

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country : The People's Republic of Bangladesh

Project : Chattogram - Cox's Bazar Highway Improvement Project (E/S)

Loan Agreement : 12 August, 2020

2. Background and Necessity of the Project

(1) Current State and Issues of the Road Sector in Bangladesh

In the People's Republic of Bangladesh, the demand for transportation has increased in line with the GDP growth of over 6% per year over the last ten years. The road sector, which accounts for 70% of passenger traffic and 60% of freight traffic in all modes of transport, plays an important role in the economic growth of the country. National Highway 1 (N1), which runs from Dhaka to Cox's Bazar via Chattogram, has been positioned in Bangladesh's Road Master Plan (2009) as the country's most important arterial road linking the country's major cities. As the primary transport route to Matarbari Port, the construction of which is currently being supported by an ODA Loan, N1 is expected to become a key route for freight traffic, connecting the port to Dhaka and Chattogram, the country's commercial and industrial centers.

However, currently, the section of N1 south of Chattogram is a single-lane road with insufficient width. Especially in the urban sections, there are multiple modes of transport such as rickshaws and auto-rickshaws, in addition to vehicles like passenger cars, buses, and trucks. This causes chronic traffic congestion and safety problems. After completion of Matarbari Port, N1 is expected to experience a significant increase in traffic volume, including large container vehicles. According to the Matarbari Port Development Project (2017), the necessary travel time from Matarbari Port to Chattogram (approx. 130 km) is estimated to increase from 123 minutes in 2017 to 438 minutes in 2035.

The improvement of road quality and road safety to promote further economic growth has been included in the Government of Bangladesh's various policies, such as the Seventh Five Year Plan (2016/17 to 2020/2021) and the Road Master Plan (2009), which have also set forth the repair and rehabilitation of major national highways as a priority issue. In addition, the development of Matarbari Port is the highest priority project in Vision 2021, which prescribes the country's long-term development agenda. This port development is also positioned as a project that will contribute to the realization of the Bay of Bengal Industrial Growth Belt (BIG-B) Initiative, set forth by the Governments of Japan and Bangladesh.

Anticipating the opening of Matarbari Port, the Chattogram - Cox's Bazar Highway Improvement Project (hereinafter referred to as "the Project") will contribute to the smooth and safe transport of passengers and freight through the construction of

flyovers and bypass roads in urban sections of the major transport route N1 between Chattogram and Cox's Bazar, and is consistent with the policies of the Government of Bangladesh.

#### (2) Japan and JICA's Policy and Operations in the Road Sector

The JICA Country Analysis Paper for Bangladesh (March 2019) identifies transport as a priority issue, while Japan's Country Assistance Policy for Bangladesh (February 2018) has also set forth the priority area of "accelerating inclusive economic growth towards becoming a middle-income country," with initiatives for developing high-quality transport infrastructure in accordance with international standards and promoting the efficient movement of people and goods to contribute to the improvement of regional connectivity. The Project is thus consistent with this analysis and policy.

Additionally, by promoting the use of Matarbari Port, the Project will also contribute to the "pursuit of economic prosperity," as described in the Free and Open Indo-Pacific Strategy, from the aspect of enhancing efficiency and connectivity of the transport network with neighboring countries. The Project is also thought to contribute to SDGs 3.6 (halve the number of global deaths and injuries from road traffic accidents) and 9 (Industries, Innovation and Infrastructure).

JICA's past assistance in the road sector includes the Technical Cooperation Bridge Management Capacity Development Project (2015-2018), the ODA Loan Kanchpur, Meghna and Gumti 2<sup>nd</sup> Bridges Construction and Existing Bridges Rehabilitation Project (Loan Agreement signed in 2013), and the ODA Loan Cross-Border Road Network Improvement Project (Bangladesh) (Loan Agreement Signed in 2015).

#### (3) Other Donors' Activity

The Asian Development Bank (ADB) has indicated a policy of strategically supporting the development of economic corridors to promote intra-regional trade between Bangladesh and its neighboring countries, and is also providing assistance for the development of the railway network between Chattogram and Cox's Bazar in the SASEC Chittagong-Cox's Bazar Railway Project Phase 1.

### 3. Project Description

#### (1) Project Objective(s)

The objective of the Project is to achieve smooth cargo transportation between Matarbari Port and Chattogram by improving roads at congested town area along the National Highway No.1, thereby contributing to improvement of logistics in Bangladesh and to the economic growth of the surrounding area. The loan for Engineering Service (E/S) (hereinafter referred to as "the Loan") covers consulting service for review of feasibility study, detailed design and tender assistance to implement the Project smoothly.

(2) Project Site/Target Area

Chattogram District and Cox's Bazar District

(3) Project Component(s)

1) Road improvements (construction of flyovers and bypass roads in five urban sections, widening and alignment improvements in some sections)

2) Consulting services (F/S review, detailed design, tender assistance, construction supervision, implementation of traffic safety measures, etc.)

Of the consulting services for the Project, this ODA Loan covers the F/S review, detailed design, and tender assistance.

