**PEOPLE'S REPUBLIC OF BANGLADESH**
**MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND COOPERATIVES**
**LOCAL GOVETNMENT ENGINEERING DEPARTMENT**

# PREPARATORY SURVEY ON URBAN DEVELOPMENT AND CITY GOVERNANCE PROJECT

# FINAL REPORT

**June 2021**

**Japan International Cooperation Agency (JICA)**

**Nippon Koei Co., Ltd.**
**Koei Research & Consulting Inc.**

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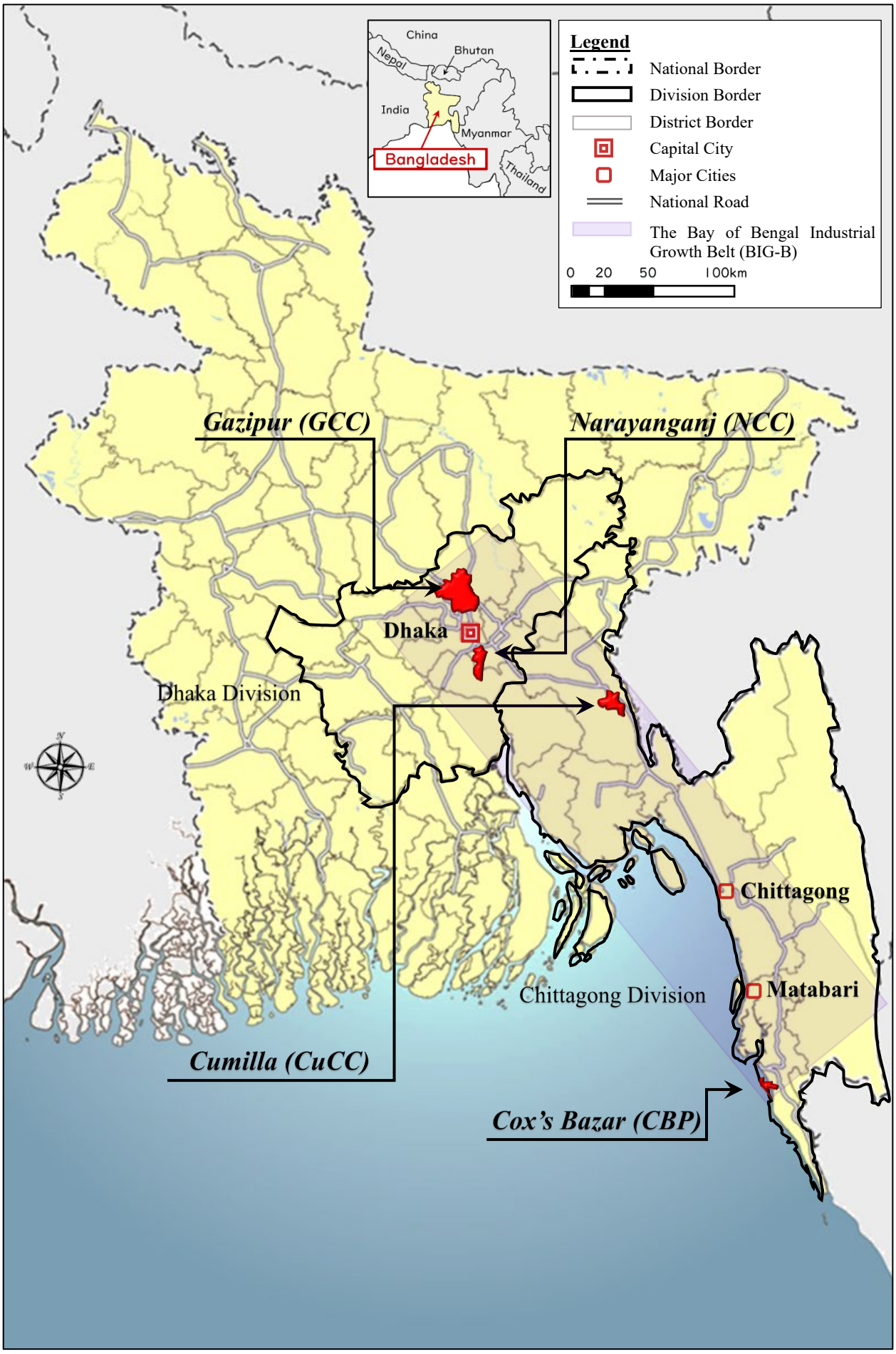
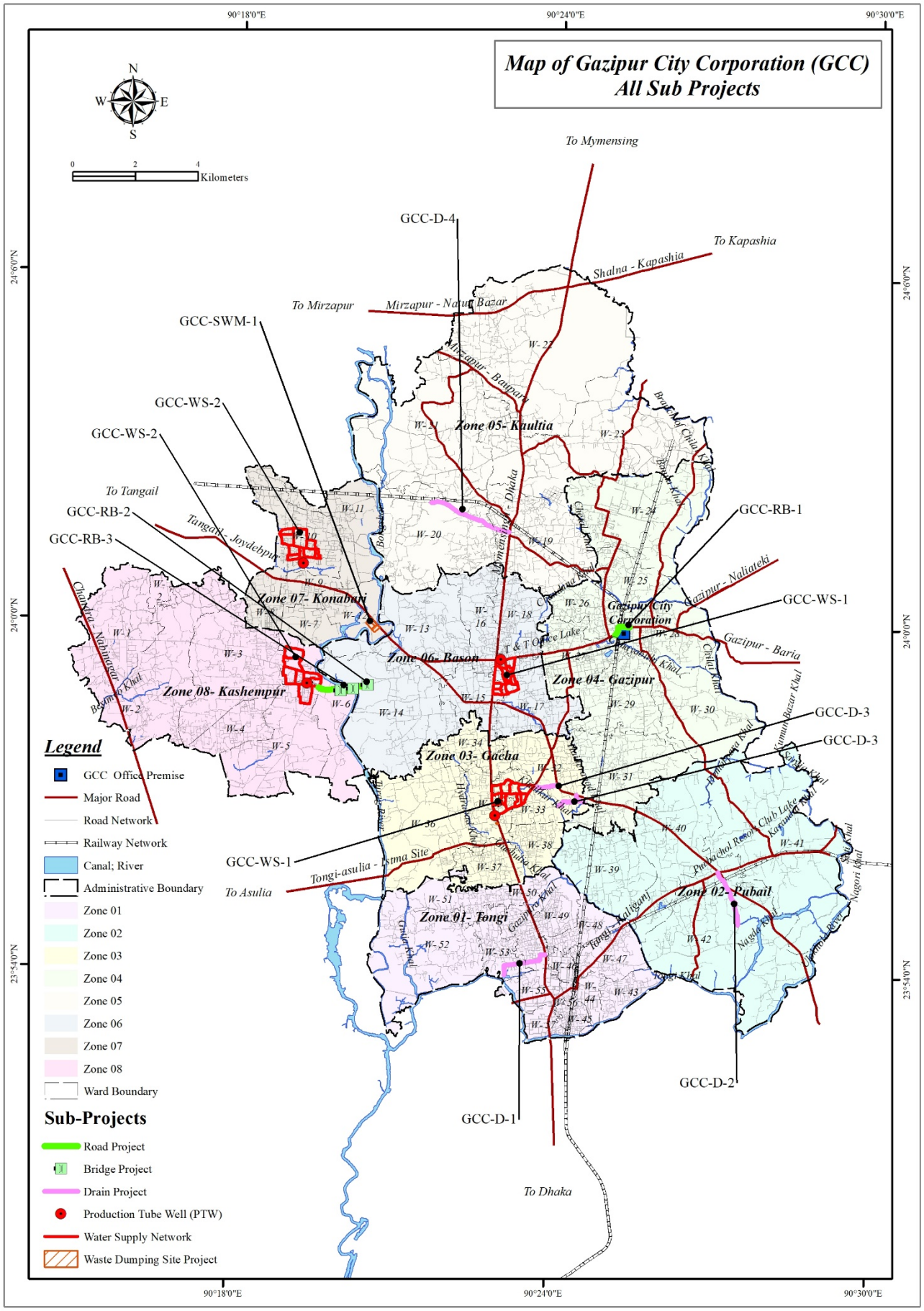



Source: JICA survey team

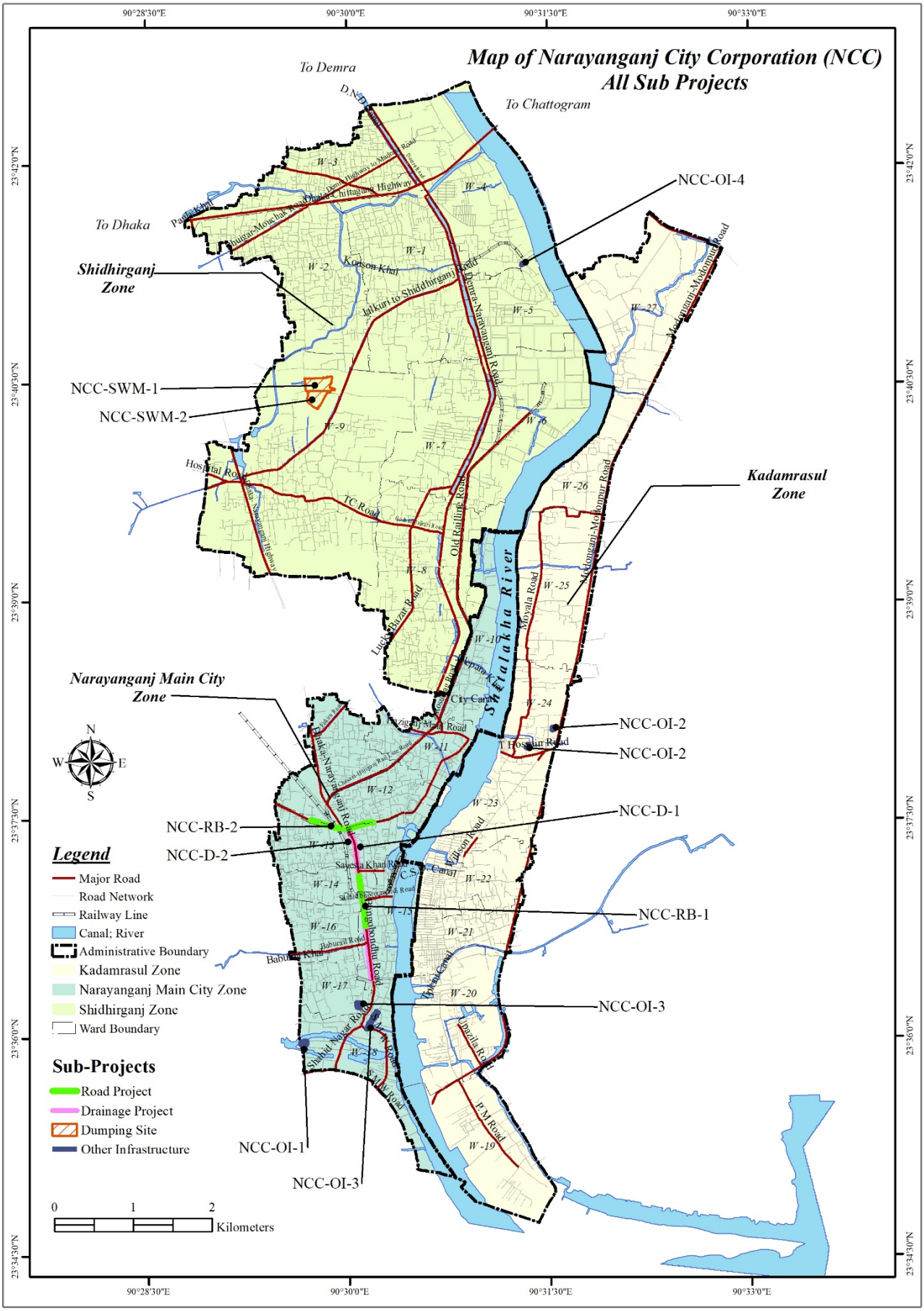
# Location Map of Survey Target Area (4 ULBs)




Source: JICA Survey Team

IDs of each subproject are referred to Attachment 7.3.1 (GCC-RB-1 to 3 refer to subprojects in Road and Bridge, GCC-D-1 to 4 refer to Drainage, GCC-WS-1 to 2 refer to Water Supply and GCC-SWM-1 refer to Solid Waste Management. GCC SWM-2 is not on the map due to its nature).

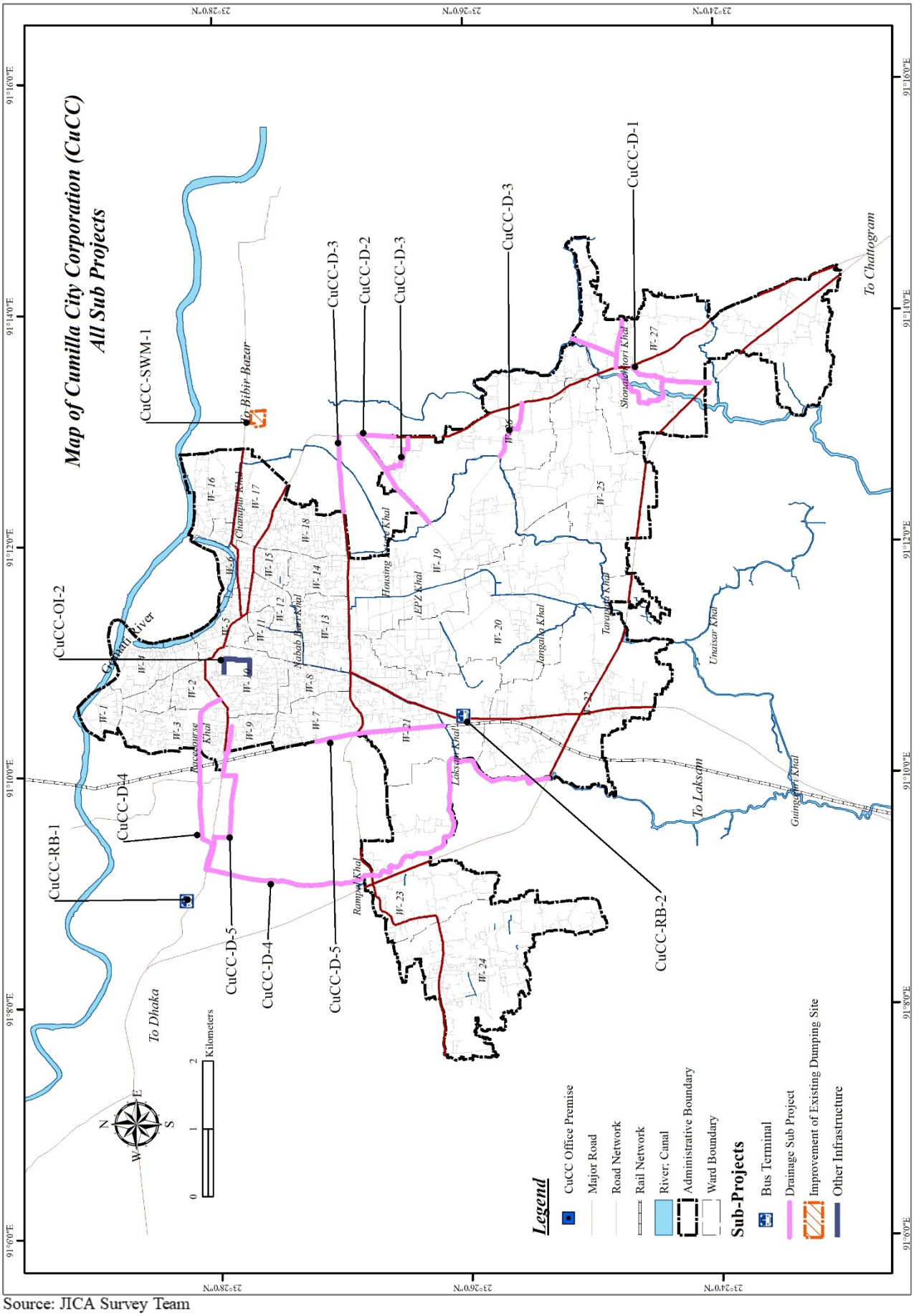
# Location Map of Target ULB (GCC)




Source: JICA Survey Team

IDs of each subproject are referred to Attachment 7.3.1 (NCC-RB-1 to 2 refer to subprojects in Road and Bridge, NCC-D-1 to 2 refer to Drainage, NCC-SWM-1 to 2 refer to Solid Waste Management and NCC-OI 1 to 4 refer to Other Infra).

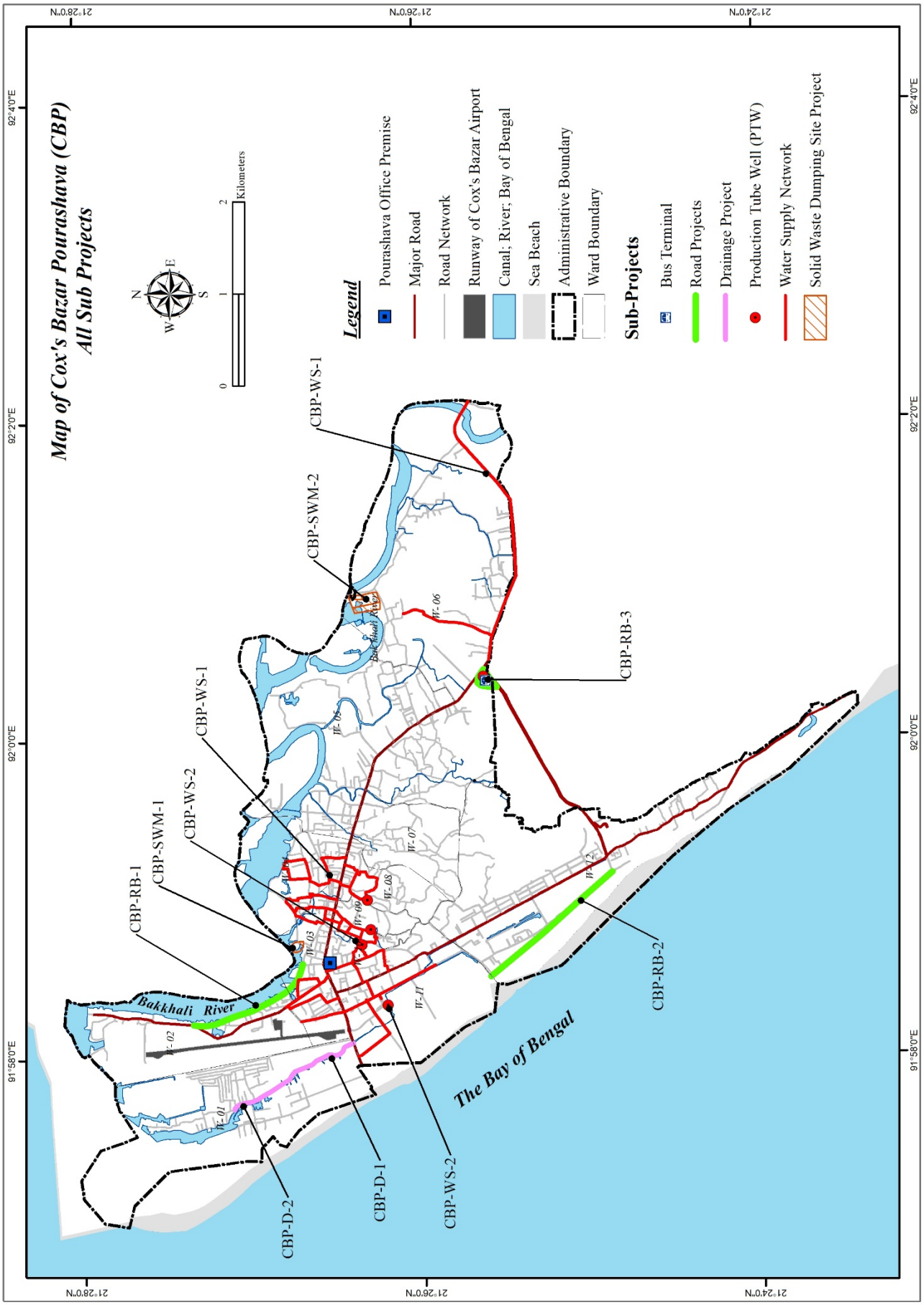
# Location Map of Target ULB (NCC)




Source: JICA Survey Team

IDs of each subproject are referred to Attachment 7.3.1 (CuCC-RB-1 to 2 refer to subprojects in Road and Bridge, CuCC-D-1 to 5 refer to Drainage, CuCC-SWM-1 refers to Solid Waste Management and CuCC-OI-2 refers to Other Infra. CuCC OI-1 is not on the map due to its nature).

# Location Map of Target ULB (CuCC)




Source: JICA Survey Team

IDs of each subproject are referred to Attachment 7.3.1. (CBP-RB-1 to 3 refer to subprojects in Road and Bridge, CBP-D-1 to 4 refer to Drainage, CBP-WS-1 to 2 refer to Water Supply and CBP-SWM-1 to 2 refer to Solid Waste Management. CBP OI-1 is not on the map due to its nature)

# Location Map of Target ULB (CBP)

# Photo of Priority Subprojects (1/2)

| | |
|---|---|
| 【Road and Bridge】 Construction of Railway Overpass in GCC (GCC-RB-1) | 【Road and Bridge】 Extension of Bus Terminal at Ashrafpur / Jangalia under CuCC (CuCC-RB-2) |
|  <br>Existing condition of the railway crossing |  <br>Existing Bus Terminal at Jangalia |
| 【Road and Bridge】 Road & bridge from Kasturaghat LGED bridge to Airport in CBP (CBP-RB-1) | 【Drainage】 RCC drain in East side of Bangbandhu road with footpath (Ch 00-Ch 2+225.00m) in NCC (NCC-D-1) |
|  <br>Connected road to the beginning point |  <br>Existing condition at 1st Ending point |
| 【Drainage】 Re-excavation of existing (2) Racecourse and Gungaijuri Canals (CuCC-D-4) | 【Water Supply】 Installation of groundwater supply system in ward 6 and ward 8 in CBP (CBP-WS-1) |
|  <br>Existing condition earth canal at mid- point<br>Proposed Excavation of canal |  <br>Proposed construction area for Distribution Pipeline (under city road) |

*Source: JICA Survey Team*

# Photo of Priority Subprojects (2/2)

| | |
|---|---|
| 【Solid Waste Management】Construction of New Landfill Site in GCC (GCC-SWM-1) | 【Solid Waste Management】Construction of new landfill site in Jarkri (phase I) in NCC (NCC-SWM-1) |
|  <br>Existing dumping site |  <br><br>Surrounding Area of Proposed New Landfill Site in Julkri |
| 【Solid Waste Management】Improvement of collection and transportation system and landfill site in CuCC (CuCC-SWM-1) | 【Solid Waste Management】Improvement of current solid waste management situation in CBP (CBP-SWM-1) |
|  <br><br>Waste transfer situation of compactor vehicle |  <br><br>Existing parking area for collection vehicle |
| 【Other Infra】Construction of Ali Ahmed Chunka Public place and Playground in NCC (NCC-OI-1) | 【Other Infra】Supplying and installation of streetlight and intelligent LED streetlight with necessary pole and related accessories in CuCC (CuCC-OI-1) |
|  <br>Existing condition of Ali Ahamed Chunka Playground |  <br>Existing Condition of road at Tomsom Bridge to Paduar Bazar, Proposed to Install LED Street light. |

*Source: JICA Survey Team*

# EXECUTIVE SUMMARY

## 1. Introduction

### 1.1 Background

Bangladesh has been experiencing rapid urbanization since independence in 1971. In 2016, 35.0% (57.00 million) of total population of the country lived in urban area. The urban population growth rate is 3.1% per annum, much higher than total population growth rate of 1.1% (World Bank 2018). The urbanization results from three main factors: expansion of urban areas, migration of rural population to urban areas and population growth within the urban areas, all of which are expected to continue at a similar or accelerated pace.

In Bangladesh, local governments in urban areas are divided into City Corporation (CC) and Paurashava (municipalities) (hereinafter CC and Paurshava are collectively referred to as "Urban Local Body (ULB)"), depending on the scales of their population and tax revenue. These ULBs have a larger scope of responsibility than their rural counterparts. They assume to play important functions as city planning, local infrastructure development/maintenance, and the delivery of public services including water supply and solid waste management. The urban areas, are faced with a range of issues while cities take critical roles to pull the economic development of the country as an industrial accumulation place.

In urban areas, infrastructure development does not catch up with rapid population growth and traffic jam or the environmental aggravation are actualized. Inconsistency between overall development plan of ULBs and the individual infrastructure development plan, delay of the infrastructure development and insufficient maintenance of the public facility deteriorate the situation. And, CCs and Paurashavas are Local Government Institutions mandated to provide public service to the urban citizens, however, they do not have enough capacity to provide those services to their dwellers. The reasons of the weak urban governance are: a) shortage of manpower; b) financially vulnerability; c) incompetence of officers; d) the limited power for recruitment; and the absence of participatory planning process and system.

In this connection, the Project is proposed for Yen Loan aiming at improving urban functions by addressing urban infrastructure development in parallel with governance improvement.

### 1.2 Objective of the Survey

The purpose of the survey is to study current situation and issues on capacity of ULBs, urban planning, and development and O&M of infrastructure; to identify priority urban infrastructure subprojects to be funded; to examine necessary technical assistance paying attention to improvement of city governance related to infrastructure; and to formulate the Project as an appropriate Yen loan project.

Target ULBs of the survey are Gazipur, Narayanganj, Cumilla, (three CCs) and Cox's Bazar (one Paurashava).

## Part I: Formulation of the Project

## 2. Urban Governance

### 2.1 Policy and Legal Framework of Urban Governance

#### 2.1.1 Policy Framework of Urban Governance

The Perspective Plan of Bangladesh (2010-2021): Marking Vision 2021 a Reality provides a broad framework for the course of actions required to achieve "Vision 2021". Drawn up by the Planning Commission, Perspective Plan seeks to make Bangladesh a middle-income country by 2021. Its nine priority development agendas include "building a sound infrastructure and "ensuing effective governance". This national long-term plan places a strong emphasis on the necessity of the improved governance and addresses the importance of promoting improvement of overall public administration capacity,

accountability mechanism, M&E capacity, and e-governance. Particular to challenges related to urban governance, the plan sets out that "policies and strategies in this (urban governance) area focus on institutional reforms and decentralization of responsibilities and resources to local governments; participation of civil society including women in the design, implementation and monitoring of local priorities; building capacity of all actors (institutions, groups and individuals) to contribute fully to decision-making and urban development processes; and facilitation networking at all levels".

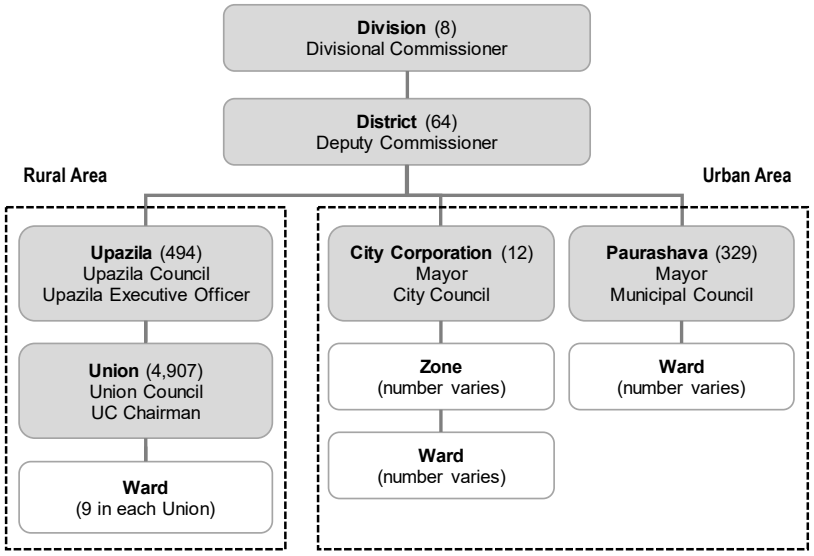
### 2.1.2 Legal Framework of Urban Governance

The administrative units, which shoulder central responsibility in providing urban services, are CCs and Paurashavas. It is said that the creation of urban local body (ULB) dates back in the mid-nineteenth century. But it was only recently that legal and functional frameworks for ULB were sorted out and promulgated. In 2009, the government enacted Local Government (City Corporation) Act (hereinafter "CC Act") and Local Government (Municipality) Act (hereinafter "Paurashava Act") to define, amongst others, autonomy, authority, functions, and scope of community participation for ULBs.

## 2.2 Local Governance System in Bangladesh

### 2.2.1 Local Government Institutions in Bangladesh

Administratively Bangladesh is made up of 8 Divisions and 64 Districts. Each district is further divided into Upazilas. The area within each Upazila is sub-divided into Unions, except for metropolitan areas.




*Source: Compiled by JICA Survey Team based on Bangladesh National Portal*

**Figure 1 Local Governance System in Bangladesh**

### 2.2.2 Supervisory Authorities for Urban Local Bodies

The Local Government Division (LGD) of the Ministry of Local Government, Rural Development and Cooperatives (LGRD&C) is the supervising authority for local government institutions, except for hill district councils which are under the Ministry of Chittagong Hill Tract Affairs. It is primarily responsible for development and implementation of policies relating to local government. Within the LGD, the Urban Wing of Administration Department oversees urban local body (ULB) matters.

The Local Government Engineering Department (LGED), a cell within the LGD, traditionally supported infrastructure development in rural areas, such as rural road, rural markets and growth centers. It recently strengthened its Urban Management Wing to manage projects in urban areas. Currently the LGED mandates cover development of rural, urban and water sector infrastructure. The LGED is also engaged in providing technical assistance, governance improvement and capacity building of urban local government.

## 2.3 Organizational Structure

The organizational structure of a Paurashava, prescribed by the LGD, consists of Mayor's Office, a Chief Executive Officer (CEO) Office and three divisions. The three divisions are namely Engineering Division (the head of Division is an Executive or Assistant Engineer), Administration Division (Secretary) and Health, Family Planning and Conservancy Division (Health Officer).

In case of CC, organization structure varies from one CC to another. To meet the growing demands of urban services and to attend properly to specific functions assigned to it, CC is entrusted to tailor its own structure (organogram and staffing table). In this light, CC proposes its own organogram and submits it to the government for review and approval.

## 2.4 Budget and Financial Management

### 2.4.1 Budget Structure of Urban Local Body

As provided in Bengal Municipal Account Rules 1935 and Municipal Budget Formulation and Execution Rules 1999, the budget document of ULB consists of three separate accounts. These are (i) Revenue Account for recurrent expenses, (ii) Development Account for infrastructure development (or asset creation) and (iii) Capital Account for borrowings and repayments. Capital Account is almost neglectable as borrowing is minimal in most ULBs.

Basically, income sources for Revenue Account and Development Account at ULB are made up of (i) own source revenues (e.g. collection of holding tax), (ii) central government financial transfers (e.g. Annual Development Programme (ADP)), and (iii) donor funds allocation. In ULB, generally, accounting for water supply service is separated from general account with an aim to maintaining sustainability of the said service.

### 2.4.2 Financial Data of 4 UDCG Target ULBs

As for original budgets and actual income/expenditures of the four ULBs from FY 2015/16 to FY 2017/18, the average real budget size of GCC is around BDT 3,400 million, while that of NCC is BDT 3,200 million, CuCC BDT 1,500 million and CBP BDT 260 million. Own source income represents 40% to 50% of the total income (Revenue and Development Account combined) at GCC, 15% to 25% at NCC, 20% to 30% at CuCC and 80% to 90% at CBP respectively during the same period. Dependency on government grant (ADP) and donor-funds is higher in NCC, particularly in FY 2017/18 when the total ADP receipt jumped to over BDT 3,000 million, a sharp increase from BDT 800 million of the previous year. Government funding is the largest source of income for Development Account at NCC, representing from 40 % (FY 2015/16) to 65% (FY 2017/18) of the total income. In Cox's Bazar, own revenue is the largest source of income for Development Account due to limited government funding and donor funding.

### 2.4.3 Taxation

CC can levy taxes, rates, fees and charges which are listed in Model Tax Schedule prescribed by the government. Similarly, Paurashava can levy taxes and non-taxes which are listed in Model Municipality Tax Schedule. Apart from the said model tax schedules, CC and Paurashava are allowed to impose new taxes and fees subject to pre-approval by the government.

### 2.4.4 Budget Preparation and Resource Allocation

Laws, rules and regulations that govern ULB's budget formulation, execution, monitoring and reporting are Bengal Municipal Account Rules 1935, Paurashava Budget Rules 1999, CC Act, Paurashava Act, and Paurashava Model Tax schedule 2014. Generally, both CCs and Paurashavas usually commence budgeting process sometime in March or April every year, following the guidance specified in Paurashava Budget Rules 1999. By law, a budget should be approved before May 31 considering suggestions and opinions of the citizenry.

Financial autonomy can be defined by the extent to which ULB raises revenues and allocates its resources independently. For certain external source funds, ULB can make choices which projects to be selected and implemented without constraints imposed by the government.

### 2.5 Development Planning

Preparation of development plans is mandatory for both CC and Paurashava. It is included among their responsibilities defined in CC Act and Paurashava Act. Both acts also touch upon ULB's function related to formulation of Master plan and land development scheme under "Town Planning", clearly separating it from the afore-mentioned "development plans".

There is no clear description provided in neither CC Act nor Paurashava Act in terms of what development plans are, but they can be conceived as "general plan" or "comprehensive plan". By drafting guidelines and providing training, donor-assisted projects are promoting the institutionalization of "development plans" in their target ULBs. JICA-assisted CCs prepared Infrastructure Development Plan (IDP) whose time horizon is 5 years. ICGP and C4C also exhort their target CCs to update the list of priority projects (infrastructure project list), a component of IDP, every year. ULBs supported by Municipal Governance and Services Project (MGSP) prepare their Capital Investment Plan (CIP), the core component of which is the list of capital investment projects and its multi-year implementation plan. Under SPGP, preparation of 5-year development plan is promoted. CBP prepared, through the assistance of Urban Governance Infrastructure Improvement Project (UGIIP), a Paurashava Development Plan (PDP).

### 2.6 Issues and Challenges in Governance of Urban Local Bodies

Despite notable improvement in many areas of city governance over the years, there are still constraints in management of city administration and service delivery.

Staff deployment, particularly in CCs, is only halfway through. Human resources are limited with many posts vacant. Enhancement of skills of officers and staffs on specific subjects is also a critical issue to ensure the minimum responsibilities and efficient work process**.**

It is often the case that physical plans (e.g. Master Plan) and development plans (e.g. IDP) are prepared without proper coordination with other service providers/national government agencies (limited coordination capacity). CCs and Paurashavas, in general, are weak in defining their strategies, setting priorities, estimating available resources, and ensuring that stakeholders work toward common targets. A well-formulated medium-term investment plan should serve as an effective tool for facilitating coordination with other service providers and resource allocation/mobilization, but the reality in ULB falls far short of this image (weak public investment management capacity).

Resource allocation is often made on unplanned and ad-hoc manner. The term - financial management - encompasses a wide range of management activities/systems from budget formulation, tax management, accounting and FM system, procurement, asset management, internal control to resource allocation mechanism. It is not too much to say that ULBs face challenges in almost all reams of FM.

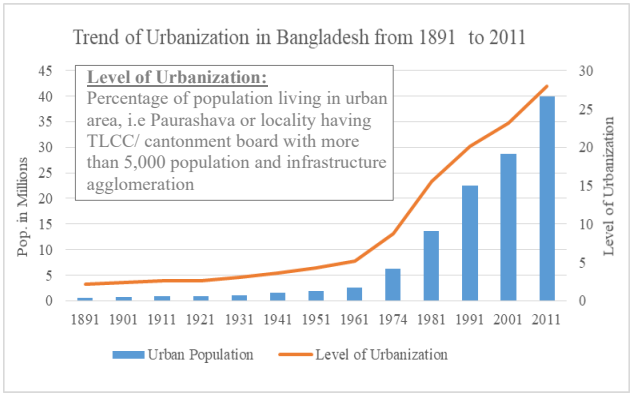
In Bangladesh, citizen participation has become a commonplace element in many planning efforts. It contributes greatly to identification and prioritization of development projects, based on which ULB can build and manage its project pipeline. Despite the positive efforts in enhanced citizen engagement, some CC officers assess that citizen participation on the ground still remains a long way from intended impacts.

One of the challenges overshadowing CCs' efforts to improve their administration is the fact that many legal instruments require framing and reframing (framing of legal instruments not completed).

## 3. Urban Development and Planning

### 3.1 Rapid Urbanization in Bangladesh

Urbanization is an inevitable phenomenon for the country like Bangladesh. Bangladesh has been experiencing quite rapid urbanization during the last few decades. Between 1961 and 2011, the country's total population increased from 55 million to about 150 million (about 273%) while the urban population increased from 2.6 million to about 43.43 million thus registering a growth of nearly 1600% (GoB, 2015; BBS, 2011). Level of urbanization, namely the percentage of population living in urban areas, was 2.18% in 1891, 2.43% in 1901, 4.33% in 1951 and 8.74% in 1974 (BBS, 1984). The urbanization got a momentum in 1981 due to the decentralization policy of the government and urban population became 15.54% of the total population. Following the urbanization trend, it is predicted that urban of Bangladesh will exceed 50 % within the next two decades (Morshed, 2013).




*Source: Bangladesh Bureau of Statistics,1984-2011*

**Figure 2 Trend of Urbanization in Bangladesh from 1891 to 2011**

### 3.2 General Information of Target Four Urban Local Bodies

Socioeconomic conditions of the four target ULBs are summarized in the table below.

**Table 1 Socioeconomic Conditions**

| Item | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| Division | Dhaka | Dhaka | Chattogram | Chattogram |
| District | Gazipur | Narayanganj | Cumilla | Cox's Bazar |
| Year Promoted to CC, or Paurashava A Class | 2013 | 2011 | 2011 | 1994 |
| Area ($km^2$) | 329.53 | 47.22 | 53.04 | 32.90 |
| Population (BBS2011) | 1,576,761 (Current area) | 709,364 | 326,366 | 167,477 |
| Pop. Density, 2011 | 4,785 | 15,023 | 6,154 | 5,090 |
| Location | Located about 22.5 km North of Dhaka | Located about 19 km South of Dhaka | Located about 100 km East from Dhaka | Located about 150 km South from Chattogram |
| No. of Ward | 57 | 27 | 9 | 12 |
| Income Level (Monthly Income) | No Description | No Description | BDT20,000-50,000 (30.5% of Household) | No Description |
| Social Structure | 70% people belong to 15-59 age range as work force | 59.2% people belong to 15-59 age range as work force | 26.3% of households are migrated. | Main occupation is business. |
| Education (Literacy Rates) | 64.4% Male:68% Female:60.2% | 57.5% | 66.4% Male:69.4% Female:63.1% | 55% |

*Source: Action Area Plan (GCC, NCC), Master Plan (CuCC), Paurashava Development Plan (CBP), *Website of GCC, NCC*

### 3.3 Plans of Urban Development

Urban planning system of Bangladesh has three-tiered structure which consists of (1) to (3) as shown below. Depending on the condition of the cities, additional plan such as (4) or (5) is prepared by CC.

**Table 2 Tiers of Urban Planning Master Plan in Bangladesh**

| Plan | Period | Jurisdiction (Basis Law) | Contents | Positioning |
|---|---|---|---|---|
| (1) Structure Plan (SP) | 20 Years | • RAJUK (Town Improvement Act 1953)<br>• Cox's Bazar Development Authority (Cox's Bazar Development Authority Act 2016)<br>• CC, Paurashava (Local Government Act 2009) | • Future urban structure (Strategic planning zone, etc.) | Goal-oriented plan |
| (2) Urban Area Plan (UAP) | 10 Years | | • Urban infrastructure development and land use control in future (Land use plan, Transportation and traffic management plan, Drainage and environmental management plan, Plan for urban services) | Control and management -oriented plan |
| (3) Detailed Area Plan (DAP) | 20 Years | | • Detailed land use | |
| (4) Action Area Plan (AAP) | 5 Years | • CC, Paurashava (Local Government Act 2009) | • Detailed land use by ward with sectoral plan and infrastructure facilities | Implementation-oriented plan |
| (4) Paurashava Development Plan (PDP) | 5 Years | | | |
| (5) Sectoral Plan | 20 Years | | • Plan by sectors based on structure plan | - |

*Source: JICA Survey Team*

## 3.4 Vision and Objectives of Master Plans in Target Urban Local Bodies

Vision and objectives of four target ULBs proposed in the current plans are described as follows.

**Table 3 Vision and Objectives of Master Plan (GCC)**

| | |
|---|---|
| Dhaka Structure Plan 2016-2035 | "Making Dhaka a livable, functional & resilient metropolis respecting local socio-cultural fabric & environmental sustainability. And this his vision has three pillars; Livability, Functionality and the Resilience." |
| Action Area Plan for Gazipur City Corporation (2016) | ➢ Formulation of Action Area Plan for provision of municipal facilities to meet basic infrastructure needs of Gazipur City Corporation<br>➢ Facilities to improve environment of the city<br>➢ To formulate policies for the best use of land and its control |

*Source: Dhaka Structure Plan 2016-2035, Action Area Plan for Gazipur City Corporation (2016)*

**Table 4 Vision and Objectives of Master Plan (NCC)**

| | |
|---|---|
| Dhaka Structure Plan 2016-2035 | "Making Dhaka a livable, functional & resilient metropolis respecting local socio-cultural fabric & environmental sustainability. And this his vision has three pillars; Livability, Functionality and the Resilience." |
| Action Area Plan for Narayanganj City Corporation (2016) | To build an environmentally friendly, clean, healthy, safe and poverty-free planned city by providing necessary services to all city dwellers |

*Source: Dhaka Structure Plan 2016-2035, Narayanganj Action Area Plan (2016)*

**Table 5 Vision and Objectives of Master Plan (CuCC)**

| | |
|---|---|
| Structure Plan | Overall vision: To make Cumilla as Eco City<br>Objectives:<br>➢ Facilitating urban growth to protect the valuable farmland and the environment and in the same time encourage non-agricultural activities.<br>➢ To support livelihood of the people in Camilla City and its influence area.<br>➢ Control undesired development throughout the City.<br>➢ To guide the City to perform its role efficiently and contribute in national development.<br>➢ To achieve a balance between employment and population.<br>➢ To ensure basic urban needs and promote urbanization and employment. |

| | |
|---|---|
| Urban Area Plan | Goal:<br>➢ Create an urban space for habitation with comfort, for economic betterment, social cohesion and environmental safeguard.<br>➢ The safeguard for easy movement calls for enough row, footpath, availability of transport and good connectivity.<br>➢ Well-disciplined use of land having appropriate service facilities will increase land value. All provided facilities provided should be maintained.<br>➢ Tree plantation, open space, well managed drainage etc. will enrich the Land use and living standard. |

*Source: Master Plan for Comilla City and its Influence Area (2014-2034)*

**Table 6 Vision and Objectives of Master Plan (CBP)**

| | |
|---|---|
| Development Plan for Cox's Bazar Town, Sea Beach Up to Tekhnaf, (2011-2031) | To develop Cox's Bazar and its surrounding areas as a World Class Tourist Centre with adequate facilities, infrastructure and amenities of living and livelihood. |
| Urban Area Plan | By 2025, every ward of tourist town Cox's Bazar, would like to be developed as a developed city with a planned infrastructure and socio-economic development, a clean tourism friendly citizen facility, and in terms of information technology. |

*Source: Development Plan for Cox's Bazar Town, Sea Beach Up to Tekhnaf, (2011-2031), Cox's Bazar Paurashava Development Plan*

## 3.5 Procedures of Urban Planning

Overall process of preparing urban planning master plan, which is commonly followed by every authority including CC and Paurashava is shown in the table below.

**Table 7 Planning Procedures of Urban Planning Master Plan**

| | |
|---|---|
| Inception Stage | ➢ Undertaking legal procedures; deployment of consultant<br>➢ Inception Workshop<br>➢ Reconnaissance Survey<br>➢ Primary area demarcation<br>➢ Mauza Map processing<br>➢ Establishment of BM<br>➢ Preparation of Inception Report are major tasks |
| Survey Stage | ➢ Conducting necessary surveys, studies, investigation and reviews<br>➢ Preparation of survey reports<br>➢ Working papers as per requirement of the TOR of master plan<br>➢ Preparation of survey maps |
| Interim Stage | ➢ Formulation of planning standard<br>➢ Review of policies, acts, rules and regulations<br>➢ Projection of future population<br>➢ Analysis of survey data<br>➢ Consultation meeting and public opinions assessment |
| Draft Master Plan Stage | ➢ Preparation of draft master plan<br>➢ Consultation meeting with stakeholders<br>➢ Feedback collection<br>➢ Revision and preparation of draft master plan. |
| Finalization & Approval Stage | ➢ Public hearing<br>➢ Modification as per logical feedback from experts & public hearing<br>➢ Finalization of the master plan,<br>➢ Approval of the master plan with legal process and gazette notification on the approval are major tasks |

*Source: Operational Handbook on Paurashava Master Plan Implementation, SPGP (JICA)*

## 3.6 Mechanism of Implementation of Master Plans

Projects mentioned in master plan are formulated based on the local demand collected by ward councilors through the discussion on WLCC. Criteria for prioritization of projects are often described in master plan, however, they are slightly different in actual implementation. According to the interviews with CC, there

are no criteria based on the physical data, nor feasibility plan. In addition, it is in most cases not so easy to find any direct alignment between IDP projects and existing master plan.

As development authorities including RAJUK and Cox's DA are empowered to formulate urban planning master plan, implementation of the plan by development control is also its jurisdiction. They provide the land clearance, approvals for building design, occupancy certificate, real estate housing area, etc., while GCC, NCC and CBP or other local government organization are not be entitled such activities within their jurisdiction area.

Furthermore, development authorities implement infrastructure development projects proposed/not proposed in master plan of ULBs. However, it is available only in case that development authorities conclude MoU with the ULB, which promises to handover the infrastructure after completion and ULB will operate/maintain it.

### 3.7 Issues in Implementation of Urban Planning

The gazette notification of the existing draft master plans for different CC and Paurashava are being delayed, which could be due to the existing bureaucratic procedure, lack of interest of the concern authorities and vested interest of different influential groups to some extent. It is assumed that lack of ownership of master plan by ULB has led to such problems, and lack of ownership could be resulted from this delayed approval too. Culture to implement the projects as per the master plan is not established, and this lack of recognition of importance leads the project implementation in inappropriate manner. This lack of recognition is related to the insufficient deployment of urban planner in ULBs.

## 4. Infrastructure Development

### 4.1 Development Direction in the M/P of Four ULBs by Subsector

(1) Road and Bridge

1) Gazipur

In Action Area Plan (AAP), roadway planning proposals are based on following approaches - traffic segregation, control entry - exit in highway / regional road; strict restrict future establishments long the highway; develop road network inside the city focusing on road classification (functional); improve & increase the share of alternative transport modes; develop appropriate stations to secure and ease of modal transfer; establish bus & truck terminal in the road network.

2) Narayanganj

In the AAP, NCC gave emphasis mostly in road widening, transportation capacity improvement, road intersection improvement, development of connectivity in the city, travel demand management, etc.

3) Cumilla

In the Urban Area Plan (UAP) of CuCC, they gave emphasis on the plan for road network development including secure of connectivity through construction of bridges, plan for transportation facilities, waterway development / improvement option, transportation system management, traffic calming, etc.

4) Cox's Bazar

In the Paurashava Development Plan, they gave emphasis in road network development, development of tourism, drainage network, water supply network, and environment.

(2) Drainage

1) Gazipur

In AAP in 2016, the following points are mentioned: 1) uninterrupted flow of the two rivers (parts of national river) and their branches are ensured; 2) river, canals, and pond should be source of recharge of ground; and 3) pond will be used as retention area of runoff.

2) Narayanganj

In Action Area Plan in 2016, installation of 4 pump stations and link drainage between Shitalakshya river and Buriganga river are planned to be constructed. West side of Shitalakshya river is mentioned as prioritized area.

3) Cumilla

In Urban Area Plan in 2014, the following points are mentioned: 1) main canal which will receive storm run-off from all the secondary drains and tertiary canal will be developed; 2) pump drainage will be provided for drainage from high land area around the Shasongacha Road near the Gomti left embankment; and 3) The existing kutcha drains throughout the city are to be progressively upgraded with brick or concrete.

4) Cox's Bazar

In the PDP, the following points are mentioned: 1) employment of adequate manpower to maintain clean drainage system, 2) construction of new drain, repair old drain and khal, select correct outfall areas and connect drainage network to that areas. 3) repair & extention of old khal, 4) preparation of drainage network, and 5) prevention from industrial waste from polluting drain and khal.

(3) Water Supply

1) Gazipur

In Detailed Area Plan, it is proposed that piped water network and continuous monitoring of tube well water to be introduced incrementally. It is expected to improve the present water supply network and new areas will be covered under a piped water supply system.

2) Narayanganj

In Detailed Area Plan, extension and rehabilitation of water supply system of NCC is proposed; and shifting the water source from deep tube well to surface water is recommended. In Action Area Plan, it is recommended to provide safe drinking water individually or community level basis. Also, it is proposed that practicing rainwater harvesting system will mitigate the demand for pure drinking water and will help to recharge groundwater.

3) Cumilla

In Structure Plan, it is proposed that increasing the present coverage of safe drinking water in rural areas by lowering the average number of users per tube well from the present 105 to 50 in near future by exploring new sources of ground water and improving existing piped water system.

4) Cox's Bazar

In Paurashava Development Plan (PDP) of Cox's Bazar Paurashava, strategy implementation plan is proposed including identification of possible area for pipe water supply, preparation of bill & bill collection system, employment of necessary manpower in water supply section, and enhance skill of manpower.

(4) Solid Waste Management

1) Gazipur

In Action Area Plan, there is no description of solid waste management except landfill site of solid waste including resource recovery facility and collection and transportation system (solid waste transfer stations on zonal basis). Considering current SWM situation, it means the consideration of final disposal site including improvement of collection and transportation system for each zone are necessary.

2) Narayanganj

In Action Area Plan, 3R is promoted based on the National 3R Strategy for Waste Management. Based on the concept, the sanitary landfill is promoted with the facilities related to 3R such as recycling center and biogas plant. And landfill with medical waste incinerator is promoted in the future.

3) Cumilla

In Urban Area Plan, sanitary landfill is proposed with waste reduction at household level. Based on the concept, the construction of sanitary landfill is proposed in the future. The required land is 4 ha for 2034. The collection and transportation system are not mentioned.

4) Cox's Bazar

In Paurashava Development Plan of Cox's Bazar, the supervision of collection system for the suitable operation and sanitary landfill construction is proposed. In addition, the secure of manpower for solid waste management as well as of budget is recommended.

## 4.2 Existing Condition

### 4.2.1 Road and Bridges

The existing situation in four cities regarding road and bridges are summarized as follows.

**Table 8 Existing Situation of Road and Bridges**

| Item | Gazipur (year: 2019) | Narayanganj (year: 2019) | Cumilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| Total length in km | 1,964 km in total<br>Trunk Roads:<br>Approx. 30% of total | 316 km in total<br>Trunk Roads:<br>25 km in total (three trunk roads)<br>Paved road:<br>80 % of total | 273 km in total<br>Trunk Roads:<br>Approx. 20% of total | 186 km in total<br>Trunk roads:<br>Approx. 20 km in total<br><br>Paved road:<br>90.25km<br>(54% of total) |
| Road Density | 5.96 km /km$^2$<br>(Including the trunk road) | 6.69 km /km$^2$<br>(Including the trunk road) | 5.15 km /km$^2$<br>(Including the trunk road) | 5.65km/km$^2$<br>(Including the trunk road) |
| Travel Time (average in city area) | 26 min. /10km<br>23 km/hr. | 28 min. /10 km<br>21 km/hr. | 30 min./10km,<br>20 km/hr. | 38 min./10km,<br>16 km/hr. |

*Source: Each City Corporation or Paurashava*

### 4.2.2 Drainage

The existing situation in four cities regarding drainage are summarized as follows. Since each ULB doesn't have inventory of drainage system, they don't generally have clear written type of information on detail situation of above information which cause to water logging.

**Table 9 Existing Situation of Drainage**

| | Gazipur (year: 2019) | Narayanganj (year: 2019) | Cumilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| Total length in km | Primary-106km<br>Secondary-53.6km<br>Tertiary-36km | Total-400km | Primary-27km<br>Secondary-81.64km<br>Tertiary -232.36km | Primary-25 km<br>Secondary-41 km<br>Tertiary - 125km |
| Linked River or Main canal | 1.Torag River<br>2.Chilai canal<br>3.Mogor canal<br>4.Hydrabad Khal | 1.Shitalakshya-River (90%)<br>2. Dhaleshwari-River (10%)<br><br>* (): ratio of discharge. | 1.Kutakhali channel<br>2.Goyanjhuri channel<br>3.EPZ To Medical college channel<br>4.Airport East channel<br>5.Dishabondo channel<br>6.Unaisal channel<br>7.Kudalia channel<br>8.khuchaitoli channel | 1.Bakkhali (7)<br>2.Bay of Bengal (1)<br><br>* (): number of outfall. |

*Source: FINAL PRE-FEASIBILITY REPORT GAZIPUR CITY CORPORATION, Feb. 2017, Hifab, Paurashava Development Plan (PDP) of Cox' Bazar Paurashava*

### 4.2.3 Water Supply

The existing situation in four cities regarding water supply system are summarized as follows.

**Table 10 Existing Situation of Water Supply**

| Item | Gazipur (year: 2019) | Narayanganj (year: 2019) | Cumilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| Water Supply Population | 450,000 (90,000HH) | 120,000 (28,000 HH) | 19,315 (3,863 HH) | 10,000 (2,000HH) |
| Average Daily Water Supply Volume | 59,535 m3/day | 24,000 m3/day | 15,000 m3/day | 2,400 m3/day |
| Water Supply Hour | 14 hours/day | Intermittent | 7 hours/day | 10 hours/day |
| Production Tube Well with Submergible Pump | 63 nos. | 31 nos. | 23 nos. | 9 nos. |
| Deep Hand Tube Well | 900 nos. | N/A | 102 nos. | 161 nos. |
| Shallow Hand Tube Well | N/A | N/A | 270 nos. | 200 nos. |
| Over Head Tank | 3 nos. | 8 nos. | 6 nos. | Not in Present |
| Water Treatment Plant | Not in Present | 2 Nos (river water) | Not in Present | Not in Present |
| Water Supply Pipe | Total: 357 km No facility ledger document of water supply pipe | N/A No facility ledger document of water supply pipe | Total: 165 km $\phi$ 100 70 km $\phi$ 150 90 km $\phi$ 200 5 km | Total 29 km $\phi$ 100 15 km $\phi$ 150 10 km $\phi$ 200 3 km $\phi$ 250 1 km |

*Remarks: N/A means information is not available*
*Source: GCC, DWASA, CuCC, CBP, Paurashava Development Plan (PDP) of Cox' Bazar Paurashava, Climate Resilient Water Safety Plan for Cox' Bazar Paurashava, ICGP report Working Paper 6,*

### 4.2.4 Solid Waste Management

The existing situation in four cities regarding solid waste management are summarized as follows.

**Table 11 Existing Situation of Solid Waste Management**

| Item | Gazipur (year: 2019) | Narayanganj (year: 2019) | Cumilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| Waste amount | Approximately 2,500 ton/day including all the solid waste such as household industrial and commercial and street waste (0.71 kg/day/person) | Approximately 750 ton/day (0.49kg/day/person) | Approximately 280 ton/day | Approximately to 120 ton/day (0.36 - 0.48 kg/day/person) including waste from tourists |
| Waste characterization (consultant estimation) | Biodegradable: 60 to 70% Non biodegradable: 30 to 40% | Organic waste: 70 to 80% Inorganic waste: 20 to 30 % | Biodegradable: 60 to 70% Non biodegradable: 30 to 40% | Biodegradable: 60 to 70% Non biodegradable: 30 to 40% |
| Collection area | 50% | 70 to 80% | 60 to 70 % | 70 to 80 % |
| Collection time | 2 shifts (day time and night time) | 6 a.m. to 14 p.m. | 2 shifts (day time and night time) | 1 time (6 a.m. to 14 p.m.) |
| Transfer station | 25 locations | 25 locations | 27 locations | 9 locations |
| Landfill | One open dumping site Kodda (1 ha). | One dumping site: 2.4 ha at Nagonr | One open dumping site: 4.25 ha at Jhakunipara, about 5 km from the city center | One open dumping site: 0.8 ha near Pana market, 2 operators |

*Source: Each City Corporation or Paurashava*

### 4.2.5 Other Infrastructure

The existing situation in four cities are summarized as follows. These mentioned number is the one constructed by the City Corporation or Paurashava.

**Table 12 Existing Situation of Other Infrastructure**

| Item | Gazipur (year: 2019) | Narayanganj (year: 2019) | Comilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| Bus Terminal | 1 No. | 2 Nos. | 2 Nos. | 1 No. |
| Truck Terminal | Nil | 2 Nos. | Nil | Nil |
| Street light (LED) | 2800 Nos. installed recently through DPP fund. | 500 Nos. installed recently through ADP fund. | Nil | 100 Nos. |
| City Park | Nil | Nil | 1 No. | Nil |
| Traffic signal | Nil | Nil | Nil | Nil |

*Source: Each City Corporation or Paurashava*

## 4.3 Implementation of Infrastructure Development

### 4.3.1 Procedures of Infrastructure Development

Generally, when infrastructure development projects are proposed, DPP is prepared by executing agencies, e.g. LGED or ULBs, and sent to respective ministries in charge and Ministry of Planning for approval. Once approval is given, detail design and cost estimate can start. After approval of design, tender documents are prepared. Then tender process is taken place. After contractors are selected, contracts are concluded, and then construction begins.

Examination, which is normally done in FS, is made in preparation of DPP e.g. socioeconomic analysis to see project feasibility (not only engineering viewpoints), and the result is presented in DPP. Thus, so-called "FS" report is basically not required for approval. In this sense, practically DPP could be a kind of "FS" report. Regarding approval, DPP, regardless of donor funded or government/own funded projects, is approved by Ministry of Planning. After DPP approval, projects can begin.

### 4.3.2 On-going Infrastructure Project

(1) On-going project in 4 ULBs

IDPs supported by ICGP, and CIPs supported by MGSP are lists of infrastructure projects, meant to be prepared to cover all on-going and intended infrastructure projects to realize master plans. However, according to the hearing from engineers of ULB, they seem not to include future projects. Basically it is understood that majority are on-going projects (or projects of which fund source has been decided). And, IDPs and CIPs are separately prepared although they are almost similar contents. Current major donor-assisted projects in four target cities are shown as below with availability of IDP and CIP.

**Table 13 Major Infrastructure Projects in the target ULBs**

| ULBs | Major Project implemented in each ULB | | | | | No. of DPP approved | Other project to be implemented in each ULB |
|---|---|---|---|---|---|---|---|
| | Project Name | Period | Fund Allocation (BDT million) | No. of subproject | Availability of IDP (for ICGP) or CIP (for MGSP) | | |
| GCC | ICGP | From 2014 to 2020 | 4,050 | 34 | ○ | 6 | Second City Region Development Project |
| NCC | ICGP | From 2014 to 2020 | 3,890 | 28 | ○ | 6 | Urban Infrastructure Improvement Preparatory Facility |
| | MGSP | From 2013 to 2020 | 2,400 | 26 | ○ | | |

| ULBs | Major Project implemented in each ULB | | | | | No. of DPP approved | Other project to be implemented in each ULB |
|---|---|---|---|---|---|---|---|
| | Project Name | Period | Fund Allocation (BDT million) | No. of subproject | Availability of IDP (for ICGP) or CIP (for MGSP) | | |
| CuCC | ICGP | From 2014 to 2020 | 4,110 | 30 | ○ | 3 | - |
| | MGSP | From 2013 to 2020 | 866 | 14 | ○ | | |
| CBP | MGSP | From 2013 to 2020 | 861 | 5 | × | 0 | Livelihoods Improvement of Urban Poor Communities Project' |
| | UGIIP-3 | From 2014 to 2020 | 931 | 8 | - | | |

*Source: Each City Corporation or Paurashava*

(2) Summary of ICGP Subproject Implementation

Batch 1 subprojects are almost completed, and now Batch 2 subprojects are in full swing. In addition, this year Batch 2 additional packages have been decided to be added because sum of Batch 1 and 2 subprojects cannot reach total loan amount due to changes of subprojects. Now they have started tendering process. ICGP was supposed to be completed in 2019, but due to overall delay, one year has been extended to the end of 2020. Current progress of Batch 2 subprojects is summarized in the table below.

