

Country Name	Project on Revision and Updating of Strategic Transportation Plan for Dhaka
People's Republic of Bangladesh	

I. Project Outline

Background	<p>The Dhaka Metropolitan Area (DMA), including Dhaka City, the capital of Bangladesh, had a population of 9.3 million in 2011. Urban transportation in DMA mostly relied on road transportation overcrowded with cars, buses, auto-rickshaws, rickshaws and others. That situation brought about serious traffic congestions and health problems caused by air pollution by the traffic. Besides, with rapid national economic growth, urban population rapidly increased. In order to cope with such situation, the government of Bangladesh formulated the “Strategic Transport Plan for Dhaka (STP)” in cooperation with the World Bank in 2005. STP prepared the urban transportation policy for 20 years from 2004 to 2024 placing high priority on the improvement of mass transit system, development of urban expressways, and establishment of the execution and maintenance and operation organization for transportation projects. However, except two projects assisted by JICA, the World Bank and the Asian Development Bank (ADB), any other projects planned in STP were not executed, while the urban population had been expanding further than expected by STP and the traffic congestion had become worse.</p>								
Objectives of the Project	<p>Through revising STP for short-, medium-, and long-term perspectives and selecting high priority projects, the project aimed at promoting effective and efficient urban transportation in the target districts, thereby contributing to economic growth and alleviation of traffic congestion and air pollution.</p> <p>Expected goals through the proposed plan¹: By conducting the urban public transportation projects under the revised STP, economic growth, and alleviation of traffic congestion and air pollution are expected.</p>								
Activities of the Project	<p>1. Project Site: Dhaka, Gazipur, Manikganj, Munshiganj, Narayanganj and Narshingdi districts 2. Main Activities: 1) decision of traffic survey areas, 2) review of current situation and identification of development issues, 3) revision of STP and selection of prioritized projects, and 4) technical transfer of the methodologies for traffic survey, demand forecast, and data analysis. 3. Inputs (to carry out above activities)</p> <table border="0"> <tr> <td>Japanese Side</td> <td>Bangladeshi Side</td> </tr> <tr> <td>(1) Mission members: 24 persons</td> <td>(1) Staff allocated: 4 persons</td> </tr> <tr> <td>(2) Equipment: PCs, video cameras, projectors, geographic information system (GIS) software, computer aided design (CAD) software, etc.</td> <td>(2) Facilities and equipment: project office (3) Local cost: cost for utility of offices (electricity, water, and telephone)</td> </tr> </table>			Japanese Side	Bangladeshi Side	(1) Mission members: 24 persons	(1) Staff allocated: 4 persons	(2) Equipment: PCs, video cameras, projectors, geographic information system (GIS) software, computer aided design (CAD) software, etc.	(2) Facilities and equipment: project office (3) Local cost: cost for utility of offices (electricity, water, and telephone)
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Project Period	May 2014 - November 2016 (Extension: October 2015 - November 2016)	Project Cost	(ex-ante) 324 million yen, (actual) 316 million yen						
Implementing Agency	Dhaka Transport Coordination Authority (DTCA)								
Cooperation Agency in Japan	ALMEC Corporation, Oriental Consultants Global Co., Ltd., Katahira & Engineers International								

II. Result of the Evaluation

<Special Perspectives Considered in the Ex-Post Evaluation>

- Because an ex-ante evaluation had not been conducted for this project, there was no indicator for the “utilization status of the proposed plan” and the “expected goals through the proposed plan.” Therefore, the achievement of the “utilization status of the proposed plan” was evaluated by the three major recommendations made by the project, i.e., 1) the revised STP (hereinafter RSTP) was approved by the concerned agencies and the cabinet and disseminated to the stakeholders, 2) implementation responsibilities of the projects planned in RSTP were clearly allocated to the concerned government agencies, and DTCA oversaw and monitored the implementations of the projects, and 3) short-term projects planned in RSTP were implemented as proposed.
- The “expected goals through the proposed plan” was confirmed by the three factors stated in its statement, namely by the 1) economic growth, 2) alleviation of traffic congestion, and 3) alleviation of air pollution in DMA through implementation of the projects planned in RSTP. Their achievements were confirmed but not assessed in this ex-post evaluation as stated in the footnote 1.
- The ex-post evaluation was conducted by the questionnaire to and interviews with DTCA officials without field surveys visiting construction sites and interviewing with local authorities and residents due to the effects of COVID 19.

