graduated from engineering university.	Detailed Design Consultants	PMU/ LGED/ World Bank
Build a “Provide training for unskilled female workers” item in the Bill of Quantity (BOQ) of bidding document. The Bidders will quote for this item in their bids.	Detailed Design Consultants/ PMU	LGED/ World Bank
Implementation and Maintenance		
Organize awareness raising campaign to all project-related agencies to promote the increase of female workers ratio and “equal pay for equal work”.	PMU/ LGED	LGED/ World Bank
Provide training for unskilled female workers as quoted in the BOQ	Contractors	PMU



Action Areas	Responsible Agency	Monitoring Agency
Hire trained female workers for simple works, ensuring: (i) equal pay for equal work; (ii) gender friendly work environment; and (iii) work place safety for women and children	Contractors	PMU
Assign a Gender Specialist in PMU to monitor the gender action plan throughout the project implementation	PMU	LGED/ World Bank

66. In terms of female employment in the transport sector, the Program has set a target that at least a 15 percent of the labor force employed in the rural road maintenance will be women and this will be measured through the indicator “Percentage of women employed in road works (relative to total labor force employed in road construction)”. Since female employment in road maintenance in rural areas is 13 percent, having 15 percent will play a significant role in filling this gender gap. This action for improving the livelihoods of women is well aligned with the 2011 National Women Development Policy of Bangladesh and with the LGED’s Gender Equality Strategy (GES).

67. An indicator “Road safety audit carried out for all roads rehabilitated under AF, incorporating safety and security in transportation for women” has also been added to evaluate the implementation of road safety activities as well as to reflect the perspective of “women as transport users” under gender action plan. Women living along the project roads will be consulted during the design and road safety audit process to understand their needs for safe and secure transportation. Results from this consultation will be taken into improvements of the roads design both from engineering solutions and additions of the road safety facilities like traffic lights, strengthened guardrails, etc.

Labor Influx, Gender-Based Violence (GBV), Sex Exploitation and Abuse (SEA) and Child Labor

68. The size of labor influx will be moderate with around 50-100 workers per contract, the majority of workers can be recruited locally. Though the number of outsider workers is considered on the “low” side compared to the community population, there are still potential social risks related to gender-based violence and sexual exploitation and abuse, especially from the troubling country data on the treatment of women⁹. The project therefore will adopt a series of measures to prevent, mitigate, and respond promptly and adequately to any case of gender-based violence.

69. The project will design and implement a “4C Program” which gathers all project-related agencies - Client, Community, Consultants and Contractors – to prevent, mitigate, and, if the situation arises, expeditiously respond to project-related instances of gender-based violence, sexual exploitation and abuse, and violence during project implementation. The project will mitigate these risks by minimizing labor influx through the inclusion of specific requirements in the bid documents that encourage hiring of local workers from the vicinity of the project areas.

70. This program will be designed and implemented by an NGO active in the country under the scope of sub-component B.2.1. This Program, at project level, will cover the following activities:

- (a) Organize an awareness-raising campaign on the Gender-Based Violence (GBV), Sex Exploitation and Abuse (SEA) for all project-related stakeholders, including Client, Community, Consultants and Contractors. This campaign

⁹ Bangladesh Bureau of Statistics (BBS)’ Report on Violence Against Women (VAW) Survey 2015 provides official statistics on the prevalence and nature of the various forms of VAW in Bangladesh. The data can be disaggregated to the national, divisional, urban, and rural levels. Through this survey, Bangladesh’s BBS and Statistics and Informatics Division (SID) has become one of the pioneers in rigorously measuring VAW. According to the survey, 72.6 percent of ever-married women experienced one or more forms of violence by their husband at least once in their lifetime. More than 27.8 percent of women reported lifetime physical violence by someone other than the husband (non-partner).



would include: (i) design/ print and distribute booklet that contains definitions of GBV/ SEA, acts that are considered harmful GBV/ SEA, preventive and mitigation measures to avoid such GBV/ SEA acts, place and person who acts as local service provider, GRM system information and procedures, contact person of the Client (LGED) who is charge of the GBV/ SEA, useful phone numbers such as police, clinic, etc.; (ii) undertake monthly training programs for workers and community to reduce GBV/ SEA; (iii) support the Client to promote similar campaign to the whole sector;