**Table 14 Summary of Current Progress of ICGP Infrastructure Subprojects (Batch 2)**

| | Physical Progress (%) | Financial Progress (%) |
|---|---|---|
| GCC | 41.67 | 31.75 |
| NCC | 44.62 | 37.21 |
| CuCC | 60.87 | 44.25 |

*Remarks: data is as of the end of August 2019*

*Source: Prepared by the Survey Team based on the information given by JICA Bangladesh Office*

Physical progress of the subprojects in CuCC is 60.87%, followed by NCC (44.62%), and GCC (41.67%).

## 4.4 Operation and Maintenance of Infrastructure

In practice, City-corporations and Paurashavas typically allocate funds for O&M every year. Individual priority repair, maintenance, or rehabilitation subprojects are identified, estimated, and budgeted. The implication of this approach is that those ULBs do not have overall plan for the sustainable O&M of their inventory of different categories of infrastructure. O&M is carried out on an ad-hoc basis to meet immediate priorities. These situations are generally similar to all subsectors regardless financers of infrastructure.

## 4.5 Issues in Infrastructure Development

### 4.5.1 Existing Condition

(1) Road and Bridge Sector

The common issues for all ULBs are assessed as follow:

- The road network for urban area is not sufficiently developed from the viewpoint of road density. The present road density of 5 to 7 km/km$^2$ is still in lower level for medium scale city.
- Average travel time in the city area at 26 to 38 min. / 10 km shows traffic congestion of the existing roads has been caused.

(2) Drainage Sector

The common issues are observed as follows:

- It is desirable to drain all of rainwater after any rainfall immediately. But the current situation is that waterlogging occurs to some extent of time in every rainy season in each ULB. The reasons for water logging vary by the condition of topography, present condition of drainage system, water level of inside and outside drainage, land use, etc. Therefore, drainage system needs to drain rainwater from waterlogging area that will improve livelihood in suffered area.
- Run off capacity of flood water at outfall points is insufficient especially for monsoon season.
- All drainage channels are not linked due to rapid urbanization e.g. land reclamation for housing and other purposes without consideration of drainage flow.
- Inventory of existing drainage system is not prepared or updated.
- Disaster prevention plans are not prepared considering locations of water logging and flood.
- Most of ULBs' engineers have insufficient technical knowledge on drainage system and its development/improvement referring to comprehensive master-plan level understanding of drainage system in the ULBs..

(3) Water Supply Sector

The common issues are observed as follows:

- Desirable level of water supply ratio by piped water should be more than 90 % in the big cities in Japan such as Tokyo, Yokohama, and Nagoya, etc. Based on National Level Sector Policy in Bangladesh, long term plan (FY 2021-2025) indicates the water supply ratio of large Paurashava is planned at 90 percent.
- Water supply ratio of all ULBs is remained under 20%.
- Capacity for development planning, construction and operation and maintenance of water supply systems at all ULBs are limited. Sustainability of water supply systems (mainly groundwater systems) are assumed at low.

(4) Solid Waste management

The common issues are observed as follows:

- There is no by-law or regulations related to Solid Waste Management.
- There is no reliable data for solid waste management.
- Door to door collection is implemented as primary collection. However, the collection does not cover all the area of the city corporations.
- Desirable development level of solid waste management should commonly be more than 80% as collection area coverage and rate.
- The transfer system from primary collection to secondary collection is not in a suitable manner. The route or time for the operation of collection vehicle is not scheduled and monitored. Therefore, some of the collection vehicles does not dispose at the legal dumping sites.
- Current final disposal is open dumping and the sanitary landfill rate is 0% in the target ULBs though all the waste in DNCC and DSCC is disposed of in the sanitary landfill site, which means the sanitary landfill rate is 100%.

(5) Other infrastructure:

- These infrastructures are not developed enough.
- Existing street lights and bus terminal should be upgraded due to deterioration.

- Bus terminal and truck terminal are required to reduce many buses/truck parking alongside roads which causes traffic congestion.

4.5.2 Implementation of development projects

(1) Road and Bridge Sector

- Land acquisition process in case of widening project is delayed.
- Activities of subcontractors (most cases are local contractors) are not properly controlled by main contractors which are normally at Dhaka base.
- Financial capacity of the contractors is lower due to acceptance of lower bid price by NCC.

(2) Drainage

- Hierarchy-based drainage networks which comprise with primary drains, secondary drains and tertiary drains to integrate with proper drainage system are lacking.
- Necessary information is inaccurate due to lack of systematic document keeping on design and construction related materials.
- Trained technical staff of CC/ Paurashava for supervision are lacking.
- Construction is delayed due to no coordination between road construction and drainage construction (when the location of road construction and drainage construction is the same, the works are better be done by the same construction company so that coordination becomes easier)
- Construction is delayed due to inadequate planning for tendering (need to consider rainy season).

(3) Water Supply

- Activities of subcontractor in this area (in most cases local contractor) is not properly controlled by main contractor, for example which normally comes from Dhaka.
- Land acquisition process took time in case of production tube well installation.

(4) Solid Waste Management

- To implement the capacity building of staff on solid waste management planning based on the reflect of issues and future projection is necessary. There is no engineer only for solid waste management. The engineers with knowledge of solid waste management and with real experience should be assigned.
- In case of equipment of collection and transportation or final disposal, it is necessary for ULB engineers to have knowledge of specification and daily maintenance of collection vehicles including compactor vehicle, dump truck, arm roll vehicle and heavy equipment such as excavator, bulldozer or payloader, etc. and change of their spare parts when breakdown occurs.
- In case of final disposal, there is no experienced design engineers of civil structure of landfill liner system or leachate collection and treatment, stormwater drainage which is required for sanitary landfill site.

(5) Other infrastructure

- Developing other infrastructures faces the same problems mentioned above due to lack of proper strategic planning of development for the infrastructure.

4.5.3 Operation and Maintenance

(1) Road and Bridge

- No separate staff for maintenance is found.
- Any guideline for maintenance activities is not prepared.

- O&M implementation is done in only ad-hoc basis without systematic maintenance schedule.
- Appropriate and suitable maintenance activities are not conducted as the present budget at BDT 6 to 30 million per year only.

(2) Drainage

- Necessary information is inaccurate due to lack of organized documents on the existing systems and ongoing projects.
- Proper monitoring and inspection activities are lacking for maintaining drainage system in appropriate condition.
- ULBs don't have any manual and plan for maintenance.
- Technical knowledge and staff are both lacking for maintenance.
- Maintenance budget is insufficient.

(3) Water Supply

- Water quality and volume of inlet and outlet of the facilities are not checked periodically by water section staff.
- Inventory of water supply facilities and pipeline including the detailed information of location, installation year, material, diameter, etc. is not kept and prepared.
- O&M manual for water supply facilities is not prepared. O&M rule and regulation for water supply facilities is not specified. Appropriate chlorination injection is not applied in each production tube wells. Repairment work for water supply facility covering intake pump, distribution pipeline, chlorine dosing unit, etc. is not made in regular basis and repaired on an ad hoc basis. Water leakage detection works is not executed by water section staff
- Water tariff collection system with water meter is not applied in the supply area except for NCC area managed by DWASA, and fixed rate system is applied without any check.
- Manpower of water section staff is not enough, and there are currently no plans for increase of staff in the future.

(4) Solid Waste Management

- Institutional system is insufficient due to no by-law and regulations regarding solid waste management in most of the ULBs.
- There are many workers engaged in cleansing and helpers in the collection, but not for environmental monitoring or public waste. Monitoring is necessary for transfer station to prevent waste scattering.
- There is no expert who know sanitary landfill design or who know the suitable operation methods of spreading and compaction of the unloaded waste in the current final disposal site. For sanitary landfill operation in the Project, suitable operation guidance is necessary. Training provision to the staff including the landfill operators is also necessary.
- There is no manual or guidelines for data management, operation and maintenance of solid waste management.

(5) Other Infrastructure

Due lack of maintenance plan, manpower and budget, regular maintenance of existing infrastructures by ULBs are limited, and not properly made. Insufficient inspection, monitoring and supervision of the works as well as facilities are also causing less frequent maintenance activities.

## 5. Review of Related Projects

### 5.1 JICA's Governance Related Projects

To address to governance sector improvement in Bangladesh, JICA has been implementing several projects from national level to local level e.g. Upazila. The following table describes a brief summary of them.

**Table 15 JICA's Governance Related Projects at A Glance**

| Project Name | Project Period | Scheme | Executing Agency/ Counter Part | Target government body |
|---|---|---|---|---|
| Strengthening Public Investment Management System (SPIMS) | 2014 Jul– 2018 Jun (Phase 1) 2019 Aug– 2023 Jul (Phase 2) | Technical Assistance | Ministry of Planning | - |
| National Integrity Strategy Support Project (NISSP) | 2014 Oct- 2017 Mar | Technical Assistance | Cabinet Division | - |
| Inclusive City Governance Project (ICGP) | 2014-20 | Loan (BDT 30 billion) | LGED | 5 CC |
| Project for Capacity Development of City Corporations (C4C) | 2016-21 | Technical Assistance | LGD | 4 CC |
| Northern Bangladesh Integrated Development Project (NOBIDEP) | 2013-20 | Loan (BDT 5 billion) | LGED | 18 Municipality |
| Strengthening Paurashava Governance Project (SPGP) | 2014-18 | Technical Assistance | LGD | 7 Municipality |
| Upazila Governance and Development Project (UGDP) | 2016-21 | Loan (BDT 10 billion) | LGD | 500 Upazila |
| Upazila Integrated Capacity Development Project (UICDP) | 2017-22 | Technical Assistance | LGD | 10 Upazila |

*Source: JICA Survey Team*

ICGP necessitated its target CCs to tackle with 42 governance improvement activities that are bundled in Inclusive City Governance Improvement Action Program (ICGIAP). In each of these 42 activities, CCs are expected to achieve pre-determined performance targets which are closely monitored and evaluated during the implementation.

### 5.2 Donor Funded Projects

(1) UGIIP by ADB

The Urban Governance Infrastructure Improvement Project (UGIIP) funded by ADB was initiated in 2003 as Phase-1, and now Phase -3 is about to be completed with the executing agency of LGED.

It started in 2003 and continuously has implemented up to the third phase for 17 years as of now. From the beginning, UGIIP has clearly targeted Paurashava (municipality) following Paurashava act. Components of this project for all the phases are consistently the same as infrastructure development, governance improvement, and capacity development, though some betterments have been accommodated. This phase-3 on-going project includes Cox's Bazar Paurashava, one of the target ULBs in the new Project,.

(2) MGSP by WB

Municipal Governance and Services Project (MGSP) is being implemented by World Bank and soon to be completed. This project started in 2013 and will be completed in 2020, and its executing agency is LGED. Target local government body is Urban Local Bodies, which include both City Corporations and Paurashava, all located in the growth corridors extending from the center, Dhaka to e.g. Chittagong, Sylhet, and Rangpur. Components of the project is similar to UGIIP.

## 5.3 Major Achievements of Previously Implemented and On-going Urban Governance Projects

A number of donor-assisted projects have been implemented so far with a view to improving governance and service delivery at ULBs. These projects include, among others, WB's Municipal Governance and Services Project (MGSP), ADB's Urban Governance Infrastructure Improvement (UGIIP-III), JICA assisted Northern Bangladesh Integrated Development Project (NOBIDEP), Inclusive City Governance Project (ICGP), and Project for Capacity Development of City Corporation (C4C) for on-going projects as well as WB's Municipal Services Project (MSP), ADB's UGIIP-I and II, and JICA's SPGP for previously implemented projects. Overall, these projects helped ULBs promote good governance (/transparency), enhance their capacity in mobilizing and managing resources, consolidate citizen engagement mechanism and carry out infrastructure development projects in a more efficient manner.

## 5.4 Past Assistance in Solid Waste Management Project

### 5.4.1 Overview

The starting time of the assistance in solid waste management sector by JICA is around 20 years ago. The Government of Bangladesh submitted to the Government of Japan a request for a survey and the preparation of a plan for solid waste management in Dhaka City in 2002. In response to that, JICA implemented a development study entitled "Solid Waste Management Study in Dhaka City" from 2003 to 2006 and prepared the "Clean Dhaka Master Plan (referred to below as the "M/P")".

JICA implemented a technical cooperation project in order to resolve the technical and management problems of solid waste management, and the collection and transport of solid waste in particular, for a period of approx. six years from February 2007 to March 2013. Furthermore, the JICA Grant Aid Project "Improvement of Solid Waste Management Equipment" was implemented to provide the compactor vehicle for Dhaka City Corporation and Chittagong City Corporation. Currently JICA Technical Cooperation Project "The project for Strengthening of Solid Waste Management in Dhaka North City, Dhaka South City and Chittagong City"is being implemented to improve the solid waste management capacity of these ULBs.

### 5.4.2 Major Characteristics

The major characteristics about the assistance of solid waste management sector in JICA in Bangladesh are community based solid waste management, which is called as Ward Based Approach (WBA), and semi-landfill method (Fukuoka method) for sanitary landfill.

WBA is the system to implement solid waste management at ward level. The system is one of the community based approach that it involves originally existing various Community Based Organization (CBOs) or private sectors and the staff of solid waste management control and management. In addition, WBA include the environmental education and awareness raising activities for waste discharge.

Semi-aerobic landfill is the method that the waste decomposition situation is under semi-aerobic condition by fresh air inflowed through leachate collection pipe by connecting with gas collection pipe. The landfill gas generated in the process of waste decomposition is also transmitted to air promptly by natural circulation of high temperature landfill gas. This method is suitable for high temperature and humidity area due to prompt discharge of leachate and facilitation of disposed waste degradation with aerobic condition without artificial aeration.

## 5.5 Collaboration between the Past JICA Projects and the Project

### 5.5.1 Materials to be Referred

As discussed in the above, JICA has been implementing several governance projects. In formulation of the Project, some collaboration can be designed utilizing outputs produced by such projects.

In designing the new project, ICGP experiences are fully utilized, as planning capacity development components including governance and solid waste management, and infrastructure. And, many materials prepared in the past assistance (SPGP, C4C, SPIMS, and NOBIDEP) which can be fruitful inputs in the related areas. In this regard, related documents are planned to be referred in the capacity development component of the Project.

### 5.5.2 Solid Waste Management

The new Project will collaborate these on-going technical cooperation projects and Dhaka North City and Dhaka South City, especially in the following points.

- The concept of WBA can be utilized for public awareness for waste discharge, improvement of collection and transportation system including transfer station management & monitoring and monitoring cleansing activity by street sweepers or the collectors of primary collection.
- The maintenance workshop of collection and transportation vehicle or heavy equipment has been prepared in Dhaka. The knowledge related to maintenance will be utilized for the improvement of the maintenance capability for the target ULBs.
- The knowledge and experience of improvement to sanitary landfill including leachate collection and treatment system by semi-aerobic method and embankment construction can be utilized.

# 6. Examination of Future Needs of Infrastructure Development for The Project

## 6.1 Infrastructure Development Needs for the Project

Under ICGP implementation, participating CCs must prepare IDPs, Infrastructure Development Plans which are supposed to include all development projects, both already committed ones as well as ones seeking fund sources. MGSP requests participating ULBs to prepare CIP, Capital Investment Plan, which is the similar concept to IDP. In the target UBLs in the Project, Narayanganj and Cumilla have both IDPs as well as CIPs, separately prepared. Substantially, it is desired that only one investment plan is available under a master plan; a ULB updates it annually; and such a list is shared by all development partners and even Government of Bangladesh (both central and local governments).

## 6.2 Selection Criteria of Priority Subprojects

Selection criteria for infrastructure subprojects in the Project is proposed referring to the above potential needs, and shown as below:

**Table 16 Selection Criteria to Identify Priority Subprojects**

| | Criteria | | Details |
|---|---|---|---|
| Eligibility criteria | | | |
| 1 | Ownership | | ULBs take responsibility in the implementation and O&M |
| 2 | Construction cost | | JPY 0.1 billion to 0.5 billion / subproject (BDT 8crore to 40 crores), basically*1 |
| 3 | Construction period | | Almost less than 2 years |
| 4 | Scope (including criteria) | Road and Bridges | Road for strengthening the network<br>Construction of bus terminal |
| | | Drainage | Upgrading of natural stream/existing old drainage to new drainage<br>Excavation works of existing main canal<br>Priority : 1.Primary Drainages: they link to existing main canal, river and pond, 2.Secondary and Tertiary drainages: they link to existing primary canal. |
| | | Water Supply | Production Tube Well, Distribution Pipe Line, Over Head Tank, Ancillary Facility |
| | | Solid Waste Management | Procurement of collection bins<br>Procurement of collection vehicles<br>Development and/or improvement of transfer stations<br>Rehabilitation, improvement and/or extension and/or improvement of landfill site (Semi-aerobic sanitary landfill site with leachate treatment which require the discharge standard of waste quality in Bangladesh) |
| | | Other Infrastructure | Procurement and installation of street lights<br>Social infrastructure (public places) |
| 5 | Land acquisition related issues | | Cost as minimum as possible, minimum illegal encroachment |
| 6 | Environment and social consideration | | JICA Category: B and below |
| 7 | Relevance | | Selected subprojects should be urgently required, priority infrastructures by ULBs and residents, consistent with the master plans, and have certain impacts. |

*Remarks: *1: Even the case of exceeding BDT 40 crores, Maximum must be JPY 1 billion, or BDT 76 million.*

*Source: JICA Survey Team*

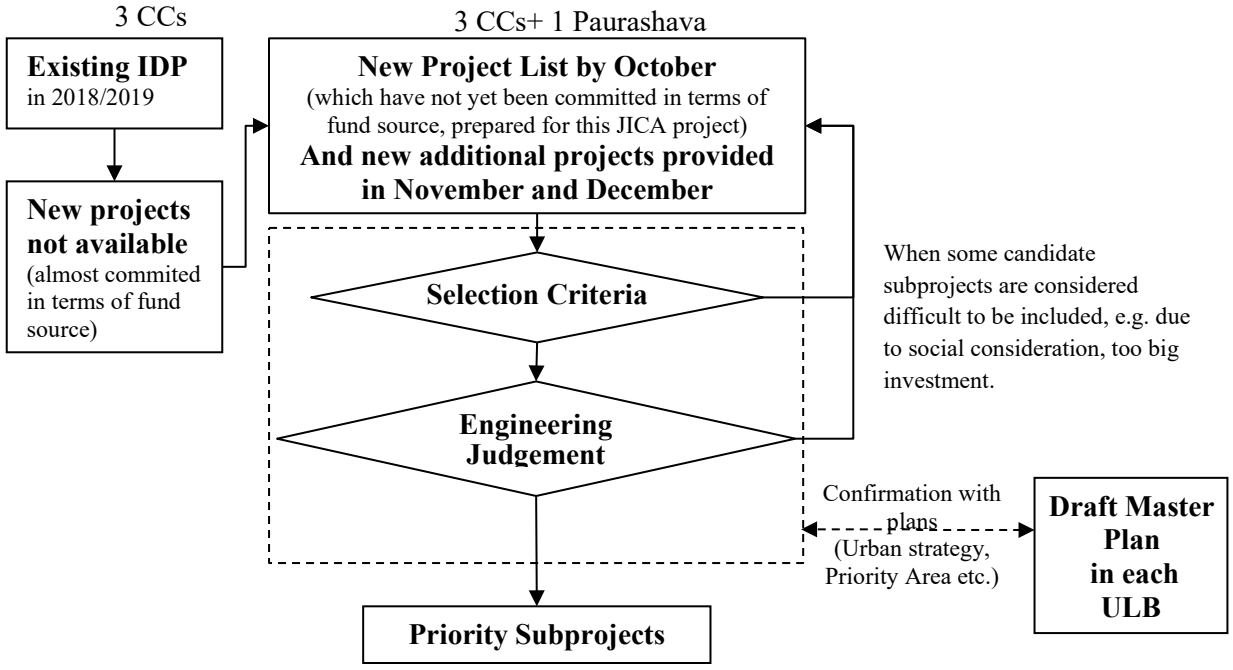
### 6.3 Selection of Priority Subprojects To Be Financed by New Project

From the new lists which are prepared and submitted by the ULBs by October 2019, which responded to the request by the team, selection activities have started. It continued upto the end of December 2020.

Through the process, draft final lists were prepared. Based on the lists, JICA and LGED discussed and finalized the final list, dropping some of the infrastructure subprojects as standby lists as a result of the possible loan amount to be provided to this project. Finalization process was taken with involvement of the target ULBs considered with the priority of the ULB basically as well as the opinions of LGED in January 2020.

Through the above process, relations of potential subprojects to the development direction in the master plans was also examined. It could be said that these infrastructure investment needs are somehow in line with the development direction in the master plans, although the new lists and some additions were shared with the survey team through the course of the survey period, in addition to several lists of infrastructure investment which have existed already such as IDP and CIP. This is probably because substantial development needs in these areas are technically not so much different.

General process to select the priority subprojects were as follows:




*Source: JICA Survey Team*

**Figure 3 Process of Selection of Priority Subprojects**

## Part II: The Project

### 7. Contents of the Project

### 7.1 Objective and Outline of the Project

The following table shows outline of the Project to be formulated in the Survey.

**Table 17 Outline of the Project**

| Items | Contents |
|---|---|
| Project Title | Urban Development and City Governance Project |
| Purpose | To improve urban functions by strengthening city governance related to infrastructure development in the target cities, thereby contributing to economic growth and improvement of living conditions toward sustainable cities. |
| Components | 1) Capacity Development<br>• Governance, urban planning, procurement, infrastructure related issues<br>2) Infrastructure Development<br>• Road and bridges, Drainage facilities, Solid waste management, Water supply facilities, Other infrastructure<br>3) Consulting services |
| Target Cities (Urban Local Bodies) | 4 cities, Urban Local Bodies (ULBs)<br>3 City Corporations (Gazipur, Narayanganj, Cumilla)<br>1 Municipality = Paurashava (Cox's Bazar) |
| Related Governments institutions | Executing Agencies: LGD, LGED,3 City Corporations (Gazipur, Narayanganj, Cumilla) and 1 Municipality = Paurashava (Cox's Bazar) |

*Source: JICA Survey Team*

The above will be implemented through Performance-based Approach (PBA) to allocate infrastructure development fund based on performance evaluation of project activities of ULBs.

There are two areas to be focused in the project activities through capacity development component, of which performance is to be evaluated through PBA as discussed as below:

Governance Activities

Governance improvement activities in UDCG center on the preparation and management of investment plan, more specifically IDP for the three CCs and PDP for CBP. Every year, prior to preparation of annual budget, target ULBs are expected to update the project list (project pipeline) of IDP and PDP on a rolling basis. This requires removal of completed projects from the list, incorporation of new projects, reprioritization among pipeline projects, and adjustment of budget allocation. Revising investment plan should also fulfill procedural requirements. For instance, revised investment plan should be built on due consultation with stakeholders (citizenry and other government agencies). Forms of consultation with citizenry include WLCC, TLCC and CLCC. Other core elements surrounding IDP/PDP revision include, among others, ensuring links with Master Plan, strategic vision and annual budget. The Project shall also see if investment project lists include all different funding sources and carry multi-year framework.

For effective overall investment management, allocation and mobilization of resources is critical as well. In light of this, the Project also pays attention to resource allocation (budget preparation and management) and resource mobilization (tax collection and management).

Pilot Activities of Solid Waste Management

Solid waste management is becoming a big issue in ULBs recently as population increases and economy grows in Bangladesh. Therefore, solid waste management is the area which needs to be addressed urgently in this project as an important government service delivery.

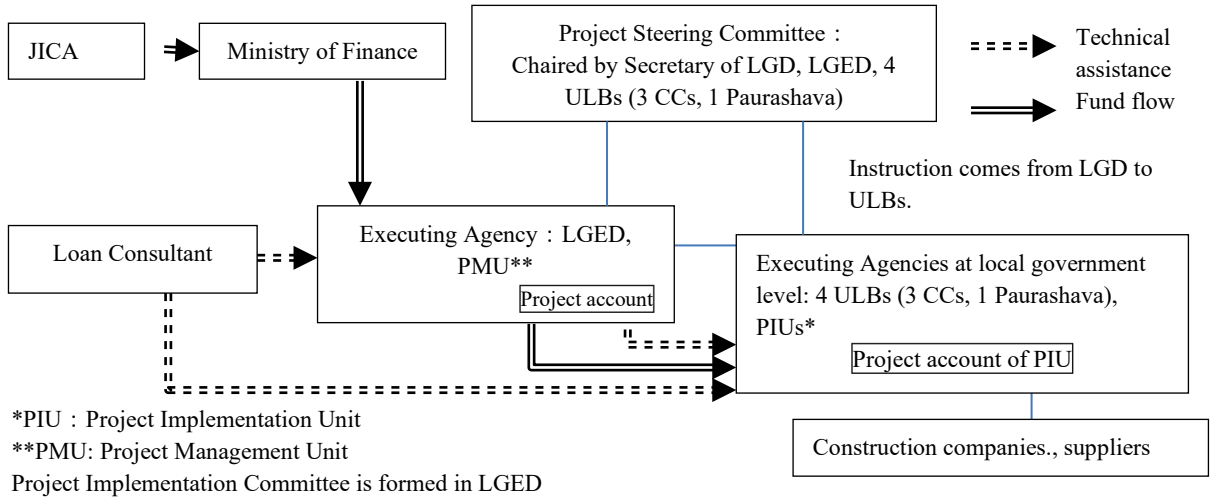
Waste collection and transportation system in each ULB are divided into the parts of road and drainage sweeping, primary collection and secondary transportation. The primary collection is implemented by each ULB or Community Based Organizations (CBO) and secondary collection and sweeping are implemented by ULBs.

These activities by each actor who deals with the above part are not done in a coordinated manner. For example, it takes long time to loading the waste to secondary transportation vehicle from the arrival of primary collection vehicle due to no schedule of the collection and transportation system. It is inevitable to unload the waste to the ground in order to transfer secondary transportation vehicle from primary collection vehicle such as rickshaw van in this system. Despite waste collection and transportation have been basically implemented by the above system in each ULB with cooperation with CBO, waste is scattered in transfer stations and along roads, as discussed and the system does not unfortunately work in efficient manner.

Therefore, this pilot activity to solve these issues through coordination with actors with concept of Ward Based Approach. This pilot activity will be implemented in selected one or two wards in each ULB as pilot basis. Selection of pilot wards needs to mainly consider synergistic effect with subprojects of solid waste management and other points.

## 7.2 Implementing Organization

Subprojects will be implemented by PIUs and engineers in the target cities. PIUs are responsible to manage and monitor overall subproject implementation by city, and overall Project implementation is managed by LGED. Technical assistance to the cities is to be provided by LGED, and loan consultants to be hired by LGED. Loan allocation by Performance-based Approach will be decided by LGED consulting the target cities based on the evaluation results prepared by loan consultants.




*Source: JICA Survey Team*

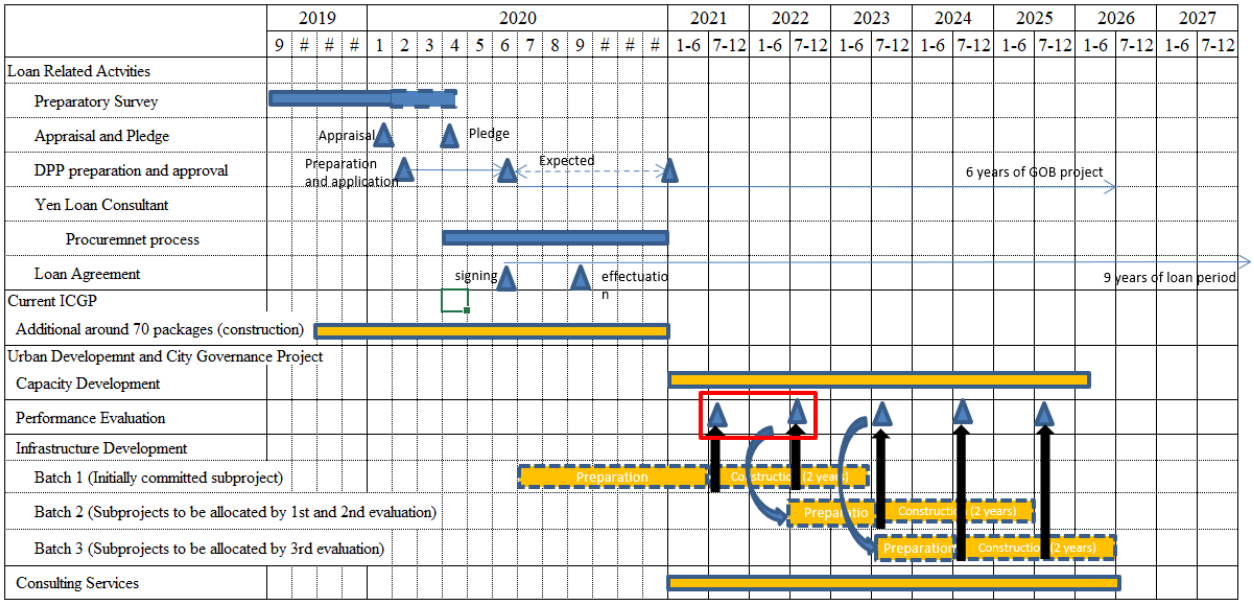
**Figure 4 Implementing Organization**

## 7.3 Operation and Maintenance of Infrastructure Component

Operation and maintenance of all infrastructure to be invested in the Project will be done by ULBs. As seen, there are issues in O&M of the infrastructure in ULBs, and it is expected to address them through implementation of the capacity development component of the Project.

## 7.4 Implementing Schedule

The Project will start in July 2020 and continue until June 2026, six years if loan agreement as well as DPP approval in GOB is expected in June 2020. Overall implementing schedule is shown in the figure below;




*Source: JICA Survey Team*

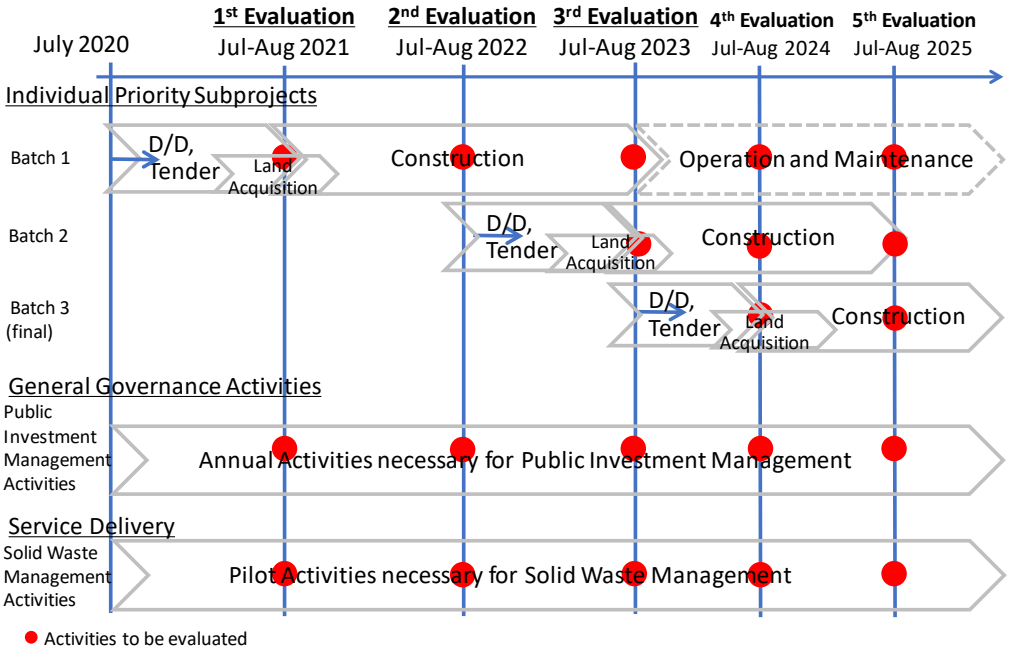
**Figure 5 Overall Implementation Schedule of the Project**

## 7.5 Operation and Effect Indicators

Operation and effect indicators are proposed in three categories, such as infrastructure subprojects, governance activities, and pilot activities for solid waste management. Impacts of the Project will be monitored by these indicators

## 8. Performance-based Approach

In the Project, a performance-based approach which directly measures infrastructure planning and implementation could be effective to further enhance capacities of the ULBs. The concept of this approach is depicted in the figure below:




*Source: JICA Survey Team*

**Figure 6 Conceptual Framework of Performance-based Approach to Allocate Infrastructure Fund**

## 9. Environmental and Social Considerations

### 9.1 Environmental and Social Considerations

All subprojects under this Project, no matter if they are drafted during this survey or after the signing of L/A, shall abide Bangladeshi laws and regulations on environmental protection, *the JICA Guidelines for Environmental and Social Consideration* issued in April 2010, and *World Bank Safeguard Policy (OP4.01)*.

Those subprojects which fall in Category A according to the JICA Environmental Guidelines must be avoided in this Project, taking into account that a) this Project has the nature of fast and flexible project implementation; and b) subprojects with significant environmental and social impacts must be avoided as they will take place in the heart of target ULBs. Forty one priority subprojects are judged as Category B or C as a result of selection process based on the selection criteria. If any subprojects are judged as Category A during DD stage, such subprojects will be excluded.

As of now, eleven out of 41 subprojects will likely require an EIA, and 23 require an IEE for ECC prior to the construction work (See the table below). The DOE may give directions to skip an IEE and implement an EIA if the adverse impacts are severer than anticipated, or provide instructions not to go as far as EIA if it finds the degrees of adverse impacts lower than anticipated. Actual number of EIA and IEE thus may change accordingly.

**Table 18 Environmental Documents Subprojects Likely Require**

(unit: number of subproject)

| ULBs | GCC | | | NCC | | | CuCC | | | CBP | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sector | N/A | IEE | EIA | N/A | IEE | EIA | N/A | IEE | EIA | N/A | IEE | EIA | N/A | IEE | EIA |
| Road & Bridge | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 8 | 2 |
| Drainage | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 13 | 0 |
| Water Supply | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 |
| Solid Waste | 1 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 5 |
| Other Infrastructure | 0 | 0 | 0 | 3 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 6 | 1 | 0 |
| TOTAL | 1 | 5 | 5 | 3 | 5 | 2 | 2 | 7 | 1 | 1 | 6 | 3 | 7 | 23 | 11 |

*Note 1) "N/A" implies that subprojects fall in Green or Orange A categories which will not require an IEE or EIA. ULBs will submit a simple application to the DOE for the issuance of ECC.*
*Note 2) Subprojects which require an EIA may also require an IEE prior to the implementation of EIA. It depends on the DOE's decision if they can omit the submission of IEE.*
*Source: JICA survey team, assumed in accordance with the ECA1995 and 1997 (stated in EARF).*

### 9.2 Land Acquisition and Resettlement

In the process of screening candidate subprojects, exclusion of those classified as Category A according to the JICA Guidelines for Environmental and Social Considerations 2010 was one of the selection criteria, or design alterations were sought to minimize the acquired land area and involuntary resettlement. There is thus no such subproject that causes large-scale land acquisition, physical displacement of people and involuntary resettlement.

Detail design survey for each prioritized subproject will further examine technical aspects, and social survey will identify exact numbers of affected structures, what they are used for, numbers of affected households due to the project implementation and rehabilitation measures. For the subprojects which cause land acquisition and resettlement, ARAP is to be prepared (at this moment all of the subprojects are considered that entail land acquisition or involuntary resettlement of fewer than 200 people).

## 10. Recommendation

### 10.1 LGED

#### 10.1.1 Project Formulation and Implementation

DPP Approval and Acceleration of Loan Consulting Services

Current project implementing schedule assumes to start the Project from July 2020. Therefore, it is necessary that DPP is approved before June 2020, within the current Bangladesh fiscal year. Facilitation to accelerate this process is important.

Similarly, loan consultant is assumed to be mobilized in January 2021 according to the current schedule. To keep this on time, procurement process of loan consultant shall be on time as per proposed schedule.

Land Acquisition and Compensation

There are some subprojects which require land acquisition and compensation. Once DPP approves these costs, ULBs needs to implement the process receiving budget from GOB. Therefore, for LGED, it is necessary to secure the budget, and send the budget to ULBs in timely manner for smooth implementation of the Project.

Preparatory work of Batch 1 Subproject

Loan consultants cannot be involved in preparation of detail design, cost estimate for most of the part of Batch 1 subprojects because preparation of Batch 1 subprojects is assumed to start from July 2020, and

loan consultants will be mobilized in January 2021. Therefore, it is important to conduct preparation of these materials with necessary environmental and social consideration.

Working Relationship with ULBs

Construction of infrastructure subprojects is primarily managed by ULBs as they are contract signers with construction companies, and PIUs. LGED is overall PMU at central level of this Project. Mutual understanding and cooperation of the Project, especially infrastructure subprojects between LGED and ULBs are quite important for smooth implementation of the Project.

10.1.2 Governance

Harmonization with Other Donor-funded Projects

It is recommended that LGED take initiative in coordination among different donor-funded projects and find harmonization (/synchronization) of at least investment project list format. The existing formats under MGSP and UGIIP, CGP all carry a multi-year framework and there is not much difference from one form to another. However, there are some minor differences to be worked out.

Possible Collaboration with National Academy for Planning and Development (NAPD)

National Academy for Planning and Development (NAPD), a training institution under Ministry of Planning, organizes courses on planning and project management, project formulation, project feasibility /appraisal study, monitoring and evaluation of development projects, and procurement management. With the help of JICA-supported TA project, Strengthening Public Investment Management System (SPIMS) Phase 2, NAPD is expected to provide training to national agencies about public investment management (PIM) subjects in the future. Collaboration with training institutions like NAPD should be sought where such collaboration is feasible and effective.

Facilitation to Increase of ULBs Manpower to Be Able to Deliver Their Services by Themselves

Manpower, e.g. engineers, urban planner and other relevant officers are not quite sufficient to manage all the works of ULB, not only their own works but works from development donors. In a long run, it is understood that all the services are to be delivered by ULBs, especially CCs. In this sense, though appropriate work volume and manpower needs to be examined, manpower in ULBs must be increased at least from the current one.

Official Approval of Guidelines, Training Manuals Prepare by the Past JICA Technical Cooperation

In this Project, many guidelines, manuals prepared by the past JICA technical cooperation projects are designed to be used to expect synergy of Japanese assistance to Bangladesh. If there are documents necessary/recommended to be approved by GOB referring to the recommendation of the relevant past JICA projects, the Project is able to use official documents for the project activities. Approval process is advised to be expedited.

10.1.3 Urban Planning

It is pointed out that ULB's lack of ownership of the master plan could be attributed to delayed approval of the daft master plans in the target ULBs or vice versa.

**10.2 ULBs**

Appropriate Implementation of the Project Activities due to Performance-based Approach (PBA)

This Project introduces Performance-based Approach to expect proper implementation of the planned project activities. Governance, Pilot Activities of Solid Waste Management, and various process of infrastructure subprojects which include environmental and social consideration (land acquisition and compensation), proper selection of contractors, and appropriate construction supervision. Mayors' commitment is indispensable in this regard.

Improvement of Infrastructure Related Governance

Capacity development component includes governance activities, which focus more on infrastructure related governance. The activities deal with training program of development planning and public investment management including citizen's participation mechanism. Increase of their own revenue is also very much important to deliver more and better service delivery to citizens, especially O&M of infrastructure, and then one of the activities targets resource mobilization. ULBs related stakeholders are strongly recommended to learn knowledge and skills on these areas.

Infrastructure Subprojects

Actual decision on implementation of subprojects depends on performance evaluation at each time of evaluation. As a general guide, it is recommended that Batch 1 infrastructure subprojects are relatively easier to be implemented technically and socially. And, complicated, technically difficult subprojects are advised to be implemented in Batch 2 and 3 because loan consultants are able to assist ULBs in this matter from Batch 2.

Operation and Maintenance of Subprojects

Especially for the subprojects of water supply and solid waste management, proper and continuing operation and maintenance are must things. Capacity development component will cover these points, and ULBs are expected to be proactively participate in the component. Mayors' proper understanding on this matter and his/her leadership is highly necessary to secure the O&M budget.

### 10.3 JICA

Application of Sector Loan-type of Project to Urban Development

From a viewpoint of assistance modality, when a sector loan type of project is intended to be applied to urban areas, it would be in general more suitable to select ULBs in relatively less-developed urban areas (closer to rural areas), or newly formed CC or Paurashava A. Development needs of ULBs which are closer to mega cities could be addressed as a single project, not a sector type subproject.

Formulation of the Project

Loan consultants will only be able to mobilize after six months from commencement of the Project. At the inception stage, Operation Guideline is needed to be prepared by loan consultants to provide guidance to all stakeholders. Referring to the similar project experiences, procurement of consultants might take more time than the current schedule. Some sorts of measures may be necessary to be taken to do this work. Also, environmental and social consideration for Batch 1 subprojects are also necessary to be assisted, otherwise, implementation of Batch 1 may also delay. This could also be assisted together with preparation of Operation Guideline.

## 11. Subcontract and Additional Work

### 11.1 Data Collection Survey on the Surrounding Area of Cox's Bazar

As the captioned data collection survey, JICA survey team prepared the draft of master plan revision for Paurashavas of Chakaria and Moheshkari, which are located in Cox's Bazar District. The data collection survey was started as a subcontracting work to a local consultant, but since the survey period is extremely short, JICA survey team provided technical guidance on each part of the master plan in addition to work supervision. However, due to the influence of Covid-19 after March 2020, the progress of the survey continued to be stagnant. Therefore, JICA survey team terminated the contract with the subcontractor, hired local staffs with experience in formulating the master plans, and completed the draft of master plan revision.

## 11.2 Operational Guideline

Operational guideline is prepared to provide guidance in implementation of the Project. Specifically, it describes the policies and procedures that would be involved in the day-to-day operations of the Project, and enable JICA and Bangladesh counterparts (LGED and ULBs) to have uniform understanding of the operation and management of the Project. Target users of operational guideline are LGED and ULBs officers involved in the implementation and monitoring of the Project.

## 11.3 Technical Guide For Detailed Design

The technical guide is prepared to provide technical guidance to the concerned engineers/staffs of LGED/LGD for the proper preparation of detailed designs (D/Ds) for 1st batch subprojects (SPs), which are including i) Drainage SPs with Hydrological Analysis separatory, ii) Road SPs, iii) Water Supply SPs and iv) Playground and Park SPs. Each technical guide is composed of the engineering requirements and supporting information for the preparation of D/Ds.

## 11.4 Environment Survey

The JICA Survey Team has drafted an IEE for seven ORANGE-B CATEGORY subprojects and EIA for two subprojects in RED CATEGORY. The rest two are found as GREEN CATEGORY which do not require an IEE or EIA to obtain an Environmental Clearance Certificate from the Department of Environment.

As a result of IEE and EIA, it is found that subprojects may experience minor negative impacts during the construction phases, which are however limited within the existing level experienced by local people. LGED is required to authorize the IEE and EIA reports and submit to the DoE for obtaining clearance from them prior to the construction work. Site specific EMPs shall be developed by the Contractor after detail design is developed.

**PREPARATORY SURVEY**
**ON**
**URBAN DEVELOPMENT AND CITY GOVERNANCE PROJECT**

# FINAL REPORT

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Operational Guideline

Technical Guide For Detailed Design

Initial Environmental Examination (IEE)

Environmental Impact Assessment (EIA)

Environmental Screening, Management and Monitoring Plan

## List of Abbreviation

| | | |
|---|---|---|
| AAP | : | Action Area Plan |
| AA | : | Agricultural Area |
| ADB | : | Asia Development Bank |
| ADP | : | Annual Development Programme |
| ARC | : | Administrative Reform Committee |
| BBS | : | Bangladesh Bureau of Statistics |
| BDT | : | Bangladesh Taka |
| BEPZA | : | Bangladesh Export Processing Zones Authority |
| BMDF | : | Bangladesh Municipal Development Fund |
| BSCIC | : | Bangladesh Small and Cottage Industries Corporation |
| BIDA | : | Bangladesh Investment Development Authority |
| C4C | : | Capacity Development for City Cooperation |
| CBO | : | Community Based Organization |
| CBP | : | Cox's Bazar Paurashava |
| CBD | : | Central Business District |
| CC | : | City Corporation |
| CDIA | : | Cities Development Initiative for Asia |
| CDCC | : | City Development Coordination Committee |
| CDU | : | Capacity Development Unit |
| CEO | : | Chief Executive Officer |
| CG | : | Community Group |
| CoxDA | : | Cox's Bazar Development Authority |
| CIP | : | Capital Investment Plan |
| CISC | : | City Information Service Center |
| CLCC | : | City Level Coordination Committee |
| CPTU | : | Central Procurement Technical Unit |
| CPU | : | Comprehensive Planning Unit |
| CRC | : | Citizen Report Card |

| | | |
|---|---|---|
| CS | : | Construction Supervision |
| CSCC | : | Civil Society Coordination Committee |
| CSO | : | Community Services Organization |
| CuCC | : | Cumilla City Corporation |
| CUA | : | Central Urban Area |
| DAP | : | Detailed Area Plan |
| DD | : | Detailed Design |
| DDP | : | Detailed Development Plan |
| DFR | : | Draft Final Report |
| DOE's | : | Department of Environment |
| DPHE | : | Department of Public Health Engineering |
| DPP | : | Development Project Proforma/Proposal |
| DPCBT | : | Development Plan for Cox's Bazar Town, Sea Beach Up to Teknaf |
| ECC | : | Environmental Clearance Certificate |
| ECDM | : | Environment, Climate and Disaster Management |
| EIA | : | Environmental Impact Assessment |
| EMP | : | Environment Management Plan |
| EOI | : | Express of Interest |
| EPZ | : | Export Processing Zones |
| FDI | : | Foreign Direct Investment |
| FD | : | Finance Department |
| FMIS | : | Financial Management Information Systems |
| FM | : | Financial Management |
| FF | : | Fact Finding |
| FR | : | Final Report |
| FS | : | Feasibility Study |
| FY | : | Financial Year |
| GAP | : | Gender Action Plan |
| GCC | : | Gazipur City Corporation |
| GED | : | General Economic Division |
| GIS | : | Geographic Information System |
| GMA | : | Growth Management Area |
| GOB | : | Government of Bangladesh |
| GOJ | : | Government of Japan |
| GRC | : | Grievance Redress Cell |
| ICGP | : | Inclusive City Governance Project |
| ICGIAP | : | Inclusive City Governance Improvement Action Plan |
| IDP | : | Infrastructure Development Plan |
| IDA | : | International Development Association |
| IEE | : | Initial Environment Examination |
| IFT | : | Invitations for Tender |
| IFPQ | : | Invitations for Pre-Qualification |
| IBRD | : | International Bank for Reconstruction and Development |
| ITR | : | Interim Report |
| JICA | : | Japan International Cooperation Agency |
| JETRO | : | Japan External Trade Organization |
| JPY | : | Japanese Yen |
| KOICA | : | Korea International Cooperation Agency |
| LA | : | Loan Agreement |
| LCB | : | Local Competitive Bidding |
| LCS | : | Least Cost Selection |
| LEO | : | Law Enforcing Unit |
| LED | : | Light-Emitting Diode |
| LGD | : | Local Government Division |
| LGED | : | Local Government Engineering Department |
| LIUPCP | : | Livelihoods Improvement of Urban Poor Communities Project |
| MCC | : | Mass Communication Cell |

| | | |
|---|---|---|
| LTM | : | Limited Tendering Method |
| MIDI | : | Moheshkhali-Matarbari Integrated Infrastructure Development Initiative |
| MOLGC | : | Ministry of Local Government and Cooperative |
| MoPA | : | Ministry of Public Administration |
| MOF | : | Ministry of Finance |
| MGSP | : | Municipal Governance Support Project |
| MM | : | Men Month |
| MP | : | Master Plan |
| MPM | : | Mass Public Meeting |
| MSP | : | Municipal Services Project |
| NCC | : | Narayanganj City Corporation |
| NCB | : | National Competitive Bidding |
| NDCC | : | North Dakota Century Code |
| NIS | : | National Integrity Strategy |
| NISSP | : | National Integrity Strategy Support Project |
| NLTP | : | National Land Transport Policy |
| NOA | : | Notification of Award |
| NOBIDEP | : | Northern Bangladesh Integrated Development Project |
| NSPGI | : | National Strategy for Paurashava Governance Improvement |
| NGO | : | Non-Governmental Organization |
| NWPo | : | National Water Policy |
| O&M | : | Operation & Maintenance |
| OEI | : | Operation and Effect Indicators |
| OMA | : | Outer Management Area |
| ODA | : | Official Development Assistance |
| OJT | : | On the Job Training |
| OTM | : | Open Tendering Method |
| PBA | : | Performance Based Approach |
| PCO | : | Project Coordination Office |
| PDP | : | Paurashava Development Plan |
| PDCA | : | Plan Do Check Act |
| PEC | : | Project/Proposal Evaluation Committee |
| PHC | : | Primary Health Care |
| PIU | : | Project Implementation Unit |
| PIP | : | Project Investment Plan |
| PMF | : | Public Financial Management |
| PMO | : | Prime Minister's Office |
| PMU | : | Project Management Unite |
| PPP | : | Public Private Partnership |
| PPA2006 | : | Public Procurement Act 2006 |
| PPR | : | Public Procurement Rules |
| PR | : | Performance Review |
| PSC | : | Project Steering Committee |
| PTW | : | Production Tube Well |
| QCBS | : | Quality- and Cost-Based Selection |
| PSU | : | Policy Support Unit |
| RB | : | Road and Bridge |
| RAJUK | : | Rajdhani Unnayan Kartripakkha |
| RFQ | : | Request for Quotation |
| RHD | : | Roads and Highways Department |
| RMP | : | Road Master Plan |
| SBSQ | : | Selection Based on Consultant's Qualifications |
| SC | : | Standing Committee |
| SCC | : | Site Clearance Certificate |
| SDP | : | Sector Development Plan |
| SFB | : | Selection under a Fixed Budget |
| SGI-CCT | : | Strategy for Governance Improvement of City Corporations in Transition |

| | | |
|---|---|---|
| SPGP | : | Strengthening Paurashava Governance Project |
| SP | : | Structure Plan |
| SDG | : | Sustainable Development Goals |
| SDCC | : | Sustainable Development and Climate Change |
| SDP | : | Sectoral Development Plan |
| SWM | : | Solid Waste Management |
| STD | : | Standard Tender Document |
| SSS | : | Single Source Selection |
| SWOT | : | Strengths, Weaknesses, Opportunities, Threats. |
| SPIMS | : | Strengthening Public Investment Management System Project |
| TDM | : | Travel Demand Management |
| TOR | : | Terms Of Reference |
| TLCC | : | Town Level Coordination Committee |
| UAP | : | Urban Area Plan |
| ULB | : | Urban Local Body |
| UDCG | : | Urban Development and City Governance |
| UDD | : | Urban Development Directorate |
| UGDP | : | Upazila Governance and Development Project |
| UICDP | : | Upazila Integrated Capacity Development Project |
| UIIPF | : | Urban Infrastructure Improvement Preparatory Facility |
| UPDSC | : | Urban Planning and Development Support Committee |
| UGIIP | : | Urban Governance Infrastructure Improvement Project |
| VAT | : | Value Added Tax |
| WASA | : | Water Supply & Sewerage Authority |
| WB | : | World Bank |
| WBA | : | Ward Based Approach |
| WLCC | : | Ward Level Coordination Committee |
| WSS | : | Water Supply and Sanitation |

# Measurement Units

**Length**

mm = millimeter(s)
cm = centimeter(s) (cm = 10 mm)
m = meter(s) (m = 100 cm)
km = kilometer(s) (km = 1,000 m)

**Extent**

$cm^2$ = square centimeter(s) (1.0 cm × 1.0 cm)
$m^2$ = square meter(s) (1.0 m × 1.0 m)
$km^2$ = square-kilometer(s) (1.0 km × 1.0 km)
ha = hectare(s) (10,000 $m^2$)
Acre = 0.4047 hectare(s) (4,047 m2)

**Volume**

$cm^3$ = cubic centimeter(s) (1.0 cm × 1.0 cm × 1.0 cm, or 1.0 ml)
$m^3$ = cubic meter(s) (1.0 m × 1.0 m × 1.0 m or 1.0 kl)
L = liter (1,000 $cm^3$)
MCM = million cubic meter(s)

**Weight**

g = gram(s)
kg = kilogram(s) (1,000 grams)
ton(s) = metric ton(s) (1,000 kg)

**Time**

sec = second(s)
min = minute(s)
hr = hour(s)

**Others**

ppm = parts per million
° = degree
°C = degrees Celsius
% = percent
mS = millisiemens

**Currency**

US$ = United State dollar(s)
JPY = Japanese yen(s)
BDT = Bangladeshi Taka(s)

Exchange rate

USD 1 = JPY 108

USD 1 = BDT 84.8

BDT 1 = JPY 1.27

(provided by JICA for appraisals implemented in JFY 2019)

# CHAPTER 1 INTRODUCTION

## 1.1 Introduction

This is the "Final Report" prepared by the Survey team in accordance with the contract for the "Preparatory Survey on Urban Development and City Governance Project", defined as "the Survey", agreed upon between the Japan International Cooperation Agency (JICA) and the joint venture of Nippon Koei Co., Ltd. and Koei Research & Consulting Inc. on August 26, 2019.

The Survey team commenced the work in the late August 2019 to undertake various activities for the Survey. The Survey team compiled all information collected up to now as the Final Report to present the results of the all survey work as of 11 June 2021.

## 1.2 Background

Bangladesh has been experiencing rapid urbanization since independence in 1971. In 2016, 35.0% (57.00 million) of total population of the country lived in urban area. The urban population growth rate is 3.1% per annum, much higher than total population growth rate of 1.1% (World Bank 2018). The urbanization results from three main factors: expansion of urban areas, migration of rural population to urban areas and population growth within the urban areas, all of which are expected to continue at a similar or accelerated pace.

In Bangladesh, local governments in urban areas are divided into City Corporation (CC) and Paurashava (municipalities) (hereinafter CC and Paurshava are collectively referred to as "Urban Local Body (ULB)"), depending on the scales of their population and tax revenue. These ULBs have a larger scope of responsibility than their rural counterparts. They assume to play important functions as city planning, local infrastructure development/maintenance, and the delivery of public services including water supply and solid waste management. The urban areas, are faced with a range of issues while cities take critical roles to pull the economic development of the country as an industrial accumulation place.

In urban areas, infrastructure development does not catch up with rapid population growth and traffic jam or the environmental aggravation are actualized. Inconsistency between overall development plan of ULBs and the individual infrastructure development plan, delay of the infrastructure development and insufficient maintenance of the public facility deteriorate the situation. And, CCs and Paurashavas are Local Government Institutions mandated to provide public service to the urban citizens, however, they do not have enough capacity to provide those services to their dwellers. The reasons of the weak urban governance are: a) shortage of manpower; b) financially vulnerability; c) incompetence of officers; d) the limited power for recruitment; and the absence of participatory planning process and system.

In this connection, the Project is proposed for Yen Loan aiming at improving urban functions by addressing urban infrastructure development in parallel with governance improvement.

## 1.3 Objective of the Survey

The purpose of the survey is to study current situation and issues on capacity of ULBs, urban planning, and development and O&M of infrastructure; to identify priority urban infrastructure subprojects to be funded; to examine necessary technical assistance paying attention to improvement of city governance related to infrastructure; and to formulate the Project as an appropriate Yen loan project.

Target ULBs of the survey are Gazipur, Narayanganj, Cumilla, (three CCs) and Cox's Bazar (one Paurashava).

## 1.4 Activities of the Survey

(1) Work in Japan

The Survey team reviewed the existing and available information and data covering the past related JICA projects including ICGP, C4C, SPGP, the data of target Urban Local Bodies in the late August. Survey schedule, and questionnaires for data collection were also examined and prepared. Based on this, Inception Report was prepared and submitted to JICA.

(2) First Survey Work in Bangladesh

The team commenced the work in Bangladesh on September 1st. The kick-off meeting of the Survey was held on September 5th, 2019 with representative of four target Urban Local Bodies to explain the contents of Inception Report and work schedule. The Survey team also made the initial visits to the four target Urban Local Bodies in September, (8th: Gazipur CC, 9th: Cummila CC, 11th and 12th: Cox's Bazar, and 15th: Narayanganj). The first visit aimed at introduction of the Survey team members, explanation of new project formulation, and collection of data and information necessary for the Survey. After the visits, several visits were made to these Urban Local Bodies by experts to collect information of governance, urban planning, and infrastructure development needs. Most of the members completed the assignments by October 24 and the first survey work was completed.

(3) Assistance to the JICA First Fact Finding Mission

The first Fact Finding mission was conducted by JICA from September 22 to October 3 in Bangladesh. The Survey team assisted the mission by participating in series of the discussion with LGED, and providing information. The team also attended in the kick-off meeting with LGED held on September 23rd at LGED.

(4) Second Survey Work in Bangladesh

After the first survey work, preparation of priority subproject lists continued from the late October to the early November. And, the team members commenced their assignments from the beginning of November as the second survey work in Bangladesh started. Main works are finalization of selection of the priority subprojects and preliminary cost estimate, examination of O&M institution, planning of project activities related to performance-based approach, environmental and social consideration, any other formulation works of the project, and a subcontract work. The team visited the target ULBs several times, and obtained information, exchanged views, and so on. In early December, explanation and discussion on draft project outline as well as draft priority infrastructure lists were made with related officers in ULBs.

(5) Assistance to the JICA Second Fact Finding Mission

The second Fact Finding mission was conducted by JICA from November 13 to November 19 in Bangladesh. The Survey team assisted the mission by participating in the discussion with LGED and JICA, and providing information mainly O&M, environmental and social consideration, ownership of ULBs. The team attended in the first meeting with LGED held on November 14 at LGED.

(6) Third Survey in Bangladesh

In the early January 2020, the team commenced the third survey work in Bangladesh. Mainly, the work was to coordinate relevant stakeholders, namely JICA, LGED, and four target ULBs to adjust the loan eligible amount and finalize the project components. The team visited four ULBs in January with LGED to explain the adjusted eligible loan amount and subprojects. The team also collected information for refinement of Interim Report to prepare Draft Final Report.

(7) Assistance to the JICA Appraisal Mission

The appraisal mission was dispatched by JICA from February 2 to 6 in Bangladesh. The Survey team assisted the mission by participating in the discussion with LGED and JICA, and providing information as required.

# Part I: Formulation of the Project

# CHAPTER 2 URBAN GOVERNANCE

## 2.1 Policy and Legal Framework of Urban Governance

### 2.1.1 Policy Framework of Urban Governance

The Perspective Plan of Bangladesh (2010-2021): Marking Vision 2021 a Reality provides a broad framework for the course of actions required to achieve "Vision 2021"[1]. Drawn up by the Planning Commission, Perspective Plan seeks to make Bangladesh a middle-income country by 2021. Its nine priority development agendas include "building a sound infrastructure and "ensuing effective governance". This national long-term plan places a strong emphasis on the necessity of the improved governance and addresses the importance of promoting improvement of overall public administration capacity, accountability mechanism, M&E capacity, and e-governance. Particular to challenges related to urban governance, the plan sets out that "policies and strategies in this (urban governance) area focus on institutional reforms and decentralization of responsibilities and resources to local governments; participation of civil society including women in the design, implementation and monitoring of local priorities; building capacity of all actors (institutions, groups and individuals) to contribute fully to decision-making and urban development processes; and facilitation networking at all levels".

