

## Ex-Ante Evaluation

### 1. Name of the Project

Country: People's Republic of Bangladesh

Project: Urban Building Safety Project

Loan Agreement: December 13, 2015

Loan Amount: 12,086 million Yen

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

### 2. Background and Necessity of the Project

#### (1) Current State and Issues of the Disaster Risk Management Sector in Bangladesh

The Dhaka Metropolitan Area and Chittagong District are the two largest cities in Bangladesh. Serving as the center of politics and economy, they hold some 15% of the population and account for some 50% of the national GDP. Dhaka and Chittagong have around 300,000 and 180,000 buildings, respectively, many of which do not comply with the Bangladesh National Building Code (BNBC). This has made the cities vulnerable to earthquakes and other natural disasters.

Bangladesh is located in the Himalayan region, which is prone to frequent earthquakes. In fact, the country has experienced seven earthquakes with a magnitude of 7.0 or greater over the past 150 years. According to the study of the World Bank and the United Nations Development Programme, it is predicted that a future earthquake of that magnitude may cause the partial or complete destruction of approximately 30% of buildings and the death of 40,000 to 150,000 people in the Dhaka Metropolitan Area and the partial or complete destruction of approximately 80% of buildings in Chittagong District. Meanwhile, human-made disasters caused by illegal construction have been attracting increasing attention, especially since 2013, when a multi-tenant building housing a sewing factory was collapsed and killed 1,135 people.

#### (2) Development Policies for the Disaster Risk Management Sector in Bangladesh and the Priority of the Project

The Sixth Five Year Plan (from FY2011-2012 to FY2015-2016), the national development strategy of Bangladesh, aims to deal with urbanization by improving the seismic safety of buildings and creating a disaster-resilient environment in urban areas. Nevertheless, little progress has been made in the seismic retrofit of buildings. In particular, the problem is urgent in Dhaka and Chittagong, where political and economic functions are concentrated, since they have a great number of high-rise buildings, sewing factories, and other structures. Therefore, it is essential to implement the Urban Building Safety Project (hereinafter referred to as "this Project") to improve the safety of buildings vulnerable to disasters.

#### (3) Japan and JICA's Policy and Operations in the Disaster Risk Management Sector

The JICA Country Analysis Paper for Bangladesh (issued in April 2013) identifies disaster

preparedness as a priority issue. The Country Assistance Program for Bangladesh (issued in June 2012) also sets “overcoming social vulnerability” as a priority area, suggesting that Japan will support disaster risk management including earthquake preparedness. Thus, this Project is consistent with the policy and analysis of the Japanese Government and JICA.

In the disaster management sector, JICA implemented the Project for Capacity Development on Natural Disaster-Resistant Techniques of Construction and Retrofitting for Public Buildings (technical cooperation from 2011 to 2015) and the Financial Sector Project for the Development of Small and Medium-sized Enterprises (ODA loan approved in FY2011).

#### (4) Other Donor’s Activity

The World Bank will support disaster response strategies and seismic risk assessment in Dhaka. Meanwhile, the United Nations Development Programme (UNDP) is supporting disaster risk reduction and disaster management.

#### (5) Necessity of the Project

It is urgent for Bangladesh to mitigate the risk of earthquakes and other disasters in the Dhaka Metropolitan Area and Chittagong District, where urbanization is taking place along with economic growth. This Project aims to improve the safety of public buildings which can play an important role in disaster response as well as sewing factories and other private buildings which are serving as key hubs for economic activities. Thus, this Project is in line with the priority areas/development issues identified in Japan’s Country Assistance Program for Bangladesh as well as the development policies of the Government of Bangladesh. Therefore, it is highly necessary and relevant to implement this Project.

### **3. Project Description**

#### (1) Project Objective

The objective of the Project is to strengthen the building safety in urban cities by financing loans for building safety for private buildings through the PFI(s), and by improving the building safety for public buildings, thereby contributing to improvement of the social vulnerability of the urban cities through disaster risk reduction.

#### (2) Project Site/Target Area

Dhaka Metropolitan Area (Dhaka, Gazipur, and Narayanganj Districts) and Chittagong District

#### (3) Project Components

- 1) Loan for improvement of safety of private buildings: medium- and long-term financing to private businesses (e.g., sewing factories) through participating financial institutions (PFIs) to improve the safety of buildings

- 2) Improvement of safety of public buildings: construction of headquarters buildings for Bangladesh Fire Service and Civil Defense, seismic retrofit of 9 fire stations, and procurement of equipment
- 3) Consulting services: assistance for the selection of PFIs, detailed design, tender assistance, construction supervision, assistance for the monitoring of the implementation of this Project, etc.