- (b) Develop a web-based Grievance Redress Mechanism (GRM), which will be managed by the Client, to adequately and promptly address any potential grievance from survivors of GBV and SEA. This GRM will be the basis to develop a sector-level GRM for the whole LGED at later stage. The complaints registered in this system will be managed by a dedicated administrator that will liaise immediately any GBV and SEA complaints with the NGO, the Client (LGED/ PMU), and the World Bank. If the GRM receives a case on sexual exploitation and abuse related to the project, it will be recorded, and the survivor will be referred to the NGO for assistance and, if needed, for referral to other service providers. Service providers will also be trained about the availability of the GRM, so that they can refer survivors of gender-based violence in the project area. The contracted NGO will keep the information confidential to protect privacy of survivors. The project intends to strengthen the GRM through information and communication technology to ensure that all complaints regarding sexual exploitation and abuse are immediately reported to the Government and to the World Bank. In cases, where the perpetrator(s) is linked to project activities then the contractor will take appropriate actions as per the Code of Conduct signed by the particular person and under the effective law in Bangladesh;
- (c) Provide capacity building for the Client (LGED/ PMU) to manage the GBV issue in sustainable manner for the whole transport sector. The implementing agency will appoint a gender focal point for coordinating activities linked to the gender-based violence and sexual exploitation and abuse mitigation. This person will lead mitigation of gender-based violence and sexual exploitation and abuse risks from the implementation agency side. The Program will provide training for this focal person who will also be in constant communication with the contracted NGO to have the issues managed properly and promptly.

71. In addition, the project will enforce contractual obligations into the works contracts to reduce the gender-based violence/sexual exploitation and abuse risks, including:

- (a) The bidding documents will include specific requirements that minimize the use of expatriate workers and encourage hiring of local workers, thereby minimizing labor influx.
- (b) The prospective contractors will be briefed on the Environmental, Social, Health, and Safety (ESHS) and Occupational Health Safety (OHS), as well as GBV and SEA related requirements. All Contractors staff and workers must attend the training provided by NGO under the “4C Program”.
- (c) Contractors will be required to submit “Codes of Conduct” with their bids. The codes will set clear boundaries for acceptable and unacceptable behaviors of all individuals and companies (including the contractor, sub-contractors, and their workforces), and specify sanctions, including for any incidents of gender-based violence or sexual exploitation and abuse. All project consulting firms will also be required to submit Codes of Conduct with their proposals.
- (d) The contractor will be required to establish anti-sexual harassment policies, and an Action Plan for implementing



ESHS/ OHS standards and preventing sexual exploitation and abuse.

- (e) Sexual activity with children under 18 - including through digital media - will be prohibited by the Code of Conducts. Mistaken belief regarding the age of a child and consent from the child will not be defended. The Codes of Conduct will include sanctions for noncompliance with this obligation.
- (f) The contractor will be required to provide training to workers on sexual exploitation and abuse and on the content and obligations derived from the code of conduct, through the partner nongovernmental organization (NGO).

72. Fulfilment of sexual exploitation and abuse related obligations by the contractor as stipulated in the contract conditions will be monitored by the Supervision Consultant and the PMU. This Consultant shall mobilize an adequate social and environmental expert to monitor this work of the contractors. This expert should also join the training on GBV and SEA under the “4C Program”.

Environmental Social Health and Safety (ESHS), Occupational Health Safety (OHS)

73. Principles and guidelines for contractor’s Codes of Conduct and management of worker’s health and safety will be incorporated in the bidding documents and will be regularly monitored by the supervision consultant during the execution of works. Contractors will be required to train all workforce at regular basis on the Workers Code of Conduct to ensure clear definition of obligations of contractors’ staff and workers with regard to implementing the project’s environmental, social, health and safety (ESHS) and occupational health and safety (OHS) requirements; help prevent, report and address gender-based violence (GBV) within the work site and in its immediate surrounding communities; and inform workers about national laws that make gender-based violence a punishable offence which is prosecuted. Labor camps will be constructed for those workers coming from outside the community and will be regularly monitored by the supervision consultant. The SIMF and RAP provide details on a comprehensive grievance redress mechanism that will also be used to manage grievance redress related to worker conduct, including monitoring timely resolution of grievances received from women. Two intermediate result indicators are included to the project results framework, which will help track timely and due resolution of grievance and monitoring of mandatory training of all contractor staff on GBV, ESHS and OHS Codes of Conduct.