Specific strategies and approaches to achieve the goals of Perspective Plan are articulated in the two five-year plans (6th and 7th) covering its target years (refer to Attachment 2.1.1 for extracted related parts). The Sixth Five Year Plan (2011-2015) emphasizes the importance of empowering local government to play a more prominent role in local development activities as it clearly states that "the strengthening of local governments is a key institutional development challenge for Bangladesh". The concrete approaches taken up in the plan for this end are developing planning and budgeting capacity, strengthening citizen participation, adherence to rule of law, and establishing e-governance at all local government levels.

The Seventh Five Year Plan (2016 - 2020) continues to underline the significance of promoting efficient local government, particularly urban governance and management with greater accountability, transparency and improved public participation. Four areas are picked up as challenging in contest of local governance, namely (i) decentralization, (ii) institutional reform at the local level, (iii) strengthening of municipal capacity, and (iv) mobilization of resources. With regard to urban governance, the plan maintains that "good governance need to be ensured through accountability, responsiveness, equity and inclusiveness in the urban bodies" and upholds a strategy that "capacity-building efforts at municipal level should focus on augmenting human resources in line with the discharge of responsibilities in major areas of urban planning, community mobilization, and ICT". The plan also spells out in detail challenges particular to CCs, describing "unplanned and uncontrolled spontaneous urbanization and expansion of the city area". To ensure the planned development and provide proper infrastructure facilities, the plan emphasizes the need for CCs' institutional capacity building in "increasing revenue income, improving municipal financial system and capital budget planning".

In order to address urban governance improvement in Paurashavas, a uniform approach and policy direction was articulated in the National Strategy for Paurashava Governance Improvement (2016-2025). It was drafted with support from JICA Strengthening Paurashava Governance Project (SPGP) and adopted by the LGD.

### 2.1.2 Legal Framework of Urban Governance

The administrative units, which shoulder central responsibility in providing urban services, are CCs and Paurashavas. It is said that the creation of urban local body (ULB) dates back in the mid-nineteenth century.

[1] Vision 2021 was the political manifesto of the Bangladesh Awami League party before winning the National Elections of 2008. The Vision 2021 aims to articulate how Bangladesh needs to be in 2021 - the year which marks the 50th anniversary of its independence.

But it was only recently that legal and functional frameworks for ULB were sorted out and promulgated. In 2009, the government enacted Local Government (City Corporation) Act (hereinafter "CC Act") and Local Government (Municipality) Act (hereinafter "Paurashava Act")[2] to define, amongst others, autonomy, authority, functions, and scope of community participation for ULBs.

(1) Local Government (CC) Act 2009

CC Act consists of 126 articles under 6 parts and 8 schedules. These articles and schedules cover 6 thematic categories: (i) foundations of CC, (ii) administrative functions and procedures, (iii) service delivery-related functions, (iv) offences and penalties, (v) government's powers and responsibilities, and (vi) legal instruments (in respect of Rules, Regulations and By-laws). Jurisdictional boundaries of all CCs as well as CC functions and taxation power are all laid out in the schedules.

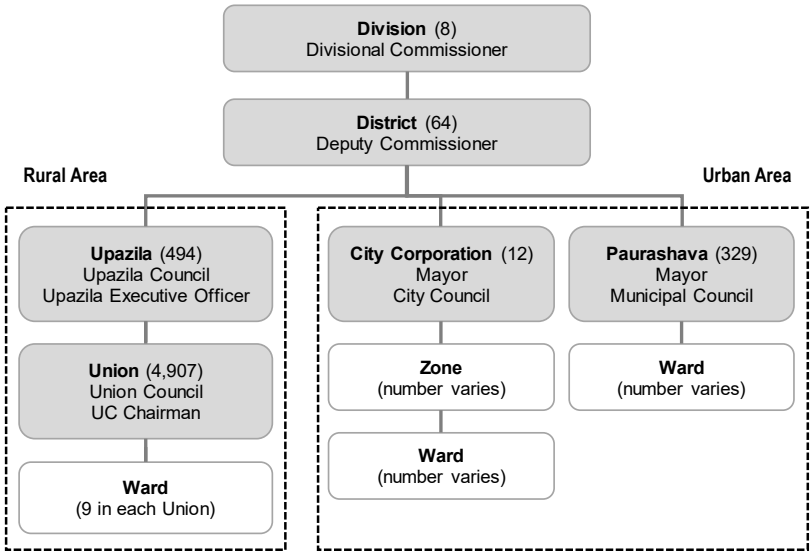
(2) Local Government (Mun.) Act 2009

Paurashava Act is comprised of 131 articles under 5 parts as well as 8 schedules. Similar to CC Act, Paurashava Act pulls together different thematic categories, such as: (i) establishment and constitution of Paurashava, (ii) election of Mayor/Councilors (iii) officers and employees, (iv) responsibilities and functions (including functions of standing committees), (v) financial management, budget and accounting (including taxation power), and (vi) law and discipline.

## 2.2 Local Governance System in Bangladesh

### 2.2.1 Local Government Institutions in Bangladesh

Administratively Bangladesh is made up of 8 Divisions[3] and 64 Districts[4]. Each district is further divided into Upazilas. The area within each Upazila is sub-divided into Unions, except for metropolitan areas.




*Source: Compiled by JICA Survey Team based on Bangladesh National Portal*

**Figure 2.2.1 Local Governance System in Bangladesh**

[2] The amendment law was passed on October 5, 2010.
[3] The administrative head is the Divisional Commissioner, who is appointed by the government from a senior secretary of BCS Administration Cadre.
[4] 64 districts include 3 hill districts. The administrative head is the Deputy Commissioner, who is appointed by the government from a deputy secretary of BCS Administration Cadre.

As of January 2020, rural local government system is comprised of 494 Upazila Parishads[5] and 4,907 Union Parishads while the metropolitan areas are administered by ULBs that include 12 CCs[6] and 329 Paurashavas.

**Table 2.2.1 Number of Local Government Institutions**

| Division | District | Hill District | Urban Areas | | Rural Areas | |
|---|---|---|---|---|---|---|
| | | | CC | Paur. | Upazila | Union |
| Barisal | 6 | 0 | 1 | 23 | 42 | 352 |
| Chattogram | 8 | 3 | 2 | 60 | 102 | 949 |
| Dhaka | 13 | 0 | 4 | 84 | 90 | 1,248 |
| Khulna | 10 | 0 | 1 | 33 | 60 | 571 |
| Mymensingh | 4 | 0 | 1 | 26 | 35 | 351 |
| Rajshahi | 8 | 0 | 1 | 58 | 67 | 564 |
| Rangpur | 8 | 0 | 1 | 27 | 58 | 536 |
| Sylhet | 4 | 0 | 1 | 18 | 40 | 336 |
| Total | 61 | 3 | 12 | 329 | 494 | 4,907 |

*Source: Compiled by JICA Survey Team based on Bangladesh National Portal*

### 2.2.2 Supervisory Authorities for Urban Local Bodies

The Local Government Division (LGD) of the Ministry of Local Government, Rural Development and Cooperatives (LGRD&C) is the supervising authority for local government institutions, except for hill district councils which are under the Ministry of Chittagong Hill Tract Affairs. It is primarily responsible for development and implementation of policies relating to local government. Within the LGD, the Urban Wing of Administration Department oversees urban local body (ULB) matters.

The Local Government Engineering Department (LGED), a cell within the LGD, traditionally supported infrastructure development in rural areas, such as rural road, rural markets and growth centers. It recently strengthened its Urban Management Wing to manage projects in urban areas. Currently the LGED mandates cover development of rural, urban and water sector infrastructure. The LGED is also engaged in providing technical assistance, governance improvement and capacity building of urban local government.

### 2.2.3 Overview of Urban Local Bodies

As mentioned previously, there are a total of 341 ULBs in Bangladesh as of October 2019. Of these, 12 are CCs and 329 are Paurashavas. Paurashavas are further classified into A, B, and C categories. To create a new Paurashava of category C, the proposed area's own revenue has to be more than 2 million on an average (/year) over the last three years. For upgrading C to B, candidate C category Paurashava's own revenue on an average (/year) has to be 6 million or more and at the same time its tax collection rate must be more than 75% over the last three years. For upgrading B to A, candidate B category Paurashava's own revenue on an average (/year) has to be 10 million or more and at the same time its tax collection rate must be more than 75% over the last three years[7].

Clause 4, Article 3 of CC Act lays out criteria used for formation of CC. This includes (i) population, (ii) population density, (iii) income source, (iv) economic importance, (v) infrastructure and its extensiveness, (vi) annual income of ULB, and (vii) residents' opinion. Clause 2, Article 3 of Paurashava Act stipulates that the government can convert a rural area to a municipality based on the analysis of (i) population, (ii) population density, (iii) income sources, (iv) land type, and (v) economic importance. Thresholds are set as no less than 50,000 and three-fourth of population engage in non-agricultural profession for the above (i) population, not less than 1,500 per sq. km in average for the above (ii) population density, and 33% of total land classified into non-agricultural for the above (iv) land type.

[5] Bengali word for local council
[6] Dhaka South, Dhaka North, Chattogram, Khulna, Sylhet, Rajshahi, Barisal, Rangpur, Cumilla, Narayanganj, Gazipur and Mymensingh
[7] LGD circular dated May 31, 2011 (No. 46.064.028.28.07.015.2011/811.)

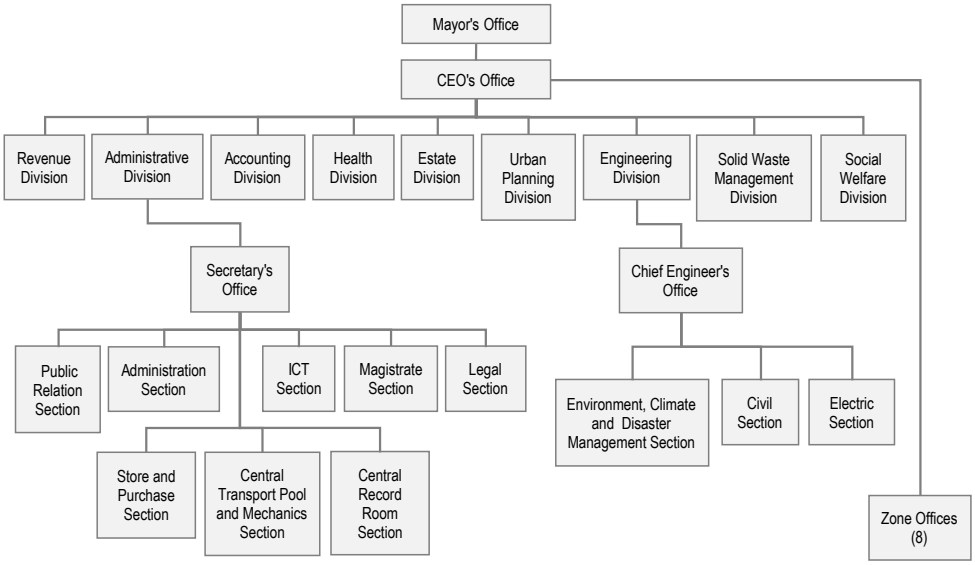
## 2.3 Organizational Structure

### 2.3.1 Organograms of 4 UDCG Target ULBs

The organizational structure of a Paurashava, prescribed by the LGD[8], consists of Mayor's Office, a Chief Executive Officer (CEO) Office and three divisions. The three divisions are namely Engineering Division (the head of Division is an Executive or Assistant Engineer), Administration Division (Secretary) and Health, Family Planning and Conservancy Division (Health Officer).

In case of CC, organization structure varies from one CC to another. To meet the growing demands of urban services and to attend properly to specific functions assigned to it, CC is entrusted to tailor its own structure (organogram and staffing table). In this light, CC proposes its own organogram and submits it to the government for review and approval.

(1) GCC



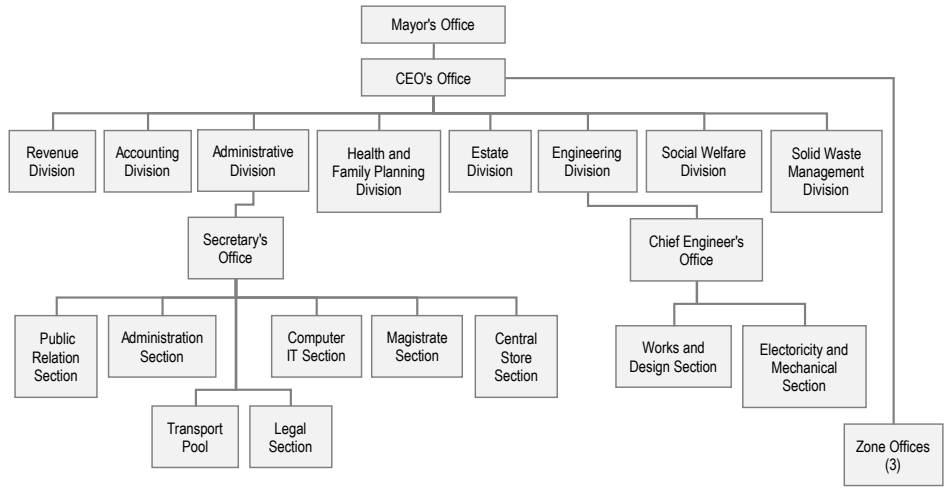

*Source: GCC*

**Figure 2.3.1 Proposed Organization Chart of GCC**

The proposed organizational structure of GCC consists of 9 divisions and 8 zone offices under Mayor and CEO. The Engineering Division consists of three sections, namely Civil Section, Electric Section and Environment, Climate and Disaster Management (ECDM) Section though no engineers are deployed yet in the ECDM section.

[8] Paurashava Employee Service Rules, 1992 (March 7, 1992)

(2) NCC

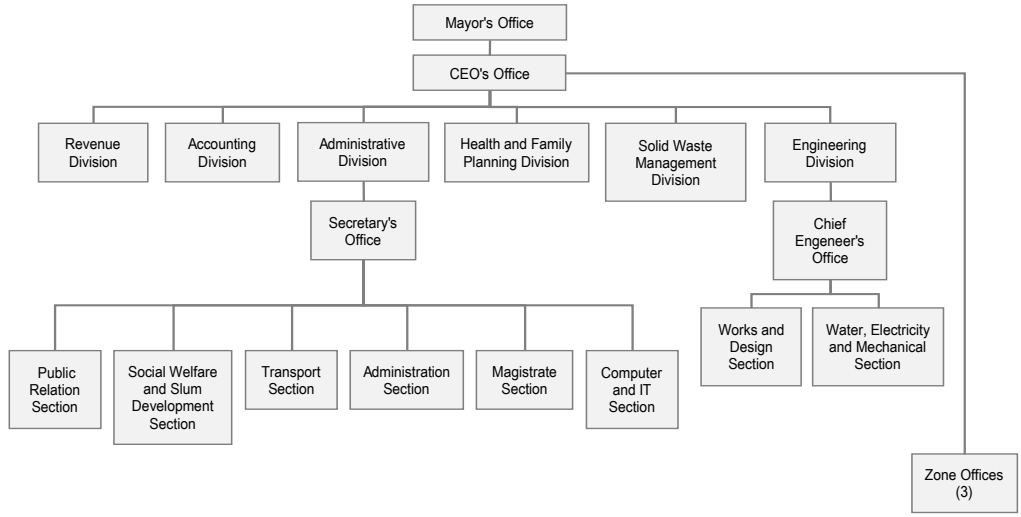



The proposed organizational structure of NCC consists of eight (8) divisions and three (3) zone offices under Mayor and CEO.

*Source: NCC*

**Figure 2.3.2 Proposed Organization Chart of NCC**

(3) CuCC

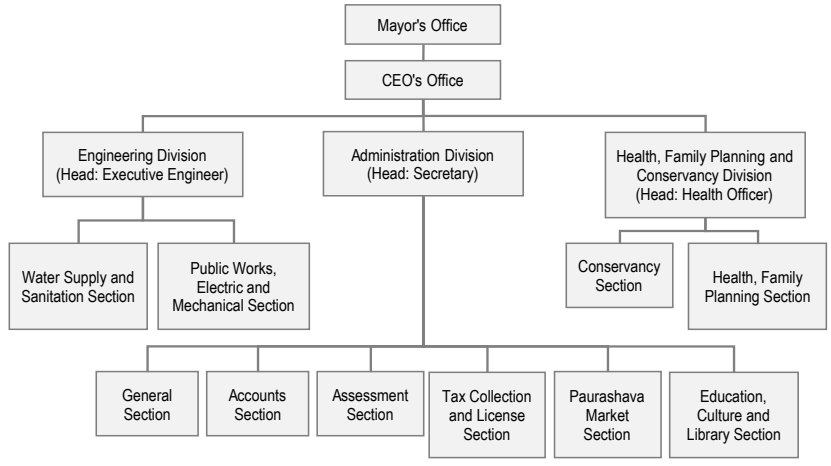



The proposed organizational structure of CuCC is made up of six (6) divisions and three (3) zonal offices.

*Source: CuCC*

**Figure 2.3.3 Proposed Organization Chart of CuCC**

(4) CBP




CBP adopts the prescribed organization structure of Grade "A" Paurashavas.

*Source: CBP*

**Figure 2.3.4 Organization Chart of CBP**

### 2.3.2 Staffing Situation of 4 UDCG Target ULBs

#### (1) Existing Manpower

The number of existing manpower, both permanent and non-permanent, is 288 at GCC, 147 at NCC, 91 at CuCC and 112 at CBP respectively. Table 2.3.2 puts together planned and actual numbers of staff at the 4 target cities. The numbers of employees in Engineering Division shown in Table 2.3.2 include both engineers and non-engineers (e.g. computer operators and office assistants).

**Table 2.3.1 Proposed and Actual Numbers of Staff in 4 Target ULBs (as of January 2020)**

| GCC | P | A | NCC | P | A | CUCC | P | A | CBPS | P | A |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 1849 | 288 | Total | 683 | 147 | Total | 603 | 91 | Total | 159 | 112 |
| **Mayor's Office** | 8 | 2 | **Mayor's Office** | 5 | 4 | **Mayor's Office** | 5 | 1 | **Mayor's Office** | 3 | 3 |
| **CEO's Office** | 6 | 1 | **CEO's Office** | 3 | 2 | **CEO's Office** | 3 | 1 | **CEO's Office** | 2 | 0 |
| **Administrative Division** | **222** | **19** | **Administrative Division** | **153** | 38 | **Administrative Division** | **269** | 77 | **Administrative Division** | **54** | 41 |
| Secretary's Office | 4 | 1 | Secretary's Office | 3 | 0 | Secretary's Office | 3 | 0 | Secretary's Office | 1 | 1 |
| Administration Section | 176 | 15 | Administration Section incl. security and Councilors staff | 70 | 7 | Administration Section (Incl. Safety and other relavent | 105 | 67 | General Section | 20 | 16 |
| Magistrate Section | 8 | 1 | Magistrate Section | 3 | 0 | Magistrate Section | 3 | 0 | Accounting Section | 6 | 4 |
| Mechanical Section | 7 | 0 | Transport Pool Section | 60 | 23 | Transport Pool Section | 118 | 4 | Assessment Section | 6 | 6 |
| Public Relation Secction | 4 | 0 | Public Relation Secction | 4 | 0 | Public Relation Secction | 4 | 0 | Tax Collection and License Section | 16 | 11 |
| ICT Section | 5 | 0 | Computer ans info. Tec. Section | 3 | 0 | Computer and IT Section | 4 | 0 | Market Section | 5 | 3 |
| Store and Purchase | 8 | 2 | Central Storage Section | 3 | 2 | Social Welfare and Slum Devt. Section | 9 | 0 | | | |
| Legal Section | 6 | 0 | Legal Section | 4 | 4 | Legal section | 5 | 0 | | | |
| Central Record Room Section | 4 | 0 | Central Record Room Section | 3 | 2 | - | - | | | | |
| **Revenue Division** | 12 | 6 | **Revenue Division** | **6** | 0 | **Revenue Division** | 5 | 1 | | | |
| **Accounting Division** | 18 | 4 | **Accounting Division** | **9** | 6 | **Accounting Division** | 13 | 5 | | | |
| **Engineering Division** | **104** | **19** | **Engineering Division** | **26** | 24 | **Engineering Division** | **31** | **7** | **Engineering Division** | **68** | 48 |
| Chief Engineer's Office | 8 | 2 | Chief Engineer's Office | 3 | 2 | Chief Engineer's Office | 3 | 0 | Executive Engineers Office | 1 | 1 |
| Civil Section | 66 | 14 | Works and Design Section | 12 | 17 | Works and Design Section | 15 | 7 | Works Electricity and Mechanical Section | 51 | 38 |
| Electric Section | 13 | 3 | Electricity and Mechanical Section | 11 | 5 | Water, Electricity Mechanical Section | 13 | 0 | Water supply and Sanitation Section | 16 | 9 |
| Environment, Climate and DM Section | 17 | 0 | | | | - | - | | | | |
| **Urban Planning Division** | **11** | 1 | | | | - | - | | | | |
| **Health Division** | **30** | 3 | **Health and Family Planning Division** | **4** | 12 | **Health and Family Planning Division** | **6** | 0 | **Health, Family Planning and Conservancy Division** | **32** | 20 |
| **Estate Division** | **27** | 2 | **Estate Division** | **13** | 3 | - | - | | **Conservancy Section** | **5** | 4 |
| **Solid Waste Management Division** | **35** | 4 | **Solid Waste Management Division** | **3** | 17 | **Solid Waste Management Division** | **3** | 0 | **Health and Family Planning Section** | **27** | 16 |
| Waste Management Section | 30 | 4 | | | | - | - | | | | |
| Medical Waster Management Unit | 5 | 0 | | | | - | - | | | | |
| **Social Welfare Division** | **13** | 1 | **Social Welfare Division** | 11 | 1 | - | - | | | | |
| **Zone Offices (8)** | **1363** | **226** | **Zone Offices (3)** | **450** | **34** | **Zone Offices (3)** | **273** | **38** | | | |

P: Planned number, A: Actual number

*Source: JICA Survey Team based on proposed organograms of 4 cities and interviews made in September 2019*

#### (2) Number of Engineers

The Engineering Division in a typical CC consist of 2 sections, namely i) Works and Design Section and ii) Water, Electricity and Mechanical Section. Urban Planner section is a sub-section within Works and Design Section. In case of GCC, engineers are deployed at zonal offices as well. At NCC, three engineers are seconded from the LGED as shown in Table 2.3.3 (shaded boxes)[9]. The numbers of engineers and urban planner deployed in 4 target cities are as follows.

[9] The LGD can deploy LGED engineer(s) to CC, subject to request(s) placed to the LGD by CC. This request can be made by CC regardless of whether its organogram have been approved or not. Normally, CC submits a request to the LGD for deployment of engineer(s) at CC, and then the LGD requests the LGED to provide the particulars of the deployable engineer(s) as per CC's request. If all conditions are met, the LGD deploys such engineer(s) to CC. CC is liable for payment of salary and benefits to the deployed engineer(s).

**Table 2.3.2 Number of Engineers Deployed in 4 UDCG Target ULBs (as of October 2019)**

**(1) Number of Engineers**

| Name of Office | | | Designation | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|---|---|---|
| Engineering Division | Chief Engineer's Office | | Chief Engineer | -- | -- | 1 | -- |
| | | | Additional Chief Engineer | 1 | -- | -- | -- |
| | | | Superintending Engineer | 1 | 1 | -- | -- |
| | | Works and Design Section | Executive Engineer (Civil) | 1 | 2 | 3 | 1 |
| | | | Assistant Engineer (Civil) | 1 | 2 | 5 | 1 |
| | | | Sub-Assistant Engineer (Civil) | -- | 6 | 2 | 2 |
| | | Water, Electricity and Mechanical Section | Executive Engineer | 2 | -- | -- | -- |
| | | | Assistant Engineer | 1 | 1 | 2 | -- |
| | | | Sub-Assistant Engineer | -- | 2 | 4 * | 1 |
| | | Environment, Climate and Disaster Management Section | | This section is proposed in Gazipur City Corporation only and no engineers are deployed for the moment. | | | |
| Zone | | | Superintending Engineer | 2 | -- | -- | -- |
| | | | Executive Engineer | 9 | -- | -- | -- |
| | | | Assistant Engineer | 6 | -- | -- | -- |
| | | | Sub Assistant Engineer | 4 | -- | -- | -- |
| **Total** | | | | **28** | **14** | **17** | **5** |

Note: Engineers in shaded boxes are seconded from LGED.

* Two sub-assistant engineers are contractual.

**(2) Number of Urban Planners**

| Name of Office | Designation | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|---|
| Urban Planner Section * | Urban Planner | **2** | **1** | -- | -- |

* It is a sub-section of Works and Design Section.

*Source: JICA Survey Team*

(3) Number of Regular and Contractual Staff

Particularly for those CCs whose organograms are yet to be approved by central authorities, contractual staff play a relatively important role in undertaking administrative work. The table below presents an overview of human resources from the standpoint of their status.

**Table 2.3.3 Number of Regular and Contractual Staff of 4 ULBs (as of October 2019)**

| City | Regular | Contractual | Total |
|---|---|---|---|
| GCC | 288 | 1,233 | **1,521** |
| NCC | 147 | 229 | **376** |
| CuCC | 91 | 700 | **791** |
| CBP | 112 | 520 | **632** |
| **Total** | **638** | **2,682** | **3,320** |

*Source: JICA Survey Team*

### 2.3.3 Staff Recruitment

Staff recruitment at CC can be initiated only after proposed organogram and service rules are approved by the central authorities[10]. The head of the CC officers and employees is CEO who is a cadre service officer (Admin) of the central government. CEO is deployed on deputation to CC by the LGD. The head of each division is also deputed by the LGD[11]. Recruitment of other officers and employees at CC is under the responsibility of the Administration Division of each CC though the recruitment procedure and qualification need to be verified by the recruitment committee set up in each CC. One of the committee members should be selected from the LGD and usually headed by Mayor.

For Paurashava, the LGD recruits all employees under Class I (Executive Engineer, Assistant Engineer, Town Planner, Health Officer and Secretary) and Class II (Sub-Assistant Engineer, Administrative Officer, Accounts Officer, Slum Development Officer) and appoints them to Paurashavas. All staff under Class III (all Clerical Staffs, Drivers, Field Supervisors) and Class IV (Messengers, Guards, and other lower

[10] According to the section 66 of local government (City Corporation) Act 2009

[11] Head of each division can be deployed by LGD departments or from other ministries.

subordinate staffs) are employed by Paurashava following the process prescribed in Paurashava Employee Service Rules 1992, although such recruitment can be only completed after its final verification by the LGD. During recruitment, a committee is formed at each Paurashava to verify and evaluate its process. This recruitment committee is headed by Mayor and is composed by Paurashava Secretary, one councillor, a representative of District Commissioner (DC) and one specialist/expert on the proposed position. The committee is responsible for selecting candidate(s) and informing the LGD accordingly.

### 2.3.4 Standing Committees

Article 50 of CC Act and Articles 55 of Paurashava Act both provide formation requirements of standing committees (SC). The laws require CC and Paurashavas to establish 14 SCs and 10 SCs respectively. In addition to these statutory committees, ULBs can form additional standing committees, if required.[12] The role of standing committees is to assist the councils by deliberating and providing recommendations for the issues in the respective thematic areas[13]. For instance, SC for Finance and Establishment is to oversee, provide advice and take necessary measures on financial administrative issues. To be more specific, it i) reviews the draft annual budget, ii) monitors revenues and expenditures based on reports prepared by Account Department, iii) assists the concerned departments in strengthening revenue generation and financial management, iv) promotes the awareness of citizens for tax payment, and v) monitors administration with respect to human resources and organizational arrangements.

**Table 2.3.4 Summary of Standing Committees in GCC and CBP**

| | CC | Paurashava |
|---|---|---|
| Statutory SCs | 1- Finance and Establishment<br>2- Waste Management<br>3- Education, Health, Family Planning, and Health Management<br>4- Urban Planning and Development<br>5- Audit and Accounts<br>6- Urban Infrastructure Construction and Maintenance<br>7- Water and Electricity<br>8- Social Welfare and Community Center<br>9- Environment Development<br>10- Sports and Cultural<br>11- Birth-Death Registration<br>12- Communication<br>13- Market Price Observation, Monitoring and Control<br>14- Disaster Management | 1-Establishment and Finance<br>2-Taxation and Collection<br>3-Accounts and Audit<br>4-Urban Planning, Services for Citizen and Development<br>5-Law and Order and Public Security<br>6-Communication and Physical Infrastructural<br>7-Women and Child<br>8-Fisheries and Livestock<br>9-Information and Culture<br>10-Observation, Monitoring and Control of Market Prices |
| Additional SCs | (GCC as sample)<br>15- Women and Child<br>16- Law and Discipline<br>17- Poverty Reduction<br>18- Operation and Maintenance | (CBP as sample)<br>11-Solid Waste Disposal and Transfer<br>12-Health, Water and Sanitation<br>13-Poverty Reduction and Slum Development<br>14-Disaster Management<br>15-Education<br>16-Tourism<br>17-Electricity and Vehicle Repairs and Maintenance<br>18-Grievance Redress Cell |

*Source: Compiled by JICA Survey Team based on LG acts and interviews with UDCG target cities*

SC for Urban Planning and Development is to oversee, provide recommendation and take measures on matters related to urban planning including land use policy. It is responsible for i) overseeing urban planning in the concerned area in accordance with master plan, ii) providing advice on long-term planning studies,

[12] Clause 2, Article 55 of Paurashava Act ("Formation of Standing Committee by Municipality")
[13] By-law issued by the LGD on January 2, 2013 ("Standing committee formation and their functions by-laws 2013")

which include population projection, land use planning, planning of transportation systems, and natural heritage, iii) providing advice on land and property development, and iv) providing assistance in the formulation and implementation of a master plan and development plan. SC for Urban Infrastructure Construction and Maintenance deals with matters related to infrastructure construction and maintenance. The said SC i) oversees all issues related to the infrastructure in accordance with the master plan, development plan and relevant legislation, ii) provides advice and recommendations on applications for infrastructure development, iii) monitors the situation of physical infrastructure, iv) provides assistance for coordination on infrastructural development initiated by different agencies, and v) takes measures for quick removal or transfer of infrastructure which is at risk or in unhealthy conditions.

As for the number of members of each SC, CC Act stipulates that CC can determine it on their own while Paurashava Act fixes the said number at five.[14] In both CC and Paurashava the chairman and members of a SC are elected by councilors from among themselves provided that a councilor cannot be a member of more than two SCs at the same time.

During Inclusive City Governance Project (ICGP) period, SCs were not always active. Performance Review, carried out in July 2018, disclosed that SCs in ICGP target CCs had not met monthly meeting targets and failed to produce reports mostly. Interviews with employees of ICGP target CCs also lead to a general view that further activation of SCs should be pushed for in the future.

## 2.4 Services provided by CC and Paurashava

The scope of service delivery is stipulated in both CC Act and Paurashava Act. Responsibilities and functions of CC are illustrated in Article 41 of CC Act and their details are listed in its Third Schedule. Paurashava services are almost identical to those of CC. Likewise, details of Paurashava services are laid out in the Second Schedule of Paurashava Act. Table 2.4.1 provides an overview of 28 service items of CC and 12 service items of Paurashava.

[14] Clause 3, Article 50 of CC Act, Clause 3, Article 55 of Paurashava Act

**Table 2.4.1 Comparison of Service Delivery of CC and Paurashava**

| CC | | Paurashava | |
|---|---|---|---|
| 1 | Public Health | 1 | Public Health |
| | Health management | | Health management |
| | Unhygienic building | | Unhygienic building |
| | Collection, removal and management of waste | | Collection, removal and management of waste |
| | Latrine and urinals | | Public toilets |
| 2 | Registration of birth, death, marriage | | Registration of birth, death, marriage |
| 3 | Infectious diseases | | Infectious diseases |
| 4 | Healthcare and maternity centres | | |
| 5 | Development of public health | | Promotion of public health |
| 6 | Hospital and dispensary | | Hospital and dispensary |
| 7 | Medical aid, medical education, etc. | | Medical treatment, health education |
| 8 | Water supply and drainage system | 2 | Water supply and drainage system |
| | Water supply | | Water supply |
| | Private source of water supply | | Private source of water supply |
| | Drainage schemes | | Drainage and Drainage schemes |
| | Place of bathing and washing | | Bathing and washing places |
| | Washing place and washer-man | | Dhobighat and washer-man |
| | Public water reservoirs | | Public waterbodies |
| 9 | Public ferries | | Public Ferries |
| 10 | Public fisheries | | Public fisheries |
| 11 | Food and beverage | 3 | Food and beverage |
| | Regarding food and drinks | | Articles of food and beverage |
| | Milk supply | | Milk supply |
| 12 | Public markets | | Public markets |
| 13 | Private markets | | Private markets |
| 14 | Slaughter houses | | Slaughter houses |
| 15 | Animals | 4 | Animals |
| | Animal husbandry | | Animal husbandry |
| | Stray animals | | Stray animals |
| | Stables and farms | | Stables and farms |
| | Registration of the sale of cattle | | Registration of the sale of cattle |
| | Livestock development | | Livestock development |
| | Dangerous animals | | Dangerous animals |
| | Cattle shows, zoo, etc. | | Cattle shows, zoo, etc. |
| | Disposal of carcasse | | Disposal of carcasse |
| 16 | Town planning | 5 | Town planning |
| | Master plan | | Master plan |
| | Land development schemes | | Land development schemes |
| | Execution of land development | | Execution of land development |

| CC | | Paurashava | |
|---|---|---|---|
| 17 | Building control | 6 | Building control |
| | Regulation of buildings | | Constructionof buildings |
| | | | Regulation of buildings |
| | | | Occupancy and alteration of buildings, etc. |
| 18 | Roads | 7 | Streets |
| | Public roads | | Public streets |
| | General provisions about roads | | Streets |
| | Trespass, encroachment | | General provisions about streets |
| | Street lighting | | Street lighting |
| | Street watering | | Street watering |
| 19 | Traffic control | | Traffic control |
| | Public vehicle | | Public transportation |
| 20 | Public safety | 8 | Public safety |
| | Fire fighting | | Fire fighting |
| | Civil defense | | Civil defense |
| | | | Floods |
| 21 | Disaster management | | |
| 22 | Trade in harmful materials | | Trade in harmful materials |
| 23 | Graveyard and crematorium | | Graveyard and crematorium |
| 24 | Trees, Parks, Garden and Forests | 9 | Trees, Parks, Garden and Forests |
| | Arboriculture | | Arboriculture |
| | Gardens | | Gardens |
| | Open spaces | | Open spaces |
| | Forests | | Forests |
| | Harmful activities relating to tree plantation | | Harmful activities relating to tree plantation |
| 25 | Ponds and Low-lying area | | Ponds and Low-lying area |
| 26 | Education and culture | 10 | Education and culture |
| | Education | | Education |
| | Compulsory education | | Compulsory education |
| | General provision of education | | General provision of education |
| | Culture | | Culture |
| | Libraries | | Libraries |
| | Fair and exhibition | | |
| 27 | Social welfare | 11 | Social welfare |
| 28 | Development | 12 | Development |
| | Development plans | | Development plans |
| | Community development plans | | Community development plans |
| | Commercial schemes | | Commercial schemes |

*Source: CC Act and Paurashava Act*

## 2.5 Budget and Financial Management

### 2.5.1 Budget Structure of Urban Local Body

As provided in Bengal Municipal Account Rules 1935 and Municipal Budget Formulation and Execution Rules 1999, the budget document of ULB consists of three separate accounts. These are (i) Revenue Account for recurrent expenses, (ii) Development Account for infrastructure development (or asset creation) and (iii) Capital Account for borrowings and repayments. Capital Account is almost neglectable as borrowing is minimal in most ULBs.

Basically, income sources for Revenue Account and Development Account at ULB are made up of (i) own source revenues (e.g. collection of holding tax), (ii) central government financial transfers (e.g. Annual Development Programme (ADP)), and (iii) donor funds allocation. In ULB, generally, accounting for water supply service is separated from general account with an aim to maintaining sustainability of the said service. Each budget item is briefly explained in the following table.

**Table 2.5.1 Description of Budget Items**

| Items | Description |
|---|---|
| **Income** | |
| **1. Revenue Account (RA)** | |
| **General** | |
| 1.1 Taxes | including taxes and rates on holding, immovable properties transfer tax, etc. |
| 1.2 Non-taxes | including license fees, market rent, rent of assets, lease of market, ferry ghat, etc. |
| 1.3 Government Grant | salary compensation grant from the government |
| 1.4 Others (Donation, etc.) | donation from private sector and individuals |
| 1.5 Balance carried forward | balance of RA carried forward from the previous fiscal year (openning balance) |
| **Water** | |
| 1.6 Water Billing | including income from water bill, line connection fee, water rate (where applicable) |
| 1.7 Balance carried forward | balance of water account carried forwad from the previous fiscal year (openning balance) |
| **2. Development Account (DA)** | |
| 2.1 ADP (Block Grant) | government subsidy allocated as "block grant" |
| 2.2 ADP (through DPP) | government grant allocated to specific development projects after DPP approval |
| 2.3 ADP (Special) | governent grant allocation for "emergency" needs |
| 2.4 Received from Donor Programs | foreign funded project assistance |
| 2.5 Others (BMDF loan, etc.) | including loan from BMDF, bank interest, others |
| 2.6 Transfer from Revenue Account | transfer from revenue account to development account |
| 2.7 Balance carried forward | balance of DA carried forward from the previous fiscal year (openning balance) |
| **Expenditure** | |
| **1. Revenue Account (RA)** | |
| **General** | |
| 1.1 Office Operation Expenses | including Mayor and councillors' honorarium, salary, fuel, office stationary, etc. |
| 1.2 Social Services Operation Expenses | education, health and sanitation, sports and culture, etc. |
| 1.3 Transfer to Development Account | transfer from revenue account to development account |
| 1.4 Balance carried down | balance of RA carried down to the following fiscal year (closing balance) |
| **Water** | |
| 1.5 Office Operation Expenses | salary, allowances, fuel, repairs and maintenance, stationary, others. |
| 1.6 Balance carried down | balance of water account carried down at the end of the financial year (closing balance) |
| **2. Development Account (DA)** | |
| 2.1 Infra. Development and Maintenance | infrastracture development and maintenance using ADP and own-source funds, etc. |
| 2.2 Infra. Development (Donor Programs) | infrastructure development using foreign funds |
| 2.3 Balance carried down | balance of DA carried down at the end of the financial year (closing balance) |

*Source: JICA Survey Team*

### 2.5.2 Financial Data of 4 UDCG Target ULBs

This section aims to deliver an overall picture of financial status of four UDCG target ULBs. The following tables present original budgets and actual income/expenditures of the four ULBs from FY 2015/16 to FY 2017/18. The average real budget size of GCC is around BDT 3,400 million, while that of NCC is BDT 3,200 million, CuCC BDT 1,500 million and CBP BDT 260 million (refer to Attachment 2.5.2 for more details).[15] Own source income represents 40% to 50% of the total income (Revenue and Development Account combined) at GCC, 15% to 25% at NCC, 20% to 30% at CuCC and 80% to 90% at CBP respectively during the same period. Dependency on government grant (ADP) and donor-funds is higher in NCC, particularly in FY 2017/18 when the total ADP receipt jumped to over BDT 3,000 million, a sharp increase from BDT 800 million of the previous year. Government funding is the largest source of income for Development Account at NCC, representing from 40 % (FY 2015/16) to 65% (FY 2017/18) of the total income. In Cox's Bazar, own revenue is the largest source of income for Development Account due to limited government funding and donor funding.

In terms of difference between the original budget and the actual figures, difference in Development Account is generally lager than that in Revenue Account. In Development Account, the items of ADP (DPP) as well as Received from Donor Program tend to show bigger differences than the others. This could be because changes occur during implementation and budgets are not spent as planned.

[15] The budget size here is referring to nominal budget. Since there is transfer of funds between two accounts, that is transfer from Revenue Account to Development Account, the real budget size is calculated by deducting the said transfer from the nominal budget. Average real budget size of 4 ULBs from FY2015/16 to FY2017/18 is more or less BDT 2.8 billion for GCC, BDT 3.2 billion for NCC, BDT 1.3 billion for CuCC and BDT 200 million for CBP.

# Table 2.5.2 Summary of Original Budget and Actual Income/Expenditure of 4 ULBs

**Gazipur City Corporation**

**Income: FY 2015/16-FY 2017/18**

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | |
| **1. Revenue Account** | | | | | | | | | |
| **General** | | | | | | | | | |
| 1.1 Taxes | 2,253,000,000 | 930,826,904 | 64% | 2,495,500,000 | 1,010,384,436 | 69% | 1,588,500,000 | 1,142,351,589 | 78% |
| 1.2 Non-taxes | 567,580,000 | 96,296,343 | 7% | 849,170,000 | 141,980,940 | 10% | 337,680,000 | 97,611,629 | 7% |
| 1.3 Government Grant | 50,000,000 | 18,202,333 | 1% | 50,000,000 | 8,000,000 | 1% | 45,000,000 | 18,000,000 | 1% |
| 1.4 Others (Donation, etc.) | | - | 0% | - | - | 0% | - | - | 0% |
| 1.5 Balance carried forward | 450,642,022 | 320,811,668 | 22% | - | 19,869,459 | 1% | - | 26,036,858 | 2% |
| **Water** | | | | | | | | | |
| 1.6 Water Billing and Other Income | 176,420,000 | 86,135,086 | 6% | 107,020,000 | 117,041,243 | 9% | 152,964,000 | 139,009,250 | 10% |
| 1.7 Balance carried forward | 9,771,220 | 11,272,978 | 1% | 13,090,000 | 5,144,243 | 0% | - | 2,044,196 | 0% |
| **Sub-total (A)** | **3,507,413,242** | **1,463,545,312** | **100%** | **3,514,780,000** | **1,302,420,321** | **100%** | **2,124,144,000** | **1,425,053,522** | **100%** |
| **2. Development Account** | | | | | | | | | |
| 2.1 ADP (Block Grant) | 200,000,000 | 80,032,940 | 4% | 200,000,000 | 310,000,000 | 14% | 300,000,000 | 100,000,000 | 6% |
| 2.2 ADP (DPP) | 3,900,000,000 | - | 0% | 4,770,000,000 | 93,956,757 | 4% | 5,602,500,000 | 225,000,000 | 14% |
| 2.3 ADP (Special) | 1,000,000,000 | 255,000,000 | 12% | 600,000,000 | - | 0% | 500,000,000 | - | 0% |
| 2.4 Received from Donor Programs | 5,229,894,834 | 658,373,541 | 30% | 4,910,439,000 | 931,271,798 | 41% | 5,943,094,000 | 746,882,523 | 45% |
| 2.5 Others (BMDF loan, etc.) | - | 5,454,371 | 0% | - | 4,137,230 | 0% | 6,000,000 | - | 0% |
| 2.6 Transfer from Revenue Account | 2,650,068,022 | 1,048,417,214 | 48% | 2,377,212,000 | 768,297,343 | 34% | 1,217,235,000 | - | 0% |
| 2.7 Balance carried forward | 300,382,850 | 148,550,640 | 7% | 218,200,000 | 150,412,075 | 7% | - | 580,162,000 | 35% |
| **Sub-total (B)** | **13,280,345,706** | **2,195,828,706** | **100%** | **13,075,851,000** | **2,258,075,203** | **100%** | **13,568,829,000** | **1,652,044,523** | **100%** |
| **Grand total (A+B)** | **16,787,758,948** | **3,659,374,018** | | **16,590,631,000** | **3,560,495,524** | | **15,692,973,000** | **3,077,098,045** | |

**Expenditure: FY 2015/16-FY 2017/18**

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | |
| **1. Revenue Account** | | | | | | | | | |
| **General** | | | | | | | | | |
| 1.1 Office Operation Expenses | 262,634,000 | 242,719,734 | 17% | 471,400,000 | 227,332,106 | 17% | 360,330,000 | 371,859,944 | 26% |
| 1.2 Social Services Operation Expenses | 408,520,000 | 75,000,300 | 5% | 546,060,000 | 184,605,386 | 14% | 400,615,000 | 175,526,727 | 12% |
| 1.3 Transfer to Development Account | 2,650,068,022 | 1,048,417,214 | 72% | 2,377,212,000 | 768,297,343 | 59% | 1,217,235,000 | - | 0% |
| 1.4 Balance carried down | - | - | | - | - | 0% | - | 736,613,405 | 52% |
| **Water** | | | | | | | | | |
| 1.5 Office Operation Expenses | 143,691,220 | 92,263,822 | 6% | 120,110,000 | 114,251,607 | 9% | 152,964,000 | 137,391,700 | 10% |
| 1.6 Balance carried down | 42,500,000 | 5,144,242 | 0% | - | 7,933,879 | 1% | - | 3,661,746 | 0% |
| **Sub-total (D)** | **3,507,413,242** | **1,463,545,312** | **100%** | **3,514,782,000** | **1,302,420,321** | **100%** | **2,131,144,000** | **1,425,053,522** | **100%** |
| **2. Development Account** | | | | | | | | | |
| 2.1 Infrastructure Development and Maintenance | 7,833,930,973 | 1,297,224,433 | 59% | 8,165,410,000 | 1,130,437,353 | 50% | 2,016,235,000 | 836,713,405 | 51% |
| 2.2 Infrastructure Development (Donor Programs) | 5,231,352,711 | 535,945,277 | 24% | 4,910,439,000 | 544,363,380 | 24% | 11,545,594,000 | 769,725,330 | 47% |
| 2.3 Balance carried down | 215,062,022 | 362,658,996 | 17% | - | 583,274,470 | 26% | - | 45,605,788 | 3% |
| **Sub-total (E)** | **13,280,345,706** | **2,195,828,706** | **100%** | **13,075,849,000** | **2,258,075,203** | **100%** | **13,561,829,000** | **1,652,044,523** | **100%** |
| **Grand Total (D+E)** | **16,787,758,948** | **3,659,374,018** | | **16,590,631,000** | **3,560,495,524** | | **15,692,973,000** | **3,077,098,045** | |

**Narayanganj City Corporation**

**Income: FY 2015/16-FY 2017/18**

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | |
| **1. Revenue Account** | | | | | | | | | |
| **General** | | | | | | | | | |
| 1.1 Taxes | 438,972,260 | 311,551,126 | 55% | 379,968,523 | 400,120,069 | 58% | 469,634,800 | 429,530,724 | 49% |
| 1.2 Non-taxes | 254,445,720 | 164,581,296 | 29% | 258,987,500 | 180,664,120 | 26% | 482,991,000 | 304,978,638 | 35% |
| 1.3 Government Grant | 8,000,000 | 8,000,000 | 1% | 8,000,000 | 8,775,000 | 1% | 10,000,000 | 9,000,000 | 1% |
| 1.4 Others (Donation, etc.) | - | - | 0% | - | - | 0% | - | - | 0% |
| 1.5 Balance carried forward | 33,805,003 | 85,591,445 | 15% | 167,711,472 | 106,225,375 | 15% | 80,361,966 | 125,428,657 | 14% |
| **Water** | | | | | | | | | |
| 1.6 Water Billing and Other Income | - | - | 0% | - | - | 0% | - | - | 0% |
| 1.7 Balance carried forward | - | - | 0% | - | - | 0% | - | - | 0% |
| **Sub-total (A)** | **735,222,983** | **569,723,867** | **100%** | **814,667,495** | **695,784,564** | **100%** | **1,042,987,766** | **868,938,019** | **100%** |
| **2. Development Account** | | | | | | | | | |
| 2.1 ADP (Block Grant) | 90,000,000 | 70,000,000 | 3% | 70,000,000 | 210,000,000 | 11% | 200,000,000 | 150,000,000 | 3% |
| 2.2 ADP (DPP) | 1,120,000,000 | 601,001,315 | 28% | 1,220,000,000 | 607,402,680 | 33% | 1,184,968,000 | 2,681,429,666 | 57% |
| 2.3 ADP (Special) | 100,000,000 | 160,000,000 | 7% | 100,000,000 | - | 0% | 200,000,000 | 245,000,000 | 5% |
| 2.4 Received from Donor Programs | 2,188,095,000 | 640,078,593 | 30% | 2,927,900,000 | 233,274,807 | 13% | 3,426,300,001 | 918,031,750 | 19% |
| 2.5 Others (BMDF loan, etc.) | 12,500,000 | - | 0% | 180,000,000 | - | 0% | - | - | 0% |
| 2.6 Transfer from Revenue Account | 361,620,548 | 372,357,136 | 17% | 295,197,495 | 377,091,284 | 20% | 332,667,466 | 542,000,139 | 11% |
| 2.7 Balance carried forward | 643,269,634 | 324,525,615 | 15% | 699,462,296 | 417,287,222 | 23% | 812,487,858 | 181,336,868 | 4% |
| **Sub-total (B)** | **4,515,485,182** | **2,167,962,659** | **100%** | **5,492,559,791** | **1,845,055,993** | **100%** | **6,156,423,325** | **4,717,798,423** | **100%** |
| **Grand total (A+B)** | **5,250,708,165** | **2,737,686,526** | | **6,307,227,286** | **2,540,840,557** | | **7,199,411,091** | **5,586,736,442** | |

**Expenditure: FY 2015/16-FY 2017/18**

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | |
| **1. Revenue Account** | | | | | | | | | |
| **General** | | | | | | | | | |
| 1.1 Office Operation Expenses | 160,400,000 | 96,144,565 | 17% | 201,000,000 | 128,060,445 | 18% | 214,640,000 | 137,235,589 | 16% |
| 1.2 Social Services Operation Expenses | 213,202,435 | 38,372,433 | 7% | 318,470,000 | 190,632,835 | 27% | 495,680,300 | 189,702,291 | 22% |
| 1.3 Transfer to Development Account | 361,620,548 | 372,357,136 | 65% | 295,197,495 | 377,091,284 | 54% | 332,667,466 | 542,000,139 | 62% |
| 1.4 Balance carried down | - | 62,849,733 | 11% | - | - | 0% | - | - | 0% |
| **Water** | | | | | | | | | |
| 1.5 Office Operation Expenses | - | - | 0% | - | - | 0% | - | - | 0% |
| 1.6 Balance carried down | - | - | 0% | - | - | 0% | - | - | 0% |
| **Sub-total (D)** | **735,222,983** | **569,723,867** | **100%** | **814,667,495** | **695,784,564** | **100%** | **1,042,987,766** | **868,938,019** | **100%** |
| **2. Development Account** | | | | | | | | | |
| 2.1 Infrastructure Development and Maintenance | 1,869,404,390 | 1,194,797,787 | 55% | 2,168,283,416 | 1,173,592,100 | 64% | 6,032,884,900 | 2,758,142,901 | 58% |
| 2.2 Infrastructure Development (Donor Programs) | 2,625,059,000 | 556,710,418 | 26% | 3,097,900,000 | 316,034,271 | 17% | 40,000,000 | 553,039,061 | 12% |
| 2.3 Balance carried down | 21,021,792 | 416,454,454 | 19% | 226,376,375 | 355,429,622 | 19% | 83,538,425 | 1,406,616,461 | 30% |
| **Sub-total (E)** | **4,515,485,182** | **2,167,962,659** | **100%** | **5,492,559,791** | **1,845,055,993** | 100% | **6,156,423,325** | **4,717,798,423** | **100%** |
| **Grand Total (D+E)** | **5,250,708,165** | **2,737,686,526** | | **6,307,227,286** | **2,540,840,557** | | **7,199,411,091** | **5,586,736,442** | |

**Cumilla City Corporation**

**Income: FY 2015/16-FY 2017/18**

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | |
| **1. Revenue Account** | | | | | | | | | |
| **General** | | | | | | | | | |
| 1.1 Taxes | 189,238,965 | 157,860,551 | 44% | 211,289,938 | 196,607,550 | 46% | 235,943,229 | 206,751,223 | 69% |
| 1.2 Non-taxes | 216,010,000 | 41,288,063 | 12% | 177,219,996 | 152,018,748 | 35% | 171,874,999 | 44,722,594 | 15% |
| 1.3 Government Grant | 12,000,000 | 8,000,000 | 2% | 16,000,000 | 8,000,000 | 2% | 17,000,000 | 8,000,000 | 3% |
| 1.4 Others (Donation, etc.) | 8,000,000 | 124,014 | 0% | 7,000,000 | 243,246 | 0% | 500,000 | 1,242,034 | 0% |
| 1.5 Balance carried forward | 125,000,000 | 134,196,547 | 38% | 85,000,000 | 53,902,671 | 13% | 85,000,000 | 20,018,327 | 7% |
| **Water** | | | | | | | | | |
| 1.6 Water Billing and Other Income | 22,869,000 | 13,968,920 | 4% | 24,384,300 | 17,175,421 | 4% | 28,613,666 | 16,939,773 | 6% |
| 1.7 Balance carried forward | 2,490,077 | 185,600 | 0% | 889,403 | 280,655 | 0% | 528,389 | 252,621 | 0% |
| **Sub-total (A)** | **575,608,042** | **355,623,695** | **100%** | **521,783,637** | **428,228,291** | **100%** | **539,460,283** | **297,926,572** | **100%** |
| **2. Development Account** | | | | | | | | | |
| 2.1 ADP (Block Grant) | 205,000,000 | 120,000,000 | 13% | 150,000,000 | 80,000,000 | 6% | 120,000,000 | 130,000,000 | 11% |
| 2.2 ADP (DPP) | 350,000,000 | 10,000,000 | 1% | 450,000,000 | 400,000,000 | 32% | 338,800,000 | 170,000,000 | 14% |
| 2.3 ADP (Special) | - | - | 0% | - | - | 0% | - | - | 0% |
| 2.4 Received from Donor Programs | 989,517,927 | 607,802,505 | 68% | 1,469,600,000 | 542,121,345 | 44% | 2,973,200,000 | 737,427,441 | 61% |
| 2.5 Others (BMDF loan, etc.) | 70,500,000 | 4,874,292 | 1% | 110,000,000 | - | 0% | 100,000,000 | 64,525,232 | 5% |
| 2.6 Transfer from Revenue Account | 245,523,965 | 133,482,550 | 15% | 194,029,934 | 200,311,421 | 16% | 204,368,229 | 64,083,884 | 5% |
| 2.7 Balance carried forward | 800,000 | 13,915,525 | 2% | 5,308,839 | 21,217,882 | 2% | 28,569,874 | 45,912,137 | 4% |
| **Sub-total (B)** | **1,861,341,892** | **890,074,872** | **100%** | **2,378,938,773** | **1,243,650,648** | **100%** | **3,764,938,103** | **1,211,948,694** | **100%** |
| **Grand total (A+B)** | **2,436,949,934** | **1,245,698,567** | | **2,900,722,410** | **1,671,878,939** | | **4,304,398,386** | **1,509,875,266** | |

**Expenditure: FY 2015/16-FY 2017/18**

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | |
| **1. Revenue Account** | | | | | | | | | |
| **General** | | | | | | | | | |
| 1.1 Office Operation Expenses | 120,990,000 | 73,032,399 | 21% | 121,800,000 | 91,569,852 | 21% | 109,445,000 | 83,889,129 | 28% |
| 1.2 Social Services Operation Expenses | 93,735,000 | 81,051,555 | 23% | 90,680,000 | 92,044,347 | 21% | 106,505,000 | 94,308,150 | 32% |
| 1.3 Transfer to Development Account | 245,523,965 | 133,482,550 | 38% | 194,029,934 | 200,311,421 | 47% | 204,368,229 | 64,083,884 | 22% |
| 1.4 Balance carried down | 90,000,000 | 53,902,671 | 15% | 90,000,000 | 26,846,595 | 6% | 90,000,000 | 38,453,014 | 13% |
| **Water** | | | | | | | | | |
| 1.5 Office Operation Expenses | 24,445,000 | 13,873,865 | 4% | 22,710,000 | 14,985,434 | 3% | 27,990,000 | 15,847,975 | 5% |
| 1.6 Balance carried down | 914,077 | 280,655 | 0% | 2,563,703 | 2,470,642 | 1% | 1,152,050 | 1,344,419 | 0% |
| **Sub-total (D)** | **575,608,042** | **355,623,695** | **100%** | **521,783,637** | **428,228,291** | **100%** | **539,460,279** | **297,926,571** | **100%** |
| **2. Development Account** | | | | | | | | | |
| 2.1 Infrastructure Development and Maintenance | 838,800,000 | 253,754,485 | 29% | 895,500,000 | 828,582,308 | 67% | 758,300,000 | 467,542,626 | 39% |
| 2.2 Infrastructure Development (Donor Programs) | 1,019,517,927 | 607,802,505 | 68% | 1,478,200,000 | 361,989,870 | 29% | 2,976,200,000 | 315,823,595 | 26% |
| 2.3 Balance carried down | 3,023,965 | 28,517,882 | 3% | 5,238,773 | 53,078,470 | 4% | 30,438,107 | 428,582,474 | 35% |
| **Sub-total (E)** | **1,861,341,892** | **890,074,872** | **100%** | **2,378,938,773** | **1,243,650,648** | **100%** | **3,764,938,107** | **1,211,948,695** | **100%** |
| **Grand Total (D+E)** | **2,436,949,934** | **1,245,698,567** | | **2,900,722,410** | **1,671,878,939** | | **4,304,398,386** | **1,509,875,266** | |

**Cox's Bazar Paurashava**

**Income: FY 2015/16-FY 2017/18**

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | |
| **1. Revenue Account** | | | | | | | | | |
| **General** | | | | | | | | | |
| 1.1 Taxes | 122,872,888 | 83,005,977 | 54% | 107,930,000 | 94,682,901 | 68% | 121,445,332 | 124,857,800 | 59% |
| 1.2 Non-taxes | 70,220,000 | 49,336,834 | 32% | 77,870,000 | 39,157,659 | 28% | 76,870,000 | 58,983,686 | 28% |
| 1.3 Government Grant | 450,000 | 0 | 0% | 550,000 | 464,542 | 0% | 1,380,000 | - | 0% |
| 1.4 Others (Donation, etc.) | - | 13,595,413 | 9% | - | 1,373,030 | 1% | - | 23,445,004 | 11% |
| 1.5 Balance carried forward | 6,359,025 | 4,271,049 | 3% | 498,295 | - | 0% | - | - | 0% |
| **Water** | | | | | | | | | |
| 1.6 Water Billing and Other Income | 6,830,000 | 3,056,622 | 2% | 3,245,400 | 3,475,948 | 2% | 7,066,910 | 3,188,321 | 2% |
| 1.7 Balance carried forward | 473,594 | 260,773 | 0% | 4,157,884 | 188,113 | 0% | - | 97,151 | 0% |
| **Sub-total (A)** | **207,205,507** | **153,526,668** | **100%** | **194,251,579** | **139,342,193** | **100%** | **206,762,242** | **210,571,962** | **100%** |
| **2. Development Account** | | | | | | | | | |
| 2.1 ADP (Block Grant) | 5,000,000 | 7,000,000 | 11% | 45,000,000 | 6,000,000 | 11% | 10,000,000 | 6,400,000 | 4% |
| 2.2 ADP (DPP) | - | - | 0% | - | 5,000,000 | 9% | - | 25,000,000 | 16% |
| 2.3 ADP (Special) | 200,000,000 | 600,000 | 1% | - | 4,500,000 | 8% | 52,000,000 | - | 0% |
| 2.4 Received from Donor Programs | 300,000,000 | - | 0% | 780,000,000 | 562,851 | 1% | 580,000,000 | 55,578,064 | 36% |
| 2.5 Others (BMDF loan, etc.) | 155,000,000 | - | 0% | 20,000,000 | - | 0% | 450,000,000 | 1,629,843 | 1% |
| 2.6 Transfer from Revenue Account | 25,000,000 | 57,558,083 | 88% | 55,000,000 | 38,763,222 | 71% | 15,453,000 | 60,762,874 | 40% |
| 2.7 Balance carried forward | 4,113,710 | - | 0% | 1,679,000 | 114,421 | 0% | 1,414,846 | 2,918,912 | 2% |
| **Sub-total (B)** | **689,113,710** | **65,158,083** | 100% | **901,679,000** | **54,940,494** | 100% | **1,108,867,846** | **152,289,693** | 100% |
| **Grand total (A+B)** | **896,319,217** | **218,684,751** | | **1,095,930,579** | **194,282,687** | | **1,315,630,088** | **362,861,655** | |

**Expenditure: FY 2015/16-FY 2017/18**

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | |
| **1. Revenue Account** | | | | | | | | | |
| **General** | | | | | | | | | |
| 1.1 Office Operation Expenses | 57,515,000 | 55,904,422 | 36% | 72,790,000 | 65,561,353 | 47% | 86,516,000 | 73,041,883 | 35% |
| 1.2 Social Services Operation Expenses | 102,105,000 | 36,746,768 | 24% | 56,390,000 | 31,353,557 | 23% | 95,593,559 | 72,869,419 | 35% |
| 1.3 Transfer to Development Account | 25,000,000 | 57,558,083 | 37% | 55,000,000 | 38,763,222 | 28% | 15,453,000 | 60,762,874 | 29% |
| 1.4 Balance carried down | 15,281,913 | - | 0% | 2,668,295 | - | 0% | 2,632,155 | - | 0% |
| **Water** | | | | | | | | | |
| 1.5 Office Operation Expenses | 3,515,000 | 2,999,875 | 2% | 2,855,000 | 3,566,910 | 3% | 6,429,000 | 3,897,786 | 2% |
| 1.6 Balance carried down | 3,788,594 | 317,520 | 0% | 4,548,284 | 97,151 | 0% | 138,527 | - | 0% |
| **Sub-total (D)** | **207,205,507** | **153,526,668** | 100% | **194,251,579** | **139,342,193** | **100%** | **206,762,241** | **210,571,962** | **100%** |
| **2. Development Account** | | | | | | | | | |
| 2.1 Infrastructure Development and Maintenance | 410,400,000 | 65,158,083 | 100% | 121,300,000 | 52,021,583 | 95% | 526,867,847 | 96,711,629 | 64% |
| 2.2 Infrastructure Development (Donor Programs) | 275,000,000 | - | 0% | 780,000,000 | - | 0% | 580,000,000 | 55,578,064 | 36% |
| 2.3 Balance carried down | 3,713,710 | - | 0% | 379,000 | 2,918,911 | 5% | 2,000,000 | - | 0% |
| **Sub-total (E)** | **689,113,710** | **65,158,083** | 100% | **901,679,000** | **54,940,494** | 100% | **1,108,867,847** | **152,289,693** | 100% |
| **Grand Total (D+E)** | **896,319,217** | **218,684,751** | **100%** | **1,095,930,579** | **194,282,687** | | **1,315,630,088** | **362,861,655** | |

*Source: JICA Survey Team*

### 2.5.3 Breakdown of Funding Sources for Spending on Infrastructure Development

The expenditure related to infrastructure development is largely covered by the government grant/allocation and development partners' funds. Due to the receipt of large volume of ADP (DPP), NCC spent a total of over BDT 3.3 billion for infrastructure development in FY 2017/18 which is about twenty times larger than CBP's spending on infrastructure development. CuCC depends more on donor funds than on other sources for infrastructure development.