(4) Estimated Project Cost (Loan Amount)

90,000 million Yen (Loan Amount : 1,906 million Yen)

(5) Schedule

August 2020 – November 2023 (40 months in total)

The Loan will be completed when the E/S as indicated section 3, (3), 2) is finished.

(6) Project Implementation Structure

1) Borrower : The Government of the People's Republic of Bangladesh

2) Guarantor : N/A

3) Executing Agency: Roads and Highways Department, Ministry of Road Transport and Bridges (RHD)

4) Operation and Maintenance System: RHD

(7) Cooperation and Sharing of Roles with Other Donors

1) Japan's Activity: The Project intends to facilitate traffic on N1, a major route for transporting freight to and from Matarbari Port, which is currently being constructed under the Matarbari Port Development Project (E/S Loan Agreement signed in FY 2018, Phase 1 Loan Agreement Signed in FY 2019). In addition, four bridges on N1 are currently being constructed under the Cross-Border Road Network Improvement Project (Bangladesh), an ODA Loan project aiming to improve regional connectivity.

2) Other Donors' Activity: N/A

(8) Environmental and Social Consideration/Poverty Reduction/Social Development

1) Environmental and Social Consideration

① Category A

② Reason for Categorization

The project is likely to have significant adverse impact due to its characteristic under the JICA guidelines for environmental and social considerations April 2010

③ Environmental Permit

Being studied by the Preparatory Survey to be reviewed during consideration of this Loan.

④ Anti-Pollution Measures

Being studied by the Preparatory Survey to be reviewed during consideration of this Loan.

⑤ Natural Environment

Being studied by the Preparatory Survey to be reviewed during consideration of this Loan.

⑥ Social Environment

Being studied by the Preparatory Survey to be reviewed during consideration of this Loan.

⑦ Other / Monitoring

Being studied by the Preparatory Survey to be reviewed during consideration of this Loan.

2) Cross-Cutting Issues

The Project will alleviate traffic congestion and may contribute to climate change measures (mitigation measures). Details will be finalized during the Loan.

3) Gender Category: [Gender Project] GI (S) (Gender Activities Integration Project) Activity Component(s)/Reason for Categorization:

Wages will be set at the same level for men and women for construction work of the Project, and a quota for female employment will be set. Women will also be actively hired for the project implementation unit, to be established within the Executing Agency. Consequently, this is categorized as a Gender Integrated Project.

(9) Other Important Issues

Under the Memorandum of Understanding between the Governments of Japan and Bangladesh regarding PPP projects (signed in June 2017), a PPP expressway construction project is being considered for a section of N1 covered by the Project. If this PPP project is implemented, the road to be constructed by the Project is expected to become part of the expressway operated by the PPP project. However, the road specifications of the PPP project, such as width and design speed, will be designed to be consistent with the road standards of the Project. The possibility of using Japanese technologies in the Project will be studied in the detailed design and will be discussed with the relevant agencies in Bangladesh.

4. Targeted Outcomes
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(1) Quantitative Effects

Indicator	Baseline (Actual Value in 200x)	Target (200X) 【Expected value 2 years after project completion】
Annual average daily traffic volume (vehicles/day) Necessary average travel time (hours)	To be determined during the appraisal process for the loan for the construction phase of the Project.	
Number of passengers (1,000 persons/year)		
Freight volume (1,000 tons/year)		

## (2) Qualitative Effects

To promote logistics and economic growth in the target region and reduce greenhouse gas emissions by alleviating traffic congestion. Greenhouse gas emissions will be included as an indicator under (1) Quantitative Effects if quantitative indicators can be collected.

## (3) Internal Rate of Return

To be determined during the appraisal process for the loan for the construction phase of the Project.

## 5. External Factors and Risk Control

(1) Preconditions: N/A

(2) External Conditions: N/A

## 6. Lessons Learned from Past Projects

It was learned from the ex-post evaluation of the Casablanca South Ring Road Construction Project (2007) that when constructing a bypass road, from the perspective of regional division, it is important to prepare an action plan on social considerations based on design drawings that reflect the latest on-site information. Information should be disclosed to local residents and a sufficient amount of discussion should be held beforehand. Based on the results of those discussions, the necessary number of crossing structures should be incorporated into the plan and design. In light of this, an explanation of the Project will be provided and discussions held with local residents, so that the detailed design can be formulated to reflect the views of the local community in the planning and design of the structures.

## 7. Evaluation Results

The Project is consistent with the development issues and development policies of Bangladesh, as well as the assistance policies and analyses of the Government of Japan and JICA. Through road improvement in the main congested sections between Chattogram and Cox's Bazar on N1, where there is chronic traffic and safety problems, the Project will help promote passenger travel and physical distribution, including the

movement of freight to and from Matarbari Port, as well as help the social and economic development of the areas along the route, thereby contributing to the achievement of SDGs 3.6 (halve the number of global deaths and injuries from road traffic accidents) and 9 (Industries, Innovation and Infrastructure). Therefore, the necessity for JICA to support Project is substantial.

## 8. Plan for Future Evaluation

### (1) Indicators to be Used

To be determined during the appraisal process for the loan for the construction phase of the Project.

### (2) Timing

To be determined during the appraisal process for the loan for the construction phase of the Project.