Citizen Engagement

74. A robust approach will be adopted by RTIP with regard to the citizens’ engagement by involving all stakeholders including beneficiaries and affected persons inclusive of location, age, education, gender, disability, ethnicity and poverty through Consultations and Participation (C&P) approach. Regular consultations with the beneficiaries/stakeholders all through the project cycle, from initial screening to the implementation stage will be implemented. Alongside, the project’s Grievance Redress Mechanism (GRM) will cover all aspects of project implementation and will be available to project beneficiaries, affected persons and other interested parties. The GRM will be open to register grievances of citizens from all groups and provide notifications and outcomes back to the concerned citizens.

75. The RTIP Project management will also create a comments dashboard on the project’s website whereby the stakeholders will be able to provide comments on the project’s activities. Finally, the project will carry out surveys on the sub-project wise participation of the direct beneficiaries and project affected people in the Citizen Engagement process through the above C&P approach. The first survey will be carried out in the first year of the AF which will establish the benchmarks and the final survey will be carried out in the last year of the project period. The data from these two surveys



will allow to assess the opinions/usefulness of the citizen engagement process. An indicator to measure such participation has been included in the project Results Framework.

76. All through the project period, the comments and feedback from the consultations, GRMs and comments notice board of the project's website, will be analyzed regularly to close the feedback loop and the information/data thus analyzed will be used in the project's implementation. The overall interventions of the Citizens' Engagement will be included in the periodic quarterly report of the RTIP which will be shared with World Bank.

77. To facilitate the Citizen Engagement process and also to enhance the project monitoring, transparency, and social accountability, the project will use and further deepen earlier initiatives undertaken under other IDA-funded projects. Already, smartphone-based geospatial applications are being used by agencies in low-capacity regions for monitoring of work sites and receiving citizens' feedback and grievances. The project will incorporate these mechanisms and provide training on different aspects of filing, receiving, and responding effectively to stakeholders' grievances.

78. Several measures have been devised for effective citizen engagement to foster transparency and accountability:

- (a) Pro-active disclosure of the Project information: The Project will create a dedicated portal that will proactively disclose Project information. For instance, the portal will display latest information on flood affected roads (e.g. their spatial location, photos and construction and maintenance history), annual maintenance plan, detailed information on awarded contracts including contract costs, contractor names, progress and payments made. The website will have features for the visitors to ask questions and the LGED will provide subsequent response, if the visitor provides contact information. This will facilitate two-way communication between the LGED and the public. The LGED will publish a Project annual summary report. The report will contain, among others, summary information on Project achievements against targets, condition status of roads, cursory future plan and grievances receives versus resolved. A summary of the Project achievements will also be published in reputed national newspaper;
- (b) Civic engagement: Public engagement events will be conducted at union level. Events attendees will include local government representatives (respective union chairman and ward members including woman member), local civil society organizations representatives (if any), press and media, transport operators, local businesses and upazila level LGED officials. The events will explain the scope of the contracts, estimated costs, requirements on the part of the contractor regarding gender-based violence, occupational health and safety and environmental and social risk mitigation measures;
- (c) Signboard and Complaint Register: Each worksite will erect a signboard in Bangla within seven days of contractor's mobilization. The objective of the signboard will be to promote transparency and accountability of the Project through disclosure of information and by providing contact details the official(s) to be contacted in case of any grievances. The signboard will contain summary information regarding the sub-project including the name of the project, name of the implementing organization, contract amount, contract completion date, name of the official, along with contact details, for registering complaints, restrictions regarding engagement of child laborers. The worksite will also contain a complaint register for registering complaints which will be submitted to PMU after completion of the subproject;
- (d) Grievance Redressal: The LGED will implement Government's October 2015 directives to develop a comprehensive department-wide Grievance Redress System(GRS). The GRS will provide opportunities for entry



at multiple levels (upazila, district and central) and using different entry methods (e.g. internet, paper complaints, verbal complaints). The activities will involve the development of customized LGED GRS guidelines following Government guidelines, development of a LGED GRS portal for lodging LGED-specific grievances.