**Table 2.5.3 Spending on Infrastructure Development of 4 UDCG Target ULBs**

| FY 2015/16 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | GCC | | NCC | | CuCC | | CBP | |
| Own resources | 340,487,311 | 18.6% | 141,461,147 | 8.1% | 120,271,935 | 14.0% | 7,600,000 | 11.7% |
| ADP (Block Grant+Special) | 956,737,122 | 52.2% | 400,010,250 | 22.8% | 133,482,550 | 15.5% | 57,558,083 | 88.3% |
| ADP (DPP) | - | 0.0% | 653,326,390 | 37.3% | - | 0.0% | - | 0.0% |
| Donor funds | 535,945,277 | 29.2% | 556,710,418 | 31.8% | 607,802,505 | 70.5% | - | 0.0% |
| Total | 1,833,169,710 | 100.0% | 1,751,508,205 | 100.0% | 861,556,990 | 100.0% | 65,158,083 | 100.0% |
| **FY 2016/17** | | | | | | | | |
| | GCC | | NCC | | CuCC | | CBP | |
| Own resources | 726,480,596 | 43.4% | 364,177,285 | 24.4% | 200,311,421 | 16.8% | 38,763,221 | 74.5% |
| ADP (Block Grant+Special) | 310,000,000 | 18.5% | 210,000,000 | 14.1% | 228,270,887 | 19.2% | 13,258,362 | 25.5% |
| ADP (DPP) | 93,956,757 | 5.6% | 599,414,815 | 40.2% | 400,000,000 | 33.6% | - | 0.0% |
| Donor funds | 544,363,380 | 32.5% | 316,034,271 | 21.2% | 361,989,870 | 30.4% | - | 0.0% |
| Total | 1,674,800,733 | 100.0% | 1,489,626,371 | 100.0% | 1,190,572,178 | 100.0% | 52,021,583 | 100.0% |
| **FY 2017/18** | | | | | | | | |
| | GCC | | NCC | | CuCC | | CBP | |
| Own resources | 736,613,405 | 44.6% | 100,513,610 | 3.0% | 64,083,884 | 8.2% | 60,762,874 | 39.9% |
| ADP (Block Grant+Special) | 100,000,000 | 6.1% | 395,000,000 | 11.9% | 403,458,742 | 51.5% | 35,948,755 | 23.6% |
| ADP (DPP) | 225,000,000 | 13.6% | 2,262,629,291 | 68.3% | - | 0.0% | - | 0.0% |
| Donor funds | 590,431,118 | 35.7% | 553,039,061 | 16.7% | 315,823,595 | 40.3% | 55,578,064 | 36.5% |
| Total | 1,652,044,523 | 100.0% | 3,311,181,962 | 100.0% | 783,366,221 | 100.0% | 152,289,693 | 100.0% |

*Source: JICA Survey Team*

### 2.5.4 Annual Development Program for ULB

The government shares part of the national revenues with local governments. There are in total four types of financial transfer from the government to ULB, three of which can be categorized as ADP[16] allocations.

(1) ADP (Block Grant)

Part of ADP is provided to CCs and Paurashavas as development assistance funds, commonly known as block grants, for which ULBs have considerable discretion in deciding on the usage. Usually, in March or April, the LGD prepares preliminary estimate demands for block grants for the next fiscal year for each local government institution (LGI) category (e.g. Upazila, CC, Paurashava), based on which the Planning Commission prepares LGI category-wise block grants allocations. In June, with the approval of the national budget, the LGD starts computing allocation of LGI category-wise block grants to each LGI. For CCs and Paurashavas, the allocation of ADP block grants is not based on any specific formula or criteria, such as the population, area, poverty or development needs.

(2) ADP (DPP)

ADP (DPP) is demand-based funding to ULBs for development funds. Part of ADP funds are allocated annually to implement development projects for which respective development project proforma/proposals (DPPs) have been approved by the government. ULBs initiate the preparation of DPPs and have them reviewed by the LGD, who then coordinates with the Planning Commission. A project costing BDT 500 million or less is approved by the Planning Minister and a project

[16] Annual Development Program (ADP) is an operational document of GOB's 5-year plan and includes all types of GOB funded and foreign-aided projects which are ongoing and newly implemented. ADP consists of investment and technical assistance programs, which are sub-divided into the different government sectors.

costing beyond this threshold is approved by the Executive Committee of the National Economic Council (ECNEC) chaired by the Prime Minister.

(3) ADP (Special)

ADP has another category referred to as development assistance in special needs. It is to address emergencies or to meet urgent financial demand for project funding, though guidelines that define "emergencies or "new or extra demand" are not available. The LGD has the authority to decide on the allocation.

2.5.5 Taxation

CC can levy taxes, rates, fees and charges which are listed in Model Tax Schedule prescribed by the government. Similarly, Paurashava can levy taxes and non-taxes which are listed in Model Municipality Tax Schedule.[17] Apart from the said model tax schedules, CC and Paurashava are allowed to impose new taxes and fees subject to pre-approval by the government.

Major CC and Paurashava taxes and non-taxes income comes from tax on holdings, tax on handover of immovable property, and fees for business licenses, etc. Property tax is commonly referred to as 'holding tax' in Bangladesh. It is a local tax on buildings, along with appurtenant land, and has to be paid by the owners. The normal holding tax is usually coupled with a number of service taxes, for instance, rate for water supply (water rate), rate on waste disposal (conservancy rate), rate on light and fire (lighting rate), etc. All of these use the same tax base, that is holding tax. For instance, in case of Cox's Bazar, a total of 20% of annual renting value of buildings and land is collected in a single bill. The breakdown of this is 5% holding tax, 3% lighting rate, 5% conservancy rate, and 7% water rate. NCC collects 7% for holding tax, 5% for lighting rate and 7% for conservancy rate. Water rate is not collected in NCC as water supply service is provided by Dhaka WASA.

**Table 2.5.4 Taxes and Non-taxes of CCs and Paurashavas**

| Items | CC | Paur. |
|---|---|---|
| **Taxes** | | |
| Tax on annual value of building and land | √ | √ |
| Tax on transfer of immovable property | √ | √ |
| Tax on land development *1 | N/A | √ |
| Tax on construction and re-construction of building | √ | √ |
| Tax on imported materials for consumption, use and sale | √ | √ |
| Tax on exported materials from municipality | √ | √ |
| Tax on profession, business and calling | √ | √ |
| Tax on birth, marriage, adoption and feast | √ | √ |
| Tax on advertisement | √ | √ |
| Tax on (trading of) animal | √ | √ |
| Tax on cinema, drama and theatre show and amusement and recreation | √ | √ |
| Tax on vehicles other than motor vehicle and boats | √ | √ |
| Tax on conducting public welfare activities | √ | √ |
| Any sub-tax on tax imposed by the government | √ | √ |
| Any other tax applicable by any other rules under this act | √ | √ |
| Any other imposable taxes applicable by the government following the act | √ | √ |
| **Rates** | | |
| Lighting and fire rate *2 | √ | √ |
| Water plant and water supply rate *3 | √ | √ |
| Solid waste removal rate *4 | √ | √ |
| **Fees** | | |
| Fees as tolls | √ | √ |
| School Fees | √ | √ |
| Fees related to public services | √ | √ |
| Fees on fair, agricultural exhibition, sports evets and other public gatherings | √ | √ |
| Fees on market | √ | N/A |
| Fees for issuing business licenses | √ | √ |
| Fees on special services | √ | √ |
| Fees for slaughter animal | √ | √ |
| Fees for waterbody and ferry ghat (crossing water body such as river, canal) | N/A | √ |
| Fees for sand field and stone field | N/A | √ |
| Lease money of hat-bazaar (market) under the municipality. | N/A | √ |

*1. 2% of land development tax is transferred to paruashava from land tax office (Tahsil office)
*2. Lighting rate applicable by providing street light services, at present fire rate is not applicable.
*3. Water rate is applicable if water supply is ensured or water installation is established at the concerned area
*4. Conservancy rate is applicable subject to provide conservancy services

*Source: JICA Survey Team based on CC Act and Paurashava Act*

2.5.6 Budget Preparation and Resource Allocation

(1) Budget Preparation Annual Calendar

Laws, rules and regulations that govern ULB's budget formulation, execution, monitoring and reporting are Bengal Municipal Account Rules 1935, Paurashava Budget Rules

[17] CC's taxation power is provided for in Article 82 of CC Act ("City Corporation Taxation") and its Fourth Schedule. Paurashava's taxation power is defined in Article 98 of Paurashava Act ("Municipal Taxation") and its Third Schedule.

1999, CC Act, Paurashava Act, and Paurashava Model Tax schedule 2014. Generally, both CCs and Paurashavas usually commence budgeting process sometime in March or April every year, following the guidance specified in Paurashava Budget Rules 1999. By law, a budget should be approved before May 31 considering suggestions and opinions of the citizenry[18]. Accounting department starts preparing a draft copy after soliciting the other departments for their fund requirement estimates. Once a draft is prepared, it is submitted to Finance and Establishment SC for its review. Then it is also discussed in a CSCC or TLCC meeting. After endorsed by these meetings, a draft budget is submitted to and approved by the Council. The approved budget is usually shared to the public in a mass public meeting (MPM). The following table highlights a typical annual budgeting calendar of ULB.

**Table 2.5.5 Typical Annual Calendar for Budget Formulation, Execution and Reporting**

| Timing | Activity | Legal basis |
|---|---|---|
| By the end of March | 1) Accounting Department starts drafting of budget by consolidating financial requirement estimate from other departments (sections) and with the assistance of Finance and Establishment Standing Committee | - Start of budget preparation (Paurashava Budget Rules 1999) |
| April-May | 2) Draft budget is discussed in CSCC/TLCC.<br>3) Draft budget is posted on notice board.<br>4) Comments by citizens are reflected and draft budget is revised. | - Consideration of people's opinion and suggestion (Article 92 of Paurashava Act) |
| By the end of May | 5) Draft budget is deliberated at Finance and Establishment Standing Committee<br>6) Draft budget is approved by Council.<br>7) Approved budget is sent to DC and/or LGD | - Approval of budget before June 1 (Article 76 of CC Act and Article 92 of Paurashava Act) |
| June | 8) MPM is held to announce budget. | - MPM (Article 110 of CC Act "Right of access to Information"[19] |
| July 1 - June 30 | 9) Budget is executed. | |
| Before the end of December | 10) Annual financial statement is prepared.[20] | - Approval of financial statement before the end of December (Bengal Municipal Account Rules 1935, Article 77 of CC Act) |

*Source: Compiled by JICA Survey Team based on Interviews made in September 2019*

(2) Financial Autonomy and Resource Allocation

Financial autonomy can be defined by the extent to which ULB raises revenues and allocates its resources independently. For certain external source funds, ULB can make choices which projects to be selected and implemented without constraints imposed by the government.

For the funds associated with donor-supported programs, a common procedure includes that a beneficiary ULB selects sub-projects based on pre-determined selection requirements, prepares sub-project proposals and record fund requirements in its budget (Development Account) once they receive concurrence from respective project management unit. In case of donor funds, resource allocation is demand-based. A beneficiary ULB can select sub-projects with considerable discretion but donor funds are earmarked specifically for target projects. The selection of which sub-projects

[18] Article 92 of Paurashava Act ("Budget")
[19] Practice introduced by ICGP in compliance with "Right of access to information"
[20] In case of C4C-supported CCs, from 2019 financial data summary is included in annual administrative report (AAR) and financial statement document is attached to AAR.

to be funded by which donor-supported programs may depend on their sub-project requirements and qualifications.

ADP (DPP) is also a demand-based fund allocation system. Recipient ULB can freely choose for which projects it prepares DPPs. Once approved by the central authorities, the ear-marked funds are disbursed by the government. Therefore, ULB cannot implement infrastructure projects unless they were approved by central authorities. The approval procedure for this government subsidy is already described above.

When it comes to development projects funded by own source income and ADP (Block Grant), ULBs exercise greater, if not sole, discretion in selecting which projects to be financed by what resources. It is not required that ULB conducts feasibility study for projects implemented using own source income and block grant. The engineering division may prepare a very brief project description (note) for each potential project on which the council can make decision whether it should be financed by own source income or ADP (Block Grant). Decision-making for allocation of these funds is made during the same fiscal year, not in the previous fiscal year.

**Table 2.5.6 Extent of Discretion ULB Exercises in Using Different Funds**

| Fund source | Extent of discretion CCs and Paurashavas |
|---|---|
| Own source funds | - ULB has sole discretion in selecting and financing projects when using own source funds. |
| ADP (Block Grant) | - ULB has considerable discretion in selecting and financing projects under ADP (Block Grant) although ULB is required to submit reports on projects implemented using ADP.<br>- There is a guideline issued by the government to set a standard budget allocation ULB is to follow for ADP (Block Grant). It is the "guideline regarding undertaking and implementation of development project by Paurashava" issued in 2001 (e.g. public health: 5-15% of total allocation).<br>- Development projects are selected and decided on an ad-hoc basis as ULB is not informed by the government of allocated amount in advance. |
| ADP (DPP) | - ULB may choose which projects to be financed by this funding source, but funds are only allocated after the appraisal and approval of DPPs by the government authorities.<br>- Projects may be identified by communities (bottom-up) or through top-down approach.<br>- Preparation of DDP by ULB and its approval by central authorities is a pre-condition. |
| Donor funds (e.g. ICGP) | - ULB may choose projects in accordance with project-selection criteria set by donor programs.<br>- Donor-funded project is also subject to DPP approval.<br>- Projects identified, formulated and proposed by ULB may be concurred by project management unit.<br>- It is demand-based allocation of funds and funds are ear-marked to specific projects. |

*Source: JICA Survey Team*

Ideally, identification and prioritization of development projects is evidence-based and through participatory process. After development projects identified or proposed by communities are prioritized, prioritized projects are endorsed by platforms for citizen participation (CSCC or TLCC). The reality on the ground may be different from the above image. The mayor tends to dominate decision-making on every aspect of ULB management. Citizen participation is not well integrated in planning (e.g. prioritization of development projects) and budgeting process.

## 2.6 Development Planning

### 2.6.1 Overview of Development Planning in ULBs

Preparation of development plans is mandatory for both CC and Paurashava. It is included among their

responsibilities defined in CC Act and Paurashava Act[21]. Both acts also touch upon ULB's function related to formulation of Master plan and land development scheme under "Town Planning", clearly separating it from the afore-mentioned "development plans".

There is no clear description provided in neither CC Act nor Paurashava Act in terms of what development plans are, but they can be conceived as "general plan" or "comprehensive plan". By drafting guidelines and providing training, donor-assisted projects are promoting the institutionalization of "development plans" in their target ULBs. JICA-assisted CCs prepared Infrastructure Development Plan (IDP) whose time horizon is 5 years. ICGP and C4C also exhort their target CCs to update the list of priority projects (infrastructure project list)[22], a component of IDP, every year. ULBs supported by Municipal Governance and Services Project (MGSP) prepare their Capital Investment Plan (CIP), the core component of which is the list of capital investment projects and its multi-year implementation plan. Under SPGP, preparation of 5-year development plan is promoted. CBP prepared, through the assistance of Urban Governance Infrastructure Improvement Project (UGIIP), a Paurashava Development Plan (PDP).

**Table 2.6.1 Development Plans Promoted under Donor-supported Projects**

| | CCs under ICGP | CCs/Paurashavas under MGSP | Paurashavas under SPGP | Paurashavas under UGIIP |
|---|---|---|---|---|
| General Plan (Medium-term) | Infrastructure Development Plan of CC (IDP) | Capital Investment Plan (CIP) | 5-year Development Plan | Paurashava Development Plan (PDP) |
| (Annual) | List of priority projects revised every year | | Annual Plan | |
| Investment Plan (List of priority projects) | List (supposedly 5 years in horizon) included in IDP as one component | List of capital investment projects ("Firm pipeline" and "Soft pipeline") included in CIP as one component | List (5 years in horizon) included in 5-year DP | List (target years: 2017-2021) included in PDP * |

* List of priority projects (pipeline projects) is incorporated in Cox's Bazar PDP as Cox's Bazar Municipality Investment Plan 2017-2025.

*Source: JICA Survey Team*

### 2.6.2 Infrastructure Development Plan (IDP)

#### (1) Structure of IDP

The composition of IDP, as per ICGP's guideline, includes present situation analysis, vision-setting, defining approaches and targets for achieving the upheld vision and list of prioritized infrastructure projects. PDP has a similar structure. The following table compares the structures of IDP promoted under ICGP and Cox's Bazar PDP. The underlined section is indicating the list of priority projects within the respective development plan.

**Table 2.6.2 Structure of IDP and CBP PDP**

| Indicative Structure of IDP | Cox's Bazar PDP structure |
|---|---|
| Part 1: Introduction<br>Part 2: Review of Present Condition<br>2-1 General condition of CC<br>2-2 Review of relevant plans and activities<br>2-3 On-going projects<br>2-4 Existing infrastructure and facilities<br>Part 3: Analysis and Vision Setting<br>3-1 Diagnosis of urban services and infrastructure by WLCC | 1. Introduction (including objective of PDP)<br>2. Description of UGIIP (including expected outputs of UGIIP)<br>3. Process of PDP Preparation<br>4. Cox's Bazar Municipality Context (including description of socio-economic situation of CBP)<br>5. Analysis of Access to Services (water, drainage, sanitation, PHC, education, SWM, road, etc.) |

[21] Section 28 of Third Schedule of CC Act and Section 62 of Second Schedule of Paurashava Act
[22] The list itself is often referred to as IDP by CC officers and other persons concerned.

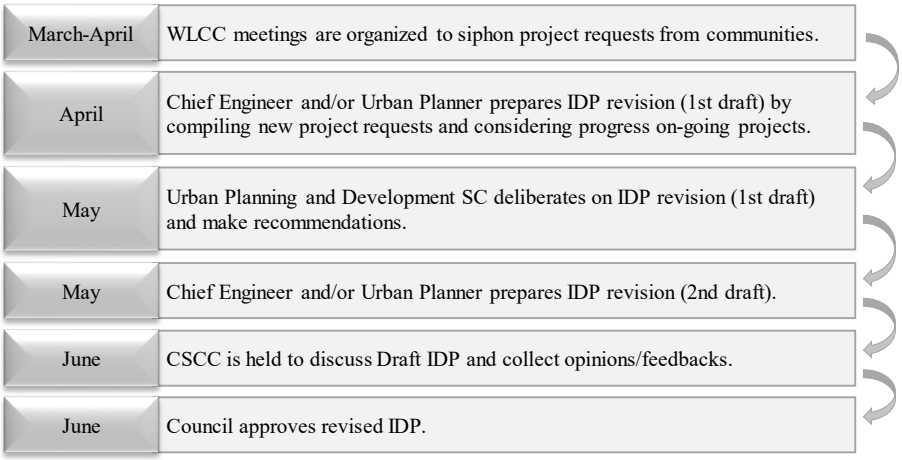
| Indicative Structure of IDP | Cox's Bazar PDP structure |
|---|---|
| 3-2 Analysis of urban activities and relevant facilities<br>3-3 SWOT analysis of CC<br>3-4 Prospective improvement of each urban activities<br>3-5 Five-year target of infrastructure development<br>Part 4: Sub-projects and Their Priority Setting<br>4-1 Confirmation of existing and planned infrastructure<br>4-2 Nomination of necessary infrastructure in five years<br>4-3 Priority setting among the proposed sub-projects | 6. Municipal Governance (including analysis of activities by other service providers)<br>7. Formulation of Municipality Vision, Identification of Priority area of Development and Determination of Implementation Strategies<br>8. Vision Realization Planning<br>9. Municipal Financial Planning and Sustainability (including analysis of revenue and development revenue expenditure of the municipality)<br>10. Cox's Bazar Municipality Investment Plan 2017-2025<br>11. Poverty Reduction Action Plan<br>12. Gender Action Plan<br>13. Land Use Management Plan |

*Source: JICA Survey Team*

The list of priority projects supposedly provides an overview of all investment profiles that are realized over the medium term. But the project lists prepared by the CCs under current circumstances cover only one year. They do not contain all projects of different funding sources either.

(2) Revision of IDP

According to the ICGP guideline, review and renewal of the entire IDP is carried out every three years and only the project list is revised on a rolling basis every year. A common procedure for revising IDP observed in ICGP-supported CCs starts with organizing WLCC meetings for the purpose of siphoning project requests. Then, the procedure may include Chief Engineer and/or Urban Planner drafting a new project list for the next fiscal year by considering the progress of on-going development projects and recommendations made by Urban Planning and Development SC. Before the submission of a final draft to the council, CSCC may be held in order to discuss new projects in the list. On paper, CPU is to play a central role in the IDP revision process, but as it stands now, CPU seems to be breaking away from the originally intended function. In fact, it has been reduced to a "name-exists-only" status in some CCs. In such case, Chief Engineer or Urban Planner assumes the task of revising project list. The following diagram shows a standard procedure for the revision of project list adopted at ICGP-supported CCs.




*Source: JICA Survey Team*

**Figure 2.6.1 Standard Procedure of IDP Revision in ICGP-supported CCs**

(3) Link between Revised IDP and Budget

Under the present circumstances, IDP revision process is divorced from budget preparation. There is virtually no link between the two processes. Revising work of IDP starts in March or April, more or less at the same time as the start of budget formulation. In other words, budget is prepared without much account of the development projects implemented or detailed funding requirements for the next fiscal year. As for ADP (Block Grant), only the total amount appears in original budget and the information of which projects will be funded by this ADP category is not specified.

2.6.3 Institutional Set-up for Preparation and Revision of IDP

(1) Platforms for Citizen Engagement

In Bangladesh, citizen participation is deemed a symbol of good governance and is to play an important role in planning process and overseeing development activities. Paurashava Act, by replacing the Paurashava Ordinance 1977,[23] aimed to strengthen citizen participation and accountability in Paurashava. This trend has gained strong support from donor-fund projects such as ICGP, UGIIP and MGSP. UGIIP introduced Town Level Coordination Committee (TLCC) to advance citizen participation in Paurashavas. ICGP carries on the experience of TLCC and promotes Civil Society Coordination Committee (CSCC) in its supported CCs, even though CSCC is not provided for in CC Act.

**Table 2.6.3 Description of Existing Platforms for Citizen Participation**

| | Role/Legal basis |
|---|---|
| CC | |
| CSCC | • CSCC is not specified in CC Act.<br>• CSCC is a citizen engagement platform at city level in which a wide range of stakeholders provide opinions on development plans, budget, individual development projects, etc.<br>• CSCC is composed of elected representatives, CC officials and stakeholders (representatives from professional groups, community groups, NGOs, the economically disadvantaged and different industry groups).<br>• ICGP-assisted CCs are encouraged to hold this committee meeting 4 times a year. |
| WLCC | • WLCC is not stipulated by law.<br>• WLCC is organized in every ward and meets regularly to discuss issues like infrastructure needs and public services.<br>• The councilor chairs the meeting and coordinates collaboration between CC administration and community groups.<br>• ICGP-assisted CCs are encouraged to hold this committee meeting at least 4 times a year. |
| Paurashava | |
| TLCC | • TLCC, promoted by UGIIP, is a citizen engagement platform for at Paurashava.<br>• Article 115 of Paurashava Act provides that "every municipality shall form a committee with members not more than 50 to dialogue with community people issues relating services and others".<br>• The composition and TOR of TLCC are specified in detail in an office order issued by the LGD (March 2011). The frequency is not prescribed in the Order. |
| WC | • Article 14 of Paurashava Act defines the formation of ward committee.<br>• Ward committee, with approval from municipality, can be formed in every ward with its members not exceeding ten. An elected ward councilor serves as the chairperson of this committee.<br>• The composition and TOR of WLCC are specified in detail in the above-mentioned LGD office order. The frequency of its meeting is not prescribed in the Order. |

*Source: Compiled by JICA Survey Team based on CC Act, Paurashava Act and LGD Office Order (2011)*

[23] The Ordinance (dated June 27th, 1997) provided for the constitution of local government institutions in urban areas.

(2) Forum for Coordination with Other Service Providers

The Prime Minister's Office (PMO) issued a circular in 2016 instructing CCs to coordinate with national government agencies which operate in their jurisdiction for planning and implementing public services. ICGP-assisted CCs established City Development Coordination Committee (CDCC) for this purpose. The members of CDCC include Mayor as chairperson, head(s) of standing committee(s), CEO, representatives from national government agencies and representatives of Private Sector. The terms of reference (TOR) of CDCC include, amongst others, i) sharing/updating respective organizational plans and programs, ii) exploring inter-origination coordination/collaboration and iii) contributing to CC's strategic plan preparation. ICGP-assisted CCs have held one general CDCC meeting annually. Apart from annual general meeting, CCs are encouraged to hold quarterly technical level meetings.

2.6.4 Budgeting and Fund Allocation of GOB Portion for Donor-funded Program Loan

For a donor-funded investment project, fund requirement or estimated cost of eligible portion and non-eligible portion is to be presented in detail in a project document (DPP: Development Project Proforma/Proposal). In DPP, annual fund requirement (annual disbursement estimate) of non-eligible (GOB) portion is indicated, by which GOB gets the picture of year-wise GOB fund requirement.

Once DPP is approved, its detailed year-wise project costing is used as the basis of preparation of Development Budget[24]. This year-wise disbursement estimate does not bind in a very strict sense the fund allocation to the entire project cost extending over multi-years, but it still provides strong basis for future fund allocation.

## 2.7 Issues and Challenges in Governance of Urban Local Bodies

Despite notable improvement in many areas of urban governance over the years, there are still constraints in management of city administration and service delivery. Challenges faced by ULB are underscored and analyzed as follows.

Human Resources

As stated earlier, staff deployment, particularly in CCs, is only halfway through. Human resources are limited with many posts vacant. Short-handed Engineer Division, for instance, struggles to construct a project pipeline. IDP in some CCs only include those projects implemented in the following fiscal year (only spanning one year) due to lack of capacity in the formulation of new projects **(shortage of manpower)**. Shortage of permanent staff is mainly attributable to the delay in the vetting and approval process of organograms proposed by CCs. As presented earlier, a proposed organogram needs approval from 4 different government offices. UDCG target CCs has not acquired approval, which prevents CCs from hiring of their permanent staff. Newly elected councilors often require orientation on the laws and capacity development to be able to fulfil their roles as law-makers. Enhancement of skills of officers and staffs on specific subjects is also a critical issue to ensure the minimum responsibilities and efficient work process **(limited knowledge and skills)**. ICGP has pushed for improvement of capacity of CC officials through the establishment of Capacity Development Unit and formulation of training program tailored in each target cities, but a structured, far-reaching national human resources development for ULBs is imperative **(absence of national HRD strategy)**. AS such, SPGP prepared the Paurashava Training Plan with LGED and NILG.

Strategic Planning / Resource Allocation

It is often the case that physical plans (e.g. Master Plan) and development plans (e.g. IDP) are prepared without proper coordination with other service providers/national government agencies (**limited**

[24] Development budget is prepared by the Development Wing of the Ministry of Finance.

**coordination capacity**). CCs and Paurashavas, in general, are weak in defining their strategies, setting priorities, estimating available resources, and ensuring that stakeholders work toward common targets. Many ULBs face constraints in prioritizing development needs, formulating projects and constructing a solid project pipeline (prioritized medium-term investment plan). Under ICGP, target CCs are encouraged to manage their investment plan on a rolling basis, but in reality, this activity is not carried out in an ideal manner. Investment plan in most CCs spans only one year in its time horizon and does not encompass all development projects implemented with different funding sources. A well-formulated medium-term investment plan should serve as an effective tool for facilitating coordination with other service providers and resource allocation/mobilization, but the reality in ULB falls far short of this image (**weak public investment management capacity**).

Financial Management (FM)

Resource allocation is often made on unplanned and ad-hoc manner. It is also a common practice among ULBs that with regards to ADP (Block Grant) projects are identified and selected only after the actual allocation of funds from the government. which is one of the factors undermining ULB's efforts in the estimate of future financial outcomes. For that reason, there are cases where the same projects are financed redundantly, particularly between those financed by own source income and by ADP (Block Grant) (**haphazard resource allocation**). The term - financial management - encompasses a wide range of management activities/systems from budget formulation, tax management, accounting and FM system, procurement, asset management, internal control to resource allocation mechanism. It is not too much to say that ULBs face challenges in almost all reams of FM. ULBs in general lack revenues to finance new investments or operation and maintenance of existing infrastructure. Low efficiency of collecting local taxes hampers ULB capacity to generate sufficient revenues (**weak financial foundation and revenue generation capacity**). Absence of integrated accounting and financial management system inhibits effective asset management and financial reporting (**vulnerable financial management system**).

Citizen Engagement

In Bangladesh, citizen participation has become a commonplace element in many planning efforts. It contributes greatly to identification and prioritization of development projects, based on which ULB can build and manage its project pipeline. During the IDP revision process in ICGP-supported CCs, WLCC and CSCC meetings are organized to discuss development needs. Despite the positive efforts in enhanced citizen engagement, some CC officers assess that citizen participation on the ground still remains a long way from intended impacts (**citizen participation not well integrated into planning process**).

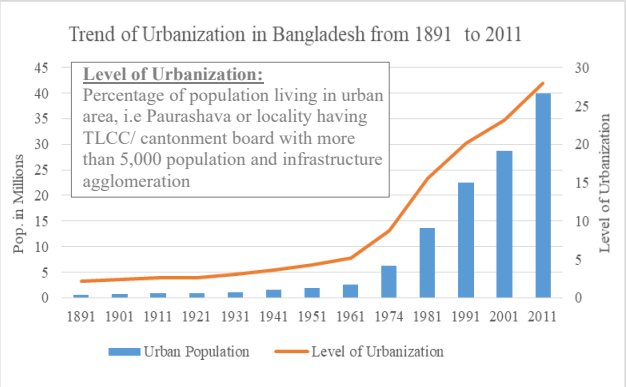
Legal Instruments

One of the challenges overshadowing CCs' efforts to improve their administration is the fact that many legal instruments require framing and reframing (**framing of legal instruments not completed**). Under Capacity for Cities (C4C) project, about 150 CC related legal instruments were examined. C4C also organized a meeting where officials and representatives of CCs discussed prioritization of CC rules, regulations and by-laws that need to be framed or reframed.

# CHAPTER 3 URBAN DEVELOPMENT AND PLANNING

## 3.1 Rapid Urbanization in Bangladesh

Urbanization is an inevitable phenomenon for the country like Bangladesh. Bangladesh has been experiencing quite rapid urbanization during the last few decades. Between 1961 and 2011, the country's total population increased from 55 million to about 150 million (about 273%) while the urban population increased from 2.6 million to about 43.43 million thus registering a growth of nearly 1600% (GoB, 2015; BBS, 2011). Level of urbanization, namely the percentage of population living in urban areas, was 2.18% in 1891, 2.43% in 1901, 4.33% in 1951 and 8.74% in 1974 (BBS, 1984). The urbanization got a momentum in 1981 due to the decentralization policy of the government and urban population became 15.54% of the total population. Following the urbanization trend, it is predicted that urban of Bangladesh will exceed 50 % within the next two decades (Morshed, 2013).




*Source: Bangladesh Bureau of Statistics,1984-2011*

**Figure 3.1.1 Trend of Urbanization in Bangladesh from 1891 to 2011**

**Table 3.1.1 Classifications of Urban Area**

| | |
|---|---|
| 1) Mega City | Metropolitan area having population 5 million or more. |
| 2) City Corporation | City corporations incorporated and administered by the Ministry of Local Government under City Corporation Act, 2009. |
| 3) Paurashava/ Municipality Area | Paurashavas incorporated and administered by local government under Paurashava Ordinance, 1977. |
| 4) City | Urban area having population 100,000 and above. |
| 5) Other Urban Area | Upazila headquarters which are not Paurashavas. The only exception is the 17 unions adjacent to Dhaka City Corporation under Dhaka Metropolitan Area. These unions are treated as other urban areas on the basis of their urban characteristics. |
| 6) Town | Urban area having population less than 100,000 |

*Source: Population & Housing Census-2011, Bangladesh Bureau of Statistics*

Considering the spatial distribution, urbanization in Bangladesh is not evenly distributed. Most of the urban population in Bangladesh is concentrated in few urban cities. Total 60% of urban population live in City Corporations and reminder in Paurashavas and small towns (GoB, 2015). A large portion, 40% of the total urban population is live in Dhaka.

**Table 3.1.2 Population Transition of 12 CC**

| Region | CC | Established | Population (BBS) | | Growth Rate | | | Density (/sq. km)*4 |
|---|---|---|---|---|---|---|---|---|
| | | | 2001 | 2011 | National (2011)*2 | Estimated*1 | WB (2011)*3 | |
| Dhaka | DSCC | 8 Aug 1864 and divided on 1st Dec 2011 | 948,150 | 1,224,508 | 1.4 | 2.6 | 3.6 | 11,208 |
| Dhaka | DNCC | | 1,896,879 | 2,765,178 | | 3.8 | | 14,092 |
| Rajshahi | RCC | 13 Aug 1887 | 388,811 | 449,756 | | 1.5 | | 4,629 |
| Chottogram | CCC | 31-Jul-90 | 2,023,489 | 2,582,401 | | 2.5 | | 15,362 |
| Khulna | KCC | 6-Aug-90 | 770,498 | 663,342 | | -1.5 | | 14,531 |
| Barishal | BCC | 25-Jul-02 | 225,337 | 328,278 | | 3.8 | | 6,189 |
| Sylhet | SCC | 28-Jul-02 | 263,197 | 479,837 | | 6.2 | | 18,107 |
| Narayanganj | NCC | 5-May-11 | - | 709,364 | | - | | 15,023 |

| Region | CC | Established | Population (BBS) | | Growth Rate | | | Density (/sq. km)*4 |
|---|---|---|---|---|---|---|---|---|
| | | | 2001 | 2011 | National (2011)*2 | Estimated*1 | WB (2011)*3 | |
| Cumilla | CuCC | 10-Jul-11 | 233,485 | 326,366 | | 3.4 | | 6,154 |
| Rangpur | RaCC | 28-Jun-12 | | 539,715 | | - | | 2,624 |
| Gazipur | GCC | 16-Jan-13 | 749,419 | 1,576,761 | | 7.7 | | 4,785 |
| Mymensingh | - | 14-Oct-18 | - | 679,983 | | - | | 7,541 |

*Remarks:*
**1: average annual growth rate from 2001 to 2011. *2: annual national population growth from 2010 to 2011 according to BBS record. *3: Urban population Growth Rate of Bangladesh in 2011 according to WB. *4: as of 2011*
*Source:*
*DSCC, DSCC: Dhaka Detailed Area Plan*
*RCC, CCC, KCC: Population & Housing Census-2011, Bangladesh Bureau of Statistics*
*BCC: Census 2011, BBS/ Census 2001, Research on Implementation Status on Master Plan of Barisal Divisional Town, Ministry of Housing and Public Works*
*SCC: Bangladesh Urban Resilience Project, World Bank*
*NCC, GCC: Action Area Plan*
*CuCC: Master Plan for Comilla City and its Influence Area (2014-2034)*
*RaCC: Estimated from the Projected data of Rangpur CC Mater plan report*

**Table 3.1.3 Comparison District Wise Level of Urbanization**

| | Gazipur | Narayanganj | Cumilla | Cox's Bazar |
|---|---|---|---|---|
| National Level of Urbanization, 2011 | 28 % | 28 % | 28 % | 28 % |
| Name of Division | Dhaka | | Chattogram | |
| Divisional level of Urbanization, 2011 | 32.86 % | | 24.3 % | |
| Level of Urbanization of the District, 2011 | 30.48 % | 33.54 % | 15.6 % | 21.79 % |
| Level of Urbanization of the District, 2001 | 27.31 % | 56.21 % | 11.65 % | 15.36 % |

*Remarks: Definition of urbanization has been changed due to definitional change of urban area in 2011, therefore, level of urbanization of the district may not be significantly increased from 2001 to 2011 (even, that of Narayanganj decreased).*
*Source: Bangladesh Bureau of Statistics,2011*

## 3.2 General Information of Target Four Urban Local Bodies

### 3.2.1 Natural Conditions

Natural conditions of the four target ULBs are summarized in Table 3.2.1 in short and brief explanations for each item follow continuously.

**Table 3.2.1 Natural Conditions**

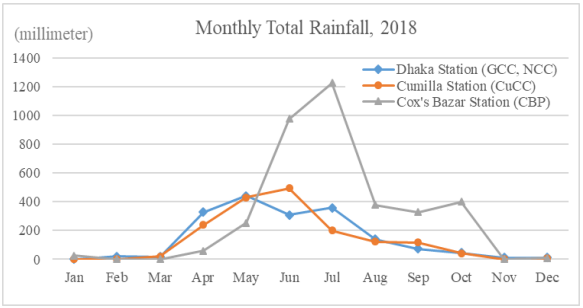
| Item | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| Climate | Sub-Tropical Monsoon | | | |
| Hydrology (River System) | Turag River, Balu River, and the Tongi canal | Sitalakhya River | Gumti River | Bakkhali River |
| Topography (Elevation, MSL) | | | | |
| Average<br>Maximum<br>Minimum | No Description<br>No Description<br>No Description | 10 m<br>14.0 m<br>-0.6 m | 6.6 m<br>44.5 m<br>1.0 m | 9 m<br>60 m<br>0 m |
| Geology/Soil | Madhupur Jungle Terrace | Madhupur Tract, Holocene floodplain | Deep silky soil | Beach and Beach Ridge Complex Deposit, Fluvio-Colluvial Plain Deposit, Older Rocks Deltaic Plain |
| Vegetation | | | | |
| Major Land Use | Residential (35.3%)<br>Agricultural (34%) | Residential (32.2%)<br>Water Body (24%) | Agricultural (37.4%)<br>Residential (30.9%) | Residential (40.1%)<br>Agricultural (24.4%) |
| Dominant Land Cover | Herbaceous Crops, Built-Up Non-Linear | Built-Up Non-Linear | Herbaceous Crops, Built-Up Non-Linear | Mangrove Plantation, Built-Up Non-Linear |

| Item | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| Flood Occurrence | East: Flood Plain of Lakhya River and Balu River, North-South, Central West: Flood Plain of Turag River | Flood Plain of Meghna River | Basin of Gumti River | Flood Plain of Bakkhali River |

*Source: JICA Survey Team*

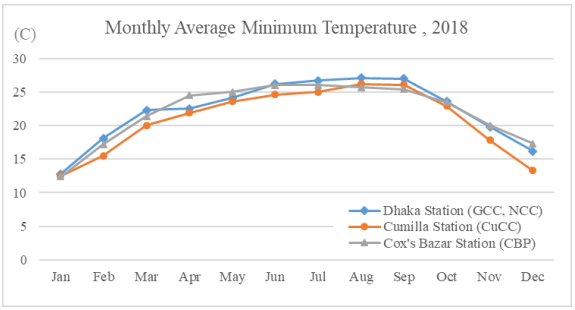
(1) Climate

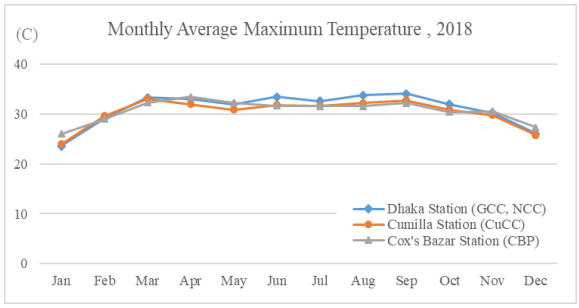
According to the Statistical Year Book Bangladesh 2018, the climate of Bangladesh is generally classified as sub-tropical monsoon characterized by three distinct seasons, namely, Winter, Summer and Monsoon. Four Target ULBs have same climate and therefore almost no difference can be seen in temperature, however outstanding the rainfall during Monsoon is outstanding in CBP as shown in Figure 3.2.1.




*Source: Statistical Year Book Bangladesh 2018, Bangladesh Bureau of Statistics (BBS)*

**Figure 3.2.1 Monthly Total Rainfall**




*Source: Statistical Year Book Bangladesh 2018, Bangladesh Bureau of Statistics (BBS)*

**Figure 3.2.2 Monthly Average Temperature**

(2) Hydrology

There is no hydrological map provided in existing urban planning master plan, nor sectoral plan of relevant ministries. In case the urban planning master plan contains hydrological description, status of the river system and ground/surface water is mentioned as shown in Table 3.2.2.

**Table 3.2.2 Hydrological Description in Existing Urban Planning Master Plan**

| | | |
|---|---|---|
| GCC | River System | ➢ Turag River: Tributary of Old Brahmaputra River and upper tributary of the Buriganga River. Its sverage width and depth are 218 m and 13.5 m, respectively.<br>➢ Balu River: Tributary of Lakhya River which is a tributary of Old Brahmaputra River.<br>➢ Tongi khal: Taking off from Turag river and flowing East to join the Balu River. |
| | Ground Water | ➢ Seasonal ground water table fluctuation: 8 to 10 m<br>➢ Maximum static water level averages: below 13 m |
| | Surface Water | ➢ Major source of surface water: Turag River, Balu River (for domestic and irrigation purpose) |
| NCC | Surface Water | ➢ Sitalakhya River, canal and water bodies. |

| | | |
|---|---|---|
| | | ➢ Surface water withdrawal from adjacent rivers is not a proved feasible option, because of high levels of industrial and domestic pollution from unregulated waste disposal. |
| | Ground Water | ➢ Ground water basin is completely dependent on the ground water resources, while all other sources of fresh water are almost dead or unusable. |
| CuCC | River System | ➢ Gumti River: Flowing 50km distance in CuCC and average width and depth are 100 m and 1.5 m respectively in rainy season.<br>➢ Dakatiya River: Tributary of Meghna River |
| CBP | River System | ➢ Bakkhali River: Connecting with the Bay of Bengal directly. |
| | Ground Water | ➢ Water bodies (total 612.07 acres, 11.91% of CBP area): Free from arsenic or other type of pollution. |
| | Surface Water | ➢ Bakkhali River contains saline water therefore, surface water is not suitable for water supply purpose. |

*Source: Action Area Plan (GCC, NCC), Master Plan (CuCC), Paurashava Development Plan (CBP)*

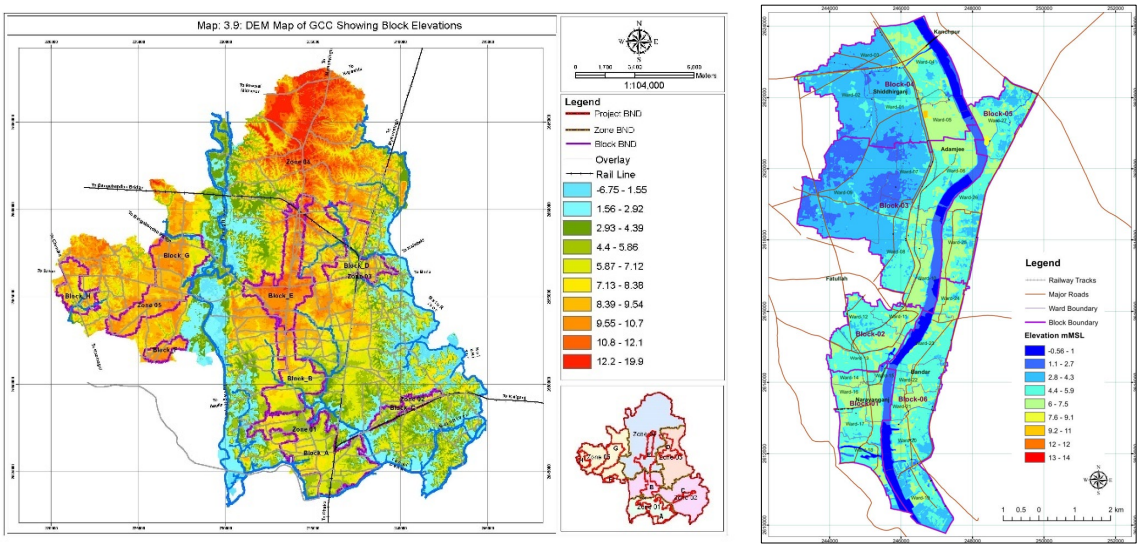
(3) Topography

Existing urban planning master plans have some description related to topography as shown in Table 3.2.3. In addition, contour map can be found in master plan of GGG, NCC and CBP.

**Table 3.2.3 Topographical Description in Existing Urban Planning Master Plan**

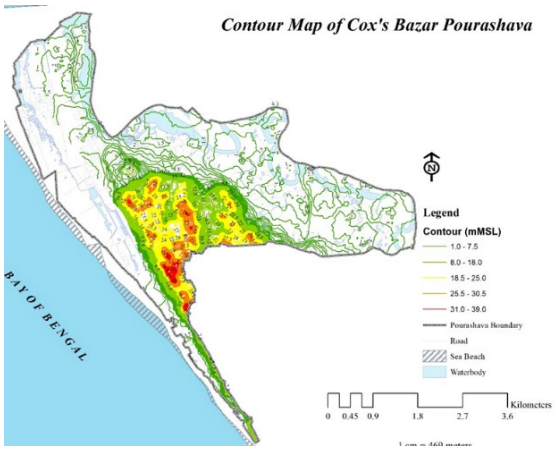
| | |
|---|---|
| GCC | ➢ Most of GCC area is located far above the normal frequent flood levels in the river.<br>➢ The terrain has sufficient slope gradient to facilitate gravity flow without any impediment. |
| NCC | ➢ The highest spot is found in Block 4, the top of ramp of Kanchpur Bridge.<br>➢ The lowest average spot is found in the Block 6, the slope of Sitalakkhya River. |
| CuCC | ➢ Nort part of CuCC is comparatively high elevation area free from flood.<br>➢ Land elevation is comparatively low in the south part where is the flood prone area.<br>➢ The highest elevation of the land exists in the west part of CuCC area. |
| CBP | ➢ North and north east part of CBP has very low land elevation, 0-3.m meter.<br>➢ Main city area including south east part has the land with high elevation in hilly area. |

*Source: Action Area Plan (GCC, NCC), Master Plan (CuCC), Paurashava Development Plan (CBP)*




*Source: Action Area plan (GCC, NCC)*

**Figure 3.2.3 Contour Map of GCC and NCC**




*Source: Cox's Bazar Paurashava Development Plan*

**Figure 3.2.4 Contour Map of CBP**

(4) Geology/ Soil

Existing urban planning master plans have some description related to geology and soil as shown in Table 3.2.4.

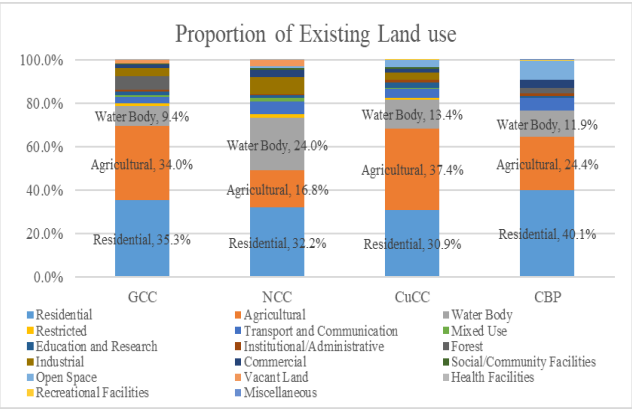
**Table 3.2.4 Geological Description in Existing Urban Planning Master Plan**

| | |
|---|---|
| GCC | ➢ The north, west and central part: Situated at the southern tip of Madhupur Jungle terrace characterized by flood free high land. Soil is brown to red in color, containing ferruginous or calcareous nodules.<br>➢ The east part is the flood plains of Lakhya River and Balu River. North-south directional central west part is the flood plain of Turag River. Upper layer of the sub-soil is predominant in silt and clay layer is very thin or absent. |
| NCC | ➢ NCC is located on the edge of the Madhupur Tract and the Holocene floodplain deposits from the aquifers. The tract is nutrient poor and somewhat acidic and soil is red or brown in color. |
| CuCC | ➢ CuCC area has predominantly deep silty soils, significant proportion of basin clays. It is some calcareous, some with seasonally acid top soils.<br>➢ There are brown calcareous loamy soils on highest ridges and near river-banks. |
| CBP | ➢ CBP is covered by Beach and Beach Ridge Complex Deposit, Fluvio-colluvial plain deposit and the older rocks (Hills and Plateaus) deltaic plain.<br>➢ The south eastern part of CBP is mainly covered by older rocks, hills and plateaus. |

*Source: Action Area Plan (GCC, NCC), Master Plan (CuCC), Paurashava Development Plan (CBP)*

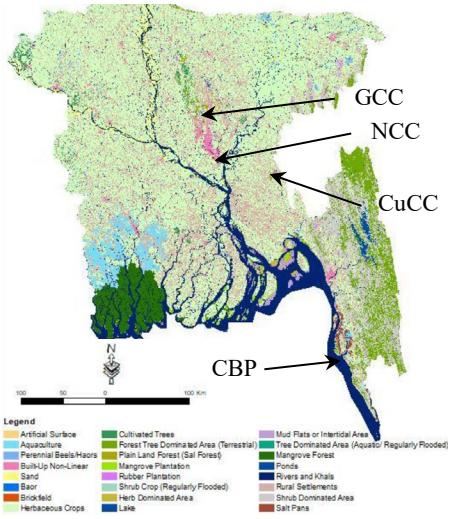
(5) Vegetation

There is no vegetation map provided in existing urban planning master plan, but only existing land use. The proportion of the land use is as shown in Figure 3.2.5.




*Source: Action Area Plan (GCC, NCC), Master Plan (CuCC), Paurashava Development Plan (CBP)*

**Figure 3.2.5 Proportion of Existing Land Use**




*Source: Historical Land Cover Mapping of Bangladesh 2018*

**Figure 3.2.6 Land Cover Map 2010**

In addition, Historical Land Cover Mapping of Bangladesh 2018 shows the land cover as of 2010. Land cover of GCC and CuCC mainly consists of Herbaceous crops and built-up non-linear, while NCC has almost built-up non-linear land cover. CBP has a characteristic land cover of Mangrove plantation.

(6) Flood Occurrence

Existing urban planning master plans have some description related to flood occurrence as shown in Table 3.2.5.

**Table 3.2.5 Flood Occurrence**

| | |
|---|---|
| GCC | ➢ East part is the flood plains of Lakhya River and Balu River.<br>➢ North-south directional central west part is the flood plain of Turag River. |
| NCC | ➢ NCC is located in flood plain of the Meghna River. Buriganga River covers both the south and a part of west and Lakhya River is in the east.<br>➢ East Part of NCC (substantial part of Kadam Rasul) goes under water due to annual flooding, while settlement area there is free from annual flooding.<br>➢ Nort part of NCC (Siddhirganj) is a flood prone area. |
| CuCC | ➢ CuCC is flood prone area located in the basin of Gumti River.<br>➢ In 2004, Gumti and Kakri tributaries bursted their banks and flooded Cumilla district.<br>➢ The worst incident occurred in July 2010, which caused huge flood affecting 470,000 people and destroying 41,386 houses. |
| CBP | ➢ CBP is flood prone area located in the flood plain of Bakkhali River. |

*Source: Action Area Plan (GCC, NCC), Master Plan (CuCC), Paurashava Development Plan (CBP)*

### 3.2.2 Socioeconomic Conditions

Socioeconomic conditions of the four target ULBs are summarized in Table 3.2.6.

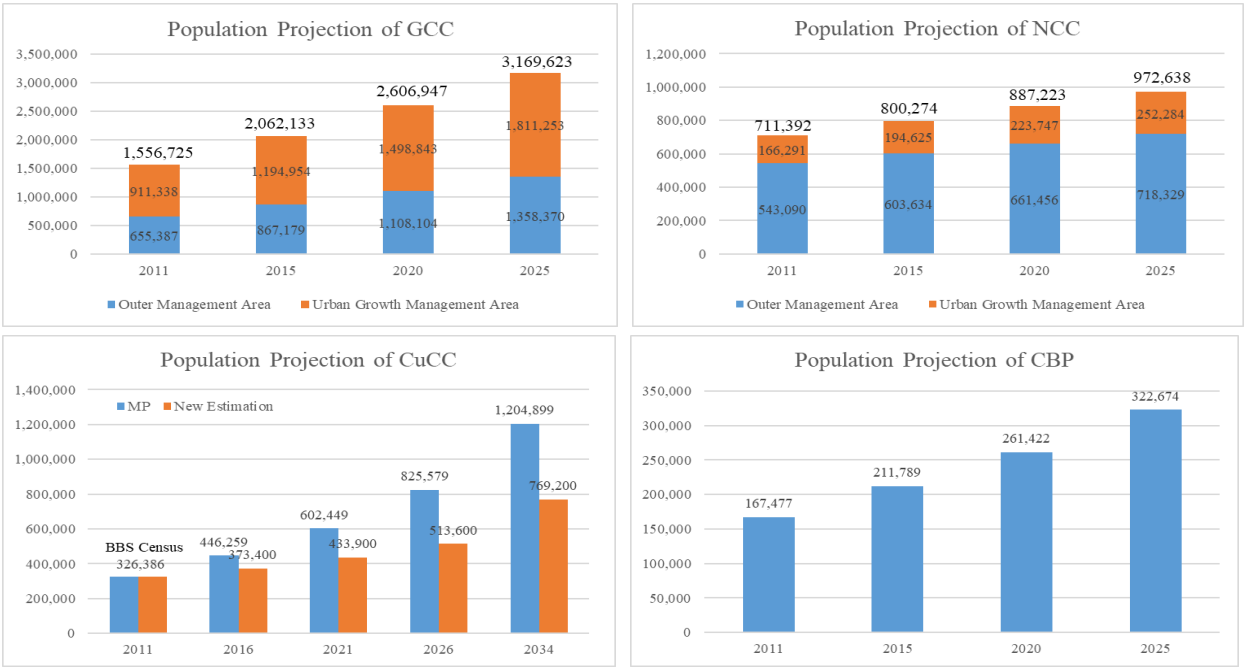
**Table 3.2.6 Socioeconomic Conditions**

| Item | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| Division | Dhaka | Dhaka | Chattogram | Chattogram |
| District | Gazipur | Narayanganj | Cumilla | Cox's Bazar |
| Year Promoted to CC, or Paurashava A Class | 2013 | 2011 | 2011 | 1994 |
| Area ($km^2$) | 329.53 | 47.22 | 53.04 | 32.90 |
| Population (BBS2011) | 1,576,761 (Current area) | 709,364 | 326,366 | 167,477 |
| Pop. Density, 2011 | 4,785 | 15,023 | 6,154 | 5,090 |
| Location | Located about 22.5 km North of Dhaka | Located about 19 km South of Dhaka | Located about 100 km East from Dhaka | Located about 150 km South from Chattogram |
| No. of Ward | 57 | 27 | 9 | 12 |
| Income Level (Monthly Income) | No Description | No Description | BDT20,000-50,000 (30.5% of Household) | No Description |
| Social Structure | 70% people belong to 15-59 age range as work force | 59.2% people belong to 15-59 age range as work force | 26.3% of households are migrated. | Main occupation is business. |
| Education (Literacy Rates) | 64.4%<br>Male:68%<br>Female:60.2% | 57.5% | 66.4%<br>Male:69.4%<br>Female:63.1% | 55% |
| Community/Community Organization | No Description | No Description | 9 Community Centers | No Description |
| Social Services | | | | |
| No. of Slaughter House | 3 | No Description | No Description | No Description |
| No. of Public Toilet | 13 | No Description | 6 | No Description |
| Ponds Owned CC | 232 | No Description | No Description | No Description |
| *Hospital<br>Diabetic Hospital<br>Clinic/Medical Center | 3<br>-<br>36 | 10<br>-<br>41 | 2<br>1<br>59 | 8<br>1<br>6 |

| Item | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| Diagnostic/EPI Center<br>Family Planning Clinic | -/-<br>26 | 26/63<br>- | 24/-<br>2 | 1/-<br>1 |
| Play Field (Stadium), Park and Playground | Play Field: 2<br>Park: 3 | Park: 6<br>Playground: 55 | Stadium: 1<br>Park: 6 | Playground: 8 |

*Source: Action Area Plan (GCC, NCC), Master Plan (CuCC), Paurashava Development Plan (CBP), *Website of GCC, NCC*

Existing urban planning master plan provide population projection as shown in Figure 3.2.7. According to the analysis 'Working Paper 8 Urban Planning Review' made by CGP project, population projection of CuCC is considered to be unrealistic and the analysis proposed the new estimation.




*Source: Dhaka Structure Plan 2016-2035, Master Plan (CuCC), Paurashava Development Plan (CBP), FSMP Working Paper 8 Urban Planning Review (CGP)*

**Figure 3.2.7 Population Projection of Target ULBs**

### 3.2.3 Industrial Structure

There is no recent data for the economy besides Economic Census 2013 which shows only the limited data by district, such as number of establishment and employees. For agriculture, although there is Agriculture Year Book as a census, most of the part are contributed to the data of crops by division. Therefore, it is quite difficult to grasp the whole industry structure focused on city level, without any production amount/ value by industry.