1 Relevance

<Consistency with the Development Policy of Bangladesh at the Time of Ex-Ante Evaluation>

The “Sixth Five Year Plan FY2011-FY2015” set the improvement of transport infrastructure development as one of the core targets in the context of Vision 2021². The plan emphasized the necessity of an overhaul of the entire urban transport system integrating multi-modal transport encompassing railways, roads and inland water transport. As a specific transport infrastructure development plan, STP prepared the “Urban Transportation Policy for 20 years 2004-2024)” and identified priority issues such as the improvement of mass transit system including 110 km in total of three bus rapid transit (BRT) lines and three mass rapid transit (MRT) lines, development of 330 km urban expressways, and establishment of the organization for implementation and maintenance and operation for these transportation projects. Since the project was planned based on the prioritized issues of the five year plan and STP, the project was consistent with the development policies of Bangladesh at the time of ex-ante evaluation.

¹ The degree of achievement of expected goals is not to be assessed in principle at the time of ex-post evaluation, since it is defined as the medium-to-long-term goals which will be attained as a result of crystallizing the proposed plan (“output” of the project).

² National socio-economic development vision of Bangladesh for the year 2021, the 50th anniversary of the nation.

<Consistency with the Development Needs of Bangladesh at the Time of Ex-Ante Evaluation>

STP placed high priority on the construction of three BRT lines and three MRT lines, and planned to commence them before 2010. However, except BRT line 3 assisted by the World Bank and ADB and MRT line 6 assisted by JICA, any other projects planned in STP did not move into action. Besides, along with the development of new towns in the capital, the urbanization has rapidly extended in the DTCA's jurisdiction including Dhaka, Gazipur, Manikganj, Munshiganj, Narayanganj and Narshingdi districts. Therefore, the project was consistent with the development needs of Bangladesh at the time of ex-ante evaluation.

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

In the Japan's "Country Assistance Policy for the Republic of Bangladesh" (June 2012), one of the two priority areas (medium objectives) was "accelerating inclusive economic growth towards the realization of becoming a middle-income country." In order to achieve this objective, it was planned to develop transportation and traffic infrastructures, promote efficient transportation of people and goods, and contribute to the mitigation of regional disparities paying attention to the diversification of means of transportation. Therefore, the project was consistent with the Japan's ODA policy for Bangladesh at the time of ex-ante evaluation.

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement for the Objectives at the time of Project Completion>

The objectives of the project were achieved by revising STP and submitting the "Revised Strategic Transport Plan for Dhaka" (RSTP) to DTCA by the time of project completion. RSTP prepared the urban transport master plan including the prioritization of urban transportation projects in DMA and short-, medium-, and long-term implementation plans.

<Utilization Status of the Proposed Plan at the time of Ex-post Evaluation>

RSTP prepared by the project has been utilized. RSTP was approved by DTCA in 2015, widely circulated to the stakeholders, and approved by the cabinet in 2016 as the urban transportation master plan for Dhaka. Implementation responsibilities for the projects planned were allocated to the concerned agencies, however specific actions to be taken by those organizations for some projects were not clearly stated in RSTP. This has caused insufficient allocation of the budget and human resources by the responsible organizations to the projects and delayed the implementation of them. DTCA and the Roads and Highways Department of the Ministry of Road Transport and Bridges (MRTB) have overseen and monitored all implementations of the projects. As for the implementation status of the short-term projects planned in RSTP, by the time of ex-post evaluation, in terms of the number of projects, 47% of the short-term projects planned were completed, 28% of them are ongoing, and 26% of them have not yet launched, while 79% of the projects in value terms have been implemented. Ongoing projects include the major projects of MRT Line 1, Line 5 and Line 6, BRT Line 3 projects, and the Dhaka Elevated Expressway project. JICA is currently providing financial assistance for MRT Line 1³, Line 5 (Northern Route)⁴, and Line 6⁵ which were highly prioritized in RSTP.