Climate Change and Disaster Risks

79. Bangladesh is located in a low-lying delta, formed by the dense network of the distributaries of the mighty Ganges, the Brahmaputra and the Meghna, between the Himalayas and the Bay of Bengal. The total land area is 147,570 sq. km and consists mostly of low and flat land, with some hilly areas in the northeast and southeast. A network of more than 230 major rivers and their tributaries crisscrosses the country. With an average elevation of 4 to 5 meters above mean sea level (MSL), nearly a third of the country is susceptible to tidal inundation and nearly 70 percent gets flooded during heavy monsoons. About 10 percent of the country is only 1 meter above the mean sea level, and one-third is under tidal excursions. Bangladesh is one of the most vulnerable countries in the world to natural calamities like cyclones and floods - 60 percent of the worldwide deaths caused by cyclones in the last 20 years occurred in Bangladesh. Overall, climate change is expected to decrease agricultural GDP by 3.1 percent each year—a cumulative \$36 billion in lost value-added for the period 2005-2050.

80. There are a lot of uncertainties associated with climate projections for Bangladesh. Nonetheless, climate change is likely to result in increased rainfall intensities during monsoon period, decreased rainfall during the dry season, rise of future sea levels, higher temperatures, higher wind speeds, and higher cyclone induced storm surge height and wave run-up in Bangladesh. These changes may consequently result in changes in flood regimes due to changes in precipitation pattern, with higher water level, longer duration of flooding, stronger flow of water, which are all factors that may affect the sustainability of the roads and associated structure such as bridges and drainage system.

81. The project design will take into account of the climate and disaster risk factor for the project to enhance the resilience and sustainability of the investment. The project roads are affected by periodic flooding with various degrees of severity during the monsoon season. Component A includes climate resilient measures for rehabilitation works. The measures incorporated into the engineering design account for about 15-20 percent of total cost of road works, and may include submersible road solution or raised road profiles in flooding-prone sections, improved capacity and quality of drainage system, strengthened approach road to bridges and strengthened slope protection. The selection of the cement concrete pavement design will further make the road surface more resilient to potential flooding damages. Ensuring adequate supervision during implementation, including quality management of climate resilience measures in road works will also support climate resilience of the investment. Component B will also support the climate resilience inclusion in the transport sector from the institutional aspect by providing training and knowledge exchange to sector staffs.

V. WORLD BANK GRIEVANCE REDRESS

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org



VI. SUMMARY TABLE OF CHANGES

	Changed	Not Changed
Results Framework	✓	
Components and Cost	✓	
Loan Closing Date(s)	✓	
Safeguard Policies Triggered	✓	
Procurement	✓	
Implementing Agency		✓
Project's Development Objectives		✓
Cancellations Proposed		✓
Reallocation between Disbursement Categories		✓
Disbursements Arrangements		✓
EA category		✓
Legal Covenants		✓
Institutional Arrangements		✓
Financial Management		✓
APA Reliance		✓
Other Change(s)		✓

VII. DETAILED CHANGE(S)

COMPONENTS

Current Component Name	Current Cost (US\$, millions)	Action	Proposed Component Name	Proposed Cost (US\$, millions)
A. Accessibility Improvement Component	338.10	Revised	A. Accessibility Improvement Component	542.02
B. Institutional	11.90	Revised	B. Institutional	18.91



Development and Enhancement Component			Development and Enhancement Component	
C. Rural Transport Safety Component	3.50	Revised	C. Rural Transport Safety Component	3.62
D. Contingent Emergency Response Component	0.00	Revised	D. Contingent Emergency Response Component	0.00
TOTAL	353.50			564.55

LOAN CLOSING DATE(S)

Ln/Cr/Tf	Status	Original Closing	Current Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
IDA-51070	Effective	30-Apr-2018	30-Apr-2019	30-Apr-2019	30-Aug-2019

Expected Disbursements (in US\$)

Fiscal Year	Annual	Cumulative
2013	1,729,200.00	1,729,200.00
2014	5,727,100.00	7,456,300.00
2015	8,202,000.00	15,658,300.00
2016	10,741,600.00	26,399,900.00
2017	12,215,500.00	38,615,400.00
2018	12,886,900.00	51,502,300.00
2019	13,862,400.00	65,364,700.00
2020	14,408,100.00	79,772,800.00
2021	14,539,300.00	94,312,100.00
2022	4,313,800.00	98,625,900.00

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Latest ISR Rating	Current Rating
Political and Governance	● Substantial	● Substantial
Macroeconomic	● Moderate	● Moderate



Sector Strategies and Policies	● Moderate	● Moderate
Technical Design of Project or Program	● Moderate	● Substantial
Institutional Capacity for Implementation and Sustainability	● Substantial	● Substantial
Fiduciary	● Substantial	● Substantial
Environment and Social	● Substantial	● Substantial
Stakeholders	● Substantial	● Moderate
Other		
Overall	● Substantial	● Substantial