**Table 3.2.7 Industrial Structure**

| Item | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| Major Industry including Commerce and Service | Apparel and Textile, Pharmaceuticals | Food Product, Building and Engineering Service | Hospital Activities | Hotel and Accommodation Service |
| *District Wise Statistics* | | | | |
| Agriculture: No. of Farm Holdings (2017) | 230,203 (42.7% to total holdings) | 119,479 (22.4% to total holdings) | 556,074 (60.6% to total holdings) | 148,271 (44.2% to total holdings) |
| No. of Establishment (2013) | 122,763<br>(62.9% is wholesale & retail, vehicle repair) | 113,063<br>(58.0% is wholesale & retail, vehicle repair) | 124,482<br>(49.5% is wholesale & retail, vehicle repair) | 53,812<br>(56.9% is wholesale & retail, vehicle repair) |
| No. of Employees (2013) | 964,241<br>(71.8% is engaged in manufacturing) | 780,575<br>(67.4% is engaged in manufacturing) | 422,923<br>(33.9% is engaged in | 205,862<br>(53.4% is engaged in |

| Item | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| | | | wholesale & retail, vehicle repair) | wholesale & retail, vehicle repair) |
| *City Wise Statistics* | | | | |
| Local Investment | | | | |
| Local Investment Amount (2011-2018) | 80,614 Million BDT (Apparel &Textile: 35.5%) | 76,918 Million BDT (Food Product: 21.8%) | 5,187 Million BDT (Hospital Activities: 36%) | 21,510 Million BDT (Hotels, etc.: 93.9%) |
| Total No. of Employee | 142,514 (Apparel &Textile: 68.5%) | 50,333 (Apparel &Textile: 70.8%) | 1,409 (Hospital Activities: 72.9%) | 1,880 (Hotels, etc.: 72.8%) |
| FDI | | | | |
| Local Investment Amount (2013-2018) | 77.4 Million USD | 3.5 Million USD | 3.0 Million USD | 0.3 Million USD |
| No. of Japanese Investors (2018) | 4 | 5 (4 at Adamjee EPZ) | 5 (4 at Cumilla EPZ) | N/A |

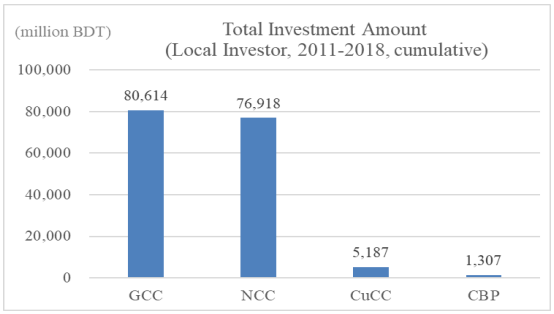
*Source: Agriculture Year Book 2017-2018, Economic Census 2013, JETRO*

(1) Local Investment

In order to understand the accurate industrial structure of target cities, JICA Survey Team analysed the list of business registration with Bangladesh Investment Development Authority (BIDA) and Bangladesh Export Processing Zones Authority (BEPZA).

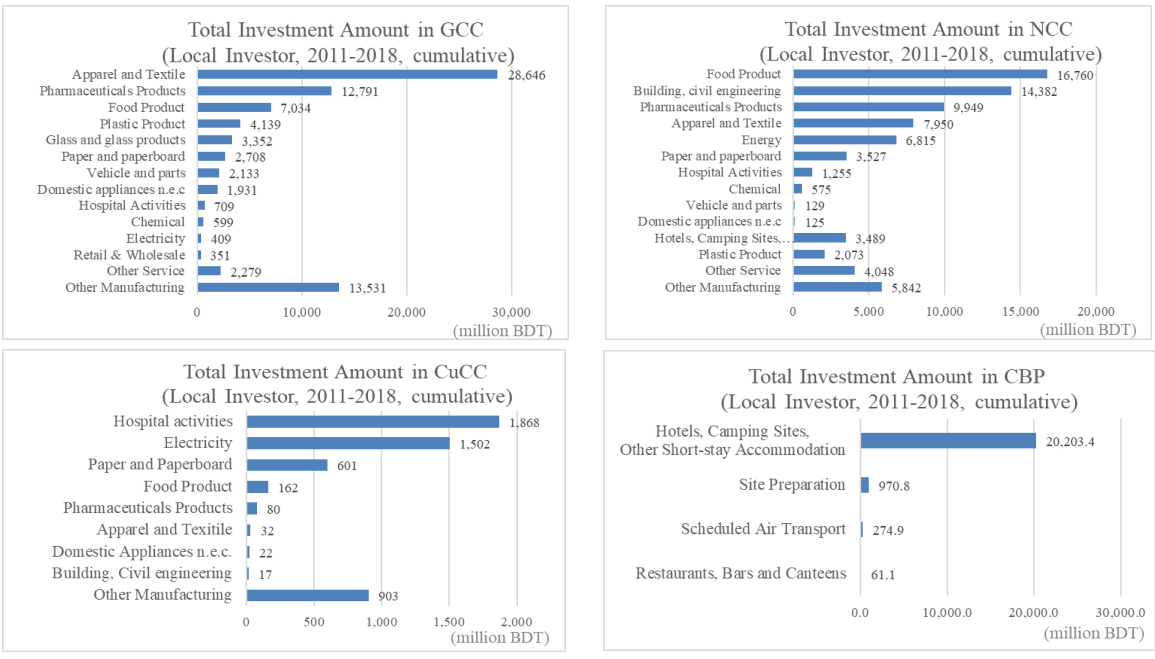
Local investment of GCC and NCC is outstanding among four ULBs, because of the advantage of their location and infrastructure as a part of Dhaka Metropolitan Region.

Major industries of each ULB are apparel and textile in GCC, food product in NCC, hospital activities in CuCC and hotels in CBP.




*Source: Prepared by JICA Survey Team based on information of BIDA*

**Figure 3.2.8 Comparison of Total Local Investment of Target ULBs**




*Source: Prepared by JICA Survey Team based on information of BIDA*

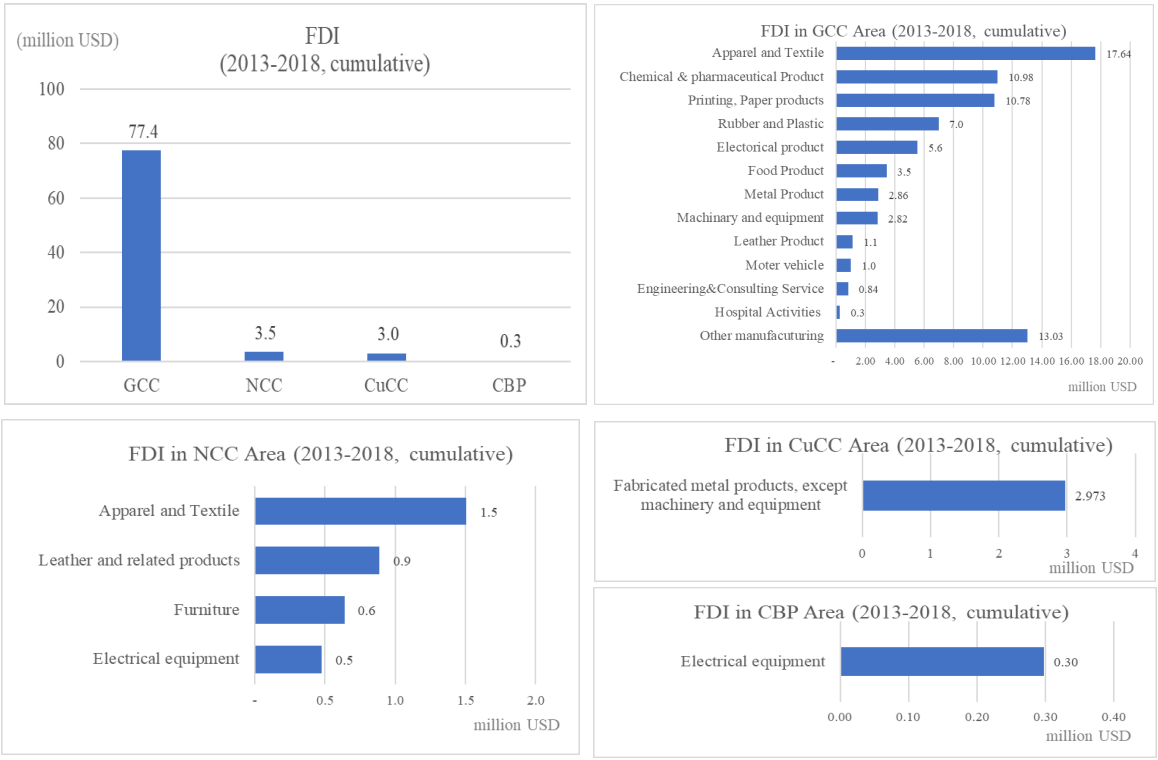
**Figure 3.2.9 Total Local Investment of Target ULBs**

(2) Foreign Investment

Foreign investment of GCC is outstanding among four cities, by taking advantage of its proximity to the international airport and the capital city, and existing agglomerations in garment industry.

It is considered that NCC is difficult to attract FDI, because it is almost built up area and doesn't have enough unused land for development besides economic zone. Furthermore, the fragile soil and vulnerability to flood may require investor additional cost for development. There is only limited FDI in CuCC and CBP.

According to JETRO, there are 14 Japanese companies located in four target ULBs as shown in Table 3.2.10.




*Source: Prepared by JICA Survey Team based on information of BIDA*

**Figure 3.2.10 Total FDI of Target ULBs and Their Comparison**

**Table 3.2.8 Classification of Japanese Companies by Location (as of 5. 2018)**

| Location | Name of Company | Classification | Establis hed Year | Capital | Area (m2) | No. of Employees |
|---|---|---|---|---|---|---|
| GCC | undisclosed | Light Engineering Workshop | undisclosed | | | |
| | undisclosed | Architectural & Engineering/ consultancy | undisclosed | | | |
| | undisclosed | Cosmetics | undisclosed | | | |
| | undisclosed | Apparel | undisclosed | | | |
| | undisclosed | Inspection factory | | | 5,300 | 400 |
| | undisclosed* | Motorcycle manufacturing and assembly | undisclosed | | | |

| Location | Name of Company | Classification | Establis hed Year | Capital | Area (m2) | No. of Employees |
|---|---|---|---|---|---|---|
| NCC | undisclosed | Inspection factory | undisclosed | | | |
| | undisclosed | Confectionery and juice | undisclosed | | | |
| Adamjee EPZ | Maruhisa Pacific Co. Ltd. | Apparel (Knit product) | 2009 | 210,000,000 (BDT) | 25,364 | 2,500 |
| | TS Tech Bangladesh Limited | Trim cover (Car Seat) | 2015 | undisclosed | | |
| | UHM Ltd. (JV of Toray International and Urmi Group) | Garments | 2015 | undisclosed | | |
| | Saitonensi Bangladesh Ltd. | Textile | 2014 | undisclosed | | |
| | Yokohama Labels and Printing (BD) Co. Ltd. | Label printing | 2010 | undisclosed | | |
| | CG Fashions Ltd. | Apparel | - | | | |
| CuCC | undisclosed | Rod/wire/pipe manufacturing | - | undisclosed | | |
| Cumilla EPZ | CAT Garment Co. Limited (JV with China and Hong Kong) | Apparel | 2011 | undisclosed | | |
| | Hashy Tiger Co. Limited. | Toy manufacturing | 2012 | 4,000,000 (BDT) | undisclosed | |
| | J B Networks Co. Ltd. (JV with Bangladeshi company) | Strap/belt/pouch sewing and manufacturing | 2010 | 1,780,000 (USD) | 2,350 | 1,078 |
| | Seiko Precision Parts (BD) Ltd. | Copy/FAX machine parts (rubber) production | 2004 | 810,000 (USD) | - | |

**Relocated to other ULB in Nov.2018.*

*Source: Prepared by JICA Survey Team based on information of JETRO, BEPZA and each company's website*

### 3.2.4 Investment Environment/Plans

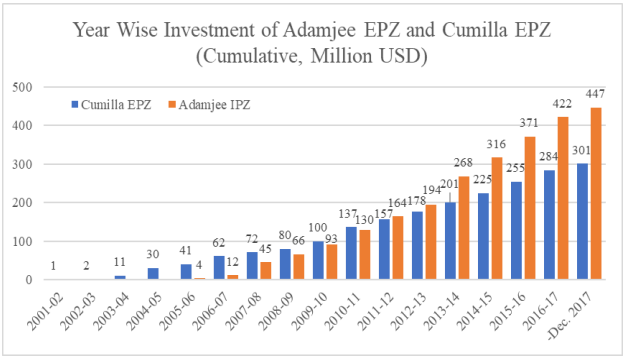
There are several economic zones in four target ULBs and their surrounding areas as shown in the Table 3.2.9. Two of them are located within the boundary of CC, namely, Adamjee EPZ and Cumilla EPZ.

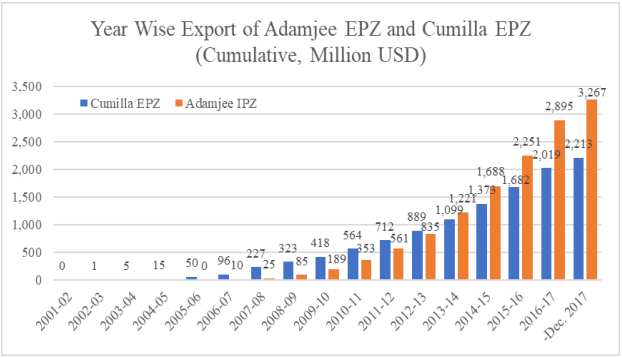
**Table 3.2.9 Economic Zones Including Plans in Proximity of Four ULBs**

| Location | Type | Name | Upazila | District | Area (acres) | Land owner | Remarks |
|---|---|---|---|---|---|---|---|
| Inside CC | EPZ | Adamjee EPZ | - | Narayanganj | 245 | | |
| | EPZ | Cumilla EPZ | - | Cumilla | 267 | | |
| Outside of CC | SEZ | Sreepur EZ | Nayanpur (Sreepur) | Gazipur | 510 | GOB | Japanese economic zone |
| | SEZ | Cumilla EZ | Megha | Cumilla | 272 | GOB | |
| | SEZ | Araihazar EZ | Araihazar | Narayanganj | 1,011 | GOB | Japanese economic zone |
| | EPZ | Megna Industrial Economic Zone PEZ | Sonargaon | Narayanganj | 80 | Private | |
| | EPZ | Megna Economic Zone PEZ | Sonargaon | Narayanganj | 68 | Private | |
| | EPZ | Aman Private EZ | Sonargaon | Narayanganj | 150 | Private | |
| | EPZ | Bay Private EZ | Gazipur | Gazipur | 65 | Private | |

*Source: Prepared by JICA Survey Team based on BEZA HP*

Cumulative investment and export amount of EPZ located in NCC and CuCC are shown in Figure 3.2.11 and Figure 3.2.112. Though Cumilla EPZ was developed earlier than Adamjee EPZ, latter exceeded the investment of former in FY2012-2013 and export in FY2013-2014.




*Source: Bangladesh Export Processing Zones Authority*

**Figure 3.2.11 Year Wise Investment of EPZs in Target Cities (NCC, CuCC)**

**Figure 3.2.12 Year Wise Export of EPZs in Target Cities (NCC, CuCC)**

Regarding the Economic Zone located outside of city corporation boundary, Sreepur and Araihazar Economic Zones are Japanese Economic Zone. Regarding Araihazar EZ, zone 2 is under investigation at the location next to Araihazar EZ (implementation period is not yet decided).

## 3.3 Policies and Plans of Urban Development

### 3.3.1 Acts and Policies related to Urban Planning and Urban Development

#### (1) Act as Basis Law

Acts as basis law for formulation of urban planning master plan and urban development are shown in Table 3.3.1.

**Table 3.3.1 Acts related to Urban Planning Master Plan and Urban Development**

| Act | | Jurisdiction in Charge |
|---|---|---|
| Planning Agency | Town Improvement Act, 1953 | Ministry of Housing and Public Works |
| | Cox's Bazar Development Authority Act, 2016 | |
| | Local Government (City Corporation) Act, 2009 | The Ministry of Local Government, Rural Development and Co-operative |
| | Local Government (Paurashava) Act 2009 | |
| Environment | Environmental Conservation Act, 1995 | Ministry of Environment and Forest |
| | National Reservoir Protection Act, 2000 | Ministry of Water Resources |
| | Public Health (Emergency Provisions) Ordinance, 1944 | Ministry of Health and Family Welfare |
| | Sand Pit and Soil Management Rules, 2011 | Ministry of Land |
| Land Use | The Bangladesh Economic Zones Act, 2010 | Prime Minister's Office |

| Act | | Jurisdiction in Charge |
|---|---|---|
| | Mega city, Divisional Town and District Town's municipal areas including country's all the municipal areas' playground, open space, park and natural water reservoir Conservation Act, 2000 | Ministry of Environment and Forest |
| Development | The Building Construction Act 1952 | Ministry of Housing and Public Works |
| | Land Development for Private Housing Project Act, 2004 | |
| land Acquisition | Vested Property Release Act, 2001 (Amendment 2012) | Ministry of Land |
| | Vested Property Release Rules, 2012 | |
| | Acquisition and Requisition of Immovable Property Ordinance, 1982 | |

*Source: JICA Survey Team*

Local Government Act 2009 stipulates the local government's responsibilities and empower CC and Paurashava A class to formulate urban planning master plan. Regarding difference between CC and Paurashava, following areas can be declared as urban local body upon fulfillment.

**Table 3.3.2 Difference between CC and Paurashava**

| | |
|---|---|
| Conditions to be CC | ➢ When the importance is raised, based on the development intensity, population, economic activity, size and obviously local demand; a Paurashava may be prompted/incorporated to CC with following parameters;<br>- Area: 25 $km^2$ or more<br>- Annual Income of Paurashava: 200 million BDT or more in consecutive last three years.<br>- Population: 450,000 or more<br>- if obviously, at least 75% employees are engaged in non-agricultural economic activity. |
| CC | ➢ City Corporation is the highest urban local government unit declared as City Corporation by the Local Government (City Corporation) Act, 2009.<br>➢ CC has more administrative independence and better technical capabilities than municipalities. |
| Paurashava | ➢ Paurashava urban local government unit declared as Paurashava under the Local Government (Paurashava/Municipality) Act 2009.<br>➢ Based on the annual income of the Paurashava, it upgraded "C" to "B" and finally "A" class Paurashava.<br>➢ Conditions to be Paurashava (Class C) are as follows;<br>- Three-fourths (3/4) of the adult male population of the area is engaged in nonfarm activities.<br>- Population: 15,000 or more and average density of 2,000/square mile or more |

*Source: Prepared by JICA Survey Team based on Local Government Act 2009 and interview with CCs*

(2) National Policies

National policies referred in formulation of master plan and implementation of development project are shown in Table 3.3.3.

**Table 3.3.3 National Policies related to Urban Area**

| Policies | | Jurisdiction in Charge |
|---|---|---|
| Land Use | National Land Use Policy, 2001 | Ministry of Land |
| | National Urban Sector Policy, 2011 | Ministry of Local Government, Rural Development and Cooperatives |

| Policies | | Jurisdiction in Charge |
|---|---|---|
| | National Housing Policy, 2016 | Ministry of Housing and Public Works |
| | Population Policy, 2004 | Ministry of Health |
| | National Land Transportation Policy, 2004 | Ministry of Road Transport and Bridges |
| | Khas (Public) Land Settlement Revised Policy for Hotel-Motel | Ministry of Land |
| | Jalmohal (Natural Waterbody for Fisheries) Management Policy, 2009 (Amendment 2012) | |
| | Chingri Moral (Shrimp Farm) Management Policy | |
| | Salt Mohal (Salt Farm) Management Policy | |
| Environment | National Environment Policy, 1992 | Ministry of Environment and Forests |
| | Coastal Zone Policy, 2005 | Ministry of Water Resources |
| Industry | National Agriculture Policy, 1999 | Ministry of Agriculture |
| | National Industrial Policy, 2016 | Ministry of Industries |
| | National Tourism Policy, 2010 | Ministry of Civil Aviation and Tourism |

*Source: JICA Survey Team*

### 3.3.2 Plans

#### (1) National Plans

National plans related to urban development are shown in Table 3.3.3 and summary of each plan is described continuously. Each plan except National Urban Sector Policy is prepared by General Economics Division of Planning Commission under Ministry of Planning.

**Table 3.3.4 National Plans related to Urban Development**

| Plan | Relevance to Urban Development in Strategy |
|---|---|
| Perspective Plan Bangladesh 2010-2021 | • Road map for accelerated growth<br>• Specific strategies/tasks will be articulated through Five Year Plan |
| 7th Five Year Development plan (2016-2020) | • Umbrella strategy of Government's development<br>• Several target areas for urban development (Infrastructure development around SEZ, inclusive urban planning, housing and other civic services, etc.) |
| Bangladesh Delta Plan 2100 | • Long term integrated and holistic plan focusing on water resource management, climate change, etc.<br>• Indicating strategies and directions for sustainable land use and spatial planning |

*Source: JICA Survey Team*

1) Perspective Plan of Bangladesh: 2010 - 2021

The Perspective Plan provides the road map for accelerated growth and lays down broad approaches for eradication of poverty, inequality, and human deprivation. Specific strategies and the task of implementation will be articulated through the two five-year plans: Sixth Five Year Plan (2011-2015) and the Seventh Five Year Plan (2016-2020).

2) 7th Five Year Plan (FY 2016- FY 2020)

The solid development performance under the 6th Plan suggests that the Government's development strategy is on track and the challenge for the 7th Plan is to build on the successes while taking further actions to address the areas of shortfalls. Importantly, the 7th FYP, spanning fiscal years 2016-2020, begins with the country having entered the ranks of middle-income

countries. The first year of the 7th Plan also coincides with the launch of the UN post-2015 Sustainable Development Goals (SDGs). The following are target areas for the Urban Development:

- Infrastructural investment and civic facilities in peri-urban growth centres especially around Special Economic Zones
- Inclusive housing and other civic services for urban inhabitants including for people living in informal settlements and slums
- Inclusive urban planning based on sustainable land use planning and zoning
- Increased productivity, access to finance, and policy support for urban micro-small and medium enterprises

3) Bangladesh Delta Plan 2100 (BDP2100)

BDP 2100 is envisioned as a long term integrated and holistic plan that takes a long-term view on water resource management, climate change and environmental challenges with a view to supporting long term development of Bangladesh, formulated in 2018 by General Economic Division (GED), Planning Commission under Ministry of Planning.

Although it focuses on the water-related issues, importance of consideration in urban planning is emphasized in its strategies and directions for sustainable land use and spatial planning are referred, such as 'Formulation of necessary laws and acts to form land zoning', 'Spatial land use planning for urbanization', etc.

(2) Regional Plans

Urban planning system of Bangladesh has three-tiered structure which consists of (1) to (3) as shown below. Depending on the condition of the cities, additional plan such as (4) or (5) is prepared by CC.

**Table 3.3.5 Tiers of Urban Planning Master Plan in Bangladesh**

| Plan | Period | Jurisdiction (Basis Law) | Contents | Positioning |
|---|---|---|---|---|
| (1) Structure Plan (SP) | 20 Years | • RAJUK (Town Improvement Act 1953) | • Future urban structure (Strategic planning zone, etc.) | Goal-oriented plan |
| (2) Urban Area Plan (UAP) | 10 Years | • Cox's Bazar Development Authority (Cox's Bazar Development Authority Act 2016)<br>• CC, Paurashava (Local Government Act 2009) | • Urban infrastructure development and land use control in future (Land use plan, Transportation and traffic management plan, Drainage and environmental management plan, Plan for urban services) | Control and management -oriented plan |
| (3) Detailed Area Plan (DAP) | 20 Years | | • Detailed land use | |
| (4) Action Area Plan (AAP) | 5 Years | • CC, Paurashava (Local Government Act 2009) | • Detailed land use by ward with sectoral plan and infrastructure facilities | Implementation-oriented plan |
| (4) Paurashava Development Plan (PDP) | 5 Years | | | |

| | | | | |
|---|---|---|---|---|
| (5) Sectoral Plan | 20 Years | | • Plan by sectors based on structure plan | - |

*Source: JICA Survey Team*

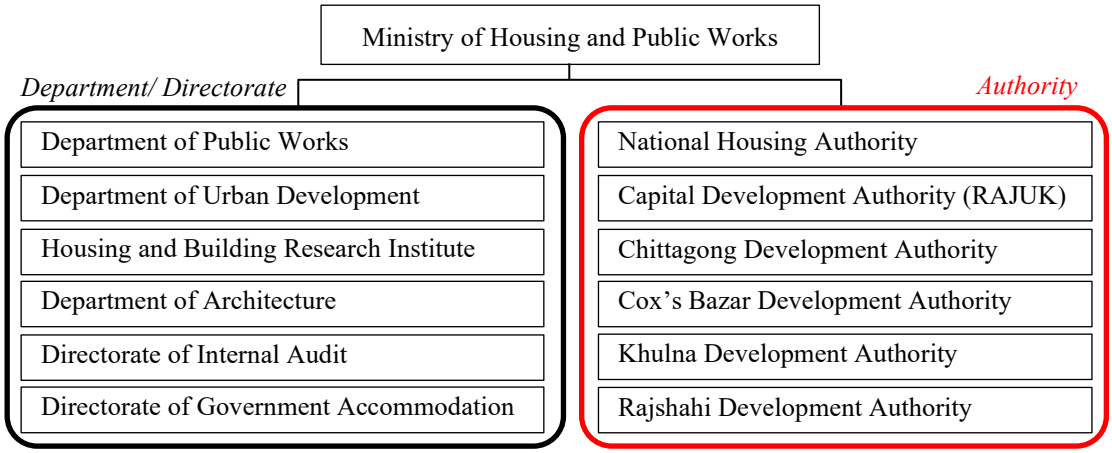
**Table 3.3.6 Legal Basis for Master Plan by ULB**

| Basis Law | Chapter | Description |
|---|---|---|
| Local Government (City Corporation) Act, 2009 | Third Schedule: Detail Activities, 16. Town Planning | 16.1 The Corporation may prepare a Master Plan for the city and, among other things, the following matters may be provided for therein-<br>(a) The formulation and implementation of five-year or multi-year projects;<br>(b) A survey containing the description of the city's history, statistics, welfare and other prescribed matters;<br>(c) Development and expansion of any area within the city; and<br>(d) Restrictions and controls to be imposed with regard to the development of sites, and the construction or re-construction of buildings within the city. |
| | Third Schedule: Detail Activities, 28. Development | 28.1 the Corporation shall prepare and implement development plans for a specified period, but such plans shall be subject to the approval of the government and, among other matters, shall provide for the following, namely-<br>(a) the development of any special services provided by the Corporation;<br>(b) collection of funds for development plans and their implementation and supervision;<br>(c) the government may direct the City Corporation to spend its total income or part thereof earned from any specific sector for the implementation of the development plan. |
| Local Government (Paurashava) Act, 2009 | Second Schedule: Detail Functions of the Municipality, Town Planning | 32. Master Plan<br>95 A municipality shall draw up a Master Plan for the municipality within five years of formation or implementation of this ordinance, and the master plan shall be fitted with rules of this ordinance, among other matters, provide for-<br>(a) a survey of the municipality including its history, statistics, public services and other prescribed particulars;<br>(b) development, expansion, and improvement of any area within the municipality; and<br>(c) restrictions, regulations and prohibitions to be imposed with regard to the development of sites, and the erection and re-erection of buildings within the municipality. |
| | 62. Development Plans | (1) A municipality may prepare and implement development plans for such periods and in such manner as may be specified.<br>(2) Such plans shall be subject to the sanction of the Prescribed Authority and along with other issue there shall be rules for-<br>(a) The prevention of environmental pollution;<br>(b) The development of any special function of the municipality;<br>(c) The manner in which the plan shall be financed, implemented and supervised;<br>(d) Determine the agency through which the plan shall be executed and implemented; and<br>(e) Such other matters as may be necessary.<br>(3) The Government may direct that any specified item of income of a Municipality shall wholly or in part be earmarked and applied in the implementation of a development plan. |

*Source: Local Government (City Corporation) Act, Local Government (Paurashava) Act*

As shown in Table 3.3.5 and 3.3.6, Local Government Act 2009 stipulates that CC and Paurashava class A shall draw up a master plan for the municipality within five years of its formation or after enactment of Local Government Act 2009'. On the other hand, Town Improvement Act 1953 and Cox's Bazar Development Authority Act 2016 empower to development authorities to formulate urban planning master plan as an umbrella plan. From that reason, GCC and NCC under jurisdiction of RAJUK (Capital Development Authority) area has no responsibilities to formulate SP, UAP and DAP, as well as CBP under jurisdiction of Cox's Bazar Development Authority (Cox's DA). Therefore, RAJUK and Cox's DA have the jurisdiction of development control based on DAP.

CC and Paurashava under development authority area only formulate AAP and PDP to carry out their urban/infrastructure development project.




*Source: website of Ministry of Housing and Public Works*

**Figure 3.2.13 Organization Structure of Development Authority**

For example, Cox's Bazar Development Authority Act stipulates the main functions of the authority as follows.

- Formulation and implementation of master plan
- Control of development including removal of illegal structures
- Undertaking, implementing and supervising development projects and investment activities
- Coordination with concerned authorities in formulating and implementing appropriate plans

Existing urban planning master plans of target cities and responsibilities for preparation are shown in Table 3.3.7.

**Table 3.3.7 Existing Plans to be Prepared by Target ULBs**

| Plan | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| (1) SP | - | | - | Development Plan for Cox's Bazar Town and Sea Beach up to Teknaf 2011-2031 *(Formulated by UDD in 2011)* |
| (2) UAP | N/A | N/A | - | N/A |
| (3) DAP | - | | - | N/A |
| *Responsible Authority for Preparation of SP, UAP and DAP with Basis Law* | *RAJUK Town Improvement Act 1953* | | *CuCC Local Government (CC) Act 2009* | *Cox's DA Cox's Bazar Development Authority Act 2016* |

| Plan | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| (4) AAP | - | - | - | Development Plan for Cox's Bazar Town and Sea Beach up to Teknaf 2011-2031<br><br>*(Formulated by UDD in 2011)* |
| (4) PDP | N/A | N/A | N/A | Paurashava Development Plan2017-2021<br>*(Formulated in UGIIP-III)* |
| *Responsible Authority for Preparation of AAP and PDP with Basis Law* | *GCC*<br>*Local Government (CC) Act 2009* | *NCC*<br>*Local Government (CC) Act 2009* | - | *CBP*<br>*Local Government (Paurashava) Act 2009* |
| (5) Sectoral Plan | If necessary | If necessary | - | - |

*Source: JICA Survey Team*

In the recent past, the Local Government Division (LGD) is assigned responsibility by the Government of Bangladesh to prepare, approve and implement master plan of all local government institutions/bodies except where development authorities are acting.

1) Gazipur/ Narayanganj

   RAJUK has finished the formulation of Dhaka Structure Plan (SP) and Detailed Area Plan (DAP) for 2016-2035. The former was already submitted to Ministry of Housing and Public Works and still on process for approval, while the latter is on public hearing. It shows that GCC and NCC don't have their comprehensive master plan yet, and therefore they can't start to revise the AAP or sectoral plans.

   In addition, previous DAP didn't cover whole area of GCC and NCC, because its aim was to control the development of Dhaka metropolitan region. New DAP is expected to cover whole area of GCC and NCC.

2) Cumilla

   CuCC has the Cumilla EPZ and one BSCIC industrial area within its boundary. The development plans of EPZ and BSCIC are prepared by their jurisdiction authorities (BEPZA and BSCIC) and incorporated in master plan. Similarly, CuCC consults with other authorities to keep alignment with sector plans of ministries and plans of adjacent municipalities.

3) Cox's Bazar

   Development Plan for Cox's Bazar Town and Sea Beach up to Teknaf 2011-2031 was prepared in 2011 by Urban Development Directorate (UDD), Ministry of Housing and Public Works. It consists of SP and AAP, but no UAP. Target areas are some specific areas in the region including CBP and surrounding areas such as Maheshkhali, Teknaf, etc.

   Along with the establishment of Cox's DA in 2016, new urban planning master plan will be prepared by Cox's DA. It submitted Development Project Proforma/Proposal (DPP) in January 2019, to secure the budget for formulation of master plan which would extend the target area to Matabari.

PDP is a mid-term and long-term development plan prepared in UGIIP III (2017-2025) funded by ADB, based on "Development Plan for Cox's Bazar Town and the Beach up to Tekhnaf (2011-2031).

## 3.4 Vision and Development Direction, Priority Area of Target Urban Local Bodies

Vision and development directions with priority area of four target ULBs proposed in the current plans are described as follows, preceding with urban issues.

### 3.4.1 Gazipur

(1) Urban Issues

Gazipur City has been experiencing rapid urbanization as the northern part of Dhaka Metropolitan Region, occurred by the outward urban expansion of Dhaka. According to the existing master plans, urban issues in Dhaka Metropolitan Region and GCC are summarized as Table 3.4.1 and Table 3.4.2, respectively. Because SP of GCC is the Dhaka Structure Plan which describes general issues for the entire Dhaka Metropolitan Region, the issues specific to GCC can be referred from AAP.

**Table 3.4.1 Urban Issues in Dhaka Metropolitan Region**

| Sector | Urban Issues |
|---|---|
| All Sector<br>(Electricity, Gas, Water Supply, Sewerage, Solid Waste Management, Information & Communication, Health, Education, etc.) | • Heavy demands on urban utilities and services<br>• Scarcity or inadequacy of the service and mismanagement in general has caused crisis situations<br>• Pollution of air and soil in dangerous level<br>• Lack of hygienic affordable housing |

*Source: Dhaka Structure Plan*

**Table 3.4.2 Urban Issues in GCC**

| Sector | Urban Issues | Reason |
|---|---|---|
| Traffic | • Traffic congestion along all primary roads and within industrial and commercial areas | • Lack of connectivity within the city area, to Dhaka, and to the areas to the north, west and east<br>• Poor condition of roads and minimal maintenance, particularly during monsoon period |
| Solid Waste Management system | • Poor management of existing disposal sites<br>• Significant amount of illegal dumping into city drainage systems | • Low garbage collection coverage by the CC due to limited financial/human resources and equipment<br>• Lack of understanding of the pollution impact |
| Drainage | • Waterlogging in major urban centers | • Absence of an integrated drainage network<br>• Siltation of waterways due to illegal dumping of solid waste<br>• Encroachment of drainage channels<br>• Improper operation and maintenance of canals and drains |
| Sanitation | • Increased risk of waterborne diseases | • Pollution of waterways and groundwater due to the lack of a public sewage disposal system, prevalent use of insanitary latrines by household<br>• Low service coverage of piped water supply system |

*Source: Action Area Plan*

(2) Vision

To address the urban issues mentioned in (1), following visions and objectives were set in the master plan.

**Table 3.4.3 Vision and Objectives of Master Plan (GCC)**

| | |
|---|---|
| Dhaka Structure Plan 2016-2035 | "Making Dhaka a livable, functional & resilient metropolis respecting local socio-cultural fabric & environmental sustainability. And this his vision has three pillars; Livability, Functionality and the Resilience." |
| Action Area Plan for Gazipur City Corporation (2016) | ➢ Formulation of Action Area Plan for provision of municipal facilities to meet basic infrastructure needs of Gazipur City Corporation<br>➢ Facilities to improve environment of the city<br>➢ To formulate policies for the best use of land and its control |

*Source: Dhaka Structure Plan 2016-2035, Action Area Plan for Gazipur City Corporation (2016)*

(3) Development Direction

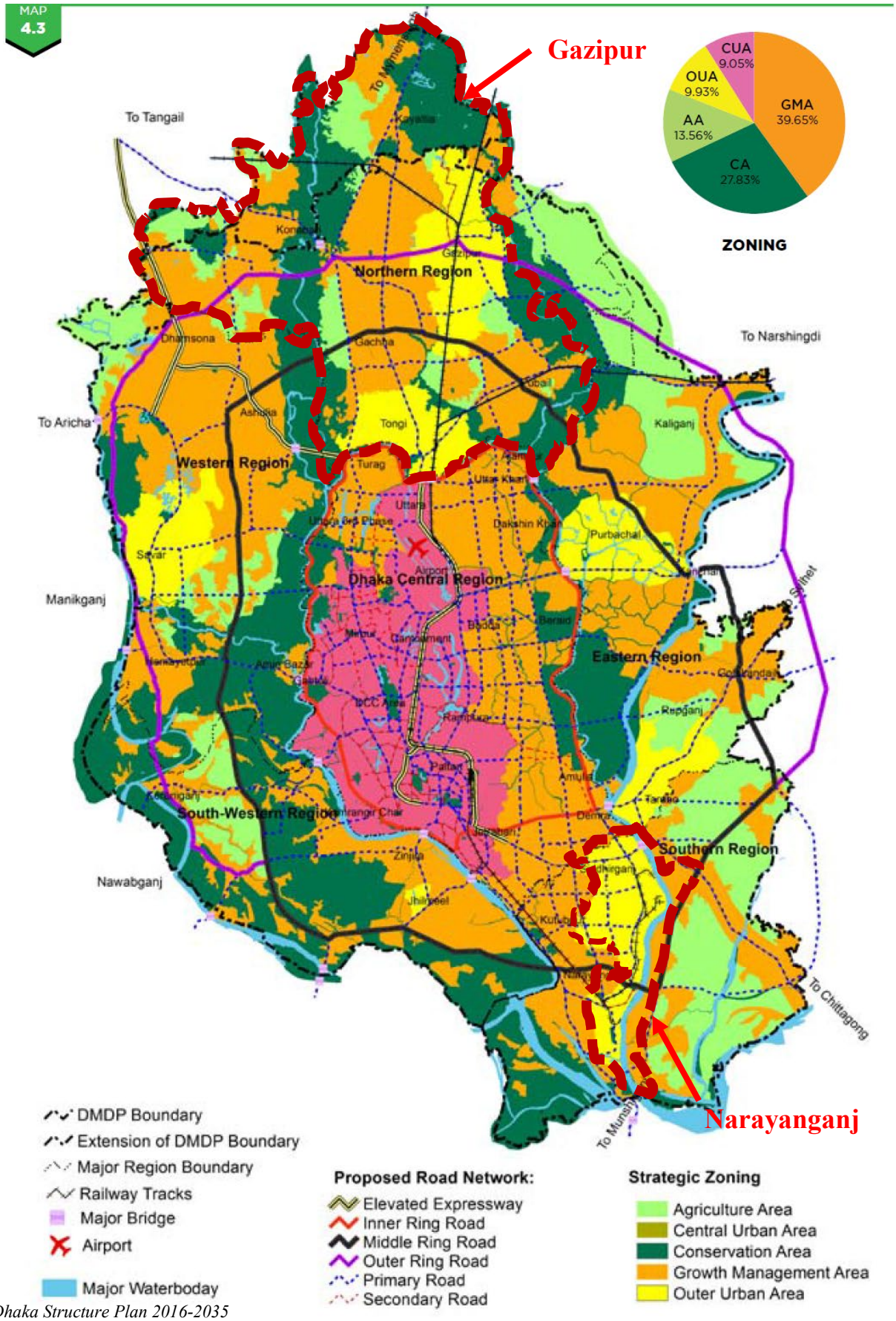
Dhaka Structure Plan 2016-2035 proposed the five categories for development as shown in Table 3.4.4.

**Table 3.4.4 Categories for Development in Dhaka Structure Plan 2016-2035**

| | |
|---|---|
| Central Urban Area (CUA) | Built up area with high density (Dhaka North/South CC area) |
| Growth Management Area (GMA) | Area for promoting development |
| Outer Urban Area (OUA) | Built up area (Development is partially available with certain condition) |
| Agricultural Area (AA) | Protected area (Development is basically prohibited) |
| Conservation Area (CA) | |

*Source: Dhaka Structure Plan 2016-2035*

According to the proposed categories, built up area in GCC including Gazipur, Tongi are designated as OUA, while area along NH 3 as GMA. Existing agricultural area in east of GCC and forest area in north are designated as AA and CA respectively. Development direction of ward level will be clear in Detailed Area Plan.




*Source: Dhaka Structure Plan 2016-2035*

**Figure 3.4.1 Proposed Strategic Zones for Dhaka Metropolitan Region**

(4) Priority Area

In order to solve the urban issues shown in Table 3.4.1, the Dhaka Structure Plan also gives significant development directions to GCC as below.

- Joydebpur as regional center for GCC.
- Tongi and Konabari as specialized center, the former is already well established, and the latter is for reinforcing the garment cluster in Ashulia in neighboring Savar.
- Chowrasta, Vogra Bypass and Board Bazar as Sub Regional centers.
- Development of new rail based Inland Container Depot located on the Dhaka Bypass Road between Joydebpur and Tongi.
- Upgrade of Dhaka Bypass road as a part of Middle Ring Road.
- Termination of MRT-2 which runs along the eastern side of the DMR to Narayanganj.

In addition to this, Action Area Plan provides the project priority as generalized wish list schemes on needs basis.

**Table 3.4.5 Generalized Wish List Schemes**

| No. | Name of the Scheme | Sector |
|---|---|---|
| 1 | Flyover at Shibbari Railway Crossing | Road |
| 2 | Solid Waste Dumping Ground in Each Zone | Sanitation |
| 3 | Solid Waste Transfer Stations on Zonal basis | Sanitation |
| 4 | Access Road for Better Connectivity with the City | Road |
| 5 | Street light in all over the City | Electricity |
| 6 | Extension of Piped Water System throughout the City | Water Supply |
| 7 | Gas Supply throughout the City | Gas |
| 8 | Solar Panel in Selected Locations | Street Light |
| 9 | Rain Water Harvesting | Water Supply |
| 10 | Drainage Improvement through establishing drainage network maintaining hierarchy in the form of Primary, Secondary and Tertiary drains. | Drainage System |
| 11 | Public Toilet all over the City | City service |
| 12 | Multi Storey Council Building | City service |
| 13 | Community Resource Center | City service |
| 14 | Public Graveyard in each Ward | City service |
| 15 | Ward basis School, Madrasa, Play ground | Social service |
| 16 | Community Health Clinic | Health |

*Source: Action Area Plan for Gazipur City Corporation (2016)*

3.4.2 Narayanganj

(1) Urban Issues

Narayanganj City has been experiencing rapid urbanization as one of the gateways of Dhaka Metropolitan Region, connecting south-western region with other part of Bangladesh by Dhaka-Chittagong Highway (NH-01). In addition, NCC is an industrial area of wholesale trading of all types of commodities, which attracts daily labour and commuters.

According to the existing master plans, urban issues in NCC are summarized as Table 3.4.6. Urban issues specific to NCC can be referred from AAP, because SP of NCC is the Dhaka Structure Plan which describes general issues for the entire Dhaka Metropolitan Region.

**Table 3.4.6 Urban Issues in NCC**

| Sector | Urban Issues | Reason |
|---|---|---|
| Traffic | • Traffic congestion of both important road and internal road | • Large number of daily commuters who work in NCC area.<br>• Internal roads of NCC are narrow.<br>• Overwhelming number of non-motorized transport<br>• Encroachment of road.<br>• Commercial establishments along the important roads generate additional traffic.<br>• Road on pedestrian because of absence of proper footpath.<br>• Many tank trucks carrying fuel from port to Dhaka. |
| Solid Waste Management system | • Uncollected solid waste | • Low garbage collection coverage by the CC due to limited financial/human resources and equipment |
| Drainage | • Waterlogging in major urban centers | • Encroached by the influential people<br>• Development of residential and industrial area by land filling in the pond and other water bodies. |
| Environmental Degradation | • Increased risk of public health | • Uncollected solid waste is disposed on the landfills and left are unattended or locally dumped on the riverside or canals. |

*Source: Action Area Plan*

(2) Vision

To address the urban issues mentioned in (1), following visions and objectives were set in the master plan.

**Table 3.4.7 Vision and Objectives of Master Plan (NCC)**

| | |
|---|---|
| Dhaka Structure Plan 2016-2035 | "Making Dhaka a livable, functional & resilient metropolis respecting local socio-cultural fabric & environmental sustainability. And this his vision has three pillars; Livability, Functionality and the Resilience." |
| Action Area Plan for Narayanganj City Corporation (2016) | To build an environmentally friendly, clean, healthy, safe and poverty-free planned city by providing necessary services to all city dwellers |

*Source: Dhaka Structure Plan 2016-2035, Narayanganj Action Area Plan (2016)*

(3) Development Direction

According to the proposed categories shown in Table 3.4.4, Narayanganj Sadar is designated as OMA, while Bandar (west area of NCC) as GMA. Development direction of ward level will be clear in Detailed Area Plan.

On the other hand, Action Area Plan provide the strategic objectives as development directions to achieve the vision as shown in Table 3.4.8.

**Table 3.4.8 Strategic Objectives as Development Directions**

| | |
|---|---|
| Infrastructure Facilities | ➢ Provide driveway both side of the Sitalakhya river for relieving traffic congestion.<br>➢ Improve safety of all modes of travel and ensure transit availability of the area.<br>➢ Broad linkage development of transport and drainage network.<br>➢ Improve drainage networks for solving water logging problems in case of sewerage or storm water. |

| | |
|---|---|
| Housing Facilities | ➢ Provide appropriate proposal for re-setting land use for NCC area.<br>➢ Improvement of existing housing condition which are more earthquake vulnerable by applying readjustment techniques.<br>➢ Improve access to a broad range of quality housing that is safe, accessible and affordable for the local inhabitants of NCC. |
| Municipal Facilities | ➢ Provide appropriate municipal facilities like water supply, waste management, health and education facilities, electricity, gas, etc. for the welfare of the inhabitants. |
| Social and Recreational Facilities | ➢ Provide appropriate social facilities like institutions, community centers, active and passive recreation like open space, parks, garden etc. which will be easily accessible to the general people. |
| Solid Waste Disposal System | ➢ Provide designated areas and incorporate policies for proper waste collection and disposal system in the NCC area. |
| Environmental Health | ➢ Protect and monitor water pollution in case of industrial, residential or commercial uses of water and establishment of industrial waste treatment plant for each industry.<br>➢ Conserve and restore biodiversity and habitat of the NCC area. |
| Water Supply System | ➢ Provide safe drinking water individually or community level.<br>➢ Ensure development of rainwater harvesting system for all constructing new buildings to provide safe drinking water and to recharge ground water properly. |

*Source: Narayanganj Action Area Plan (2016)*

(3) Priority Area

Dhaka Structure Plan gives significant roles to NCC in the development of Dhaka metropolitan region as below.

- Regional center/hub of South in Dhaka metropolitan region.
- East part of NCC (Kadam Rasul) as sub regional center.
- Adamjee EPZ as specialized center.
- Termination of MRT-2 which runs along the eastern side of the DMR to Gazipur.
- The proposed DMR Middle Ring Road, which would pass through the NCC on an east -west direction and cross the Shitalokha River on a new bridge roughly on an alignment between Hajiganj and Nobiganj.

In addition to this, Action Area Plan provides the project priority by sector as shown in Table 3.4.9.

**Table 3.4.9 Project Priority in AAP by Sector**

| | |
|---|---|
| Transport | ➢ Rehabilitation of Road Construction.<br>➢ Construction, Maintenance and Improvement of NCC roads.<br>➢ Intersection Improvement |
| Solid Waste Management | ➢ Establish hygienic waste dumping ground. |
| Drainage | ➢ Waste Water Treatment Plant.<br>➢ Construction of RCC drain.<br>➢ Drainage Network Improvement.<br>➢ Re-excavation of canal from Sonakanda stadium south-south corner to Shitalakhya river. |

*Source: Narayanganj Action Area Plan (2016)*

### 3.4.3 Cumilla

(1) Urban Issues

Cumilla City is located midway between Dhaka and Chattogram which is the major industrial and port city in Bangladesh. It connects to both by major road and rail lines and also lies very close to the international border with India. Taking advantage of its strategic location, CuCC area has experienced rapid growth and urbanization in the past few years. Master Plan for Comilla City and its Influence Area describes urban issues in CuCC in its UAP part as Table 3.4.10.

**Table 3.4.10 Urban Issues in CuCC**

| Sector | Urban Issues | Reason |
|---|---|---|
| Traffic | • Traffic congestion | • Deficiencies of roadway capacity.<br>• Narrow road<br>• Bus/Truck terminal on road |
| Solid Waste Management system | • Uncollected solid waste<br>• Improper disposal of infectious waste | • Lack of human resources<br>• Lack of convenient local collection points<br>• Lack of special treatment for solid waste from hospital and EPZ<br>• Lack of awareness |
| Drainage | • Flooding and Waterlogging | • Dumping of garbage into the drains<br>• Direct septic tank connections to the drains<br>• Silt up of existing drains (Gungiajuri, Racecourse, Katakhali or Laksam and Sanaichari Khal)<br>• Illegal encroachment (Jangalia and Unaichar Khal) |

*Source: Urban Area Plan, Master Plan for Comilla City and its Influence Area (2014-2034)*

(2) Vision

To address the urban issues mentioned in (1), following visions and objectives were set in the master plan.

**Table 3.4.11 Vision and Objectives of Master Plan (CuCC)**

| | |
|---|---|
| Structure Plan | Overall vision: To make Cumilla as Eco City<br>Objectives:<br>➢ Facilitating urban growth to protect the valuable farmland and the environment and in the same time encourage non-agricultural activities.<br>➢ To support livelihood of the people in Camilla City and its influence area.<br>➢ Control undesired development throughout the City.<br>➢ To guide the City to perform its role efficiently and contribute in national development.<br>➢ To achieve a balance between employment and population.<br>➢ To ensure basic urban needs and promote urbanization and employment. |
| Urban Area Plan | Goal:<br>➢ Create an urban space for habitation with comfort, for economic betterment, social cohesion and environmental safeguard.<br>➢ The safeguard for easy movement calls for enough row, footpath, availability of transport and good connectivity.<br>➢ Well-disciplined use of land having appropriate service facilities will increase land value. All provided facilities provided should be maintained.<br>➢ Tree plantation, open space, well managed drainage etc. will enrich the Land use and living standard. |

*Source: Master Plan for Comilla City and its Influence Area (2014-2034)*

(3) Development Direction

Structure Plan proposed the optimization of existing urban land as the strategic development direction from 3 options, by reviewing existing situation and the assumptions for future spatial growth.

**Table 3.4.12 Evaluation of Spatial Growth Options**

| Option | Evaluation Criteria | | |
|---|---|---|---|
| | Resource Capability | Land Utilization | Administrative Capacity |
| Optimization of Existing Urban Land use | • Better use of limited public sector resource<br>• Better use of private resources<br>• Resource use not cost effective | • Best optimum use of land | • Advantages |
| Peripheral Growth | | • Uneconomic use of land | • Tolerable level of advantage |
| Promotion of Present Trend | • Resource use fairly cost effective | • Fairly economic | • Tolerably better |
| Dispersed Growth | • No cost effective | • Not fairly economic | • Difficult to manage |

*Source: Master Plan for Comilla City and its Influence Area (2014-2034)*

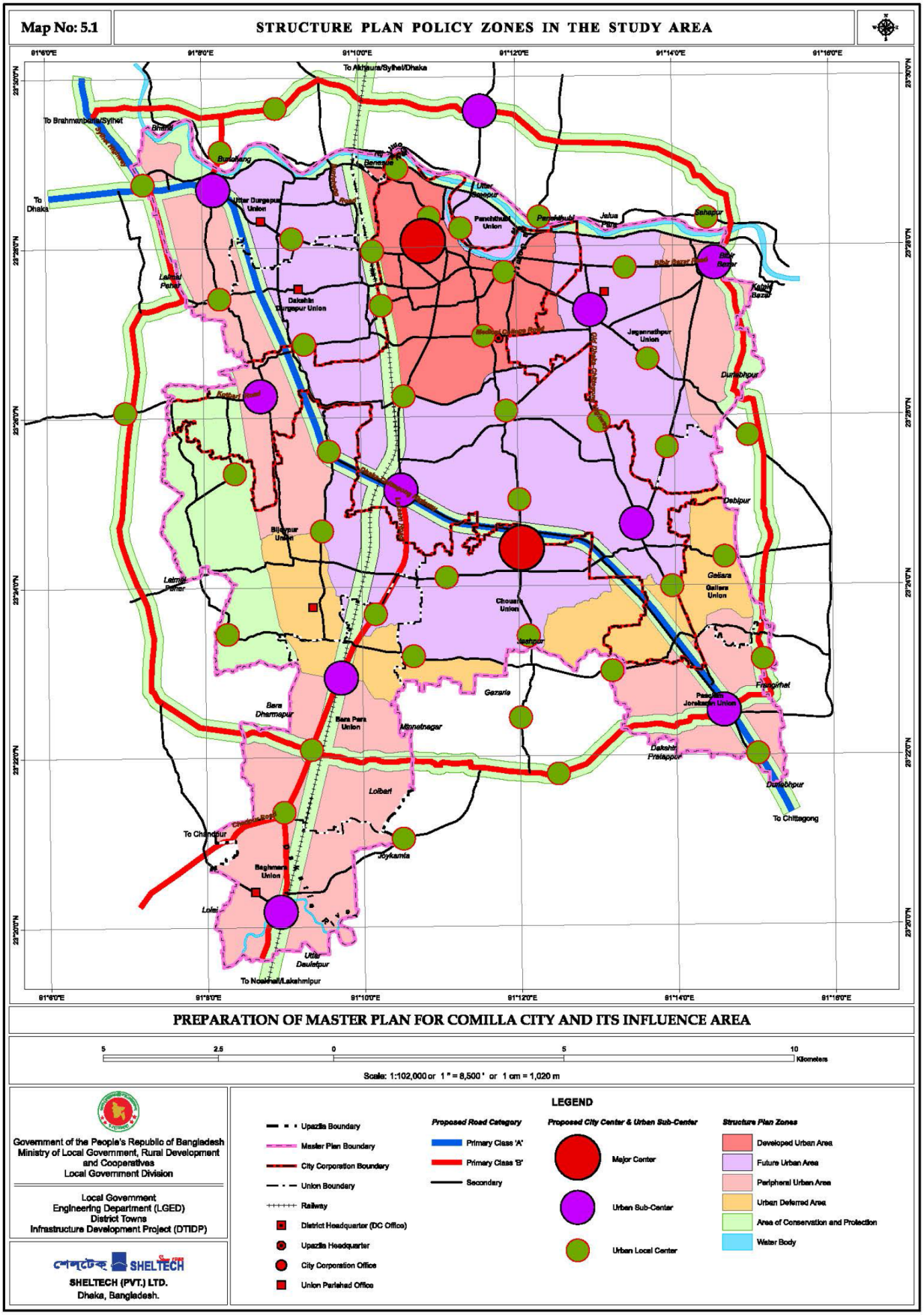
Based on such policy framework, structure plan divides the study area into five development zones. The area covered by each zone and the role that is proposed to fulfil in the development of the city.

**Table 3.4.13 Structure Plan Policy Zones**

| Zones | Description of Zones | Percentage of Total Area |
|---|---|---|
| Development Urban Area/ Core Area | ➢ Consist of the existing core area of the city with the highest level of services.<br>➢ Including the historic commercial and administrative quarters of CuCC and the surrounding residential neighborhoods. | 9% |
| Future Urban Area | ➢ Wrapping around the existing built up areas.<br>➢ Largely agricultural in character with a number of large villages and water bodies. | 42.71% |
| Peripheral Area | ➢ Remotest area from the existing city.<br>➢ Currently largely agricultural in character.<br>➢ Area need to be controlled to avoid spontaneous growth because of its lower land costs. | 29.03% |
| Area of Conservation and Protection | ➢ Including productive agricultural lands, water bodies, low lying areas and rights of way of essential transport infrastructure.<br>➢ Generally, on the edges of the city or along key transport corridors. | 9.65% |
| Urban Deferred Area | ➢ Outlying areas that should be protected from development in the Plan period.<br>➢ Reserve lands for the long term. | 9.61% |

*Source: Master Plan for Comilla City and its Influence Area (2014-2034)*

In addition to the area distribution, city centers proposed with three-tiered hierarchy as shown in Figure 3.4.2. Two major centers are designated to existing urban center (Jailkhana) and in in south of the Dhaka- Chittagong Highway (Cumilla Sadar). It is expected that these will provide higher order services to the people, needless to move to Dhaka and/or Chattogram. 10 urban sub centers will supplement these major centers as well as urban local centers.




*Source: Master Plan for Comilla City and its Influence Area (2014-2034)*

**Figure 3.4.2 Proposed Policy Zones for CuCC and its Influence Area**

(3) Priority Area

Structure Plan mentions that Peripheral growth centers/markets areas and other focal points of development will be priority investment areas, while Urban Area Plan identifies the followings as high priority projects.

- Highway network including widening of Dhaka-Chittagong Highway (Cumilla Bypass Road), development of two arterial roads (Chandpur Road, south of the Comilla Bypass Road and a proposed circular road), and secondary roads.
- Shasangachha Bus Terminal move to Alekhar Char
- New truck terminal and integrated freight complex on the bypass south of the city center.
- The creation of a recreational walkway along the old Gomti River
- Development of a solid waste disposal site at Vanti Burichang Upazila
- Re-excavation of Khals and removal unauthorized establishments in the right of way
- Rehabilitation and construction of new drains in the urban area.

3.4.4 Cox's Bazar

(1) Urban Issues

Cox's Bazar is the most important tourism destination in Bangladesh for the benefit of long beach, geographical location and cultural diversity. There is a significant development in Cox's Bazar municipality, however, some areas are still under development and vulnerability to natural disaster, resulting from lack of infrastructure keeps away from investors. Urban issues in CBP are summarized as Table 3.4.14.

**Table 3.4.14 Urban Issues in CBP**

| Sector | Urban Issues | Reason |
|---|---|---|
| Traffic | • Traffic congestion of main street | • No paved roads in some areas. |
| Drainage | • Waterlogging | • Lack of drainage<br>• Heavy rainfall and erosion of drainage |
| Others | • Low QOL | • No water supply in some areas.<br>• No traffic lights in some areas.<br>• Limited agricultural land<br>• No basic municipal facilities in many areas |

*Source: Cox's Bazar Paurashava Development Plan*

(2) Vision

To address the urban issues mentioned in (1), following visions and objectives were set in the master plan.