(4) Estimated Project Cost (Loan Amount)

14,031 million Yen (Loan Amount: 12,086 million Yen)

(5) Schedule

This Project is planned to run from December 2015 to December 2023 (97 months in total). Project completion is defined as the completion of the disbursement of the loans for improvement of the safety of private buildings and the commencement of the service of the facilities provided to improve the safety of public buildings (in December 2022).

(6) Project Implementation Structure

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

2) Guarantor: N/A

3) Executing Agency:

① Loan for improvement of safety of private buildings: Ministry of Finance. The Bangladesh Bank (BB) is responsible for the implementation of this Project.

② Improvement of safety of public buildings: Public Works Department (PWD)

4) Operation and Maintenance System:

① Loan for improvement of safety of private buildings: BB

② Improvement of safety of public buildings: PWD

(7) Environmental and Social Consideration/Poverty Reduction/Social Development:

1) Environmental and Social Consideration

① Category: FI

② Reason for Categorization:

This Project is classified as Category FI, according to the JICA Guidelines for Environmental and Social Considerations (published in April 2010), because its sub-projects cannot be specified prior to JICA's approval of funding and because those sub-projects are expected to have a potential impact on the environment.

③ Others/Monitoring:

In this Project, the executing agencies are to classify each sub-project according to the laws and regulations of Bangladesh and the JICA Guidelines for Environmental and Social Considerations (published in April 2010) and take necessary measures depending on the category while receiving support from consultants hired through

this Project. None of the sub-projects will fall under the Category A

2) Promotion of Poverty Reduction:

None in particular.

3) Promotion of Social Development (e.g. Gender Perspective, Measure for Infectious Diseases Including HIV/AIDS, Participatory Development, Consideration for the Handicapped etc.):

None in particular.

(8) Collaboration with Other Donors

The World Bank will implement the Urban Resilience Project (hereinafter referred to as “URP”; 173 million USD; approved by the Board of Executive Directors in February 2015). This Project is planned to be implemented in close synergy with the URP. To be more specific, JICA will support the seismic retrofit of fire stations and sewing factories and the World Bank will development of disaster response systems as well as relevant public buildings and infrastructure. The technical review committee to be established through this Project is planned to be utilized by both JICA and the World Bank.

(9) Other Important issues

None in particular.

**4. Targeted Outcomes**

(1) Quantitative Effects

1) Performance Indicators (Operation and Effect Indicator)

Indicator	Baseline (Actual value in FY2014)	Target (in 2024) [Expected value two years after project completion]
Number of buildings that satisfy the BNBC requirements (buildings)	-	Increase
Number of seismic resistant fire stations that satisfy the BNBC requirements (buildings)	0	10
Number of loan contracts for improvement of safety of private buildings (contracts)	-	Increase
Recovery rate of loans for improvement of safety of private buildings (%)	-	Increase
Number of public relations activities about the architectural requirements of Bangladesh (activities per year)	-	Increase

\* There is no official data that can be used as a baseline to evaluate the safety of buildings. Moreover, it is difficult to set individual numerical targets. Therefore, this Project is to be evaluated by the increase or decrease in the indicators listed above from the baseline values to be determined from the

data collected on a sample basis.

(2) Qualitative Effects:

Mitigation of disaster damage.

(3) Internal Rate of Return:

The Financial Internal Rate of Return (FIRR) and Economic Internal Rate of Return (EIRR) were not calculated because sub-projects could not be identified.

## **5. External Factors and Risk Control**

(1) Preconditions: None in particular.

(2) External Factors: None in particular.

## **6. Evaluation Results and Lessons Learned from Past Projects**

(1) Results of Evaluation of Similar Past Projects

The results of the ex-post evaluation of the Human Settlements Improvement Project (II) in Indonesia indicated that when the project consists of multiple sub-projects, it is important for the central government to determine clear technical and project monitoring policies and enhance the capacity of the implementing organizations of sub-projects, such as local governments, by providing technical training and consulting services.

(2) Lessons for the Project

Because this Project also consists of multiple sub-projects for public and private buildings, the PWD and technical review committee will explain technical policies to project participants (construction contractors and private companies), and PWD staff and consultants hired through this Project will organize technical training and seminars for project participants.

## **7. Plan for Future Evaluation**

(1) Indicators to be Used

- 1) Number of buildings that satisfy the BNBC requirements (buildings)
- 2) Number of earthquake-proof fire stations that satisfy the BNBC requirements (buildings)
- 3) Number of loan contracts for improvement of safety of private buildings (contracts)
- 4) Recovery rate of loans for improvement of safety of private buildings (%)
- 5) Number of public relations activities about the architectural requirements of Bangladesh (activities per year)

(2) Timing of Next Evaluation:

Two years after the completion of the Project (ex-post evaluation)