COMPLIANCE**Change in Safeguard Policies Triggered**

Yes

Safeguard Policies Triggered	Current	Proposed
Environmental Assessment OP/BP 4.01	Yes	Yes
Performance Standards for Private Sector Activities OP/BP 4.03	No	No
Natural Habitats OP/BP 4.04	No	Yes
Forests OP/BP 4.36	No	Yes
Pest Management OP 4.09	No	No
Physical Cultural Resources OP/BP 4.11	No	No
Indigenous Peoples OP/BP 4.10	No	Yes
Involuntary Resettlement OP/BP 4.12	Yes	Yes
Safety of Dams OP/BP 4.37	No	No
Projects on International Waterways OP/BP 7.50	No	No



Projects in Disputed Areas OP/BP 7.60	No	No
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LEGAL COVENANTS – Additional Financing for Second Rural Transport Improvement Project (P166295)

Sections and Description

No information available

Conditions



VIII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Bangladesh

Additional Financing for Second Rural Transport Improvement Project

Project Development Objective(s)

The proposed Project Development Objective is: To improve rural accessibility in project areas (covering 26 districts) and strengthen institutional capacity for sustainable rural road maintenance.

Project Development Objective Indicators by Objectives/ Outcomes

Indicator Name	DLI	Baseline 2019	Intermediate Targets				End Target 2019
			1	2	3	4	
To improve rural accessibility in project areas (covering 26 districts) and strengthen institutional (Action: This Objective is New)							
1. Increase in population living within 2 km of all season upazila and union roads improved under RTIP2 in 26 project districts (Percentage)		0.00			1.20		2.80
Action: This indicator has been Revised							
2. Increase of upazila and union roads under RPM and PBMC sub-components of RTIP2 in good condition (IRI below 7, measured within the DLP) in 26 project districts (5,861 km of paved roads)		0.00			30.00		75.00



Indicator Name	DLI	Baseline 2019	Intermediate Targets				End Target 2019
			1	2	3	4	
(Percentage)							
Action: This indicator has been Revised							
3. Increase in level of satisfaction from road users in the project influence area (Percentage)		0.00			5.00		15.00
Action: This indicator has been Revised							
4. Increase in maintenance budget needs met for the rural roads (Percentage)		0.00	0.00	2.00	5.00	8.00	12.00
Action: This indicator has been Revised							

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline 2019	Intermediate Targets					End Target 2019
			1	2	3	4	5	
Accessibility Improvement (Action: This Component is New)								
5.i. Upgrading of UZR (Kilometers)		0.00	0.00	50.00	125.00	215.00	355.00	450.00
Action: This indicator has been Revised								



Indicator Name	DLI	Baseline	Intermediate Targets					End Target
		2019	1	2	3	4	5	2019
5.ii. Improvement of UNRs. (Kilometers)		0.00	0.00	50.00	150.00	250.00		370.00
<i>Action: This indicator has been Revised</i>								
6. Rehabilitation and periodic maintenance + Performance Based Maintenance Contract (PBMC) roads. (Kilometers)		0.00	0.00	500.00	1,500.00	3,000.00		4,428.00
<i>Action: This indicator has been Revised</i>								
7. Construction of ghats. (Number)		0.00	0.00	4.00	6.00	7.00		10.00
<i>Action: This indicator has been Revised</i>								
8. Rehabilitation of inland waterways (pilot). (Kilometers)		0.00	0.00	15.00	25.00	35.00		46.00
<i>Action: This indicator has been Revised</i>								
9. Climate-Resilient Rehabilitation of Roads (UZRs and UNRs) (Kilometers)		0.00	500.00	1,200.00				1,433.00
<i>Action: This indicator is New</i>								
Institutional Strengthening, Capacity Building and Governance Enhancement (Action: This Component is New)								



Indicator Name	DLI	Baseline 2019	Intermediate Targets					End Target 2019
			1	2	3	4	5	
10. Business Plan developed on the Maintenance Policy. (Text)		Draft Policy.	Approved by the Cabinet.	Business Plan Drafted.	Business Plan Implemented.			Business Plan Operational.
Action: This indicator has been Revised								
11. Implementation of ORA-linked Action Plan. (Percentage)		20.00	20.00	30.00	35.00	60.00		80.00
Action: This indicator has been Revised								
12. LGED implementation of Integrated Decision Support System (IDSS). (Text)		None						Existing PMIS and ePMS software upgraded
Action: This indicator has been Revised								
13. LGED implementation of comprehensive IT-based maintenance management system (Text)		Functionally limited non-networked RIS						IT-based MMS is functional
Action: This indicator has been Revised								
14. Percentage of women employed in road works (relative to total labor force employed in road construction) (Percentage)		13.00	13.50	14.00				15.00
Action: This indicator is New								
15. Contractor's workforce		0.00	70.00	100.00				100.00