**Table 3.4.15 Vision and Objectives of Master Plan (CBP)**

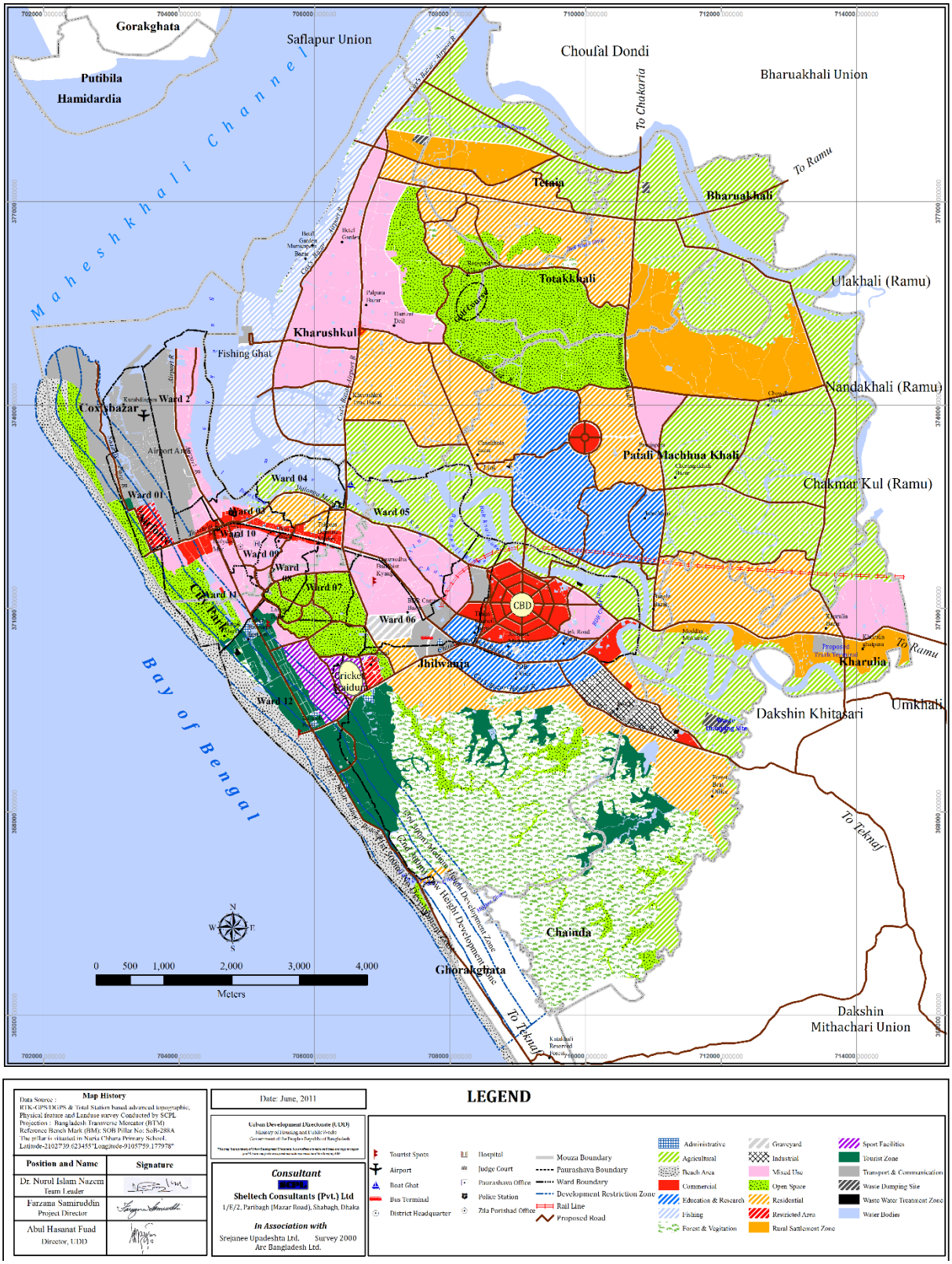
| | |
|---|---|
| Development Plan for Cox's Bazar Town, Sea Beach Up to Tekhnaf, (2011-2031) | To develop Cox's Bazar and its surrounding areas as a World Class Tourist Centre with adequate facilities, infrastructure and amenities of living and livelihood. |
| Urban Area Plan | By 2025, every ward of tourist town Cox's Bazar, would like to be developed as a developed city with a planned infrastructure and socio-economic development, a clean tourism friendly citizen facility, and in terms of information technology. |

*Source: Development Plan for Cox's Bazar Town, Sea Beach Up to Tekhnaf, (2011-2031), Cox's Bazar Paurashava Development Plan*

(2) Development Direction

Development Plan for Cox's Bazar Town, Sea Beach Up to Tekhnaf (DPCBT) provides the spatial/physical framework for the lowest tier of administration for execution of all national policies,

by proposing the road network development plan, land use plan and development/ conservation policies in coastal area in CBP.




*Source: Development Plan for Cox's Bazar Town, Sea Beach Up to Tekhnaf, (2011-2031)*

**Figure 3.4.3 Proposed Land Use for CBP and its Influence Area**

Policies of proposed land use plan is summarized as shown in Table 3.4.16.

**Table 3.4.16 Policies of the Land Use Plan**

| | |
|---|---|
| Residential Area | ➢ 5 Mauza (Jhilwanja, Khurulia, Khurushkul, Patali Machhua Khali, Tetaia, Totakkhali) |
| Commercial Area | ➢ Jhilwanja as CBD |
| Industrial Area | ➢ Chainda, Jhilwanja and Khurushkul<br>➢ BSCIC already operates in Chainda.<br>➢ In Khurushkul, new BSCIC for small-scaled fish processing is under planning. |
| Open Space | ➢ Khurushkul union poposes the recreation area with golf park, theme-park, etc. in area of 1,600 acre or more. |
| Agricultural Area | ➢ Maintain the status quo. |
| Others | ➢ Buildings around the beach is limited to two-storied, due to flight restriction area. |

*Source: Development Plan for Cox's Bazar Town, Sea Beach Up to Tekhnaf, (2011-2031)*

(3) Priority Area

DPCBT holds up the 'Eco-Friendly Tourism Development' as development policy in CBP and its surrounding area and breaks down it into detail development actions as follows.

**Table 3.4.17 Development Actions in DPCBT**

| | |
|---|---|
| CBP | ➢ Emerging four Mauzas to mitigate the congestion of CBP area (Khuruskul, Jhilwanja, Patali Machhua Khali and Chainda).<br>➢ Establishment of CBD (Burmese Market).<br>➢ Shifting of urban development activities from Kalatari to Khuruskul.<br>➢ Development of multi storied stadium.<br>➢ Conservation of Hilllocks in the central area.<br>➢ Expansion and upgrading of existing airport to international airport.<br>➢ Development of parks in central area near beach.<br>➢ Establishment of new education zone with university, institutions, etc.<br>➢ Development of new residential area to address the population increase/migrants.<br>➢ Development of Roads with proper circulation to reduce the traffic congestion.<br>➢ Conservation of agricultural land and waterbodies. |
| Coastal Area | ➢ Development of elongated recreation zone with hubs of commercial areas for fishing. |

*Source: Development Plan for Cox's Bazar Town, Sea Beach Up to Tekhnaf, (2011-2031),*

There is no description of priority area in Paurashava Development Plan (PDP).

## 3.5 Procedures of Urban Planning

### 3.5.1 Process to Prepare Master Plan

Overall process of preparing urban planning master plan, which is commonly followed by every authority including CC and Paurashava is shown in Table 3.5.1.

**Table 3.5.1 Planning Procedures of Urban Planning Master Plan**

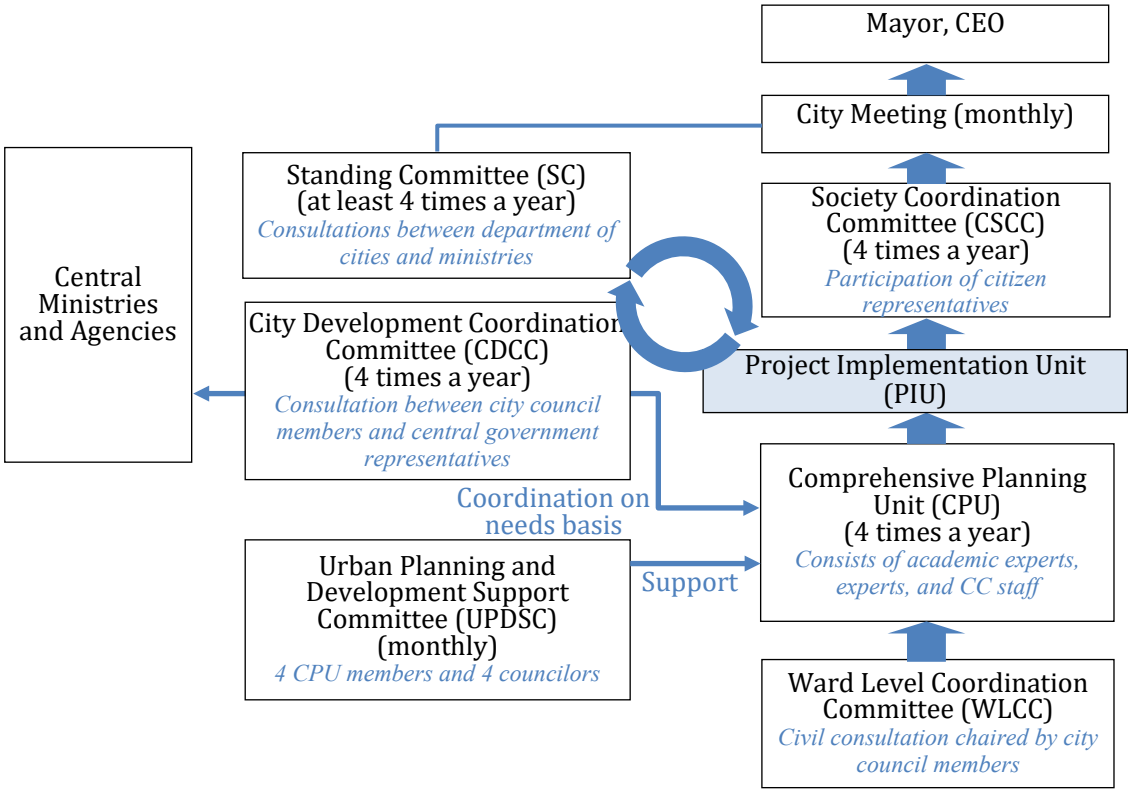
| | |
|---|---|
| Inception Stage | ➢ Undertaking legal procedures; deployment of consultant<br>➢ Inception Workshop<br>➢ Reconnaissance Survey<br>➢ Primary area demarcation<br>➢ Mauza Map processing<br>➢ Establishment of BM<br>➢ Preparation of Inception Report are major tasks |
| Survey Stage | ➢ Conducting necessary surveys, studies, investigation and reviews |

| | |
|---|---|
| | ➢ Preparation of survey reports<br>➢ Working papers as per requirement of the TOR of master plan<br>➢ Preparation of survey maps |
| Interim Stage | ➢ Formulation of planning standard<br>➢ Review of policies, acts, rules and regulations<br>➢ Projection of future population<br>➢ Analysis of survey data<br>➢ Consultation meeting and public opinions assessment |
| Draft Master Plan Stage | ➢ Preparation of draft master plan<br>➢ Consultation meeting with stakeholders<br>➢ Feedback collection<br>➢ Revision and preparation of draft master plan. |
| Finalization & Approval Stage | ➢ Public hearing<br>➢ Modification as per logical feedback from experts & public hearing<br>➢ Finalization of the master plan,<br>➢ Approval of the master plan with legal process and gazette notification on the approval are major tasks |

*Source: Operational Handbook on Paurashava Master Plan Implementation, SPGP (JICA)*

### 3.5.2 City Corporation

ULBs involved in CGP project utilize the participatory mechanism of CGP also in planning process of urban Planning master plan as shown in Figure 3.5.1. However, as for CPU, there is also a tendency to be buried because there is no legal basis. It is necessary to consider whether to continue setting CPUs.

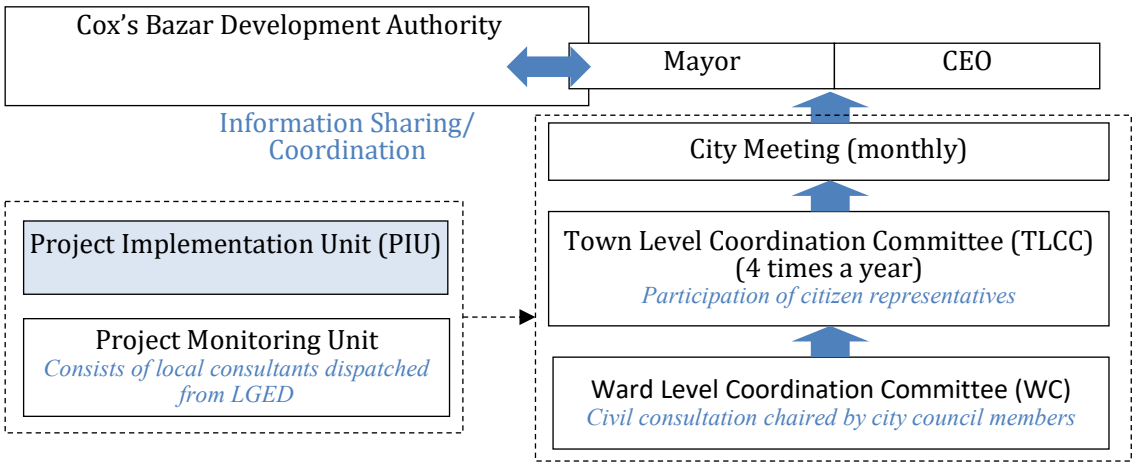



*Source: JICA Survey Team based on ICGP documents*

**Figure 3.5.1 Participatory Mechanism in Urban Planning Master Plan in CC**

### 3.5.3 Paurashava

Actual process of urban planning against legal process in Cox's Bazar Paurashava, mainly taken in UGIIP-3 is depicted in the figure below.




*Source: JICA Survey Team based on interview of CBP officers*

**Figure 3.5.2 Participatory Mechanism in Urban Planning Master Plan in CBP**

## 3.6 Mechanism of Implementation of Master Plans

### 3.6.1 Prioritization of Projects

Projects mentioned in master plan are formulated based on the local demand collected by ward councilors through the discussion on WLCC. Criteria for prioritization of projects are often described in master plan, however, they are slightly different in actual implementation. According to the interviews with CC, the actual criteria are considered as follows. There are no criteria based on the physical data, nor feasibility plan. In addition, it is in most cases not so easy to find any direct alignment between IDP projects and existing master plan.

**Table 3.6.1 Criteria of Prioritization of Projects**

| Criteria mentioned in Master plan | Actual Criteria |
|---|---|
| • Number of beneficiaries<br>• Severity and urgency of the problem<br>• Vastness and graveness of the impact area<br>• Projects having national/regional and city-wide level impacts deserve more attention over location-based projects. | • Local needs (Request from residents, business operator, etc.)<br>• Opportunity (Land availability)<br>• Financial/Fund Availability<br>• Technical Availability<br>• Serviceability<br>• Accountability to stakeholders<br>• Convinced beneficiaries |

*Source: JICA Survey Team*

### 3.6.2 Implementation of the Projects

(1) Demarcation between ULBs and Development Authorities in Infrastructure Project

As development authorities including RAJUK and Cox's DA are empowered to formulate urban planning master plan, implementation of the plan by development control is also its jurisdiction. They provide the land clearance, approvals for building design, occupancy certificate, real estate housing area, etc., while GCC, NCC and CBP or other local government organization are not be entitled such activities within their jurisdiction area.

For instance, CBP is responsible for constructing the local road, drainage network, sewerage network, solid waste management, water supply etc. within its jurisdiction area, but they have to follow the umbrella plan prepared by Cox DA for implementation. Existing master plan shows there are no overwrapping projects between Cox's DA and CBP.

**Table 3.6.2 Responsibilities of Cox's DA and CBP**

| | Responsibilities |
|---|---|
| Cox's DA | • Covered area: 323 km$^2$<br>• Preparing master plan and execute the master plan<br>• Land clearance, approvals for building design, occupancy certificate, real estate housing area, etc.<br>• Constructing infrastructure and public facilities<br>e.g.) main road (local/regional including highway), river protection embankment, solar system, apartment for low income |
| CBP | • Covered area: 32 km$^2$<br>• Constructing local road (access road), drainage network, sewerage network, solid waste management, water supply etc. |

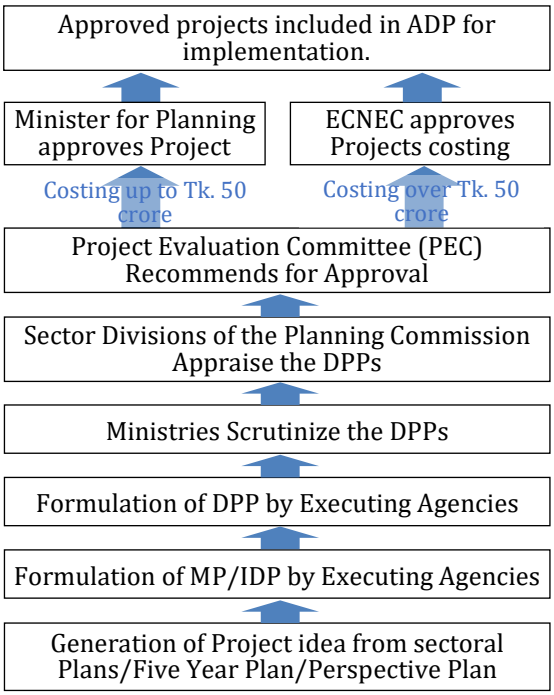
*Source: JICA Survey Team*

Furthermore, development authorities implement infrastructure development projects proposed/not proposed in master plan of ULBs. However, it is available only in case that development authorities conclude MoU with the ULB, which promises to handover the infrastructure after completion and ULB will operate/maintain it.

(2) Formulation of Development Project Proforma/Proposal (DPP)

Projects mentioned in master plan are incorporated in IDP and expected source of fund for each project are identified. In case one project or package of small projects require a large amount of budget which can't be covered by ADP and no donner fund can be available, DPP will be prepared by executing agencies, e.g. LGED or ULBs, and sent to respective ministries in charge and Ministry of Planning for approval, regardless of donor funded or government/own funded projects.

As mentioned in 3.6.1, since there is no feasibility study (FS) at prioritization of the project, several examinations often analyzed in FS is conducted in preparation of DPP. It analyses not only engineering viewpoints, but also socioeconomic conditions. However, the linkage between project and master plan, which doesn't seem to be a requirement for approval is not clearly mentioned in DPP. It is often seen that the actual project doesn't have consistency with land use zoning proposed in urban planning master plan. It would be concerned with the fact that projects are selected politically, in a form as 'local needs.' In addition to this, FS report is not required for DPP approval. In this sense, DPP can be regarded as a quasi FS report practically.




*Source: Development Project Proforma/Proposal Manual, GED*

**Figure 3.6.1 Approval Process of DPP**

After the DPP is approved, detailed design (DD) and cost estimation can be started. After approval of DD, tendering documents are prepared, and tendering process is taken place. After contractors are selected, contracts are concluded, and construction begins.

## 3.7 Issues in Implementation of Urban Planning

(1) Delay of Approval of Master Plan

In case of detailed area plan of RAJUK, it is delayed due to finalization of the survey data.

Regarding the delay of the approval, Ministry of Local Government, Rural Development and Cooperatives (MLGRDC) hasn't taken any initiative to gazette notification of the Master Plan of different municipalities for a long time. In a nutshell, the gazette notification for different CC and Paurashava are being delayed due to the existing bureaucratic procedure, lack of interest of the concern authorities and vested interest of different influential groups to some extent. It is assumed that lack of ownership of master plan by ULB has led to such problems, and lack of ownership could be resulted from this delayed approval too.

(2) Insufficient Composition of Master Plan

According to analysis, neither RAJUK nor CC were aware of being custodian of Dhaka Structure Plan (1995-2015), because of unclear demarcation of (overlaying) jurisdiction. This made them keep them away from their duty of development promotion/control based on the master plan. Furthermore, Urban Area Plan had the composition which included detailed information of both public and private projects with cost estimation and was organized by sector. Itself was very useful to avoid the duplication between CC and Ministries, however, it was ignored and never used by CC, because of lack of Mauza level map.

(3) Delay of the Project Implementation

1) Land Acquisition

Projects are sometimes not implemented properly due to the critical land acquisition process. In Bangladesh, land is considered as the most valuable asset, and not only a means of livelihood, but also a great sign of social power, pride, status, and happiness. Furthermore, most families are tied to their ancestral land which is very much a psychological bond, and the feelings that their land can never be compensated for any means if they should lose it.

For instance, land acquisition is one of the major problems in CuCC to avoid the implementation of Master Plan, especially the projects which need land acquisition for implementing. Since most of the commercial/residential structures were spontaneously developed following the existing road alignment, problems are raised once the road widening or development of new road come. CuCC tries to implement the project through active participation of the different stakeholders and convinces them with ultimate benefit due implement a project in a planned manner.

2) Lack of Human/Financial Resources Derived from Low Level of Recognition of Master Plan

Culture to implement the projects as per the master plan is not established, and this lack of recognition of importance leads the project implementation in inappropriate manner. In addition, delay of the gazette notification of the master plan is another problem which causes delay of the project implementation, because it has no legislative basis as a result.

This lack of recognition is related to the insufficient deployment of urban planner in ULBs. For example, there is no Planning section nor professional urban planner in CuCC and CBP, who can understand the plan, handle GIS database and execute accordingly. Even system is not yet established to select IDP following the Master Plan. From that reason, master plan is not updated regularly due to the lack of manpower, even though the provision of upgraded and readjusted the plan in each 5 year is mandatory of ULB. SPGP formulated 'Operational Handbook on Paurashava Master Plan Implementation' and conducted the training for familiarization of the handbook in LGED, targeting urban planner/engineer in Paurashava. This training helped urban planners/engineers with less knowledge and experience to conduct their work in line with urban

planning very much. It is expected that this experience will be utilized in LGED and the training for urban planners/engineers in CC will be also conducted.

In addition, master plan also puts some high ambitious projects which require fund as well as co-ordination among different organization. However, not all the projects are implemented, due to lack of financial support and co-ordination.

# CHAPTER 4 INFRASTRUCTURE DEVELOPMENT

## 4.1 Specific Policies of Each Subsector

### 4.1.1 National Level Sector Policy

(1) Road and Bridge

National Land Transport Policy (NLTP), 2004 was developed as the policy of road and bridge sector. This policy has emphasized that efficient transportation system is an essential element for success of a development plan leading to economic growth of Bangladesh. It highlights the need of proper connectivity of all rural growth as well as the need of highway capacity improvement along the bypass roads. In addition, improvement with new design standards of accident-prone locations and traffic junctions/intersections has been recommended. The introduction of bus stops, separate bus lanes, footpaths and crossing facilities has been also proposed for improvement of transport sector.

Road Master Plan (RMP), 2009 was developed as the national plan of road and bridge sector. RMP guides the development and maintenance of road network (National Highway) of Road and Highway Department (RHD) over the next 20 years. It will be treated as one of the milestones in the implementation of the National Land Transport Policy (NLTP), 2004. This road sector policy developed to further elaborate some of the major elements of NLTP, was an important step forward. The identification of major problems faced by RHD as contained in this Master Plan, and ways and means of addressing them.

(2) Drainage

Water resources are managed by Ministry of Water Resources in national level and Bangladesh Water Development Board is in-charge organization for surface water and ground water management under the ministry. They shall follow the National Water Policy (NWPo)-1999 which defines the Government responsibility such as 1) undertaking of comprehensive development and management of the main rivers, 2) development of water resources of the major rivers for multipurpose use, 3) de-silting watercourses to maintain navigation channels and proper drainage and 4) delineating water-stress areas based on land characteristics and water availability. However, in terms of drainage development, because urbanization has taken place rapidly in the last 30 years in major cities in Bangladesh, development of drainage system generally delays, and water logging problem occurs everywhere.

(3) Water Supply

Sector Policy

For providing access to safe drinking water and sanitation services for all citizens, LGD has prepared Sector Development Plan (SDP) of Water Supply and Sanitation (WSS) sector.

In 2005, LGD prepared a 10-year plan (SDP 2005) for WSS sector in Bangladesh. The government subsequently decided to update the SDP. Accordingly, the Policy Support Unit (PSU) under LGD prepared the next SDP for FY 2011 - 2025.

The planning period of 15 years is divided into short-term (FY2011-2015), medium-term (FY2016-2020), and long-term (FY2021-2025) planning.

In the short term, 100 percent people would be provided with water through piped water, private tube wells or other water points. The piped water supply would raise the coverage to 70-90 percent from its present 40-83 percent (Khulna 40 percent and Dhaka 83 percent). The piped water supply coverage would be 70-80 percent from the present 40 percent in the city corporations, 70 percent from the present 40 percent in the large paurashavas, and 50 percent from the present 30 percent in

the small paurashavas. In the rural areas, water supply would still be predominantly private tube well based, with some increase in piped water systems.

In the medium term, the three cities with WASAs would receive 100 percent coverage through piped water supply. The city corporations would also receive 100 percent piped water supply coverage, the large paurashavas 80 percent, and the small paurashavas 70 percent. In addition, piped water supply will be introduced in urban centers having 40 percent coverage and about 5-10 percent of villages will have piped water supply.

In the long term, piped water supply will be further expanded with the large paurashavas having 90 percent, the small paurashavas having 85 percent, the urban centers having 40 percent and rural area having 10-20 percent coverage.

Demarcation of DPHE, WASA and ULB

At present, Bangladesh water supply system is managed by Water Supply & Sewerage Authority (WASA), Department of Public Health Engineering (DPHE), and engineering section of each ULBs.

Separated by region, water supply system in metropolitan area of Dhaka, Chittagong, Khulna, Shylet, and Rajshahi is under WASA, middle scale city is under each engineering section with assistance of DPHE, and small-scale city is under DPHE.

Water supply system in CuCC, GCC, and CBP is managed by engineering section of each ULBs with assistance of DPHE. As role allotment, the construction of water supply facilities such like production tube well and pipeline is conducted by DPHE, and O&M activities is conducted by each ULBs.

It is said that LGED have a plan for transaction of water supply execution body from CuCC and GCC to WASA in future, though not formalized yet. Engineering section of CBP will continue to manage water supply system by themselves. Water supply system in NCC is managed by WASA, and water supply execution body is being transferred from WASA to NCC following MoU of activity and responsibility transfer in October 2019. Especially these directions of water supply management in both NCC and GCC/CuCC seem contradictory.

(4) Solid Waste Management

There is no fundamental laws and regulations specified for Solid Waste Management (SWM) in Bangladesh though there are various related law, regulations and strategy to SWM. Regarding strategy, there is National 3R (Reduce, Reuse, Recycle) Strategy for Waste Management (2010) as main strategy of SWM. Based on the strategy, 3R has been promoted through public awareness raising by information, education and demonstration project, by utilization of technical, financial and environmental available technology and by PPP partnership or CBO and NGO participation. Different methodologies for SWM is recommended for household, industrial, commercial and medical wastes. In this document, recommended SWM strategies have been described as well as the timeframe for the action. However, the recommended action has not been implemented according to the schedule.

4.1.2 Development Direction in the M/P of Four ULBs by Subsector

(1) Road and Bridge

1) Gazipur

In Action Area Plan (AAP), roadway planning proposals are based on following approaches - traffic segregation, control entry - exit in highway / regional road; strict restrict future establishments long the highway; develop road network inside the city focusing on road classification (functional); improve & increase the share of alternative transport modes; develop appropriate stations to secure and ease of modal transfer; establish bus & truck terminal in the road network.

This AAP gives emphasis on – grade separation facilities (flyover, interchange, bridges, etc.); ensure proper road geometry; emphasis on pedestrian, parking, new road construction & existing road widening facilities, etc. For the proper implementation of GCC's AAP, sixty-one (61) road & bridge projects are proposed there.

2) Narayanganj

In the AAP of NCC, there are some recommendations focusing on road, bridge and transportation system. Those are the construction of bridges over Sitalakhya River, the implementation of public transport in important roadway (Netaiganj to DC office and Chittagong road to Panchabati), the construction of ring roads around Dhaka City including in Dhaka Structure Plan, the traffic management in Narayanganj City (restriction of freights / containers movement in the city, development of truck / bus terminal, etc.), the development of road network focusing on growth / Central Business District (CBD) area by the construction of new road & bridge and the intersection improvement through construction of underpass and overpass, etc. For the future development in transportation sector in NCC, NCC proposed Travel Demand Management (TDM).

In the AAP, NCC gave emphasis mostly in road widening, transportation capacity improvement, road intersection improvement, development of connectivity in the city, travel demand management, etc. For the appropriate implementation of this AAP, NCC proposed here 21 projects (13 Road projects, 3 Flyover projects and 5 Bridge projects).

3) Cumilla

In the Urban Area Plan (UAP) of CuCC, they gave emphasis on the plan for road network development including secure of connectivity through construction of bridges, plan for transportation facilities, waterway development / improvement option, transportation system management, traffic calming, etc. Therefore, CuCC has proposed projects (road, bridges) focusing on the emphasis of them.

4) Cox's Bazar

For the development of CBP, they prepared a Paurashava Development Plan (PDP). In this PDP, they gave emphasis in road network development, development of tourism, drainage network, water supply network, and environment. In case of road and bridge sector, for the successful implementation of PDP, ninety-one (91) projects are proposed. CBP will implement those projects from 2017 to 2021.

(2) Drainage

1) Gazipur

In AAP in 2016, the following points are mentioned: 1) uninterrupted flow of the two rivers (parts of national river) and their branches are ensured; 2) river, canals, and pond should be source of recharge of ground; and 3) pond will be used as retention area of runoff. Current Zone 1, 4, and 8 are mentioned as prioritized area (if the AAP's previous boundary is followed, the priority areas were Zone 01, 03, and 05).

2) Narayanganj

In Action Area Plan in 2016, installation of 4 pump stations and link drainage between Shitalakshya river and Buriganga river are planned to be constructed. West side of Shitalakshya river is mentioned as prioritized area.

3) Cumilla

In Urban Area Plan in 2014, the following points are mentioned: 1) main canal which will receive storm run-off from all the secondary drains and tertiary canal will be developed; 2) pump drainage will be provided for drainage from high land area around the Shasongacha Road near the Gomti

left embankment; and 3) The existing kutcha drains throughout the city are to be progressively upgraded with brick or concrete. Prioritized area was not mentioned.

4) Cox's Bazar

In the PDP, the following points are mentioned: 1) employment of adequate manpower to maintain clean drainage system, 2) construction of new drain, repair old drain and khal, select correct outfall areas and connect drainage network to that areas. 3) repair & extention of old khal, 4) preparation of drainage network, and 5) prevention from industrial waste from polluting drain and khal. Prioritized area was not mentioned.

(3) Water Supply

1) Gazipur

In Detailed Area Plan, it is proposed that piped water network and continuous monitoring of tube well water to be introduced incrementally. It is expected to improve the present water supply network and new areas will be covered under a piped water supply system.

Also, Cities Development Initiative for Asia (CDIA) proposed the subproject in feasibility report on 2017 as follows.

Short-term Sub-project (2017-2022)

- Installation of ground water monitoring bore wells
- Ground water monitoring, reporting and record keeping
- Study and analysis of groundwater monitoring data, and groundwater modeling to determine the safe extraction limit
- Establishment of a water quality testing laboratory in GCC

Medium-term Sub-project (2022-2026)

- Preparation of an integrated sustainable water supply development plan (water supply master plan) for Gazipur City Corporation, taking into account the available ground water source and the surface water as well
- Feasibility study and preliminary design of the surface water treatment plant

Long-term Sub-project (2027-2036)

- With the growth of population and industries, underground water may not be adequate in the GCC area. Surface water in conjunction with groundwater would have to be considered for water supply.

2) Narayanganj

In Detailed Area Plan, extension and rehabilitation of water supply system of NCC is proposed; and shifting the water source from deep tube well to surface water is recommended.

In Action Area Plan, it is recommended to provide safe drinking water individually or community level basis. Also, it is proposed that practicing rainwater harvesting system will mitigate the demand for pure drinking water and will help to recharge groundwater.

3) Cumilla

In Structure Plan, it is proposed that increasing the present coverage of safe drinking water in rural areas by lowering the average number of users per tube well from the present 105 to 50 in near future by exploring new sources of ground water and improving existing piped water system.

In Urban Area Plan, the following mitigation is proposed.

- Use Gomti river water through pipeline supply to households and industries.
- Use of surface water treatment plant to purify the river water and use as drinking water.
- Introduce rainwater harvesting system and use in the project area.

- Stop land filling of ponds and water bodies (area more than 0.25 acre) to maintain the groundwater level through recharge and leaching process.

In Detailed Area Plan, one surface water treatment plant and six production wells with overhead tank have been proposed to meet the CC demand.

4) Cox's Bazar

In Paurashava Development Plan (PDP) of Cox's Bazar Paurashava, strategy implementation plan is proposed as below.

i) Identification of possible area for pipe water supply and viability test of the system
ii) Implementation of technical design & estimation/project implementation
iii) Preparation of bill & bill collection system
iv) Employment of necessary manpower in water supply section, and enhance skill of manpower
v) Budget allocation to projects which were designed by the activity ii)
vi) Set up of adequate O&M manual for production tube well
vii) Increase of monitoring and spread the activity

(4) Solid Waste Management

1) Gazipur

In Action Area Plan, there is no description of solid waste management except landfill site of solid waste including resource recovery facility and collection and transportation system (solid waste transfer stations on zonal basis). Considering current SWM situation, it means the consideration of final disposal site including improvement of collection and transportation system for each zone are necessary.

2) Narayanganj

In Action Area Plan, 3R is promoted based on the National 3R Strategy for Waste Management. Based on the concept, the sanitary landfill is promoted with the facilities related to 3R such as recycling center and biogas plant. And landfill with medical waste incinerator is promoted in the future.

3) Cumilla

In Urban Area Plan, sanitary landfill is proposed with waste reduction at household level. Based on the concept, the construction of sanitary landfill is proposed in the future. The required land is 4ha for 2034. The collection and transportation system are not mentioned.

4) Cox's Bazar

In the report of Development Plan of Cox's Bazar Town and Sea Beach up to Teknaf, the improvement of collection efficiency, toxic waste management from hospital, clinic, and industry, recycling of solid waste, and introduction of sanitary landfill are promoted as waste management strategies.

In Paurashava Development Plan of Cox's Bazar, the supervision of collection system for the suitable operation and sanitary landfill construction is proposed. In addition, the secure of manpower for solid waste management as well as of budget is recommended.

## 4.2 Existing Condition

### 4.2.1 Road and Bridges

The existing situation in four cities regarding road and bridges are summarized as follows.

**Table 4.2.1 Existing Situation of Road and Bridges**

| Item | Gazipur (year: 2019) | Narayanganj (year: 2019) | Cumilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| Total length in km | 1,964 km in total<br>Trunk Roads:<br>Approx. 30% of total | 316 km in total<br>Trunk Roads:<br>25 km in total<br>(three trunk roads)<br>Paved road:<br>80 % of total | 273 km in total<br>Trunk Roads:<br>Approx. 20% of total | 186 km in total<br>Trunk roads:<br>Approx. 20 km in total<br><br>Paved road:<br>90.25km<br>(54% of total) |
| Road Density | 5.96 km /km$^2$<br>(Including the trunk road) | 6.69 km /km$^2$<br>(Including the trunk road) | 5.15 km /km$^2$<br>(Including the trunk road) | 5.65km/km$^2$<br>(Including the trunk road) |
| Traffic Volume AADT (pcu/day)<br>*from "Online road network RHD year 2019" | 19,000<br>(on trunk road)<br><br>13,000<br>(target city roads were estimate as 70%) | 12,000<br>(on trunk road)<br><br>9,000<br>(target city roads were estimate as 70%) | 21,700<br>(on trunk road)<br><br>15,000<br>(target city roads were estimate as 70%) | 12,600<br>(on trunk road)<br><br>9,000<br>(target city roads were estimate as 70%) |
| Travel Time (average in city area) | 26 min. /10km<br>23 km/hr. | 28 min. /10 km<br>21 km/hr. | 30 min./10km,<br>20 km/hr. | 38 min./10km,<br>16 km/hr. |

*AADT: Annual average Daily traffic*
*Source: Each City Corporation or Paurashava*

### 4.2.2 Drainage

The existing situation in four cities regarding drainage are summarized as follows. Since each ULB doesn't have inventory of drainage system, they don't generally have clear written type of information on detail situation of above information which cause to water logging.

**Table 4.2.2 Existing Situation of Drainage**

| | Gazipur (year: 2019) | Narayanganj (year: 2019) | Cumilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| Total length in km | Primary-106km<br>Secondary-53.6km<br>Tertiary-36km | Total-400km | Primary-27km<br>Secondary-81.64km<br>Tertiary -232.36km | Primary-25 km<br>Secondary-41 km<br>Tertiary - 125km |
| Linked River or Main canal | 1.Torag River<br>2.Chilai canal<br>3.Mogor canal<br>4.Hydrabad Khal | 1.Shitalakshya-River (90%)<br>2. Dhaleshwari-River (10%)<br><br>* (): ratio of discharge. | 1.Kutakhali channel<br>2.Goyanjhuri channel<br>3.EPZ To Medical college channel<br>4.Airport East channel<br>5.Dishabondo channel<br>6.Unaisal channel<br>7.Kudalia channel<br>8.khuchaitoli channel | 1.Bakkhali (7)<br>2.Bay of Bengal (1)<br><br>* (): number of outfall. |
| Budget maintenance | 31 (BDT in Million) | 20 (BDT in Million) | 4 (BDT in Million) | 20 (BDT in Million) |
| In charge of maintenance | Civil Engineer of GCC | Civil Engineer of NCC | Civil Engineer of Cumilla | Civil Engineer of CBP |

*Remarks: it is possible that maintenance budget/expenditure includes infrastructure development budget/expenditures.*
*Source: FINAL PRE-FEASIBILITY REPORT GAZIPUR CITY CORPORATION, Feb. 2017, Hifab, Paurashava Development Plan (PDP) of Cox' Bazar Paurashava*

### 4.2.3 Water Supply

The existing situation in four cities regarding water supply system are summarized as follows.

**Table 4.2.3 Existing Situation of Water Supply**

| Item | Gazipur (year: 2019) | Narayanganj (year: 2019) | Cumilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| Execution Body for Operation and Maintenance | GCC | DWASA (to be transferred to NCC) | CuCC | CBP |
| Water Supply Population | 450,000 (90,000HH) | 120,000 (28,000 HH) | 19,315 (3,863 HH) | 10,000 (2,000HH) |
| Average Daily Water Supply Volume | 59,535 m3/day | 24,000 m3/day | 15,000 m3/day | 2,400 m3/day |
| Water Supply Hour | 14 hours/day | Intermittent | 7 hours/day | 10 hours/day |
| Production Tube Well with Submergible Pump | 63 nos. | 31 nos. | 23 nos. | 9 nos. |
| Deep Hand Tube Well | 900 nos. | N/A | 102 nos. | 161 nos. |
| Shallow Hand Tube Well | N/A | N/A | 270 nos. | 200 nos. |
| Over Head Tank | 3 nos. | 8 nos. | 6 nos. | Not in Present |
| Water Treatment Plant | Not in Present | 2 Nos (river water) | Not in Present | Not in Present |
| Water Supply Pipe | Total: 357 km<br>No facility ledger document of water supply pipe | N/A<br>No facility ledger document of water supply pipe | Total: 165 km<br>$\phi$ 100 70 km<br>$\phi$ 150 90 km<br>$\phi$ 200 5 km | Total 29 km<br>$\phi$ 100 15 km<br>$\phi$ 150 10 km<br>$\phi$ 200 3 km<br>$\phi$ 250 1 km |

*Remarks: N/A means information is not available*
*Source: GCC, DWASA, CuCC, CBP, Paurashava Development Plan (PDP) of Cox' Bazar Paurashava, Climate Resilient Water Safety Plan for Cox' Bazar Paurashava, ICGP report Working Paper 6,*

### 4.2.4 Solid Waste Management

The existing situation in four cities regarding solid waste management are summarized as follows.

**Table 4.2.4 Existing Situation of Solid Waste Management**

| Item | Gazipur (year: 2019) | Narayanganj (year: 2019) | Cumilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| Target population (including unofficial population based on the hearing information) | 3,500,000 | 1,500,000 | 800,000 | 250,000 |
| Waste amount | Approximately 2,500 ton/day including all the solid waste such as household industrial and commercial and street waste (0.71 kg/day/person) | Approximately 750 ton/day (0.49kg/day/person) | Approximately 280 ton/day | Approximately to 120 ton/day (0.36 - 0.48 kg/day/person) including waste from tourists |
| Waste characterization (consultant estimation) | Biodegradable: 60 to 70%<br>Non biodegradable: 30 to 40% | Organic waste: 70 to 80%<br>Inorganic waste: 20 to 30 % | Biodegradable: 60 to 70%<br>Non biodegradable: 30 to 40% | Biodegradable: 60 to 70%<br>Non biodegradable: 30 to 40% |
| Collection area[1] | 50% | 70 to 80% | 60 to 70 % | 70 to 80 % |
| Collection time | 2 shifts (day time and night time) | 6 a.m. to 14 p.m. | 2 shifts (day time and night time) | 1 time (6 a.m. to 14 p.m.) |
| Collection vehicle | (1) Primary collection vehicle | (1) Primary collection 200 Rickshaw vans | (1) Primary collection 30 Rickshaw vans | (1) Primary collection vehicle (i) 16 Rickshaw vans |

[1] Area where scheduled daily collection service is provided

| Item | Gazipur (year: 2019) | Narayanganj (year: 2019) | Cumilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| | (i) 1000 Rickshaw vans<br><br>(2) Secondary collection<br>49 collection vehicles includes 10 vehicles of 15 ton, 2 vehicles of 9 ton, 10 vehicles of 7 ton 2 vehicles of 5 ton, 3 vehicles of 4 ton and 22 vehicles of 3 ton | (2) Secondary collection by 45 dump trucks of 3 tons and 3 dump trucks of 5 tons (total trip number: 60 trips). Based on the information, the amount of collected waste is approximately 240 ton/day. | 50 hand carts<br><br>(2) Secondary collection<br>one vehicle of 5 ton<br>16 vehicles of 3 ton<br>7 vehicles of 1.5 ton | (ii) hand cart (33 of 80kg)<br>(iii) trolley (21 of 15 kg)<br><br>(2) Secondary collection by 6 collection vehicles (1 broken), 3ton x 2 vehicles, 1.5ton x 4 vehicles with each vehicle of 20 trip/day |
| Transfer station | 25 locations | 25 locations | 27 locations | 9 locations |
| Treatment | No treatment | Composting plant | No treatment | Compost plant:<br>12 ton/day,<br>60 days first fermentation and 15 days second fermentation (maturation) |
| Landfill | One open dumping site Kodda (1 ha). | One dumping site: 2.4 ha at Nagonr | One open dumping site: 4.25 ha at Jhakunipara, about 5 km from the city center | One open dumping site: 0.8 ha near Pana market, 2 operators |
| Proposed landfill | The landfill site is located in ward No.26 and the area is 0.4 ha. The land status is not sure. | The candidate landfill site is in low land area in Julkri and the area is 10 ha. | The candidate landfill site is also as same as at current dumping site. | The proposed landfill site is near river and ponds. The area is approximately 4 ha. |

*Source: Each City Corporation or Paurashava*

### 4.2.5 Other Infrastructure

The existing situation in four cities are summarized as follows. These mentioned number is the one constructed by the City Corporation or Paurashava.

**Table 4.2.5 Existing Situation of Other Infrastructure**

| Item | Gazipur (year: 2019) | Narayanganj (year: 2019) | Comilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| Bus Terminal | 1 No.<br>O&M done by City Corporation through its own fund.<br>Maintenance is done regularly. | 2 Nos.<br>O&M done by City Corporation through its own fund.<br>Maintenance is done regularly. | 2 Nos.<br>O&M done by City Corporation through its own fund.<br>Maintenance is done regularly. | 1 No.<br>O&M done by City Corporation through its own fund.<br>Maintenance is done regularly. |
| Truck Terminal | Nil | 2 Nos.<br>O&M done by City Corporation through its own fund.<br>Maintenance is done regularly. | Nil | Nil |
| Street light (LED) | 2800 Nos. installed recently through DPP* fund. | 500 Nos. installed recently through ADP fund.<br>O&M not yet required. | Nil | 100 Nos.<br>O&M done by City Corporation through its own fund. |

| Item | Gazipur (year: 2019) | Narayanganj (year: 2019) | Comilla (year: 2019) | Cox's Bazar (year: 2019) |
|---|---|---|---|---|
| | O&M done by City Corporation through its own fund. Maintenance is done regularly. | | | |
| City Park | Nil | Nil | 1 No. O&M done by City Corporation through its own fund. Maintenance is done regularly. | Nil |
| Traffic signal | Nil | Nil | Nil | Nil |

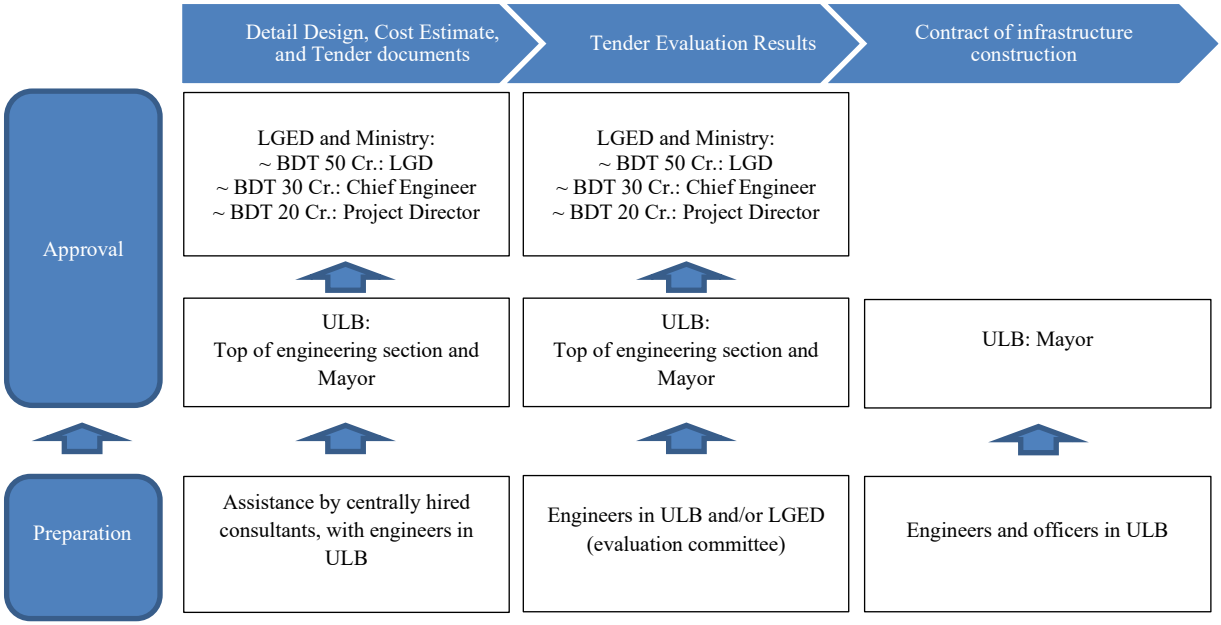
*Source: Each City Corporation or Paurashava, *DPP: Development Project Proforma/Proposal*

## 4.3 Implementation of Infrastructure Development

### 4.3.1 Procedures of Infrastructure Development

Generally, when infrastructure development projects are proposed, Development Project Proforma/Proposal (DPP) is prepared by executing agencies, e.g. LGED or ULBs, and sent to respective ministries in charge and Ministry of Planning for approval. Once approval is given, detail design and cost estimate can start. After approval of design, tender documents are prepared. Then tender process is taken place. After contractors are selected, contracts are concluded, and then construction begins. A flow of DPP is presented in Figure 3.5.3.

Examination, which is normally done in FS, is made in preparation of DPP e.g. socioeconomic analysis to see project feasibility (not only engineering viewpoints), and the result is presented in DPP. Thus, so-called "FS" report is basically not required for approval. In this sense, practically DPP could be a kind of "FS" report. Regarding approval, DPP, regardless of donor funded or government/own funded projects, is approved by Ministry of Planning. After DPP approval, projects can begin. Processes of individual subprojects of ICGP and the similar donor projects of urban development via LGED beyond approval of DPP are shown in the following figures:




*Source: prepared by JICA Survey Team through hearing to relevant officers*

**Figure 4.3.1 General Approval Process in Donor funded LGED projects (subproject type)**

4.3.2 On-going Infrastructure Project

(1) On-going project in 4 ULBs

IDPs supported by ICGP, and CIPs supported by MGSP are lists of infrastructure projects, meant to be prepared to cover all on-going and intended infrastructure projects to realize master plans. However, according to the hearing from engineers of ULB, they seem not to include future projects. Basically it is understood that majority are on-going projects (or projects of which fund source has been decided). And, IDPs and CIPs are separately prepared although they are almost similar contents. Current major donor-assisted projects in four target cities are shown as below with availability of IDP and CIP. Subprojects under MGSP and UGIIP-3 are shown in Attachment 4.3.1.

**Table 4.3.1 Major Infrastructure Projects in the target ULBs**

| ULBs | Major Project implemented in each ULB | | | | | No. of DPP approved*1 | Other project to be implemented in each ULB*2 |
|---|---|---|---|---|---|---|---|
| | Project Name | Period | Fund Allocation (BDT million) | No. of subproject | Availability of IDP (for ICGP) or CIP (for MGSP) | | |
| GCC | ICGP | From 2014 to 2020 | 4,050 | 34 | ○ | 6 | Second City Region Development Project |
| NCC | ICGP | From 2014 to 2020 | 3,890 | 28 | ○ | 6 | Urban Infrastructure Improvement Preparatory Facility |
| | MGSP | From 2013 to 2020 | 2,400 | 26 | ○ | | |
| CuCC | ICGP | From 2014 to 2020 | 4,110 | 30 | ○ | 3 | - |
| | MGSP | From 2013 to 2020 | 866 | 14 | ○ | | |
| CBP | MGSP | From 2013 to 2020 | 861 | 5 | × | 0 | Livelihoods Improvement of Urban Poor Communities Project' |
| | UGIIP-3 | From 2014 to 2020 | 931 | 8 | - | | |

*Remarks: *1: refer to Table 4.3.5, *2: refer to Table 5.2.4*

*Source: Each City Corporation or Paurashava*

The status of major on-going projects in each city are summarized as follows.

**Table 4.3.2 On-going Infrastructure Projects by Subsector in the Target ULBs**

| Name of Local Government | Sector | Present Status |
|---|---|---|
| Gazipur | Road and Bridges | - 9 CGP projects,<br>Scale of project: 4.0 km - 15.2 km<br>Contract amount: BDT 88 - 328 Million,<br>Scheduled completion date: Mar '18 – Jan '19,<br>Financial progress:<br>0 % to 10 %: 2 projects<br>10 % to 50 %: 4 projects<br>50 % to 99 %: 3 projects |

| Name of Local Government | Sector | Present Status |
|---|---|---|
| | | All 9 ongoing projects are still in progress beyond the original completion date |
| | Drainage | ICGP-I (Batch2)<br>< Works ><br>Construction of RCC Drain<br>< No. of subproject ><br>1 subproject<br>< Total Cost ><br>BDT 192.6 million<br>< Total Length ><br>5.8 km<br>< Progress ><br>51.39 % as of August 2019 |
| | Water Supply | ICGP-I (Batch 2)<br>< Works ><br>Installation of 3 production tube wells, 10 km distribution pipeline at Zone 3,6, and 7, respectively<br>< No. of Package ><br>1 Package<br>< Total Cost ><br>BDT 159,534,830<br>< Progress ><br>- 30 % as of August 2019 |
| | Solid Waste Management | - No projects are ongoing |
| | Other Infrastructure | - No projects are ongoing |
| Narayanganj | Road and Bridges | - 5 CGP projects,<br>Scale of project: Road 2.1 km – 8.2 km, Bridge 33 m – 60 m<br>Contract amount: BDT 48– 359 Million,<br>Scheduled completion date: Feb '18 – Aug '20,<br>Financial progress:<br>0 % to 10 %: 0 project<br>10 % to 50 %: 2 projects<br>50 % to 99 %: 3 projects<br>100% (completed): 2 projects<br>Out of 5 ongoing projects, 4 projects are still in progress beyond the original completion date<br>Although the remaining construction period of another one project is only 7 months, the progress is still in 32%<br>- 30 MGSP projects<br>Project cost: BDT 2905.8 million in total |
| | Drainage | ICGP-I (Batch 2)<br>< Works ><br>Re-excavation & Beautification of canals<br>Construction of Drain (RCC/Brick/Pipe)<br>< No. of subproject ><br>4 subprojects<br>Re-excavation & Beautification of canals: 2 Package<br>Construction of Drain: 2 Package<br>< Total Cost ><br>BDT 974.2 million<br>< Total Length ><br>Re-excavation of main: 6.20 km<br>Construction of Drain: 35.84 km<br>< Progress><br>0 %: 2 subprojects, 34%: 1 subproject, 87 %: 1 subproject<br>as of August 2019<br>MGSP |

| Name of Local Government | Sector | Present Status |
|---|---|---|
| | | < No. of subproject ><br>13 subprojects<br>< Total Cost ><br>BDT 2,127 million |
| | Water Supply | - Installation of pipeline and production well is planned to be executed by ICGP (Batch 2) project.<br>- However, it was exempted from the ICGP project list due to the transition issue from DWASA to NCC.<br>- Rehabilitation and expansion of existing water supply facilities have been proposed by ADB project and the Loan Agreement is expected to be signed during 2019. |
| | Solid Waste Management | - Private consulting company in Korea implemented pre-feasibility study of landfill and separation facility project. However, KOICA was not involved in the study and does not have a plan to finance the project as of now according to them. |
| | Other Infrastructure | - No projects are ongoing |
| Cumilla | Road and Bridges | - 6 CGP projects,<br>Scale of project: road 0.7 km – 20.3 km, Bridge 30 m<br>Contract amount: BDT 53 - 426 Million,<br>Scheduled completion date: Dec ’18 – Oct ‘19,<br>Financial progress:<br>0 % to 10 %: 0 project<br>10 % to 50 %: 3 projects<br>50 % to 99 %: 3 projects<br>Out of 6 ongoing projects, 4 projects are still in progress beyond the original completion date<br>Although the remaining construction period of another 2 projects is only 2 months, the progress is still in 36% or 49%<br>- 4 MGSP projects,<br>contract amount: BDT 20 - 79 Million,<br>scheduled completion date: Dec ’18 - Jun ’19,<br>progress: 62% - 70 %<br>Same situation as CGP projects was found (projects are still in progress beyond the original completion date)<br>- 9 City corporation projects,<br>contract amount: BDT 67 - 84 Million,<br>scheduled completion date: Mar - Apr ‘20,<br>progress: 45% - 75%<br>Considering the remaining construction period (6 to 7 months) and current progress, these projects are not extremely delayed |
| | Drainage | ICGP-I (Batch 2)<br>< Works ><br>Excavation of Canal<br>< No. of subproject ><br>1 subproject<br>< Total Cost ><br>BDT 195 million<br>< Total Length ><br>33.8 km<br>< Unit Cost><br>BDT 195 milli<br>< Progress><br>35% as of August 2019<br>MGSP<br>< No. of subproject ><br>2 subprojects<br>< Total Cost ><br>BDT 69 million |

| Name of Local Government | Sector | Present Status |
|---|---|---|
| | Water Supply | ICGP-I (Batch 2)<br>< Works ><br>Installation of 9 production tube well including pump house with all other accessories<br>< No. of Package ><br>1 Packages<br>< Total Cost ><br>BDT 58,456,000<br>< Progress ><br>- 13 % as of August 2019 |
| | Solid Waste Management | - No projects are ongoing |
| | Other Infrastructure | ICGP-I (Batch 2)<br>< Works ><br>Installation of street lighting system (GI pole and solar power LED light)<br>< No. of subproject ><br>1 subproject<br>< Total Cost ><br>BDT 195 million<br>< Total Quantity ><br>2550 nos.<br>< Unit Cost><br>BDT 468.8 million<br>< Progress><br>25% as of August 2019<br>MGSP<br>< No. of subproject ><br>Street Lights 2 subprojects<br>Park Improvement: 1 subproject<br>Public Toilet: 8 subprojects<br>Bus terminal: 1 subproject<br>< Total Cost ><br>Street Lights BDT 260 million<br>Park Improvement: 200 million<br>Public Toilet: 16 million<br>Bus terminal: 10 million |
| Cox's Bazar | Road and Bridges | - 8 MGSP funded projects<br>Present status:<br>3 projects: committed, 5 projects: tender in process<br>- 3 UGIIP funded projects,<br>contract amount: 39 - 56 Million BDT,<br>scheduled completion date: Jan '18 - Jan '19,<br>progress: 49 % - 84 %<br>All 3 ongoing projects are still in progress beyond the original completion date |
| | Drainage | - UGIIP-III<br>< Works ><br>Construction of Drain (RCC)<br>Construction of Road side Drain (RCC)<br>< No. of subproject ><br>5 subprojects<br>< Total Cost ><br>BDT 388 million<br>< Total Length ><br>9.9 km |
| | Water Supply | Installation of production well, WTP (surface water), overhead tank, and distribution pipeline is planned to be executed by ADB UGIIP-III project. However, they have not been financed to date. |

| Name of Local Government | Sector | Present Status |
|---|---|---|
| | Solid Waste Management | - The subproject for solid waste management sector was not proposed in ADB project (UGIIP) though the land acquisition plan has been prepared. It was not included in UGIIP-III due to land acquisition issue. |
| | Other Infrastructure | - No projects are ongoing |

*Source: Each City Corporation or Paurashava*

(2) Summary of ICGP Subproject Implementation

Summary of ICGP infrastructure subprojects in the target three CCs in the Project are extracted and shown in the table below:

**Table 4.3.3 Summary of ICGP Infrastructure Subprojects**

| | | | GCC | NCC | CuCC | | GCC | NCC | CuCC |
|---|---|---|---|---|---|---|---|---|---|
| Sector | | Component | Number of Package | | | | Cost (BDT in Crore) | | |
| Batch-1 | | | | | | | | | |
| 1 | Transport | Road Improvement | 6 | 1 | 8 | | 65 | 9 | 79 |
| 2 | Transport | Bridge/overpass | 0 | 0 | 0 | | 0 | 0 | 0 |
| 3 | Transport | Road side drain | 2 | 0 | 0 | | 16 | 0 | 0 |
| 4 | Drainage | Canal/Khal improvement | 1 | 0 | 0 | | 5 | 0 | 0 |
| 5 | Municipal Facilities | Street Light | 0 | 2 | 1 | | 0 | 28 | 4 |
| Total | | | 9 | 3 | 9 | | 86 | 37 | 83 |
| | | | | | | | | | |
| Batch - 2 | | | | | | | | | |
| 1 | Transport | Road Improvement | 8 | 3 | 3 | | 131 | 116 | 79 |
| 2 | Transport | Bridge/overpass | 0 | 3 | 1 | | 0 | 22 | 5 |
| 3 | Transport | Road side drain | 4 | 0 | 0 | | 39 | 0 | 0 |
| 4 | Drainage | Canal/Khal Improvement | 1 | 4 | 1 | | 19 | 97 | 19 |
| 5 | Water Supply System (WSS) | Water Supply System (WSS) | 1 | 2 | 1 | | 14 | 19 | 56 |
| 6 | Municipal Facilities | Street light | 0 | 0 | 1 | | 0 | 0 | 47 |
| Total | | | 14 | 12 | 7 | | 204 | 254 | 207 |
| | | | | | | | | | |
| Batch 2 - Additional Packages | | | | | | | | | |
| 1 | Transport | Road Improvement | 10 | 11 | 8 | | 101 | 83 | 77 |
| 2 | Transport | Bridge/overpass | 0 | 2 | 0 | | 0 | 15 | 0 |
| 3 | Transport | Road side drain | 1 | 0 | 5 | | 14 | 0 | 39 |
| 4 | Municipal Facilities | Street light | 0 | 0 | 1 | | 0 | 0 | 6 |
| Total | | | 11 | 13 | 14 | | 116 | 98 | 122 |
| | | | | | | | | | |
| Grand total | | | 34 | 28 | 30 | | 405 | 389 | 411 |

*Source: Prepared by the Survey Team based on the information given by JICA Bangladesh Office*

Batch 1 subprojects are almost completed, and now Batch 2 subprojects are in full swing. In addition, this year Batch 2 additional packages have been decided to be added because sum of Batch 1 and 2 subprojects cannot reach total loan amount due to changes of subprojects. Now they have started tendering process. ICGP was supposed to be completed in 2019, but due to overall delay, one year has been extended to the end of 2020. Current progress of Batch 2 subprojects is shown in Attachment 4.3.2 and summarized in the table below.

**Table 4.3.4 Summary of Current Progress of ICGP Infrastructure Subprojects (Batch 2)**

| | Physical Progress (%) | Financial Progress (%) |
|---|---|---|
| GCC | 41.67 | 31.75 |
| NCC | 44.62 | 37.21 |
| CuCC | 60.87 | 44.25 |

*Remarks: data is as of the end of August 2019*

*Source: Prepared by the Survey Team based on the information given by JICA Bangladesh Office*

Physical progress of the subprojects in CuCC is 60.87%, followed by NCC (44.62%), and GCC (41.67%).

(3) Summary of DPP projects financed by GOB

The following table shows DPP projects in recent five years by ULBs, which are financed by GOB.