<Status of Achievement for Expected Goals through the Proposed Plan at the time of Ex-post Evaluation>

Achievement for the expected goals have not been verified. According to the observation of the officials of DTCA, traffic congestions and air pollution have been alleviated in the vicinities of the projects planned in RSTP and implemented. However, no data are available. Economic growth in DMA caused by the projects of RSTP was not verified because the survey has not been conducted.

<Other Impacts at the time of Ex-post Evaluation>

Environmental impact assessment and environmental control in construction works of the projects planned in RSTP have been executed complying with the Bangladeshi Environment Conservation Act (1995) and the Environment Conservation Rules (1997) and the JICA Guidelines for Environmental and Social Considerations (April 2010). According to DTCA, no serious environmental issues associated with the construction works has been reported except some minor issues of dust and traffic congestions. The issues have been accordingly handled by the project authorities concerned including the Dhaka Mass Transit Company Limited and others. Land acquisition and resettlement has taken place in MRT Line 1, Line 5 (Northern Route) and Line 6, and payment of compensation for land acquisition has been conducted based on the Resettlement Action Plan (RAP) developed under the JICA Guidelines for the Environmental and Social Considerations (April 2010) and Bangladeshi laws including the Acquisition and Requisition of Immovable Property Ordinance (1982), the Cash Compensation by Law, and the Land Acquisition Act (1994).

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is high.

Status of Achievement of Utilization Status of the Proposed Plan and Expected Goals through the Proposed Plan

Aim	Indicators	Results
Utilization Status of the Proposed Plan: STP will be revised appropriately, and effective and efficient urban transportation development will be promoted in Dhaka, Gazipur, Manikganj, Munshiganj, Narayanganj and Narshingdi districts.	Indicator 1: RSTP will be approved by the concerned agencies and the cabinet and disseminated to the stakeholders.	(Ex-post Evaluation) Achieved RSTP was approved by DTCA in 2015 and by the cabinet in August 2016. The draft of RSTP was distributed to the concerned agencies, and after the approval by the cabinet, it was widely circulated to the stakeholders including the government agencies, local authorities and governmental construction companies concerned. RSTP was also released on the internet for public comments.
	Indicator 2: Implementation responsibilities of the projects planned in RSTP will be clearly allocated to the concerned government agencies, and DTCA will oversee and monitor the implementations of the projects.	(Ex-post Evaluation) Achieved Implementation responsibilities for the projects planned in RSTP were allocated to the concerned government agencies including the Dhaka Mass Transit Company Limited, the Dhaka Bus Rapid Transit Company Limited, the Roads and Highways Department, and the Bangladesh Bridge Authority. However, specific actions to be taken by these organizations for some projects were not clearly stated in RSTP. This has caused insufficient allocation of the budget and human resources by these organizations to the

³ The Dhaka Mass Rapid Transit Development Project (Line 1) (2019)

⁴ The Dhaka Mass Rapid Transit Development Project (Line 5, Northern Route) (2018)

⁵ The Dhaka Mass Rapid Transit Development Project (IV) (2020)

		projects and delayed the implementation of them. DTCA and the Roads and Highways Department of MRTB have overseen and monitored all implementations of the projects.
	Indicator 3: Short-term projects planned in RSTP will be implemented as proposed.	(Ex-post Evaluation) Achieved By the time of ex-post evaluation, in terms of the number of projects, out of 47 short-term projects planned in RSTP, 22 have been completed (47%), 13 are ongoing (28%), and 12 have not been launched (26%). In value terms, 79% of the short-term projects planned in RSTP (10,511 million USD out of the planned 13,233 million USD) have been implemented. Ongoing projects include the major projects of MRT Line 1, Line 5 and Line 6, BRT Line 3 projects, and the Dhaka Elevated Expressway project. The delay of commencement of the projects are mainly caused by insufficient allocation of financial and human resources to the projects by the organizations in charge. JICA is currently providing financial assistance for MRT Line 1, Line 5 (Northern Route), and Line 6 which were highly prioritized in RSTP.
Expected Goals through the Proposed Plan: By conducting the urban public transportation projects under the revised STP, economic growth, and alleviation of traffic congestion and air pollution are expected. (not to be assessed)	Indicator 1: Economic growth in DMA.	(Ex-post Evaluation) Not verified The survey on the economic growth in DMA and its relationships with the implementation of the projects planned in RSTP has not been conducted.
	Indicator 2: Alleviation of traffic congestion in DMA.	(Ex-post Evaluation) Not verified According to the observation of the officials of DTCA, traffic congestions have been alleviated in the vicinities of the projects planned in RSTP and implemented. However, no data are available.
	Indicator 3: Alleviation of air pollution in DMA.	(Ex-post Evaluation) Not verified According to the observation of the officials of DTCA, air pollution has been alleviated in the vicinities of the projects planned in RSTP and implemented. However, no data are available.