Indicator Name	DLI	Baseline 2019	Intermediate Targets					End Target 2019
			1	2	3	4	5	
trained on ESHS, OHS and GBV Code of Conduct (Percentage)								
Action: This indicator is New								
16. GRM in place and active at all time in all works contracts (Percentage)		0.00	80.00	100.00				100.00
Action: This indicator is New								
17. Road safety audit carried out for all roads rehabilitated under AF, incorporating safety and security in transportation for women (Percentage)		0.00	80.00	100.00				100.00
Action: This indicator is New								
18. Sub-projects wise participation of direct beneficiaries and project affected people in citizen engagement process (Percentage)		0.00	50.00					80.00
Action: This indicator is New								



Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
1. Increase in population living within 2 km of all season upazila and union roads improved under RTIP2 in 26 project districts		Baseline, Mid-term and end project	GIS in LGED	Survey	LGED
2. Increase of upazila and union roads under RPM and PBMC sub-components of RTIP2 in good condition (IRI below 7, measured within the DLP) in 26 project districts (5,861 km of paved roads)		Baseline, mid-term, and end of project.	Surveys data	Surveys on road conditions.	Road Maintenance Management Unit in LGED.
3. Increase in level of satisfaction from road users in the project influence area		Baseline, mid-term, and end of project.	Road User Survey.	Surveys on road users	LGED
4. Increase in maintenance budget needs met for the rural roads		Baseline, yearly and end of project.	Budget reports.	Collection data from Budget reports	LGED



Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
5.i. Upgrading of UZR	Km-cumulative	Baseline, yearly, and end of project	Project Progress Reports.	Measurement	LGED
5.ii. Improvement of UNRs.	Km-cumulative	Baseline, yearly, and end of project	Project Progress Reports.	Measurement	LGED
6. Rehabilitation and periodic maintenance + Performance Based Maintenance Contract (PBMC) roads.	Km-cumulative	Baseline, yearly, and end of project	Project Progress Reports	Measurement	LGED
7. Construction of ghats.	Number-cummulative	Baseline, yearly, and end of project	Project Progress Reports.	Percentage of completed value	LGED
8. Rehabilitation of inland waterways (pilot).	Km - cumulative	Baseline, yearly, and end of project	Project Progress Report.	Measurement	LGED
9. Climate-Resilient Rehabilitation of Roads (UZRs and UNRs)	Km - cumulative	Yearly and end of	Project Progress	Measurement	LGED



		project	Reports		
10. Business Plan developed on the Maintenance Policy.		Yearly and end project.	Budget reports, IPA reports.		LGED
11. Implementation of ORA-linked Action Plan.	% of LGED targets resolved.	Baseline, y early and end of project.	Project Progress Reports, IPA Reports.	Data collection from reports	LGED
12. LGED implementation of Integrated Decision Support System (IDSS).	Technical milestones met	Yearly and end project	Project Progress Reports, IPA reports.	Data collection from reports	LGED
13. LGED implementation of comprehensive IT-based maintenance management system		Yearly and end of project	LGED reports	Data collection from reports	LGED
14. Percentage of women employed in road works (relative to total labor force employed in road construction)		Yearly and end of project	LGED's Planning Department Reports	Data collection from reports	LGED
15. Contractor's workforce trained on ESHS, OHS and GBV Code of Conduct		Quarterly and end of project	Project Progress Reports	Data collection from reports	Contractors/ LGED
16. GRM in place and active at all time in all works contracts		Quarterly and end of	Project Progress	Data collection from reports	Contractors/ LGED



		project	Reports		
17. Road safety audit carried out for all roads rehabilitated under AF, incorporating safety and security in transportation for women		Quarterly and end of project	Design Documents/ Project Progress Reports	Data collection from reports	LGED
18. Sub-projects wise participation of direct beneficiaries and project affected people in citizen engagement process		Year 1 and end project	Community survey	Survey	LGED