**Table 4.3.5 Summary of DPP projects in Four ULBs**

| | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| No. of recent 5 years Sector/Duration | 1. Procurement of vehicles (2016-2017) | 1. Development of road& drain infrastructure; Procurement of Transport Vehicles & other equipment (2013-2017) | 1. Development of road, drain & footpath (2015-2016 & 2017-2018) | - |
| | 2. Installation of LED lights for power saving (2017-2019) | 2. Development of road & drain Infrastructure (2016-2018) | 2. Infrastructure Development of road, drain & footpath (2019-2020) | - |
| | 3. Installation of asphalt plant for development of road (2019-2020) | 3. Construction & Reconstruction of Road &Drain; tree plantation (2016-2019) | 3. Renovation & construction of road & drain (2019-2020) | - |
| | 4. Construction Road &Drain (2018-2021) | 4. Construction & Development of Infrastructure (2018-2021) | - | - |
| | 5. Construction of Road Drain &footpath (Zone 1-5 ) (2018-2021) | 5. Construction of cleaners colony (2017-2021) | - | - |
| | 6. Construction of drain and road with widening of the main connecting roads of different zones (2019-2022) | 6. Solid waste collection and removal system at NCC (2017-2019) | - | - |
| Project Cost | 1. Total= 15.79 crore (BDT) (GoB 100%) | 1. Total =192.19 crore (BDT) (GoB 70% & NCC 30%) GoB = 134.53 crore (BDT) NCC = 57.65 crore (BDT) | 1. Total =65.32 crore (BDT) (GoB 100%) | - |
| | 2. Total=22.50 crore (BDT) (GoB 100%) | 2. Total=19.99 crore (BDT) (GoB 70% & NCC 30%) GoB =13.99 crore (BDT) NCC = 5.99 crore (BDT) | 2. Total=48.55 crore (BDT) (GoB 100%) | - |
| | 3. Total=48.32 crore (BDT) (GoB 100%) | 3. Total =207.50 crore (BDT) (GoB 70% & NCC 30%) | 3. Total = 45.08 crore (BDT) (GoB 100%) | - |

| | | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|---|
| | | | GoB = 145.25 crore (BDT)<br>NCC = 62.25 crore (BDT) | | |
| | | 4. Total= 700.60 crore (BDT)<br>(GoB 100%) | 4. Total=461.26 crore (BDT)<br>(GoB 100%) | - | - |
| | | 5. Total=1510.0 crore (BDT)<br>(GoB 100%) | 5. Total=99.67 crore (BDT)<br>(GoB 80%& NCC 20%)<br>GoB =79.73 crore (BDT)<br>NCC = 9.93 crore (BDT)) | - | - |
| | | 6. Total=3828.00 crore (BDT)<br>(GoB 100%) | 6. Total-345.91 crore (BDT)<br>(GoB 100%) | - | - |
| DPP Process | Preparation | CC Engineer | CC Engineer | Consultant with CC Engineer | - |
| | Cost estimate & Design | CC Engineer, review by consultant | CC Engineer | CC Engineer | |
| | Construction Supervision | CC Engineer & Consultant hired for No.5,6 projects | CC Engineer | CC Engineer | |

*Source: prepared by JICA Survey Team through hearing to relevant engineers in ULBs*

Based on the above information, GCC received huge amount of finance as DPP projects from GOB, followed by NCC, CuCC. CBP has not yet received project finance through DPP proposals.

4.3.3 Capacity of Urban Local Bodies in Infrastructure Development

(1) Actual Implementers

After approval of DPP, detail design, cost estimate, tender and construction shall be done. Actual implementers of such practical works are summarized in the table below:

**Table 4.3.6 Actual Implementers of Infrastructure Development**

| | UGIIP 3 | MGSP | ICGP | Government own funded projects |
|---|---|---|---|---|
| DD and cost estimate, tender document preparation | Practically centrally hired consultant (Basically Dhaka base) | Centrally hired consultant (basically Dhaka base) | Batch 1<br>Engineers of ULBs<br>Batch 2<br>Centrally hired loan consultant (stationed at both Dhaka and each ULB) | Engineers of ULBs<br>For some cases, ULBs procure local consultants to do. |
| Tender | ULBs | ULBs | ULBs | ULBs |
| Contract signing | ULBs | ULBs | ULBs | ULBs |
| Construction supervision | Centrally hired consultant (stationed at each ULB) | Centrally hired consultant (stationed at each ULB) | centrally hired loan consultant (stationed at each ULB) | Engineers of ULBs<br>For some cases, ULBs procure local consultants to do. |

*Source: prepared by JICA Survey Team through hearing to relevant officers*

In most cases, centrally hired consultants assist the necessary works of infrastructure development. Engineers of ULBs also do these works, but in most cases, it is reported through the interview of engineers that they are busy doing government / own funded projects, which are generally small-scale works. According to the hearing of engineers in ULBs, process of design and cost estimate takes around three to six months for past infrastructure projects of similar size to our assumed project size.

(2) Technical Level of Staff

In view point of status of ongoing project implementation and present conditions in each subsector, the technical levels of staff are judged by the survey team engineers through the interviews, and are summarized as follows.

**Table 4.3.7 Expert Impression on Technical Level of Staff**

| Sector | | Gazipur | Narayanganj | Cumilla | Cox's Bazar |
|---|---|---|---|---|---|
| Road and bridge | Project management | Lower level | Lowest level | Medium level | Lower level |
| | Performance of project list preparation for the team | Proposed project list could not be controlled at main office | Proposed project list could not be formulated timely | Proposed project list could be well organized | Proposed project list could not be controlled at main office |
| | Reason of the above situation | Since a lot of management and administrative matters are conducted by the insufficient staff, it is less time to develop their own technical capability. | | | |
| Drainage | Project management | Medium level | Lower level | Medium level | Medium level |
| | Understanding of current situation and past project | Medium level | Medium level | High level | Medium level |
| | Performance of project list preparation for the team | Low level | Low Level | Medium Level | Medium Level |
| | Others | Because the numbers of technical staff in four cities are not sufficient, they have no time to be trained well and it seems that they are so busy just to deal with their dairy work. Motivation to new project: GCC and CBP are high. CuCC is Middle. NCC is Low. | | | |
| Water supply | | Medium level<br>- Training program of O&M is provided at DPHE office in Dhaka at a few times a year. | Medium level<br>-Trained WASA staff manage the water supply system.<br>-Management body is being transferred from WASA to NCC. | Medium level<br>- Training program of O&M is provided at DPHE office in Dhaka a few times a year. | Lower level<br>- Typical training program is not provided by DPHE and other organization.<br>- Manpower of water supply section is insufficient |
| Solid Waste Management | | Lower level<br>(The staff of conservancy section know the daily operation but there is no planning and engineering experts of SWM).<br>One of the reasons is no implementation of periodical training of planning, operation and maintenance of solid waste management. | Lower level<br>(The staff of conservancy section know the daily operation but there is no planning and engineering experts of SWM)<br>One of the reasons is no implementation of periodical training of planning, operation and maintenance of solid waste management | Lower level<br>(The staff of conservancy section know the daily operation but there is no planning and engineering experts of SWM)<br>One of the reasons is no implementation of periodical training of planning, operation and maintenance of solid waste management though some of the staff were trained in JICA training course. | Lower level<br>(The staff of conservancy section know the daily operation but there is no planning and engineering experts of SWM)<br>One of the reasons is no implementation of periodical training of planning, operation and maintenance of solid waste management. |

*Source: JICA Survey Team*

(3) Infrastructure Related Financial Capacity

According to the engineers number as well as infrastructure development expenditures as shown in Table 2.3.3 and 2.5.2, in Chapter 2, the following analysis is conducted to see infrastructure related financial capacity considering staff numbers.

**Table 4.3.8 Infrastructure Capacity Assessment**

| | FY 2015/16 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Expenditure | | | | Expenditure/engineer | | | |
| Unit: BDT | GCC | NCC | CuCC | CBP | GCC | NCC | CuCC | CBP |
| ULB implemented expenditure | 1,297,224,433 | 1,194,797,787 | 253,754,485 | 65,158,083 | 46,329,444.04 | 91,907,522.08 | 14,926,734.41 | 13,031,616.60 |
| Donor managed expenditure | 535,945,277 | 556,710,418 | 607,802,505 | - | 19,140,902.75 | 42,823,878.31 | 35,753,088.53 | - |
| Total | 1,833,169,710 | 1,751,508,205 | 861,556,990 | 65,158,083 | 65,470,346.79 | 134,731,400.38 | 50,679,822.94 | 13,031,616.60 |
| *Number of engineer (persons)* | *28* | *13* | *17* | *5* | - | - | - | - |

| | FY 2016/17 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Expenditure | | | | Expenditure/engineer | | | |
| Unit: BDT | GCC | NCC | CuCC | CBP | GCC | NCC | CuCC | CBP |
| ULB implemented expenditure | 1,130,437,353 | 1,173,592,100 | 828,582,308 | 52,021,583 | 40,372,762.61 | 90,276,315.38 | 48,740,135.76 | 10,404,316.60 |
| Donor managed expenditure | 544,363,380 | 316,034,271 | 361,989,870 | - | 19,441,549.29 | 24,310,328.54 | 21,293,521.76 | - |
| Total | 1,674,800,733 | 1,489,626,371 | 1,190,572,178 | 52,021,583 | 59,814,311.89 | 114,586,643.92 | 70,033,657.53 | 10,404,316.60 |
| *Number of engineer (persons)* | *28* | *13* | *17* | *5* | | | | |

| | FY 2017/18 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Expenditure | | | | Expenditure/engineer | | | |
| Unit: BDT | GCC | NCC | CuCC | CBP | GCC | NCC | CuCC | CBP |
| ULB implemented expenditure | 1,061,613,405 | 2,758,142,901 | 467,542,626 | 96,711,629 | 37,914,764.46 | 212,164,838.54 | 27,502,507.41 | 19,342,325.80 |
| Donor managed expenditure | 590,431,118 | 553,039,061 | 315,823,595 | 55,578,064 | 21,086,825.64 | 42,541,466.23 | 18,577,858.53 | 11,115,612.80 |
| Total | 1,652,044,523 | 3,311,181,962 | 783,366,221 | 152,289,693 | 59,001,590.11 | 254,706,304.77 | 46,080,365.94 | 30,457,938.60 |
| *Number of engineer (persons)* | *28* | *13* | *17* | *5* | - | - | - | - |

| | 3 years average | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Expenditure | | | | Expenditure/engineer | | | |
| Unit: BDT | GCC | NCC | CuCC | CBP | GCC | NCC | CuCC | CBP |
| ULB implemented expenditure | 1,163,091,730 | 1,708,844,263 | 516,626,473 | 71,297,098 | 41,538,990.37 | 131,449,558.67 | 30,389,792.53 | 14,259,419.67 |
| Donor managed expenditure | 556,913,258 | 475,261,250 | 428,538,657 | 18,526,021 | 19,889,759.23 | 36,558,557.69 | 25,208,156.27 | 3,705,204.27 |
| Total | 1,720,004,989 | 2,184,105,513 | 945,165,130 | 89,823,120 | 61,428,749.60 | 168,008,116.36 | 55,597,948.80 | 17,964,623.93 |
| *Number of engineer (persons)* | *28* | *13* | *17* | *5* | - | - | - | - |

*Source: prepared by JICA Survey Team based on Table 2.3.3. and 2.5.2.*

Infrastructure related donor fund is in most cases done by consultants centrally hired. Therefore, Infrastructure development managed by the ULB engineers could be considered as the ones financed by own resources, and all ADP. In this case, expenditure/engineer in NCC is the highest. Per engineer expenditure in GCC and CuCC are similar, and the CBP is the lowest. When it comes to donor funded expenditure, three years average shows that top three, CCs have similar, and CBP is the lowest.

It indicates that NCC has a lot of both GOB as well as donor fund, and productivity of engineers seem highest among four, and most likely busy doing the work. CBP instead, there seem more room to improve their handling capacity if opportunities are available with support of donor agencies.

### 4.3.4 Project Accounting of Donor-funded Project

Comparing among three donor-funded projects (ICGP, UGIIP-3 and MGSP), while LGED opened a project account for receiving the fund of each project and receives the fund in advance to implement subprojects, the payment process to contractors are different. In case of ICGP and UGIIP-3, LGED remits the fund to ULBs' project account based on the ULBs' financial forecast and the ULBs pays from the ULBs' project account to their contractors' bank account against the invoice issued by the contractors. Moreover, in case of ICGP, the ULBs need the payment approval from LGED Project Director at the payment to the contractor after the financial progress reaches 50% of the contract price. On the other hand, in case of MGSP, the fund required to execute the contracts is directly disbursed to the contractors' bank accounts through electronic bank transfer from LGED's project account on the basis of contractors' invoices certified by ULBs and approved by the Project Director.

Besides the above-mentioned project account to receive the fund from the donors, ULBs open the other project account for each donor-funded project. This project account is for receiving fund from Treasury, GOB as VAT and income tax which are non-eligible portion of the loan projects.

## 4.4 Operation and Maintenance of Infrastructure

In practice, City-corporations and Paurashavas typically allocate funds for O&M every year. Individual priority repair, maintenance, or rehabilitation subprojects are identified, estimated, and budgeted. The implication of this approach is that those ULBs do not have overall plan for the sustainable O&M of their inventory of different categories of infrastructure. O&M is carried out on an ad-hoc basis to meet immediate priorities. These situation is generally similar to all subsectors regardless financers of infrastructure.

Present status of operation and maintenance of infrastructure in ULBs for target subsectors are shown by three aspects, O&M expenditures, O&M organization, and O&M rule and regulations. Out of four major subsectors, two subsectors, water supply, and solid waste management require proper operation and maintenance/management to deliver proper services to citizens. In this sense, analysis in these two subsectors is much deeper than the other two, road/bridge and drainage.

### 4.4.1 Road and Bridges

(1) O&M Expenditure

At present, all ULBs are giving emphasis on – Primary Road, Local Road, Footpath, small bridges, culverts, etc. in their jurisdiction area. They received a lot of funding from different donors / projects and DPP funded / Government funded, etc recently. All projects are now in implementation / operation stage; some became matured for maintenance also. For this, ULBs have started considering some budget focusing on the O&M issues. Actual expenditure for O&M in last two years by each ULBs is shown as below (that information has collected from the respective budget of ULBs).

**Table 4.4.1 Actual Expenditure in last two years**

| Year | Gazipur | Narayanganj | Cumilla | Cox's Bazar |
|---|---|---|---|---|
| Year 2017 - 2018 | BDT 203 million (approx. 25 million per zone) | BDT 62 million | BDT 16 million | BDT 8 million |
| Year 2018 - 2019 | BDT 327 million (approx. 41 million per zone) | Road: BDT 30 million<br>Bridge: BDT 2 million | BDT 22 million | BDT 8 million |
| Actual Activities | - Surface reshaping or repair of road. Maintenance of Pavement Marking, road safety sign, road safety barrier.<br>- Ditch and culvert cleaning (silt), repair of Bridges and Culvert. | | | |

*Source: JICA Survey Team based on the information from each city corporation and municipality. The above may not clearly distinguish pure O&M and relatively larger repairing works.*

(2) O&M Organization

As those road and bridges are constructed and implemented by ULBs. So, O&M are done by the respective ULBs too. The organization's name in each ULBs is hereunder.

**Table 4.4.2 O&M Organization**

| Item | Gazipur | Narayanganj | Cumilla | Cox's Bazar |
|---|---|---|---|---|
| O&M Organization | Gazipur City Corporation | 4 km in commercial area: RHD, Central Government<br>Others: Narayanganj City Corporation | Cumilla City Corporation | Primary Road: Cox's Bazar Development Authority<br>Others: Cox's Bazar Paurashava |
| Supervision (No. of Staff) | There is no dedicated staff particularly for operation and maintenance. Engineering section is in charge as its regular works, and approx. 5-10 engineers for each ULBs (not specifically assigned. Dual tasks) | | | |
| Implementation | Contractors are appointed for the implementation work of O&M.<br>No database/inventory for maintenance is available in ICGP.<br>Any guideline for maintenance tasks is not been prepared yet in ICGP. | | | |

*Source: JICA Survey Team based on the information from each city corporation and municipality.*

(3) O&M Rule and Regulation

There is no specific O&M rule and regulation in Road and Bridge Sector under these ULBs.

4.4.2 Drainage

(1) O&M Expenditure

City Corporation or Paurashava spends its own fund for cleaning of drains and cleaning of primary, secondary and tertiary drains are done through temporally hired labors at daily basis of City Corporations or Paurashava. Those ULBs are used to expend on repair and maintenance of Drainage from their own revenue. Last three years' expenditure on Drainage O&M activities are shown under the Table 4.4.3.

**Table 4.4.3 Budget and Expenditure of Drainage O&M Activities**

(million BDT)

| | Expenditure | |
|---|---|---|
| Year | 2017-2018 | 2018-2019 |
| GCC | 1.47 | 7.05 |
| NCC | 0.94 | 14.5 |
| CuCC | 41.6 | 50 |
| CBP | 8.4 | 13.2 |

Source: JICA Survey team through hearing to Engineer in ULB. *The above may not clearly distinguish pure O&M and relatively larger repairing works.*

(2) O&M Organization

Conservancy section is responsible to do the regular cleaning of Public drains as their partial responsibilities. ULBs have options to hire master roll based labour to do the cleaning job. The relevant section under the Engineering Division is also partially responsible to do the emergence based repairing works. Staff number of those relevant divisions in each ULBs are shown below.

**Table 4.4.4 Number of existing staff related to drainage cleaning**

| | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| **Engineering Division** | | | | |
| Civil/ Works and Design/water supply and sanitation Section | 14 | 17 | 7 | 9 |
| Engineers hired for conservancy works | 0 | 2 | 0 | 0 |
| Solid Waste Management/Conservancy Division | | | | |
| Regular in Waste Management Section | 4 | 17 | - | 4 |
| Conservancy officials (Non-permanent basis) | - | 9 | 49 | 1 |
| | | | | |
| Drainage Cleaning (Non-permanent) | 323 | 227 | 89 | 148 |

Source: JICA survey team through hearing to ULB, the above are not solely engaged in drainage works, but others also

(3) O&M Rule and Regulation

(a) Availability

According to the Local Government Acts (both for CC and Paurashava) those ULBs must have to maintain, protect and clean public drainage systems with due regard to the health and convenience of the public. However, ULBs don't have specific rules following the Act for drainage O&M.

(b) Actual Implementation

The general process of drainage cleaning is shown in the figure below. Conservancy/waste management division and civil section under the Engineering division are the relevant organizations to do need-based repair, maintenance and cleaning works. Though the individual implementation for O&M is recorded by the ULB and they pay money to the contractor, the total expenditure and location to the work done are not organized well.

According to result of hearings to ULBs, frequency of actual O&M activities is generally as follow.

- Repairing, Maintenance and cleaning of Drainage system is carried out on an ad-hoc basis to meet immediate priorities as the regular works.
- Cleaning of main canals that are connected to primary drains are done after three or four years, through tendering and engaging contractors;
- Cleaning of primary drains are done every year;

Cleaning of secondary and tertiary drains are done twice in a month in the rainy season and after three to four months in the dry season.

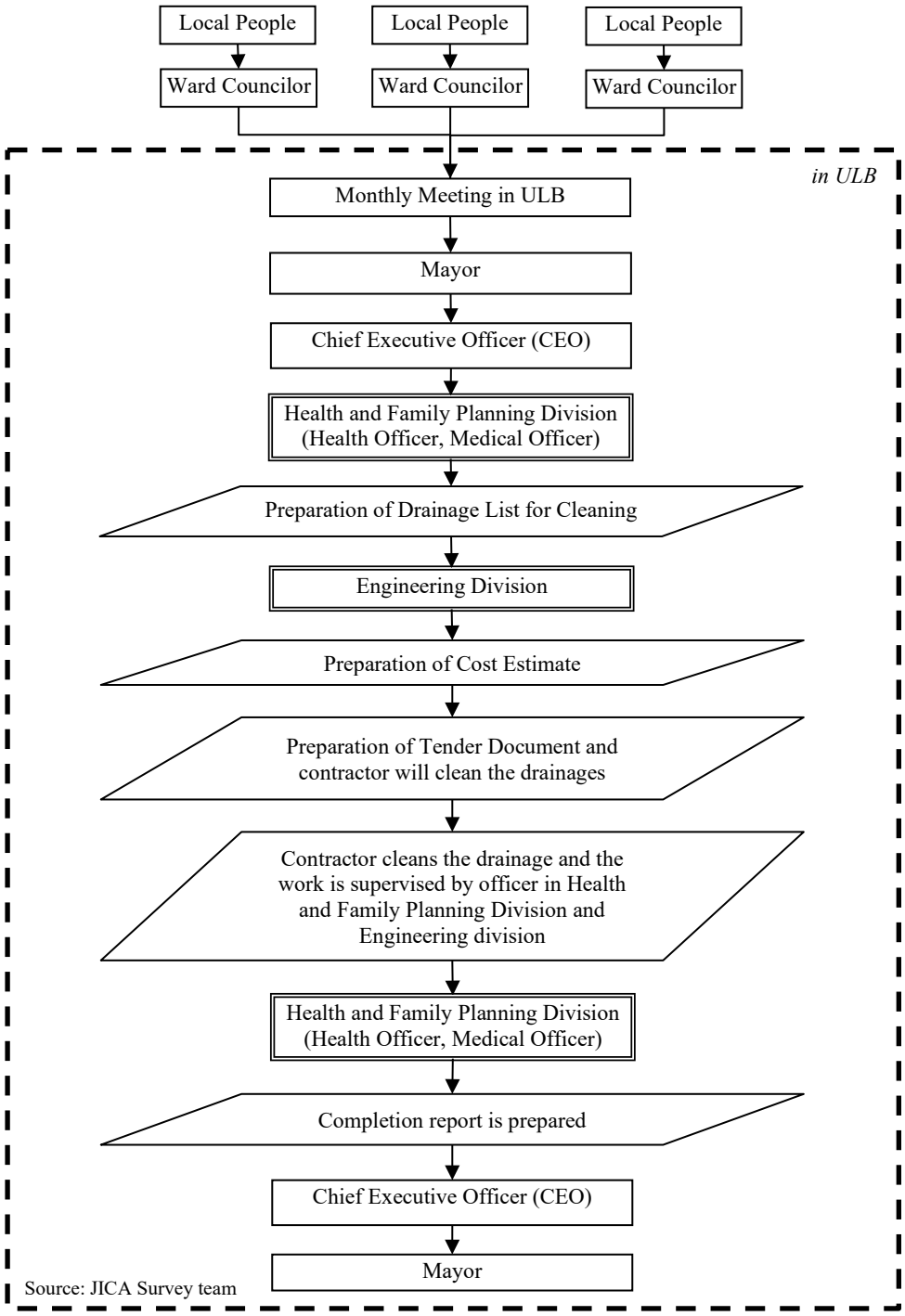



**Figure 4.4.1 General Process of Drainage Cleaning**

4.4.3 Water Supply

(1) O&M Income and Expenditure

O&M income and expenditure of water supply system provided by financial division of each ULBs are shown as below.

**Table 4.4.5 Actual Income and Expenditure**

| | GCC (2016-2017) | NCC (DWASA) (2017-2018) | CuCC (2016-2017) | CBP (2018-2019) |
|---|---|---|---|---|
| Income (BDT) | | | | |
| Water tariff | 114,117,708 | 98,473,379 | 7,132,110 | 3,168,422 |
| Connection fee | 1,654,741 | 2,060,800 | 3,119,534 | 143,200 |
| Others | 1,268,794 | 2,426,538 | 6,050 | 150,191 |
| Sub Total (BDT) | 117,041,243 | 102,960,717 | 10,257,694 | 3,461,813 |
| Expenditure (BDT) | | | | |
| Staff salary | 24,660,218 | 43,208,252 | 13,337,888 | 4,322,828 |
| Electricity cost | 42,872,145 | 149,067,049 | 1,264,102 | 11,007 |
| Repair and Renovation | 40,816,125 | | 155,605 | |
| Others | 5,903,119 | 32,400,000 | 227,839 | 182,103 |
| Sub Total (BDT) | 114,251,607 | 224,675,301 | 14,985,434 | 4,515,938 |
| Total Balance (BDT) | 2,789,636 | -121,714,584 | -4,727,740 | -1,054,125 |

*Source: GCC, DWASA, CuCC, CBP*

- Common

Independent accounting system is adopted in water supply section in each ULBs. Water tariff income is collected from each administrative division such as zone, ward, and district. Water tariff at each ULB is shown in Attachment 4.4.1.

Water tariff is collected from each administrative division and allocated as lump sum. Also, staff salary and O&M cost is disbursed from common revenue as current expenditure.

- Gazipur

At present, the balanced amount between revenue and expenditure is in plus due to the appropriate tariff collection system via direct bank deposit and water bill distribution by pump operators.

Water meter is not installed in each connection, and water tariff is charged by flat fare depending on the connection type. (ex. Φ25 mm-residential-800 BDT～ φ37mm-industrial-50,000 BDT)

Approximately 35 % of expenditure is paid out to repair and renovation cost, 35 % to electricity cost, and 20 % to staff salary. It shows the well-balanced budget in water supply section.

- Narayanganj

At present, the balanced amount between revenue and expenditure is in minus and covered by DWASA fund due to low water charge rate.

In NCC, Water meter is installed in each connection, and DWASA staff check the meter value every month. Also, web transaction system has been adopted for water tariff payment. However, low water charge rate is set for domestic use at 11.54 BDT/m3, and industry use at 37.04/ BDT/m3 (ex. general 1 household domestic use: 20 m3/month).

Therefore, water charge rate revision is required for fundamental management improvement with consensus building among subjected citizens.

- Cumilla

At present, the balanced amount between revenue and expenditure is in minus and covered by CuCC fund due to low tariff collection rate. In CuCC, pump operator distributes the bill and tariff collection system via direct bank deposit is adopted.

Water meter is not installed in each connection, and water tariff is charged by flat fare depending on the connection type. (ex. Φ25 mm-residential-600 BDT～ φ100mm-residential-100,000 BDT)

Also, water tariff collection rate remains 50 % each year. Therefore, strengthening of legislative action such as overdue charge and water supply interruption will be required for financial management improvement.

- Cox's Bazar

At present, the balanced amount between revenue and expenditure is in minus and the deficit is covered by CBP fund due to low water supply amount (approx.2,400 m3/day).

Water meter is not installed in each connection, and water tariff is charged by flat fare depending on the connection type. (ex. Φ25 mm-residential-550 BDT～ φ40mm-industrial-1,200 BDT).

After completion of proposed 2 subprojects, water supply amount will grow three hold (total 6,720 m3/day), and financial condition is expected to be improved by revenue increase.

(2) O&M Organization

O&M organization of water supply system of each ULBs are shown as below.

**Table 4.4.6 O&M Organization**

| Position | GCC | NCC (DWASA) | CuCC | CBP |
|---|---|---|---|---|
| Executive Engineer | 4 | 1 | 1 | 1 |
| Assistant Engineer | 2 | 1 | 1 | 1 |
| Sub Assistant Engineer | 1 | 4 | 4 | 0 |
| Pump Operator | 125 | 40 | 35 | 9 |
| Support Worker (not permanent) | 8 | 5 | 13 | 5 |
| Bill Clerk | 10 | 5 | 6 | 1 |
| Total | 150 | 56 | 59 | 17 |

*Source: GCC, DWASA, CuCC, CBP*

- Common

Ground water supply system with production tube well and distribution pipeline is mainly adopted, and operation of production tube well and water tariff collection from each corresponding beneficiary are executed by each pump operator. Also, Support worker is employed as non-permanent staff at the time of machinery failure and pipeline leakage. Water quality has not been periodically monitored across all target ULBs in general.

- Gazipur

Water supply section staff have managed 63 production tube well and 357 km pipeline and supplied the water to 450,000 citizens. However, they have not monitored water quality periodically and not grasped the detailed facility information of existing pipeline by the ledger of water supply facilities.

- Narayanganj

Water supply section staff of DWASA have managed 31 production tube well, pipeline, 2 water treatment plants and supplied the water to 120,000 citizens. However, they have not monitored water quality periodically and not grasped the detailed facility information of existing pipeline by the ledger of water supply facilities.

The water supply management body will be transferred from DWASA to NCC from October 2019 through transition period for 2 years. At present, water supply section staff of NCC is composed of only 2 assistant engineers and planned to be gradually expanded in the near future.

- Cumilla

Water supply section staff have managed 23 production tube well and 165 km pipeline and supplied the water to 19,000 citizens. However, they have not monitored water quality periodically and not grasped the detailed facility information of existing pipeline by the ledger of water supply facilities.

- Cox's Bazar

Water supply section staff have managed 8 production tube well and 50 km pipeline and suppled the water to 12,000 citizens. However, they have not monitored water quality periodically and not grasped the detailed facility information of existing pipeline by the ledger of water supply facilities.

(3) O&M Rule and Regulation

Rule and regulation for water supply facility inspection, maintenance, operation, and asset management is not stipulated in Bangladesh.

Therefore, water supply facility such as intake pump, distribution pipeline, and chlorine dosing unit, etc. is not inspected in regular basis and repaired on an ad hoc basis at individual discretion.

Also, each water supply section has not kept a precise record of water supply facilities after construction work due to lack of official format of the record and corresponding staff. Therefore, it obstructs the effective repairment work and asset management activity.

In addition, water flow, pressure, and quality have not recorded in each water supply point from lack of official format of the record and corresponding staff. Therefore, it obstructs the grasping the current situation of water supply system.

4.4.4 Solid Waste Management

(1) O&M Expenditure

The account for solid waste management is separated as the account of conservancy division in each ULB. However, the account includes the operation and maintenance cost of grave or cleansing of drainage. Therefore, only the O&M expenditure related to solid waste management is separated from the account for this analysis. The financial source of solid waste management is basically from holding tax. The maximum utilization rate of holding tax for solid waste management is stipulated as 7% and each ULB utilize 2 to 7% (it is called as conservancy rate) of holding tax for the operation and maintenance for solid waste management. In case of the lack of budget by conservancy rate is not sufficient for the expenditure of the fiscal year, general account supports the required deficient portion.

As the expenditure related to the operation and maintenance of solid waste management, it includes personnel cost and fuel cost of collection vehicles and heavy equipment and the maintenance cost of collection vehicle and heavy equipment. This expenditure includes the contract work with private company. Basically, the operation of collection vehicles such as dump truck or compactor or heavy equipment and daily and comparatively easy maintenance activity of collection vehicle is implemented by each ULB but the maintenance of heavy equipment or collection vehicle exchange, which is comparatively difficult is contracted-out with private company by each ULB. In addition, GCC rentals pay loader, wheel loader and dump truck for urgent necessary situation.

The operation and maintenance yearly expenditure and proposed budget in a specific year is shown as follows.

1) GCC

In case of GCC, the personnel cost of cleansing staff occupies around 60% of total expenditure in 2016-2017. The fuel cost is almost 20% and the remaining is used for maintenance of equipment and other purposes of land acquisition or rental fee of equipment. The budget in 2018-2019 increase

from 2016-2017. This budget can be owned by the account of conservancy rate of holding tax and general account.

**Table 4.4.7 Budget and O&M Expenditure in GCC**

| Solid Waste Management | Expenditure | Revised budget cost | Next year budget | Remark |
|---|---|---|---|---|
| | 2016-2017 | 2017-2018 | 2018-2019 | |
| Clean workers salary | 79,098,000 | 75,000,000 | 160,000,000 | Personnel cost |
| Conservancy vehicles fuel | 27,001,000 | 27,500,000 | 30,000,000 | Operation cost |
| Purchase of solid waste cleaning materials | 5,850,000 | 4,000,000 | 5,500,000 | Safety material, sweeper, etc |
| Repair of collection vehicle | 0 | 1,000,000 | 12,000,000 | Maintenance cost |
| Rental fee of pay loader, wheel loader, dump truck | 19,435,000 | 15,500,000 | 20,000,000 | Rental fee |
| Drainage & solid waste Cleaning | 1,020,000 | 2,500,000 | 3,000,000 | Contract work |
| Other | 0 | 0 | 1,000,000 | |
| Total | 132,404,000 | 125,500,000 | 381,500,000 | |

*Source: JICA survey team through hearing to ULB*

2) NCC

In case of NCC, the personnel cost of cleansing staff occupies around 65% of total expenditure in 2016-2017. The fuel cost is almost 20% and the remaining is used for maintenance of equipment and other purposes of land acquisition or contract work, etc. The budget in 2018-2019 increase from 2016-2017. This budget can be owned by the account of conservancy rate of holding tax and general account.

**Table 4.4.8 Budget and O&M Expenditure in NCC**

| Solid Waste Management | Expenditure | Revised budget cost | Next year budget | Remark |
|---|---|---|---|---|
| | 2016-2017 | 2017-2018 | 2018-2019 | |
| Clean workers salary | 24,987,000 | 30,000,000 | 50,000,000 | Personnel cost |
| Conservancy vehicles fuel | 7,641,000 | 8,000,000 | 20,000,000 | Operation cost |
| Drainage & solid waste cleaning | 4,417,000 | 5,000,000 | 15,000,000 | Operation cost (contract work) |
| Sanitation Activities Implementation | 254,000 | 50,000 | 2,000,000 | Operation cost (contract work) |
| Daily solid waste cleaning Materials buy | 952,000 | 1,000,000 | 2,000,000 | Maintenance cost |
| Repair of collection vehicle | 0 | 1,200,000 | 5,000,000 | Maintenance cost |
| Total | 38,251,000 | 45,250,000 | 114,000,000 | |

*Source: JICA survey team through hearing to ULB*

3) CuCC

In case of CuCC, the personnel cost of cleansing staff occupies around 83% of total expenditure in 2016-2017. The fuel cost is almost 14% and the remaining is used for maintenance of equipment and other purposes of land acquisition or contract work, etc. The budget in 2018-2019 increase from 2016-2017. This budget can be owned by the account of conservancy rate of holding tax and general account.

**Table 4.4.9 Budget and O&M Expenditure in CuCC**

| Solid Waste Management | Expenditure | Revised budget cost | Next year budget | Remark |
|---|---|---|---|---|
| | 2017-2018 | 2018-2019 | 2019-2020 | |
| Labor Payment (daily basis) | 41,632,000 | 50,000,000 | 60,000,000 | Personnel cost |
| Maintains cost (drainage) | 9,000 | 100,000 | 200,000 | Personnel cost |
| Fuel cost for garbage car and heavy equipment fuel | 7,067,000 | 10,500,000 | 12,000,000 | Operation cost |

| Solid Waste Management | Expenditure | Revised budget cost | Next year budget | Remark |
|---|---|---|---|---|
| | 2017-2018 | 2018-2019 | 2019-2020 | |
| Garbage car maintains cost including payloader, excavator bulldozer | 575,000 | 1,000,000 | 1,200,000 | Maintenance cost |
| Garbage materials/ trolley /Rickshaw van maintenance cost | 791,000 | 1,000,000 | 1,200,000 | Maintenance cost |
| Total | 50,143,000 | 62,800,000 | 75,100,000 | |

*Source: JICA survey team through hearing to ULB*

4) Cox's Bazar

In case of CBP, the personnel cost of cleansing staff occupies more than 60% of total expenditure in 2016-2017. The fuel cost is almost 25% and the remaining is used for maintenance of equipment and other purposes of land acquisition or contract work, etc. The budget in 2018-2019 increase from 2016-2017. This budget can be owned by the account of conservancy rate of holding tax and general account.

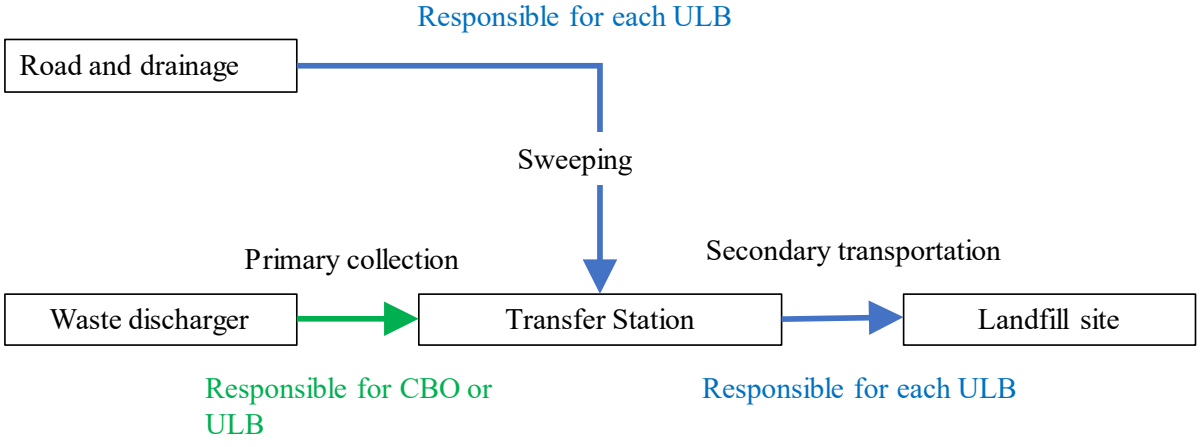
**Table 4.4.10 Budget and O&M Expenditure in CBP**

| 5) Solid Waste Management | Expenditure | Revised budget cost | Next year budget | Remark |
|---|---|---|---|---|
| | 2017-2018 | 2018-2019 | 2019-2020 | |
| Cleaning and maintaining drainage | 8,405,000 | 13,180,522 | 9,000,000 | Personnel cost |
| Cleaning of garbage (only not permanent staff) | 1,726,000 | 8,453,360 | 4,800,000 | Personnel cost |
| Garbage collection Fuel | - | 3,872,160 | - | Operation cost |
| Management of sanitation activities | 520,000 | 809,200 | 1,000,000 | Operation cost (contract work) |
| Solid waste cleaning Materials buy | 410,000 | 360,000 | 550,000 | Maintenance cost |
| Other | 81,000 | 239,488 | 400,000 | |
| Total | 11,142,000 | 23,042,570 | 15,750,000 | |

*Source: JICA survey team through hearing to ULB*

(2) O&M Organization (organization &staff number)

Each ULB has the responsibility of sweeping and cleansing of road and drainage, primary collection (in case of NCC), waste transfer, secondary transportation and landfill activity. Therefore, conservancy section has the staff of drivers, collectors, sweepers and landfill operators and their supervisors. The overall situation of solid waste management activities is shown in the following figure.




*Source: JICA survey team through hearing to ULB*

**Figure 4.4.2 Overall situation of Solid Waste Management**

1) Gazipur

In GCC, chief and assistant chief solid waste management officer manage the activities of solid waste management in each zone of zone 1 to zone 8. There is no engineer of solid waste management who has technical knowledge. The conservancy inspector manages the transfer stations in each zone, but the number is not enough for the monitoring. There are many road and drainage cleansing staff but the work is not effectively implemented with supervision of conservancy inspector or field supervisor. The primary collection is implemented by CBOs and the waste is temporarily stored in transfer station along roads until wheel loader or bulldozer bring the waste load to secondary transportation vehicles in the T/S. The number of persons related to solid waste management in GCC is shown as Table 4.4.11.

**Table 4.4.11 Organization regarding O&M in GCC**

| Position | Permanent | Non-permanent | Total | Role and responsibility |
|---|---|---|---|---|
| Chief waste management officer | 1 | 0 | 1 | Supervise all the staff |
| Assistant chief waste management officer | 1 | 0 | 1 | Supervise ward supervisor and landfill activity |
| Engineers of solid waste management | 0 | 0 | 0 | Planning and designing solid waste management system and facility |
| Conservancy inspector | 1 | 0 | 1 | Supervise transfer station and cleaning situation in ward level |
| Field supervisor/monitor | 4 | 2 | 6 | Supervise transfer station and cleaning situation in ward level |
| Road and drainage cleaning staff | 0 | 323 | 323 | Sweeping road and cleansing drainage |
| Secondary transportation driver | 7 | 36 | 43 | Drive secondary transportation vehicles from T/S to landfill site |
| Secondary transportation helper | 0 | 43 | 43 | Help Drive collection vehicles from T/S to landfill site |
| Heavy equipment operator | 0 | 6 | 6 | Operate heavy equipment |
| Staff in landfill site | 0 | 0 | 0 | Assist and monitor landfill activities, etc |
| Total | 14 | 410 | 424 | |

*Source: JICA survey team through hearing to ULB*

2) Nrayanganj

In NCC, chief solid waste management officer manages the activities of solid waste management in each ward. There is no engineer of solid waste management who has technical knowledge. The conservancy inspector manages the transfer stations in each zone, but the number is not enough for the monitoring. There are many road and drainage cleansing staff but the work is not effectively implemented with supervision of conservancy inspector or field supervisor. The primary collection is implemented by NCC and the waste is temporarily stored in transfer station along roads until wheel loader or bulldozer bring the waste load to secondary transportation vehicles in the T/S.

The number of persons related to solid waste management in NCC is shown as Table 4.4.12.

**Table 4.4.12 Organization regarding O&M in NCC**

| Position | Permanent | Non-permanent | Total | Role and responsibility |
|---|---|---|---|---|
| Chief waste management officer | 1 | 0 | 1 | Supervise all the staff |
| Assistant chief waste management officer | 3 | 0 | 3 | Supervise ward supervisor and landfill activity |
| Engineers of solid waste management | 2 | 2 | 4 | Planning and designing solid waste management system and facility |

| Position | Permanent | Non-permanent | Total | Role and responsibility |
|---|---|---|---|---|
| Conservancy supervisor | 6 | 9 | 15 | Supervise transfer station and cleaning situation in ward level |
| Road and drainage cleaning staff | 0 | 227 | 227 | Sweeping road and cleansing drainage |
| Primary collection driver/helper | 0 | 597 | 597 | Collect solid waste and transport to Transfer Station (T/S) |
| Secondary transportation driver | 4 | 18 | 22 | Drive secondary transportation vehicles from T/S to landfill site |
| Secondary transportation helper | 0 | 43 | 43 | Transfer the waste at T/S from primary collection to secondary transportation vehicle |
| Heavy equipment operator in landfill site | 1 | 6 | 7 | Operate heavy equipment |
| Staff in landfill site | 0 | 0 | 0 | Assist and monitor landfill activities, etc |
| Total | 17 | 902 | 919 | |

*Source: JICA survey team through hearing to ULB*

3) Cumilla

In case of CuCC, chief solid waste management officer manages the activities of solid waste management in each ward. CBO and CuCC implement both the primary collection. Around 350 persons in CBOs participates in the primary collection. Secondary transportation is implemented by CuCC after the transfer of waste from primary collection vehicle. Conservancy supervisor implements periodic monitoring solid waste in T/S or other sites.

The number of persons related to solid waste management in CuCC is shown as Table 4.4.13.

**Table 4.4.13 Organization regarding O&M in CuCC**

| Position | Permanent | Non-permanent | Total | Role and responsibility |
|---|---|---|---|---|
| Chief waste management officer | 1 | 0 | 1 | Supervise all the staff |
| Assistant chief waste management officer | 0 | 0 | 0 | Assist chief waste management officer |
| Conservancy inspector | 0 | 0 | 0 | Supervise transfer station and cleaning situation in ward level |
| Conservancy supervisor (field supervisor/monitor) | 0 | 49 | 49 | Supervise transfer station and cleaning situation in ward level |
| Office staff | 0 | 5 | 5 | Responsibility of administrative matter |
| Road and drainage cleaning staff | 0 | 89 | 89 | Sweeping road and cleansing drainage |
| Primary collection driver and helper | 0 | 45 | 45 | Collect solid waste and transport to T/S |
| Secondary transportation driver | 3 | 31 | 34 | Drive secondary transportation vehicles from T/S to landfill site |
| Secondary transportation helper | 2 | 97 | 99 | Help Drive collection vehicles from T/S to landfill site |
| Heavy equipment operator in landfill site | 0 | 4 | 4 | Operate heavy equipment |
| Other staff regarding landfill | 0 | 5 | 5 | Assist and monitor landfill activities, etc |
| Mechanic | 0 | 2 | 2 | |
| Total | 6 | 327 | 333 | |

*Source: JICA survey team through hearing to ULB*

4) Cox's Bazar

In case of CBP, chief solid waste management officer manages the activities of solid waste management in each ward. CBOs implement the primary collection and transport the waste to T/S. The number of staffs related to primary collection in CBO is around 160 to 170 persons. There is no concrete plan of collection and transportation time.

The number of persons related to solid waste management in CBP is shown as Table 4.4.14.

**Table 4.4.14 Organization regarding O&M in CBP**

| Position | Permanent | Non-permanent | Total | Role and responsibility |
|---|---|---|---|---|
| Chief waste management officer | 1 | 0 | 1 | Supervise all the staff |
| Assistant chief waste management officer | 0 | 0 | 0 | Supervise ward supervisor and landfill activity |
| Office staff | 0 | 1 | 1 | Responsibility of administrative matter |
| Conservancy inspector | 0 | 0 | 0 | Supervise transfer station and cleaning situation in ward level |
| Field supervisor/monitor | 3 | 11 | 14 | Supervise transfer station and cleaning situation in ward level |
| Road and drainage cleaning staff | 0 | 148 | 148 | Sweeping road and cleansing drainage |
| Secondary transportation driver | 1 | 8 | 9 | Drive secondary transportation vehicles from T/S to landfill site |
| Secondary transportation helper | 0 | 22 | 22 | Help Drive collection vehicles from T/S to landfill site |
| Heavy equipment operator in landfill site | 0 | 2 | 2 | Operate heavy equipment |
| Staff in landfill site | 0 | 2 | 2 | Assist and monitor landfill activities, etc |
| Total | 5 | 194 | 199 | |

*Source: JICA survey team through hearing to ULB*

(3) O&M Rule and Regulation (availability and their actual implementation)

There is no rule and regulation regarding operation and maintenance in each ULB.

They operate the system of solid waste management based on their own experiences. For example, there is no record of waste stream such as waste generation, collection, disposal quantity and the daily record of primary collection, waste transfer, secondary transportation. There is no record of primary collection, waste transfer and secondary transportation like collected waste quantity or the time for collection, transfer and transportation.

Regarding the maintenance, there are written record of equipment and facilities but the capacity of equipment such as compactor vehicle, dump truck, wheel loader or bulldozer are not recorded precisely and the specification of the facilities such as dumping site has not been recorded yet. There is no maintenance record of each equipment and facility and the maintenance activity is implemented ad-hoc basis.

4.4.5 Other Infrastructure

(1) O&M Expenditure

(a) Street Light

Street lights require regular maintenance; replacement of light and switching on-off. In the area where applies incandescent lamp, people have to operate the switching board every day and ULB pay operation fee for the in-charge person who was selected because he/she lives near the switching

controller and replacement fee for the lamps. In real practice, paying the electricity bills and purchasing relevant electronic goods are the regular expenditures.

(b) Other infrastructure (Community Center and open space/Park/Playground)

There are cases that Cities and Paurashava have practices on leasing out of own resources like community center and city park for daily operation and maintenance. Or ULBs spend some money to clean and operated the facilities at minimum basis.

(2) O&M Organization

(a) Street Light

Electricity and Mechanical Engineers are managing all electrical systems in the CC and Paurashava.

The staff number is as follows.

**Table 4.4.15 Number of existing staff related to Street Light O&M**

| | GCC | NCC | CuCC | CBP |
|---|---|---|---|---|
| **Engineering Division** | | | | |
| Electric and Mechanical Section | 3 | 5 | 0 | 38 |

Source: JICA Survey team through hearing to Engineer in ULB

(b) Other infrastructure (Community Center and Open space/ Park etc.)

Community center and City park etc. are managed in the same way as drainage maintenance system by on-demand basis. Engineering division are also responsible to repair the community center and Public space/play ground in case some repairing works are necessary.

(3) O&M Rule and Regulation

According to the Local Government Acts (both for CC and Paurashava), for these Other Infrastructure e.g. street light, public space/playground, community center, ULBs must need to take necessary steps for proper operation and maintenance. However they don't have any specific rule under the Act.

## 4.5 Procurement and Contract Management

### 4.5.1 Tendering System of Similar Donor-funded Projects

(1) Tendering and Contract of Civil Works

1) Applicable Procurement Guidelines

Under all of the 3 donor-funded projects (ICGP, UGIIP-3 and MGSP), the procurement of works in case of Local Competitive Bidding (LCB) / National Competitive Bidding (NCB)[2] is carried out in accordance with the Public Procurement Act 2006 (PPA), Bangladesh Public Procurement Rules 2008 (PPR), the e-GP guideline 2011 and the each donor's procurement guidelines (ICGP: Guidelines for Procurement under Japanese ODA Loans (April 2012), UGIIP-3: ADB's Procurement Guidelines (March 2013), MGSP: Guidelines: Procurement under IBRD Loans and IDA Credits (January 2011)).

However, although all the donors (JICA, ADB and WB) allow to apply PPA/PPR in case of LCB/NCB, several amendments of PPA/PPR are made by the donors as follow.

ICGP:

- Use of lottery for contracts shall not be allowed;
- No qualification / experience requirements shall not be allowed; and

[2] LCB/NCB is the competitive bidding procedure used for public procurement in the country of the borrower. JICA calls this procedure as LCB, while ADB and WB call this procedure as NCB.

- Rejection of bids above or below 5 percent of the contract estimate shall not be allowed.

UGIIP-3

- Submission of bids to 'primary' and 'secondary' locations, or 'multiple droppings' of bids, shall not be required or allowed. Advertisements and bidding documents shall specify only one location for delivery of bids;
- Bids shall not be invited on the basis of percentage above or below the estimated cost, and contract award shall be based on the lowest evaluated bid price of responsive bid from eligible and qualified bidder;
- A lottery system shall not be used to determine a successful bidder, including for the purpose of resolving deadlocks; and
- Bids shall not be rejected, and new bids solicited without ADB's prior concurrence.

MGSP:

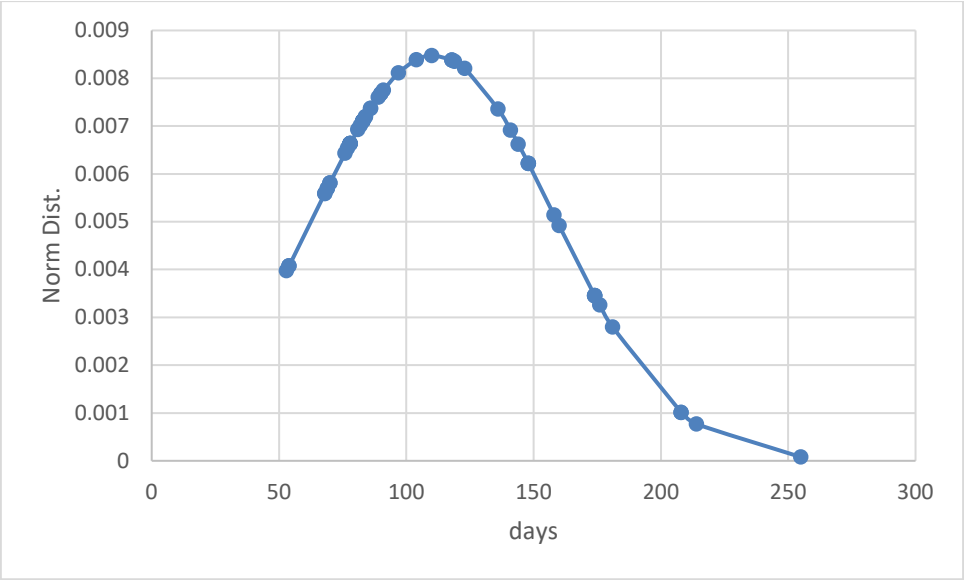
- Post bidding negotiations shall not be allowed with the lowest evaluated or any other bidder;
- Bids should be submitted and opened in public in one location immediately after the deadline for submission;
- Lottery in award of contracts shall not be allowed;
- Bidders' qualification/experience requirement shall be mandatory;
- Bids shall not be invited or rejected on the basis of percentage above or below the estimated cost and contract award shall be based on the lowest evaluated bid price of compliant bid from eligible and qualified bidder; and
- Single stage two (2) envelope procurement system shall not be allowed.

The threshold to apply LCB/NCB are different among 3 projects. Under ICGP, all of the procurement of works is implemented by LCB since the estimated contract cost of the subprojects are too small to apply International Competitive Bidding (ICB). Under UGIIP-3, in case that the estimated contract cost of the subprojects is less than USD 4 million, NCB is allowed. Under MGSP, in case that the estimated contract cost of the subprojects is less than USD 10 million, NCB is allowed.

2) Required Time of Procurement

In accordance with Clause 20 of PPR 2008, the Procuring Entity (PE) shall complete evaluation of Tenders and award of Contract within the initial period of Tender validity which is set normally between 60 days and 120 days from the date of submission of tender. The time required for tenderers to prepare tenders is set normally 28 days. Considering the above, the total required days from the date of advertisement to the date of Notification of Award is set 148 days normally. In case of ICGP, the required time was estimated at 4-5 months at the appraisal time, which is almost match with the total required days.

The Survey Team reviewed the actual required time of procurement of subprojects in GCC, CuCC and NCC under ICGP, and that in CBP under UGIIP-3. The average required time is 111 days and the standard deviation is 47 days from 59 of data-accessible procurement packages. The figure of the normal distribution is shown in Figure 4.5.1. The detailed result of the actual required time is as shown in Table 4.5.1-4. 19 subprojects out of 22 (86%) in GCC, 14 subprojects out of 16 (88%) in CuCC, 13 subprojects out of 14 (93%) in NCC, no subprojects out of 7 (0%) in CBP were completed within 148 days.




*Source: Compiled by JICA Survey Team based on National e-Government Procurement (e-GP) Portal of the Government of the People's Republic of Bangladesh*

**Figure 4.5.1 Normal Distribution of Required Days for Procurement Process**

**Table 4.5.1 Required Time of Procurement of Subprojects in GCC under ICGP**

| No. | Types of Works | Date of Advertisement | Date of Notification of Award | Duration |
|---|---|---|---|---|
| Batch 1 | | | | |
| 1 | Road & Culvert | 2015/10/29 | 2016/01/07 | 70 |
| 2 | Road & Culvert | 2015/03/11 | 2015/08/16 | 158 |
| 3 | Road | 2015/11/24 | 2016/02/14 | 82 |
| 4 | Drain | 2015/10/19 | 2016/03/03 | 136 |
| 5 | Road | 2015/11/10 | 2016/02/07 | 89 |
| 6 | Drain | 2015/10/19 | 2016/01/13 | 86 |
| 7 | Road | 2015/03/11 | 2015/08/02 | 144 |
| 8 | Road | N/A | N/A | N/A |
| 9 | Drain | 2015/03/11 | 2015/07/30 | 141 |
| Batch 2 | | | | |
| 1 | Road | 2017/05/15 | 2017/10/22 | 160 |
| 2 | Road & Drain | 2017/03/15 | 2017/05/31 | 77 |
| 3 | Road | 2017/01/11 | 2017/03/22 | 70 |
| 4 | Drain | 2016/11/13 | 2017/01/30 | 78 |
| 5 | Road & Drain | 2017/07/05 | 2017/11/01 | 119 |
| 6 | Road | 2017/02/14 | 2017/04/23 | 68 |
| 7 | Drain | 2016/12/07 | 2017/03/07 | 90 |
| 8 | Road | 2017/11/05 | 2018/01/22 | 78 |
| 9 | Road | 2017/01/11 | 2017/03/21 | 69 |
| 10 | Road | 2017/01/11 | 2017/03/21 | 69 |
| 11 | Drain | 2016/11/13 | 2017/01/30 | 78 |
| 12 | Road | 2017/02/14 | 2017/04/23 | 68 |
| 13 | Drain | 2016/11/24 | 2017/02/08 | 76 |
| 14 | Tube well pump | 2018/08/05 | 2018/12/31 | 148 |

*Source: Compiled by JICA Survey Team based on National e-Government Procurement (e-GP) Portal of the Government of the People's Republic of Bangladesh*

**Table 4.5.2 Required Time of Procurement of Subprojects in CuCC under ICGP**

| No. | Types of Works | Date of Advertisement | Date of Notification of Award | Duration (Days) |
|---|---|---|---|---|
| Batch 1 | | | | |
| 1 | Road & Drain | 2015/05/20 | 2015/09/07 | 110 |
| 2 | Road & Drain | N/A | N/A | N/A |
| 3 | Road | 2015/03/18 | 2015/06/09 | 83 |
| 4 | Road & Drain | 2015/01/28 | 2015/04/16 | 78 |
| 5 | Road & Drain | 2015/05/20 | 2015/09/01 | 104 |
| 6 | Road & Culvert | 2015/02/18 | 2015/08/13 | 176 |
| 7 | Road | 2015/01/28 | 2015/03/23 | 54 |
| 8 | Road | N/A | N/A | N/A |
| 9 | Energy Saving Light | 2015/01/28 | 2015/03/23 | 54 |
| Batch 2 | | | | |
| 1 | Road | 2017/09/11 | 2017/11/28 | 78 |
| 2 | Road & Drain | 2018/01/02 | 2018/05/30 | 148 |
| 3 | Road | 2018/01/02 | 2018/05/30 | 148 |
| 4 | Bridge | 2017/09/11 | 2017/11/28 | 78 |
| 5 | Canal | 2018/04/28 | 2018/06/20 | 53 |
| 6 | Tube-wells | 2018/04/20 | 2018/11/20 | 214 |
| 7 | Street Lighting | 2017/09/11 | 2018/01/07 | 118 |
| 8 | Drain & Footpath | 2017/09/11 | 2018/01/07 | 118 |
| 9 | Road & Drain | 2017/09/11 | 2017/11/28 | 78 |

*Source: Compiled by JICA Survey Team based on National e-Government Procurement (e-GP) Portal of the Government of the People's Republic of Bangladesh*

**Table 4.5.3 Required Time of Procurement of Subprojects in NCC under ICGP**

| No. | Types of Works | Date of Advertisement | Date of Notification of Award | Duration (Days) |
|---|---|---|---|---|
| Batch 1 | | | | |
| 1 | Road | 2015/06/09 | 2015/09/07 | 90 |
| 2 | Street Lighting | 2015/01/18 | 2015/04/12 | 84 |
| 3 | Street Lighting | 2015/01/18 | 2015/04/12 | 84 |
| Batch 2 | | | | |
| 1 | Bridge | 2016/11/14 | 2017/02/05 | 83 |
| 2 | Bridge | 2016/11/14 | 2017/02/05 | 83 |
| 3 | Culvert & Bridge | 2016/11/14 | 2017/02/05 | 83 |
| 4 | Road & Drain | 2017/02/01 | 2017/05/03 | 91 |
| 5 | Road | 2017/02/01 | 2017/05/09 | 97 |
| 6 | Road & Drain | 2017/03/27 | 2017/06/21 | 86 |
| 7 | Road & Drain | 2017/06/19 | 2017/09/10 | 83 |
| 8 | Drain | 2017/06/19 | 2017/09/10 | 83 |
| 9 | Road & Drain | 2017/06/21 | 2017/09/10 | 81 |
| 10 | Bridge | 2018/07/04 | 2018/11/04 | 123 |
| 11 | Canal | 2018/09/06 | 2019/05/19 | 255 |

*Source: Compiled by JICA Survey Team based on National e-Government Procurement (e-GP) Portal of the Government of the People's Republic of Bangladesh*

**Table 4.5.4 Required Time of Procurement of Subprojects in CBP under UGIIP-3**

| No. | Types of Works | Date of Advertisement | Date of Notification of Award | Duration (Days) |
|---|---|---|---|---|
| 1 | Road & Culvert | 2017/06/08 | 2017/12/06 | 181 |
| 2 | Road & Drain | 2017/06/08 | 2017/11/29 | 174 |
| 3 | Road & Drain | 2017/06/08 | 2017/11/29 | 174 |
| 4 | Drain | 2017/06/08 | 2017/11/29 | 174 |
| 5 | Drain & Culvert | 2017/06/08 | 2017/11/29 | 174 |
| 6 | Drain | 2018/05/03 | 2018/11/27 | 208 |
| 7 | Drain | 2018/05/03 | 2018/11/27 | 208 |

*Source: Compiled by JICA Survey Team based on National e-Government Procurement (e-GP) Portal of the Government of the People's Republic of Bangladesh*

(2) General Information of Consultants

2 characteristics in Bangladeshi consultants are found out in this survey.

First characteristic is that hiring consulting firm is not so common in public development project using GOB own fund. In accordance with e-GP portal, no engineering consulting firm is awarded through e-GP system, although IT consulting firm was selected in only 2 IT projects. Furthermore, in accordance with the interview with engineers in LGED and ULBs, in case of GOB's own-funded project, these engineers design, procure and supervise construction works without any support from engineering consulting firms normally, although some individual consultants may be hired temporary in case of necessity.