Source: DTCA

3 Efficiency

Although the project cost was within the plan (the ratio against the plan was 98%), the project period significantly exceeded the plan (the ratio against the plan was 172%). The project period was extended twice due to the security reasons in Bangladesh caused by external factors beyond control of the project, and the requests made by the government of Bangladesh to do some additional surveys. The outputs were produced as originally planned by the end of extension period of the project. Therefore, the efficiency of the project is fair.

4 Sustainability

<Policy Aspect>

RSTP in itself is the urban transportation policy of the government of Bangladesh and the urban transportation master plan for DMA including Dhaka, Gazipur, Manikganj, Munshiganj, Narayanganj and Narshingdi districts. Urban transportation projects in DMA are ongoing at the time of ex-post evaluation according to the plans of RSTP.

<Institutional/Organizational Aspect>

Institutional and organizational strengthening including recruitments for urban transportation improvement has been actively promoted by the government of Bangladesh and DTCA. DTCA has established the Dhaka Mass Transit Co., Ltd. (DMTCL) for construction, operation and maintenance of metro, and the Dhaka Bus Rapid Transit Co., Ltd. (DBRTCL) for construction, operation and maintenance of bus rapid transit. DMP has created the Traffic Engineering Unit in it. DMTCL is recruiting more than 2,000 staff members and planning domestic and overseas training programs for them. DBRTCL is also proceeding recruitments for its business.

<Technical Aspect>

According to the engineers in the Traffic Engineering Section of DTCA, technical level of related agencies including DTCA is high enough to implement the projects planned by RSTP, and the projects are ongoing at the time of ex-post evaluation without any substantial technical problems.

<Financial Aspect>

The projects planned by RSTP have been implemented on the budget from the government of Bangladesh, the assistances from the development partners including JICA, ADB and others, and the private sector in the form of public-private partnership (PPP) arrangements. MRT projects or the top-priority projects of RSTP have been largely financed by the Japanese ODA loans of “Dhaka Mass Rapid Transit Development Projects” for Line 6 (2012-2020), Line 1 (2018-2026), and Line 5 Northern Route (2020-2027). With these financial resources, 79% of the short-term projects planned in RSTP in value terms have been implemented at the time of ex-post evaluation.

<Evaluation Result>

In light of the above, the sustainability of the effectiveness through the project is high.

5 Summary of the Evaluation

The objectives of the project were achieved by the time of project completion by revising STP and submitting RSTP. RSTP was approved by DTCA and the cabinet and circulated to the stakeholders. About 79% of the short-term projects planned in RSTP have been implemented by the time of ex-post evaluation. As for efficiency, the project period significantly exceeded the plan caused by external factors beyond control of the project. Considering all the above points, this project is evaluated to be highly satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- In order to accelerate the implementation of the projects planned in RSTP and overcome the delays, it is recommended that DTCA, through rigorous discussions and thorough coordination, specify the necessary actions to be taken by the responsible organizations and make them allocate sufficient budget and human resources to the projects.

Lessons Learned for JICA:

- Funding could be a critical factor in project implementations for most developing countries. In the case of this project, the execution rate of the projects planned in the master plan has reached at almost 80% in value terms. This is mainly because the finance has been

secured by the Japanese loans along with other development partners' assistances. This project demonstrates an advantage of the scheme of "technical assistance under finance and investment account" which provides technical assistances and yen loans under one umbrella.

- To ensure the implementations of the projects planned in a master plan, it is suggested not only to allocate responsibilities for projects' implementations to related organizations, but also to specify the necessary actions to be taken by the organizations. Clarification of the specific actions to be taken will enable each organization to plan resource allocations and implementations.



MRT Line 6 construction of elevated section near Kazipara Mirpur



BRT Line 3 construction of piers near Shahjalal International Airport