The other characteristic is that most of consulting firms are located in Dhaka. The Table 4.5.5 shows the list of consulting firm which have applied the consulting service selection as a member of joint venture under Japanese ODA Loans in the last 5 years (i.e. 2014 – 2018) and its location of head office in Bangladesh. All of the applied consulting firms are located in Dhaka. The engineers in LGED and ULBs also pointed out that there are less capable consulting firm in local in the interview. As mentioned in the above, since there are fewer public projects in which consulting firm can participate especially in local, the consulting firms tend to establish their office in Dhaka.

**Table 4.5.5 List of Consulting Firms in Bangladesh and its Location**

| No. | Name of Consulting Firm | Location |
|---|---|---|
| 1 | ACE Consultants Ltd | Dhaka |
| 2 | AQUA Consultant & Associates Limited | Dhaka |
| 3 | Associates for Development Services Limited | Dhaka |
| 4 | BCL Associates Limited | Dhaka |
| 5 | BD TECHNOLOGY | Dhaka |
| 6 | BETS Consulting Services Limited | Dhaka |
| 7 | Center for Natural Resource Studies | Dhaka |
| 8 | Centre for Urban Studies | Dhaka |
| 9 | Desh Upodesh Limited | Dhaka |
| 10 | DeshConsultants(Pvt) Ltd | Dhaka |
| 11 | Design Planning & Management Consultants Limited | Dhaka |
| 12 | DevConsultants Limited | Dhaka |
| 13 | Development Design Consultants Ltd. | Dhaka |
| 14 | Development Technical Consultants Ltd | Dhaka |
| 15 | E.Gen Consultants Ltd. | Dhaka |
| 16 | Engineering and Planning Consultants Ltd. | Dhaka |
| 17 | Engineers And Consultants Bangladesh Ltd | Dhaka |
| 18 | Eusuf and Associates | Dhaka |
| 19 | Grant Thornton Bangladesh | Dhaka |
| 20 | HB Consultants Limited | Dhaka |
| 21 | House of Consultants Ltd. | Dhaka |
| 22 | Human Development Research Centre | Dhaka |
| 23 | Infrastructure Investment Facilitation Company | Dhaka |
| 24 | Keystone Business Support Company Limited | Dhaka |
| 25 | Kranti Associates Ltd. | Dhaka |
| 26 | KS Consultants Ltd. | Dhaka |
| 27 | Murshed Associates Ltd. | Dhaka |
| 28 | Pathmark Associates Limited | Dhaka |
| 29 | Prokaushali Sangsad Ltd | Dhaka |

| No. | Name of Consulting Firm | Location |
|---|---|---|
| 30 | Resource Planning and Management Consultants (Pvt.) Ltd. | Dhaka |
| 31 | SARM Associates Limited | Dhaka |
| 32 | Services and Solutions International Ltd | Dhaka |
| 33 | SODEV CONSULT | Dhaka |
| 34 | Technoconsult International Limited | Dhaka |
| 35 | Uniconsult International Limited | Dhaka |
| 36 | Unnayan Shamannay | Dhaka |
| 37 | Young consultants | Dhaka |

*Source: Compiled by JICA Survey Team based on JICA's Web site (https://www.jica.go.jp/activities/schemes/finance_co/about/ result.html)*

(3) General Information of Contractors

Unlike the consulting firms as mentioned in the above, contractors are located in all over Bangladesh. Table 4.5.6-9 show the list of awarded contractors of each ULB under ICGP/MGSP and its location of head office. As shown in these tables, many contractors are awarded from other than Dhaka and, out of them, some contractors are awarded from the same place of ULBs. However, in accordance with the engineers from LGED and ULBs, in general, the capacity of local contractors is less than that of urban contractors like Dhaka or Chittagong. Sometimes, since the financial status of the local contractors is low and such local contractor cannot provide the bid security at the time of the tender submission, they can only participate the project as subcontractors of an urban contractor.

From the interview with engineers in LGED and ULBs, some ULBs had difficulty to manage prime contractors which subcontracted most of the works to local subcontractors. Since prime contractors are stationed in a big city like Dhaka or Chittagong, the target ULBs could not instruct such prime contractors timely to supervise the local poor-performed subcontractors. In order to avoid such difficulty, CBP inserted the condition in the tender documents that subcontract shall not be allowed.

In general, Bangladeshi contractors have heavy equipment required for construction work, since such heavy equipment is specified as the requirement of participating the tender in the tender documents.

**Table 4.5.6 List of Awarded Contractors of Subprojects in GCC under ICGP**

| No. | Types of Works | Name of Contractor | Location |
|---|---|---|---|
| Batch 1 | | | |
| 1 | Road & Culvert | Ha-mim International & Mohiuddin Ahmed (J.V) | Madaripur |
| 2 | Road & Culvert | Mesba-Mithu (JV) | Chittagong |
| 3 | Road | RAKA ENTERPRISE (JV) | Rajshahi |
| 4 | Drain | Ha-mim International & Mohiuddin Ahmed (J.V) | Madaripur |
| 5 | Road | UDC-MAQ (JV) | Dhaka |
| 6 | Drain | M/S Hamim International | Madaripur |
| 7 | Road | Ha-mim International & Mohiuddin Ahmed (J.V) | Madaripur |
| 8 | Road | N/A | N/A |
| 9 | Drain | Mesba-Mithu (JV) | Chittagong |
| Batch 2 | | | |
| 1 | Road | RAB-RC (PVT) LIMITED & M/S.Dawn Corporation (JV) | Dhaka |
| 2 | Road & Drain | CDC - NPIL JV | Dhaka |
| 3 | Road | MRC & KH (JV) | Rajshahi |
| 4 | Drain | MRC & KH (JV) | Rajshahi |
| 5 | Road & Drain | M/S. Kohinoor Enterprise and Combined Development Corporation and National Polymer Industries Limited JV. | Dhaka |
| 6 | Road | Wahid Construction Ltd. | Dhaka |
| 7 | Drain | MDJ Associates | Gazipur |

| No. | Types of Works | Name of Contractor | Location |
|---|---|---|---|
| 8 | Road | NT-MMB JV | Dhaka |
| 9 | Road | MAQ ENGINEERING LTD. | Dhaka |
| 10 | Road | Wahid Construction Ltd. | Dhaka |
| 11 | Drain | MRC & KH (JV) | Rajshahi |
| 12 | Road | NT-RA JV | Dhaka |
| 13 | Drain | Wahid Construction Ltd. | Dhaka |
| 14 | Tube well pump | RFL Plastics Limited | Dhaka |

*Source: Compiled by JICA Survey Team based on National e-Government Procurement (e-GP) Portal of the Government of the People's Republic of Bangladesh*

**Table 4.5.7 List of Awarded Contractors of Subprojects in NCC under ICGP**

| No. | Types of Works | Name of Contractor | Location |
|---|---|---|---|
| Batch 1 | | | |
| 1 | Road | MAHCL-MNE (JV) | Dhaka |
| 2 | Street Lighting | Energypac Electronics Limited | Tejgaon |
| 3 | Street Lighting | Energypac Electronics Limited | Tejgaon |
| Batch 2 | | | |
| 1 | Bridge | PROMINENT-QUASHEM JV | Dhaka |
| 2 | Bridge | PROMINENT-QUASHEM JV | Dhaka |
| 3 | Culvert & Bridge | PROMINENT-QUASHEM JV | Dhaka |
| 4 | Road & Drain | M/S Munia Traders | Narayanganji |
| 5 | Road | Rana Builders - Hassan Builders JV | Dhaka |
| 6 | Road & Drain | MAM CONSTRUCTION LTD. | Cumilla |
| 7 | Road & Drain | Starlite Services Limited | Dhaka |
| 8 | Drain | Mir Habibul Alam-Udayan Builders JV | Dhaka |
| 9 | Road & Drain | Ratna Enterprise | Narayanganji |
| 10 | Bridge | Mir Habibul Alam-Udayan Builders JV | Dhaka |
| 11 | Canal | Starlite Services Limited & M/S Udayan Builders (JV) | Dhaka |

*Source: Compiled by JICA Survey Team based on National e-Government Procurement (e-GP) Portal of the Government of the People's Republic of Bangladesh*

**Table 4.5.8 List of Awarded Contractors of Subprojects in CuCC under ICGP**

| No. | Types of Works | Name of Contractor | Location |
|---|---|---|---|
| Batch 1 | | | |
| 1 | Road & Drain | RBL-SJA JV | Dhaka |
| 2 | Road & Drain | RBL-HB (JV) | Dhaka |
| 3 | Road | RBL-HB (JV) | Dhaka |
| 4 | Road & Drain | Mazid Sons Construction Ltd. | Dhaka |
| 5 | Road & Drain | MAM-IEL (JV) | Cumilla |
| 6 | Road & Culvert | SB-HE (JV.) | Dhaka |
| 7 | Road | RBL-HB (JV) | Dhaka |
| 8 | Road | N/A | N/A |
| 9 | Energy Saving Light | Mazid Sons Construction Ltd. | Dhaka |
| Batch 2 | | | |
| 1 | Road | MAMCL-PC-SAS JV | Cumilla |
| 2 | Road & Drain | RAB-RC (PVT) LIMITED-M/S. Hoque Enterprise (JV) | Dhaka |
| 3 | Road | Hassan Techno Builders Ltd. - Taher Brothers Ltd. JV | Cumilla |
| 4 | Bridge | Hassan Builders - Zaman Traders JV | Cumilla |
| 5 | Canal | Hassan Techno Builders Ltd. - M/S Saleh Ahmed JV | Cumilla |
| 6 | Tube-wells | MSST-MCS(JV) | Kandirpar |
| 7 | Street Lighting | PDL - IEL - MDHB JV | Cumilla |
| 8 | Drain & Footpath | Rana Builders (Pvt.) Ltd. | Dhaka |
| 9 | Road & Drain | Hassan Builders - Zaman Traders JV | Cumilla |

*Source: Compiled by JICA Survey Team based on National e-Government Procurement (e-GP) Portal of the Government of the People's Republic of Bangladesh*

**Table 4.5.9 List of Awarded Contractors of Subprojects in CBP under UGIIP-3**

| No. | Types of Works | Name of Contractor | Location |
|---|---|---|---|
| 1 | Road & Culvert | UD-BB-HM JV | Cox's Bazar |
| 2 | Road & Drain | Sheikh Hemayet Ali & Mr. U.T Mong (JV) | Bandarban |
| 3 | Road & Drain | M/S Hassan Builders | Comilla |
| 4 | Drain | M/S Hassan Builders | Comilla |
| 5 | Drain & Culvert | M/S Hassan Builders | Comilla |
| 6 | Drain | Mohammed Eunus & Brothers (Pvt.) Ltd - ISLAM BROTHERS CONSTRUCTION & ENGINEERING LTD JV | Dhaka |
| 7 | Drain | Mohammed Eunus & Brothers (Pvt.) Ltd - ISLAM BROTHERS CONSTRUCTION & ENGINEERING LTD JV | Dhaka |

*Source: Compiled by JICA Survey Team based on National e-Government Procurement (e-GP) Portal of the Government of the People's Republic of Bangladesh*

(4) Procurement of Goods

In the similar donor-funded projects, heavy equipment and automobiles are procured by LGED instead of ULBs and then LGED distribute them to the ULBs. This is because the suppliers are located in Dhaka mainly and, therefore, it is more efficient for LGED in Dhaka to procure such necessary equipment rather than ULBs. Another reason is that there is scale of economics by bundling small packages of procurement.

In case that a special equipment needs to be installed in a subproject, the procurement of such special equipment is included in a construction package and, therefore, the contractor procures the equipment and install it under the construction contract.

Based on the above, ULBs has less experience to procure goods with large amount.

4.5.2 Tendering System and Contract Conditions

(1) Procurement / Selection Method in Bangladesh Procurement Rules and Regulations

Bangladeshi procurement rules and regulations are stipulated in Bangladesh Public Procurement Act 2006 (PPA) and Public Procurement Rules 2008 (PPR). The implementation of PPA/PPR is monitored and reviewed by Central Procurement Technical Unit (CPTU) within the Implementation Monitoring and Evaluation Division of the Ministry of Planning. In accordance with PPA and PPR, procurement is categorized into 3 natures: Goods, Works and Services, and PE such as LGED or ULB has administrative and financial power to undertake procurement of Goods, Works or Services using public fund.

In case of procurement for Goods and Works, the following methods of procurement can be applied in accordance with PPA/PPR.

<u>In case of domestic procurement</u>

- Open Tendering Method (OTM), which is competitive bidding with open advertisement
- Limited Tendering Method (LTM), which is competitive bidding by direct invitation without open advertisement
- Direct Procurement Method (DP)
- Two-Stage Tendering Method, which is competitive bidding with open advertisement evaluated by two stages
- Request for Quotation Method (RFQ), which is a procurement method based on comparing price quotations obtained from several suppliers to ensure competitive prices

<u>In case of international procurement</u>

- Open Tendering Method
- Two-Stage Tendering Method

Basically, the Procuring Entity is recommended to apply OTM. However, in some specific occasion, the other methods may be applied with the approval of the head of the PE.

In case of procurement for Services, the following methods of procurement can be applied in accordance with PPA/PPR.

- Quality- and Cost-Based Selection (QCBS)
- Selection under a Fixed Budget (SFB), in which a consultant is selected within a fixed budget
- Least Cost Selection (LCS), in which a consultant proposing lowest price is selected
- Selection Based on Consultant's Qualifications (SBSQ), in which a consultant is selected based on EOI
- Selection amongst Community Services Organisations (CSOs), in which a consultant is selected from short-listing reputable Non-Governmental Organizations
- Single Source Selection (SSS)
- Selection of Consultants by a Design Contest (DC)
- Selection of Individual Consultant (SIC)

Basically, the PE is recommended to apply QCBS or SFB. However, in some specific occasion, the other methods may be applied with the approval of the head of the PE.

(2) E-Tendering System

In accordance with Clause 65 of PPA, any or all government procurement under PPA may be undertaken using electronic processing system called e-GP system developed by CPTU. National e-GP portal (https://www.eprocure.gov.bd) is also developed, owned and being operated by CPTU. The e-GP system provides an on-line platform to carry out the procurement activities by the Procuring Entities.

The e-GP system is a single web portal from where and through which the Procuring Entities will be able to perform their procurement related activities using a dedicated secured web-based dashboard. The e-GP system is hosted in e-GP Data Center at CPTU, and the e-GP web portal is accessible by the Procuring Entities through internet for their use.

This complete e-GP solution introduced under the Public Procurement Reform (PPR) Program is being supported by the World Bank and gradually used by all government organizations. This online platform also helps them ensuring equal access to the Bidders/Tenderers and ensuring efficiency, transparency and accountability in the public procurement process in Bangladesh.

(3) Standard Tendering Documents

In Bangladesh, many types of standard tendering documents are developed by CPTU based on the nature of procurement (i.e. Goods, Works or Services).

In case of procurement of goods, 14 types of standard tender documents are listed in the website of CPTU as shown in Table 4.5.10. Out of 14 documents, 8 documents are published and can be downloaded. Depend on the characteristic of procurement like, national / international tender, estimated value of the package, the Procuring Entities choose appropriate one and prepare tender documents based on it.

**Table 4.5.10 List of Standard Tender Documents for Goods**

| Serial No | Code | Type | Title | Published Date |
|---|---|---|---|---|
| 1 | PG1 | National | Preliminary Working draft: Standard Request for Quotation (SRFQ) Document (National) for Procurement of Goods (for values up to BDT 5 lakh) [August, 2014] | 01/08/2017 |
| 2 | PG1 | National | Draft: Standard Request for Quotation (SRFQ) Document (National) for Procurement of Goods (for values up to BDT 5 lakh) (In Bangla) | 16/04/2019 |
| 3 | PG2 | National | Preliminary Working draft: Standard Tender Document (National)For Procurement of Goods [Open Tendering Method / Limited Tendering Method] [December-2012] | 01/08/2017 |
| 4 | PG3 | National | Preliminary Working draft: Standard Tender Document (National)For Procurement of Goods [Open Tendering Method] (February 2015) For value above BDT 25 Lac | 01/08/2017 |
| 5 | PG3A | National | Standard Tender Document (National) For Procurement of Goods Using Framework Contract [OTM/LTM] | 01/04/2018 |
| 6 | PG4 | International | Standard Tender Document (STD) For Procurement of Goods (International) Open Tendering Method | 15/10/2019 |
| 7 | PG5A | National/ International | Standard Tender Document (STD) For Supply & Installation of Plant & Equipment (National / International) Applicable for One Stage Two Envelope Tendering for Turnkey Contract (For any value) | 01/04/2018 |
| 8 | PG5B | National/ International | Two Stage Tendering Method (for any Value) | Document Not Published |
| 9 | PG6 | International | SRFQ (for any Value) for Divisible Goods Collection in Bulk by Quotation | Document Not Published |
| 10 | PG7A | National | Framework STD for OTM (for any Value) | Document Not Published |
| 11 | PG7B | National | Framework STD for LTM (Value upto 25 Lac) | Document Not Published |
| 12 | PQG | National/ International | Document for Pre-Qualification in case of custom design equipment (for above 3.5 crores) and Plant Installation (above 1.5 crores)) | Document Not Published |
| 13 | PG8 | National/ International | STD for IT Equipment, Ready Software | Document Not Published |
| 14 | ePG3 | National (e-GP) | Procurement of Goods through e-GP System For viewing purpose only | 01/08/2017 |

*Source: Compiled by JICA Survey Team based on Central Procurement Technical Unit (https://cptu.gov.bd/standard-documents/standard-tender-document.html)*

In case of procurement of works, 16 types of standard tender documents are listed in the website of CPTU as shown in Table 4.5.11. Out of 16 documents, 13 documents are published and can be downloaded. Depend on the characteristic of procurement like, national / international tender, estimated value of the package, the Procuring Entities choose appropriate one and prepare tender documents based on it.

**Table 4.5.11 List of Standard Tender Documents for Works**

| Serial No | Code | Type | Title | Published Date |
|---|---|---|---|---|
| 1 | PW1 | National | Preliminary Working draft: Standard Request for Quotation (SRFQ) Document (National) for Procurement of Works (for Values up to BDT 10 lakh) [August 2014] For Values up to BDT 10 lakh [August 2014] | 02/08/2017 |
| 2 | PW2A | National | Standard Tender Document (National) For Procurement of Works [Open Tendering Method] (For values up to BDT 3 Crore.) (Updated up to 27 September 2018) | 07/10/2018 |

| Serial No | Code | Type | Title | Published Date |
|---|---|---|---|---|
| 3 | PW2b | National | Preliminary Working draft: Standard Tender Document (National) For Procurement of Works [Limited Tendering Method] [December-2012] For values up to BDT 2 Crore | 02/08/2017 |
| 4 | PW3 | National | Standard Tender Document (National) For Procurement of Works [Open Tendering Method] (For any value above BDT 3 Crore) (Without Pre-Qualification) (Updated up to 27 September 2018) | 27/09/2018 |
| 5 | PQW4 | National | Preliminary Working draft: Standard Pre-qualification Document (National) for Procurement of Works [April 2009] | Document Not Published |
| 6 | PW5 | International | Preliminary Working draft: Standard Tender Document for Procurement of Works (International) (for values up to BDT 3500 lakh) [September 2009] | 02/08/2017 |
| 7 | PQW6 | International | Document for Pre-Qualification in case of Works (SPD) (for above 35 Crore) | Document Not Published |
| 8 | PW7 | International | STD for Large and Complex Works (Value above 35 crore) | Document Not Published |
| 9 | PW3A | National | Standard Tender Document (National) For Procurement of Works [One Stage Two Envelope Tendering Method] (June 2017) for above BDT 3 Crore | 02/08/2017 |
| 10 | PW7A | International | Standard Tender Document For Procurement of Works (International) [One Stage Two Envelope Tendering Method] For large & Complex works | 01/08/2017 |
| 11 | PW4 | National | Preliminary Working draft: Standard Tender Document (STD) for National Procurement of Works (above Tk 350 million) (with Prequalification) [April 2009] | 02/08/2017 |
| 12 | PQW5 | International | Preliminary Working draft: Standard Pre-qualification Document (International) for Procurement of Works (for values above BDT 3500 lakh) [January 2010] | 02/08/2017 |
| 13 | ePW2a | National (e-GP) | Standard Tender Document (National) For Procurement of Works (Open Tendering) (For values up to BDT BDT 3 Crore.) | 13/09/2018 |
| 14 | ePW3 | National (e-GP) | Standard e-Tender Document (STD) (National) For Procurement of Works [Open Tendering Method] (For values above BDT BDT 3 Crore funded by GOB) | 13/09/2018 |
| 15 | ePW3A | National (e-GP) | Standard e-Tender Document (STD) (National) For Procurement of Works [One Stage Two Envelope Tendering Method] | 26/09/2018 |
| 16 | ePW3D | National (e-GP) | Standard e-Tender Document (STD) (National) For Procurement of Works [Open Tendering Method/ National Competitive Tendering following the Procedures of Procurement Laws] | 26/09/2018 |

*Source: Compiled by JICA Survey Team based on Central Procurement Technical Unit (https://cptu.gov.bd/standard-documents/standard-tender-document.html)*

In case of procurement of services, 14 types of standard request for proposals are listed in the website of CPTU as shown in Table 4.5.12. Out of 14 documents, 11 documents are published and can be downloaded. Depend on the characteristic of procurement like, national / international selection, estimated value of the package, the Procuring Entities choose appropriate one and prepare tender documents based on it.

**Table 4.5.12 List of Standard Tender Documents for Services**

| Serial No | Code | Type | Title | Published Date |
|---|---|---|---|---|
| 1 | PS1 | National | SRFP for Community Services | Document Not Published |
| 2 | PS2 | National | SRFQ for NGO Selection | Document Not Published |
| 3 | PS3 | National | Preliminary working draft: Standard Request for Proposal (SRFA) for Selection of Individual Consultant (National) Lump Sum based | 01/08/2017 |
| 4 | PS4 | National | Preliminary working draft: Standard Request for Proposal (SRFA) for Selection of Individual Consultant (National) Time Based | 01/08/2017 |
| 5 | PS5 | National | Preliminary working draft: Standard Request for Proposal (SRFP) for Selection of Consulting Firm (National) Simple Lump Sum -up to Tk 10 million | 01/08/2017 |
| 6 | PS6 | National | Preliminary working draft: Standard Request for Proposal (SRFP) for Selection of Consulting Firm (National) Simple Time Based - up to Tk 10 million | 01/08/2017 |
| 7 | PS7 | National | Preliminary Working draft: Standard Request For Proposal (National) For Selection of Consulting Firm [February-2013] Complex Lump Sum – For value above BDT 1 Crore | 01/08/2017 |
| 8 | PS8 | National | Preliminary Working draft: Standard Request For Proposal (National) For Selection of Consulting Firm [February-2013] Complex Time Based – For value above BDT 1 Crore | 01/08/2017 |
| 9 | PS9 | International | SRFA for Lump-sum Individual Consultant selection | Document Not Published |
| 10 | PS10 | International | SRFA for Time Based Individual Consultant Selection | Document Not Published |
| 11 | PS11 | International | Preliminary working draft: Standard Request for Proposal (SRFP) for Selection of Consulting Firm (International) Lump Sum Contract -any value | 01/08/2017 |
| 12 | PS12 | International | Preliminary working draft: Standard Request for Proposal (SRFP) for Selection of Consulting Firm (International) Time Based Contract- any value | 01/08/2017 |
| 13 | PSN | National | Standard Tender Document (National) For Procurement of Non-Consulting Services [Open Tendering Method] (July 2019) for any value | 15/07/2019 |
| 14 | PS13 | International/ National | SRFP for Consultancy Firm in case of Application Development (for Any Value) | Document Not Published |

*Source: Compiled by JICA Survey Team based on Central Procurement Technical Unit (https://cptu.gov.bd/standard-documents/standard-request-for-proposal.html)*

### 4.5.3 Selection of Consultants

(1) Preparation of Short List

In Bangladesh, for preparing short list of applicants, Expression of Interest (EOI) is conducted. Therefore, the PE shall prepare a request for EOI and advertise the request for EOI in, at least one Bangla language national newspaper and one English language national newspaper, both of which shall have a wide daily circulation within Bangladesh. The PE shall, immediately after the deadline of submission of EOI, constitute the Proposal Opening Committee (POC) and the POC shall open the EOIs. Then, Proposal Evaluation Committee (PEC), constituted in the PE, shall assess the EOIs and prepare a short-list, composed of 4-7 applicants.

(2) Approval Process of Proposal Evaluation

In accordance with PPA/PPR, the Approving Authority shall take decisions of approval of selection. Approving Authority is determined in accordance with Delegation of Financial Powers issued by

MOF. In accordance with the latest version of Delegation of Financial Powers (August 2015), the threshold of Approving Authority in case of procurement of services under development project is following:

Above BDT 10 Cr.: Cabinet Committee on Government Purchase (CCGP)

Up to BDT 10 Cr.: Ministry

Up to BDT 7 Cr.: Head of PE (HOPE)

Up to BDT 5 Cr.: A-Class Project Director[3]

Up to BDT 3 Cr.: B-Class Project Director[4]

Up to BDT 1 Cr.: C-Class Project Director[5]

In case the Approving Authority is HOPE, the approval process of proposal evaluation is following.

The short-listed applicants shall prepare proposals referring the Request for Proposals (RFP) submitted from the PE and submit technical and financial proposals separately before the deadline of the submission of proposals.

The PEC shall evaluate technical proposals submitted from the short-listed applicants and prepare a technical evaluation report while keeping financial proposals closed in the safe custody. The technical evaluation report shall be submitted to the HOPE.

Upon approval of the technical evaluation report by HOPE, the financial proposals shall be opened in presence of applicants who attained at least the minimum technical scores. In case of QCBS, the technical score shall be calculated in the combined technical and financial evaluation.

Upon completion of the evaluation of the proposals, in case of QCBS, the PEC shall invite the consultant that scored the highest in the combined technical and financial evaluation for negotiations, in case of FBS, the PEC shall invite the consultant that submitted highest ranked technical proposal within the budget for negotiations, in case of LCS, the PEC shall invite the consultant that quoted the lowest price for negotiations. When the contract negotiation is successfully completed, the PEC and the consultant sign the contract.

In accordance with procurement processing and approval timetable attached as Schedule-III in PPR, total period of evaluation process is estimated at 6-8 weeks.

4.5.4 Procurement of Works and Goods

(1) Pre-Qualification

In accordance with PPR, the PE may undertake pre-qualification for the following large and complex procurement subject to the following thresholds:

Construction Works: above BDT 35 Cr.;

Maintenance Works: above BDT 3.5 Cr.;

Supply and installation of plant and equipment: above BDT 1.5 Cr.;

Design and build infrastructure: above BDT 35 Cr.;

Custom designed equipment: above BDT 3.5 Cr.; and

Management contracts: above BDT 35 Cr.

(2) Procurement Package

When planning procurement package of a project, the PE considers the level of the Approving Authority who takes decision of approval of tender. The higher the level of the Approving Authority

[3] any packages in projects of which total project cost is more than BDT 100 Cr.
[4] any packages in projects in projects of which total project cost is between BDT 50 Cr. to BDT 100 Cr.
[5] any packages in projects in projects of which total project cost is less than BDT 50 Cr.

is, the more it takes time for approval of tender. In case of procurement of works, the threshold of Approving Authority on developing project is following.

Above BDT 50 Cr.: CCGP

Up to BDT 50 Cr.: Ministry

Up to BDT 30 Cr.: HOPE

Up to BDT 20 Cr.: A-Class Project Director

Up to BDT 15 Cr.: B-Class Project Director

Up to BDT 10 Cr.: C-Class Project Director

In case of procurement of goods, the threshold of Approving Authority on developing project is following.

Above BDT 50 Cr.: CCGP

Up to BDT 50 Cr.: Ministry

Up to BDT 20 Cr.: HOPE

Up to BDT 10 Cr.: A-Class Project Director

Up to BDT 5 Cr.: B-Class Project Director

Up to BDT 3 Cr.: C-Class Project Director

Therefore, in some circumstance, in order to avoid obtaining approval from higher authority, the PE divides a large procurement package into some small package.

Another concerned point for the PE to plan procurement package is the construction period. In accordance with the standard tender documents, price adjustment clauses are usually only permitted for works contracts, execution of which will take more than eighteen (18) months from start date of the works to completion date. Those who does not prefer to apply the price adjustment try to set the construction period within 18 months. If the total project period is estimated more than 18 months, the procurement package might be divided into several packages.

In terms of the type of works, road construction/renovation works tend to bundle with drain ones in accordance with the previous subproject data of ICGP and UGIIP-3 as shown in the Table 4.5.6-9.

(3) Approval Process of Tendering

In case the Approving Authority is HOPE, the approval process of tender evaluation is following.

The PE has the authority to advertise Invitations for Tender (IFT)[6]. Invitations shall be advertised in at least one Bangla language national newspaper and one English language national newspaper, both of which shall have a wide daily circulation within Bangladesh.

All tenderers who purchase tender documents prepare and submit tenders within the date set in the tender documents. Normally the date for preparation tender is set 28 days from the issuance of the tender documents.

The PE shall, immediately after the deadline of submission of tenders, constitute the Tender Opening Committee (TOC) and the TOC shall open the tenders. Then, Tender Evaluation Committee (TEC), constituted in the PE, shall evaluate the tenders

The PEC shall evaluate tenders both technically and financially and identify a successful tenderer. If specified in the tender documents, the post qualification shall be conducted. Then, PEC shall prepare tender evaluation report and submit it to HOPE as the Approving Authority.

[6] If pre-qualification is conducted, Invitations for Pre-Qualification (IFPQ) shall be advertised.

Upon approval of the tender evaluation report by HOPE, Notification of Award (NOA) shall be issued to the successful tenderer. Once receiving NOA, the successful tenderer shall sign the contract and submit it to the PE within the date specified in the tender document, normally 28 days. Contract negotiation shall not be conducted except some special occasion.

In accordance with procurement processing and approval timetable attached as Schedule-III in PPR, total period of evaluation process is estimated at 6-8 weeks.

## 4.6 Existing Security and Safety Situations

### 4.6.1 Security Situations

As of November 2019, the security level in Bangladesh is categorized as below by Ministry of Foreign Affairs in Japan and U.S. Embassy in Bangladesh respectively:

(1) Security Level by Ministry of Foreign Affairs in Japan

- Level 2 (Do not travel except necessity and emergency case): Dhaka division and Chittagong Hill Tracts
- Level 1(Travel with enough cautions): Throughout Bangladesh except the area of level 2

(2) Security Level by U.S. Embassy in Bangladesh

- Level 3 (Reconsider Travel): Dhaka and Southeast Bangladesh (Khagrachari, Rangamati, and Bandarban Hill Tracts districts)
- Level 2(Exercise Increased Caution): Throughout Bangladesh

Considering the above, especially those who comes from foreign countries are required to be careful to implement the Project in terms of security.

JICA also requested international consultants/experts who have contractual relationship with JICA directly to follow JICA's security instruction.

### 4.6.2 Safety Situations

From the interviews to LGED, ULBs and engineering consultants and construction site visits, it is found that there are two major issues in terms of safety during construction work in Bangladesh. First issue is that tenderers do not have to prepare and include a safety plan in tender unless it is required explicitly in Tender Data Sheet (TDS) of Instruction to Tenderers. Clause 30.1 of Instruction to Tenderers, Standard e-Tender Document for Procurement of Works (ePW3) stipulates as follow:

*"Tenderer shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in TDS, in sufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work requirements and the completion time."*

Therefore, if the PE does not instruct the tenderers to prepare a safety plan in TDS, the tenderers does not prepare and, accordingly, the PE cannot evaluate the tenderers' safety plan.

Second issue is that, even if a contractor submits safety plan, the contractor or workers under the contractor does not always follow the safety plan. For an example, although proposing to segregate the site by fencing, the contractor does not to do so for saving the cost. Figure 4.6.1 is a picture of a construction site for drainage work. There is neither signboard indicating under construction nor fence to segregate the site from the public area. One of the possible reasons for this problem is that the contractor could not include the cost for fencing in the tendering price in order to be more competitive than other tenderers. Another example is that even the contractor provides safety gears to the workers, they do not want to put such gears on because they are uncomfortable for the workers under the circumstances of high humidity and high temperatures in Bangladesh. The workers are required to change their mind to understand the importance of safety.

*Source: Survey Team*

**Figure 4.6.1 Drainage Construction Site**

## 4.7 Issues in Infrastructure Development

### 4.7.1 Existing Condition

(1) Road and Bridge Sector

The common issues for all ULBs are assessed as follow:

- The road network for urban area is not sufficiently developed from the viewpoint of road density. The present road density of 5 to 7 km/km$^2$ is still in lower level for medium scale city.
- Average travel time in the city area at 26 to 38 min. / 10 km shows traffic congestion of the existing roads has been caused.
- Desirable level of road density and travel time in city area of medium scale[7] are as follows:

**• Table 4.7.1 Desirable Level of Road Condition**

| Item | Present Level | Target/Desirable Level |
|---|---|---|
| Road Density | 5 to 7 km/km$^2$ | 10 km/km$^2$ |
| Travel Time | 26 to 38 min. /10km | 15 to 20 min. /10km |

*Source: JICA Survey Team*

- At each ULB, traffic volume will increase at the rate of around 7.5% per annum[8]. Therefore, improvement for absorbing increase of traffic volume is necessary.
- Priority subprojects to be proposed need to strengthen the road networks of ULBs.

The current issues observed by ULBs are summarized as follows:

1) Gazipur

- The north-south trunk roads are lacking.

2) Narayanganj

[7] Refer to the information of Japanese cities with similar size of population and area in 2018 for road density. And, target travel time is assumed as 30~40 km/hour on average to commute within urban areas.
[8] Bangladesh Bureau of Statistics

- No trunk roads for east to west have been developed in the road network.
- Extreme number of "Rickshaw" (passenger bicycles) were observed on the trunk roads and streets. It might be cause of traffic congestion.

3) Comilla

- The trunk roads are lacking in both east-west and north-south directions.

4) Cox's Bazar

- The narrow sections were found in the existing two trunk roads of east-west and north-south directions.
- The trunk roads are short in both east-west and north-south directions.
- A lot of small 3-wheels vehicles were found on the trunk roads that are causing traffic congestion.

(2) Drainage Sector

The common issues are observed as follows:

- It is desirable to drain all of rainwater after any rainfall immediately. But the current situation is that waterlogging occurs to some extent of time in every rainy season in each ULB. The reasons for water logging vary by the condition of topography, present condition of drainage system, water level of inside and outside drainage, land use, etc. Therefore, drainage system needs to drain rainwater from waterlogging area that will improve livelihood in suffered area.
- Run off capacity of flood water at outfall points is insufficient especially for monsoon season.
- All drainage channels are not linked due to rapid urbanization e.g. land reclamation for housing and other purposes without consideration of drainage flow.
- Inventory of existing drainage system is not prepared or updated.
- Disaster prevention plans are not prepared considering locations of water logging and flood.
- Most of ULBs' engineers have insufficient technical knowledge on drainage system and its development/improvement referring to comprehensive master-plan level understanding of drainage system in the ULBs..

The current issues observed by ULBs are summarized as follows:

1) Gazipur

- Each zonal engineer (executive engineer) covers one to two zones and each zonal engineer has no information on situations of other zones such as connection of drainage system and flow capacity of drainage.
- GCC has no integrated improvement plan of drainage systems covering all zonal areas.

2) Narayanganj

- The number of engineers is insufficient for the work requirement of the local and foreign donor's funded projects.
- The NCC engineers have insufficient capacity for planning and maintenance of drainage system.

3) Cumilla

- Drainage system connecting all existing drainage channels are not well developed.
- Many solid wastes are thrown into drainage canals and prevent smooth flow of drainage.

4) Cox's Bazar

- Due to thrown solid waste on the drainage, downstream of the drainage is seriously polluted with a stink of open sewers.

(3) Water Supply Sector

The common issues are observed as follows:

- Desirable level of water supply ratio by piped water should be more than 90 % in the big cities in Japan such as Tokyo, Yokohama, and Nagoya, etc. Based on National Level Sector Policy in Bangladesh, long term plan (FY 2021-2025) indicates the water supply ratio of large Paurashava is planned at 90 percent.
- Water supply ratio of all ULBs is remained under 20%.
- Capacity for development planning, construction and operation and maintenance of water supply systems at all ULBs are limited. Sustainability of water supply systems (mainly groundwater systems) are assumed at low.

The current issues observed by ULBs are summarized as follows:

1) Gazipur

- The sources of existing water supply system are ground water, and surface water source is not in use at present.
- The piped water supply system is installed in only Zone-1 Tongi, and Zone-4 Gazipur. Water supply in other six zones are covered by private tube wells.
- Urgent works for water leakage protection and pipe installation are executed by DPHE, and non-urgent work for other small-scale construction is executed by GCC.
- Some production tube wells in the area cannot be used due to lowered ground water table. Also, some areas have iron contamination in ground water.

2) Narayanganj

- The main sources of existing water supply system are ground water, and surface water source is used at water treatment plant at present.
- Two water treatment plant is operated by DWASA staff. However, the current surface water source of Narayanganj, Sitalakhya River, is polluted due to industries upstream.
- At present, the water supply area is divided to three zone, Narayanganj Main City Zone with 17 production tube wells, Kadamrasul Zone with 10 production tube wells, and Shidhirganj Zone with 4 production tube wells. Priority of water supply development is focused on Narayanganj Main City Zone.
- DPHE conducted water quality test in tube wells and found that no specific groundwater pollution.
- Some tube wells in the area cannot be used due to lowered ground water table.

3) Cumilla

- The sources of existing water supply system are ground water, and surface water source is not in use at present.
- Urgent work for water leakage protection and pipe installation is executed by DPHE, and non-urgent work for other small-scale construction is executed by CuCC.
- DPHE conducted water quality test in tube wells and found that some tube wells are contaminated by arsenic.

4) Cox’s Bazar

- The sources of existing water supply system are ground water, and surface water source is not in use at present.
- DPHE had constructed all water supply facilities, and it was handed over to CBP.

- Of the existing all 28 km distribution pipeline, 10 km pipe has not been connected
- The depletion of water table during dry season causes scarcity of water and some production wells become out of order.
- DPHE staff analyzed the water quality of production well irregularly. The result shows that the contamination of arsenic, iron, and manganese are low. On the other hand, fecal coliform concentration is intermediate in some production well.
- Also, the water quality test in user connection point shows some points are contaminated by fecal coliform.

(4) Solid Waste management

The common issues are observed as follows:

1) Institutional system

There is no by-law or regulations related to Solid Waste Management. It is necessary to include the covered waste categories, waste discharge methods such as prohibition of the discharge in no-designated sites or collection time of waste, collection route and time, the prohibition of open dumping, etc. in by-law or regulations at least.

2) Basic data for solid waste management

There is no reliable data for solid waste management. For example, there is no waste quantity survey data for each source such as household, commercial, industrial, hospital and streets, etc. In addition, there is no waste characterization survey data such as physical composition, moisture contents, bulk density to consider the suitable waste handling and treatment system. There is no reliable measured data for collection and disposed amount of solid waste. These data are fundamental to consider the suitable solid waste management plan.

3) Collection and transportation

Door to door collection is implemented as primary collection. However, the collection does not cover all the area of the city corporations.

Desirable development level of solid waste management should commonly be as follows:

**Table 4.7.2 Desirable Level of Solid Waste Management**

| Item | Present Level | Target/Desirable Level (in case of Dhaka city) |
|---|---|---|
| Collection area | 60 to 70% | 100% |
| Collection rate | 60 to 70% | 80 to 90% |

*Source: JICA Survey Team*

The transfer system from primary collection to secondary collection is not in a suitable manner. The route or time for the operation of collection vehicle is not scheduled and monitored. Therefore, some of the collection vehicles does not dispose at the legal dumping sites.

4) Final disposal

Current final disposal is open dumping and the sanitary landfill rate is 0% in the target ULBs though all the waste in DNCC and DSCC is disposed of in the sanitary landfill site, which means the sanitary landfill rate is 100%. The sanitary landfill site includes embankment, liner system, leachate collection and treatment facility, rainwater drainage system, gas collection system and weighing bridge, etc. In addition, there is no cover soil, and waste compaction is not sufficiently implemented in the target ULBs.

In addition, the capacity of dumping site seems to be insufficient for the future. Because the suitable embankment for piling of solid waste is not prepared, it cannot be accumulated enough height.

The current issues observed by ULBs are summarized as follows:

1) Gazipur

- The dumping site is open dumping. There are proposed sites for landfill.
- It is necessary to develop the capacity for sanitary landfill site.
- The transfer station is only temporary where solid waste is scattered in surrounding area.

2) Narayanganj

- The current final disposal site is open dumping site and its capacity is not enough.
- Developing final disposal site with sanitary manner is necessary.
- The collection vehicle is considered enough. However, it is necessary to develop implementation of collection and transportation in a suitable manner.

3) Cumilla

- The waste transfer method in the transfer stations is not effective causing scattered waste in surrounding areas.
- The waste collection covers only around 50 % in CuCC.
- The final disposal site is open dumping area, in which soil cover has not been implemented.

4) Cox's Bazar

- The capacity of current dumping site is almost full and there is a candidate site which is owned by the municipality. Though the site is in lower area and near the river, there is no alternative site within the municipality.
- There is a composting facility, but the operation efficiency is not enough due to no implementation of source separation. There are problems on operation of the transfer stations such as waste scattering.

(5) Other infrastructure:

- These infrastructures are not developed enough.
- Existing street lights and bus terminal should be upgraded due to deterioration.
- Bus terminal and truck terminal are required to reduce many buses/truck parking alongside roads which causes traffic congestion.

4.7.2 Implementation of development projects

(1) Road and Bridge Sector

Observations for causes of delay in ongoing ICGP projects by CCs and other funded projects in the municipality are as follows:

1) Gazipur

- Land acquisition process in case of widening project is delayed.
- Activities of subcontractors (most cases are local contractors) are not properly controlled by main contractors which are normally at Dhaka base.

2) Narayanganj

- Land acquisition process in case of widening project is delayed.
- Financial capacity of the contractors is lower due to acceptance of lower bid price by NCC.

3) Cumilla

- Land acquisition process in case of widening project is delayed.
- Activities of subcontractors (most cases are local contractors) are not properly controlled by main contractors which are normally at Dhaka or Chittagong base.

4) Cox's Bazar

- There is a case which was suspended for three months in total due to elections.
- There are some possibilities due to uncontrolled subcontractors, although so far such issues may not be clearly expressed by engineers in CBP.

It was found that a lot of ICGP subprojects are still in progress beyond the original completion date. Cause of delay might be that the original contract period could be shorter comparing to the necessary construction period. The contract period in most of the subprojects are only one year. Based on the above observation, the followings shall be recommended:

- Financial capacity of contractors should be carefully checked in pre-qualification stage.
- Construction period should be carefully determined for appropriate completion of the project in target date considering suitability of scale of subprojects, kind of works and rainy seasons.

(2) Drainage

Observations for causes of delay in ongoing ICGP projects and other funded projects in the municipality are commonly as follows:

- Hierarchy-based drainage networks which comprise with primary drains, secondary drains and tertiary drains to integrate with proper drainage system are lacking.
- Necessary information is inaccurate due to lack of systematic document keeping on design and construction related materials.
- Trained technical staff of CC/ Paurashava for supervision are lacking.
- Construction is delayed due to no coordination between road construction and drainage construction (when the location of road construction and drainage construction is the same, the works are better be done by the same construction company so that coordination becomes easier)
- Construction is delayed due to inadequate planning for tendering (need to consider rainy season).

(3) Water Supply

Observations for causes of delay in ongoing ICGP projects by CCs and other funded projects in ULBs are as follows:

1) Gazipur

- Activities of subcontractor in this area (in most cases local contractor) is not properly controlled by main contractor, for example which normally comes from Dhaka.

2) Narayanganj

- (Planned ICGP project was cancelled due to the transition issue from DWASA to NCC)

3) Cumilla

- (Most of planned ICGP project was cancelled due to lack of financial source and manpower for project management)
- Land acquisition process took time in case of production tube well installation.

4) Cox's Bazar:

- (Planned ADB-UGIIP project have not been funded until now)

(4) Solid Waste Management

In case of SWM, there is no on-going projects in the target CCs and Paurashava. Based on the observation and the interview in each CC and Paurashava, the following issues are commonly identified:

- To implement the capacity building of staff on solid waste management planning based on the reflect of issues and future projection is necessary. There is no engineer only for solid waste management. Another engineer implements the procurement of equipment and develop the facility with support of chief of solid waste management division or conservancy section. The engineers with knowledge of solid waste management and with real experience should be assigned.
- In case of equipment of collection and transportation or final disposal, it is necessary for ULB engineers to have knowledge of specification and daily maintenance of collection vehicles including compactor vehicle, dump truck, arm roll vehicle and heavy equipment such as excavator, bulldozer or payloader, etc. and change of their spare parts when breakdown occurs.
- Collection vehicles as well as heavy equipment to be used in transfer stations or final disposal sites are mainly manufactured by foreign factories and normally imported from India or Japan. Because there are agents of foreign manufacture in Dhaka, local competitive bidding is applied as tender process according to the hearing from each city corporation as well as in case of DNCC.
- In case of final disposal, there is no experienced design engineers of civil structure of landfill liner system or leachate collection and treatment, stormwater drainage which is required for sanitary landfill site.

(5) Other infrastructure

- Developing other infrastructures faces the same problems mentioned above due to lack of proper strategic planning of development for the infrastructure.

4.7.3 Operation and Maintenance

(1) Road and Bridge

General issues are observed as below:

- No separate staff for maintenance is found.
- Any guideline for maintenance activities is not prepared.
- O&M implementation is done in only ad-hoc basis without systematic maintenance schedule.
- Appropriate and suitable maintenance activities are not conducted as the present budget at BDT 6 to 30 million per year only.

(2) Drainage

General issues are observed as below:

- Necessary information is inaccurate due to lack of organized documents on the existing systems and ongoing projects.
- Proper monitoring and inspection activities are lacking for maintaining drainage system in appropriate condition.
- ULBs don’t have any manual and plan for maintenance.
- Technical knowledge and staff are both lacking for maintenance.
- Maintenance budget is insufficient.

(3) Water Supply

Main issues for operation and maintenance of water supply system in ULBs are as follows:

- Water quality and volume of inlet and outlet of the facilities are not checked periodically by water section staff.
- Inventory of water supply facilities and pipeline including the detailed information of location, installation year, material, diameter, etc. is not kept and prepared.

- O&M manual for water supply facilities is not prepared. O&M rule and regulation for water supply facilities is not specified. Appropriate chlorination injection is not applied in each production tube wells. Repairment work for water supply facility covering intake pump, distribution pipeline, chlorine dosing unit, etc. is not made in regular basis and repaired on an ad hoc basis. Water leakage detection works is not executed by water section staff
- Water tariff collection system with water meter is not applied in the supply area except for NCC area managed by DWASA, and fixed rate system is applied without any check.
- Manpower of water section staff is not enough, and there are currently no plans for increase of staff in the future.

(4) Solid Waste Management

The main works for operation and maintenance of solid waste management are 1) cleansing the road side or public space, 2) collection of waste from the waste in garbage bin or the waste put on the curbside of road, 3) transport the waste from transfer station to final disposal site and unloading the dumping area in final disposal site, and 4) spreading and compacting the waste unloaded from the collection vehicles and cover the waste suitably as final disposal.

In most of the target ULBs, the following issues are identified.

- Institutional system is insufficient due to no by-law and regulations regarding solid waste management in most of the ULBs.
- There are many workers engaged in cleansing and helpers in the collection, but not for environmental monitoring or public waste. Monitoring is necessary for transfer station to prevent waste scattering.
- There is no expert who know sanitary landfill design or who know the suitable operation methods of spreading and compaction of the unloaded waste in the current final disposal site. For sanitary landfill operation in the Project, suitable operation guidance is necessary. Training provision to the staff including the landfill operators is also necessary.
- There is no manual or guidelines for data management, operation and maintenance of solid waste management.

(5) Other Infrastructure

Due lack of maintenance plan, manpower and budget, regular maintenance of existing infrastructures by ULBs are limited, and not properly made. Insufficient inspection, monitoring and supervision of the works as well as facilities are also causing less frequent maintenance activities.

# CHAPTER 5 REVIEW OF RELATED PROJECTS

## 5.1 JICA's Governance Related Projects

### 5.1.1 Overview

To address to governance sector improvement in Bangladesh, JICA has been implementing several projects from national level to local level e.g. Upazila. The following table describes a brief summary of them.

**Table 5.1.1 JICA's Governance Related Projects at A Glance**

| Project Name | Project Period | Scheme | Executing Agency/ Counter Part | Target government body | Outline |
|---|---|---|---|---|---|
| Strengthening Public Investment Management System (SPIMS) | 2014 Jul–2018 Jun (Phase 1)<br>2019 Aug–2023 Jul (Phase 2) | Technical Assistance | Ministry of Planning | - | ・Public investment management in Bangladesh has challenges such as lack of ability of examination and monitoring for each project by planning commission in Ministry of Planning and lack of ability of formulation by implementing agency.<br>・As a result, problems including delaying each project and increasing cost happen.<br>・In SPIMS Phase 1, examination criteria/examination format and Development Project Proforma/Proposal (DPP) are reviewed to aim for shortening project examination period.<br>・Sector Strategy Paper (Local Government and Rural Development) was prepared. |
| National Integrity Strategy Support Project (NISSP) | 2014 Oct-2017 Mar | Technical Assistance | Cabinet Division | - | ・This is the technical cooperation project for promoting implementation of Nation Integrity Strategy (NIS) with special focus on functional enhancement of National Integrity Implementation Unit.<br>・Achievement of the project are raising awareness of anti-corruption in Bangladesh and introducing new system including information disclosure system, complaint system and hearing system. |
| Inclusive City Governance Project (ICGP) | 2014-20 | Loan (BDT 30 billion) | LGED | 5 CC | ・Improving governance and funding for urban infrastructure（about BDT 1 billion/CC/year） |
| Project for Capacity Development of City Corporations (C4C) | 2016-21 | Technical Assistance | LGD | 4 CC | ・Establishment of autonomous CC's governance (finance, appropriate organization, service improvement, etc.<br>・Strengthening CC's function of coordination and establishment of central role for urban development |
| Northern Bangladesh Integrated Development Project (NOBIDEP) | 2013-20 | Loan (BDT 5 billion） | LGED | 18 Municipality | ・Improving governance and funding for infrastructure (about BDT 5 hundreds thousands/Paurashava/year) |

| Project Name | Project Period | Scheme | Executing Agency/ Counter Part | Target government body | Outline |
|---|---|---|---|---|---|
| Strengthening Paurashava Governance Project (SPGP) | 2014-18 | Technical Assistance | LGD | 7 Municipality | ・Development of handbook for practice capacity building of Paurashava<br>・Development of training course for core function (including master plan implementation, construction and maintenance of roads, drainage, etc.) |
| Upazila Governance and Development Project (UGDP) | 2016-21 | Loan (BDT 10 billion) | LGD | 500 Upazila | ・Development funding for Upazilas local government based on governance evaluation |
| Upazila Integrated Capacity Development Project (UICDP) | 2017-22 | Technical Assistance | LGD | 10 Upazila | ・Building models of formulating Upazila integrated development plan and creating guidelines related<br>・Implementation of training for formulating Upazila development plan in association with UGDP |

*Source: JICA Survey Team*

From a view point of relevance to the Project, at the national level, there are two projects, SPIMS and NISSP, both trying to address public investment management as well as transparency in public service delivery. At the level of urban local bodies, there are four projects, two for City Corporations, and two for Paurashava (municipalities). At the lowest level of local government, Upazila, two projects are implemented. Projects targeting local governments are always implemented in combination of both yen loan projects (infrastructure investment) and technical cooperation projects (technical assistance mainly on governance improvement and urban planning).

Especially C4C and SPGP which are technical cooperation projects for CCs as well as Paurashava prepare lots of guideline and manuals for governance improvement including development planning and infrastructure developments. These documents can be fully utilized for the new Project.

### 5.1.2 Review of Related Yen Loan Projects

#### (1) Three Yen Loan Projects

Out of eight projects, three projects are yen loan projects. All three projects introduce the performance-based approach for allocating infrastructure subprojects. Review of these three projects related to governance and infrastructure from the viewpoint of PBA is summarized as below:

**Table 5.1.2 Review Summary of Related Yen Loan Projects**

| Project Name | Governance Evaluation Indicator | Structure of Loan Funding for Infrastructure | Issues and Outputs to be referred |
|---|---|---|---|
| ICGP | ・Setting of comprehensive governance indicators (7 areas and 42 items).<br>・The 7 areas consist of information disclosure, administrative reform, tax reform, finance management reform, raising awareness and participation of citizens, improving urban plan and environment and | ・Second Performance Review (PR) was implemented.<br>・13 trigger activities are evaluated as minimum requirements<br>・Evaluation results of the first PR were used as judgement materials for fund distribution of first batch and evaluation results | <u>Issues</u><br>・Infrastructure development plan is considered not well understood properly and thus not shared and used with related organization .<br>・Subproject implementation is delayed.<br><u>Output documents which can be referred to</u> |

| Project Name | Governance Evaluation Indicator | Structure of Loan Funding for Infrastructure | Issues and Outputs to be referred |
|---|---|---|---|
| | guideline for law enforcement.<br>・The 42 items are divided into 13 trigger activities as minimum requirements and 29 non-trigger activities.<br>・No indicator to directly evaluate implementation of sub-project. | of the second PR were used as well for fund distribution of second batch.<br>・The target infrastructure was selected from infrastructure development plan that was formulated by CCs (city road, bridges, drainage, street light etc.). | ・Various guidelines including infrastructure development plan formulation guideline were formulated. |
| NOBIDEP | ・Activity Status of 6 areas in Urban Governance Improvement Action Plan(UGIAP) are used as indicators.<br>・The 6 areas consist of 1) raising awareness and participation (establishment of Town Level Coordination Committee (TLCC) and Ward Level Coordination Committee etc. ) 2) Improvement of process of formulation of urban plan (formulation of Paurashava Development Plan etc.) 3) Participation of women 4) Measures for poverty in urban area 5) Improvement of ability to manage finance 6) Improvement of administrative and organizational system (establishment of sub-committee in parliament etc.). | ・Maximum funding allocation to target cities is set as BDT 1 hundred 50 thousands million for B categorized Paurashava and BDT 1 thousand million for C categorized Paurashava. Actual funding allocation is decided based on evaluation of implementation status of UGIAP in each Paurashava.<br>・First allocation (Phase 1) is limited up to 20% of maximum funding allocation above. Funding of Phase 2 (up to 40 % of maximum funding allocation above) becomes available if the activities of Phase 1 including establishment of TLCC and WLCC are achieved.<br>・Target infrastructure consists of road and small bridge in rural area and road, drainage and markets in Paurashava.<br>・Special budget is allocated for the work to formulate a network between rural area and Paurashava. | <u>Issues</u><br>(excluding the above mentioned issues, similarly applied to this project)<br>・Formulation and execution of budget is not implementing appropriately.<br>・Governance services (33 items) that Paurashava should handle are not implemented well because of lack of fund and human resource.<br><u>Output documents which can be referred to</u><br>・Handbook and materials for training (subjects related to finance) developed by SPGP are utilized, approved by LGD. |
| UGDP | ・1) Indicator group with prerequisites (8 indicators including existence and non-existence of budget and development plan based on Upazila law) .<br>・2) Indicators of governance performance (consisting of 16 indicators in 4 areas including organizational system based on Upazila law, finance management, formulation of development plan/budget and transparency and accountability). | ・Among Upazila achieving 1) Indicator group with prerequisites, BDT 5 million is funded per year to Upazila that performed better based on the result of evaluation of 2) indicators of governance performance. 100 Upazila are targeted in the first year and 100 another target Upazila are added every year.<br>・Target infrastructure is infrastructure that can be implemented by Upazila including rural (Upazila/ | <u>Issues</u><br>・Formulation of work plan of sub-project by Upazila local government is immature.<br>・Development fund allocation based on performance may not produce incentive, because there are examples that Upazila evaluated better in the first year ranked lower in the second year. |

| Project Name | Governance Evaluation Indicator | Structure of Loan Funding for Infrastructure | Issues and Outputs to be referred |
|---|---|---|---|
| | | union road) and educational and health facilities. | |

*Reference : Inclusive City Governance Project SAPI Report, Preparatory Survey on the Northern Region Rural Development and Local Governance Improvement Project - Final Report, People's Republic of Bangladesh strengthening Paurashava governance project (SPGP) : project completion report, Preparatory Survey on Local Governance Improvement Project, Local Governance Improvement Project SAPI Report*

*Source: JICA Survey Team*

The above three projects have quite similar structure of governance and infrastructure development. The structure is that governance indicators are set to cover general comprehensive governance areas (more or less similar, depending upon the level of local government), and local governments which pass the minimum criteria of so-called "trigger indicators" can receive infrastructure fund. It seems that all the above projects are designed as "governance projects" to improve general governance capacity which cover comprehensive areas of e.g. development planning, finance and budgeting, transparency, and citizen's participation, by giving infrastructure fund as "incentive". Project purpose could be being addressed by raising awareness of local government officers and establishment some committees etc. However, infrastructure subprojects may not have been implemented properly due to low capacity of service delivery by local government. This could also be attributed by no design in the projects to monitor and evaluate infrastructure implementation itself in their performance approach.

The output documents produced by especially ICGP as well as NOBIDEP can be referred to by this new Project implementation.

(2) Review of ICGP Governance Activities

ICGP necessitated its target CCs to tackle with 42 governance improvement activities that are bundled in Inclusive City Governance Improvement Action Program (ICGIAP). In each of these 42 activities, CCs are expected to achieve pre-determined performance targets which are closely monitored and evaluated during the implementation. The present survey also attempts to review the status of governance improvement (/challenges) vis-à-vis ICGIAP 42 activities. Low performing activities, spotted through literature review of the ICGP 1st and 2nd Performance Review reports as well as through interviews with the related parties engaged in ICGP and C4C, include preparation of mass public meeting plan/report (ICGIAP action 1.1), annual administrative report (action 2.9), establishment of integrated computer-based financial management system (action 4.3), revision of citizen charter, updating of Master Plan in coordination with relevant authorities (action 6.1), and preparation of solid waste management plan (action 6.7). The following table presents summary of review results of 42 activities listed in ICGIAP. Achievements (with single underline) and challenges are underlined (challenges are marked with double underline).

**Table 5.1.3 Review of ICGIAP Activities**

| ICGIAP Activities | Current status/Challenges/ Importance from the standpoint of accelerated infrastructure development and effective IDP management |
|---|---|
| 1. Improvement of Openness and Information Dissemination | |
| 1.1 Initiate e-governance activities | - Digitalization of routine functions is introduced and operational in areas such as e-tendering, business license application, and death/birth certificate, contributing to efficacy and transparency in service delivery.<br>- Further promotion (capacity development) of e-tendering is critical for sound, sustainable management of development projects.<br>- E-tendering is operational in CBP as well. |
| 1.2 Establish & operationalize Mass | - MCC has been established in all ICGP-supported CCs.<br>- CCs have been sending project related messages (SMS) to the registered citizens (holding taxpayers only). |

| ICGIAP Activities | Current status/Challenges/ Importance from the standpoint of accelerated infrastructure development and effective IDP management |
|---|---|
| Communication Cell (MCC) | - CCs also are utilizing other social medias (e.g. Facebook) for information disclosure purpose.<br>- SMS is not so effective in relaying information to large segments of citizens. |
| 1.3 Establish City Information Service Center (CISC) | - Established in all ICGP-supported CCs as per the PMO guideline<br>- CISC provides basic services like issuance of birth and death certificates.<br>- It provides information related to not only CC services but also services of other government agencies. |
| 1.4 Organize mass public meetings | - ICGP-supported CCs initiated MPMs but failed to produce MPM plans.<br>- Inviting general public to meetings to disseminate information on policies, large scale projects, budget, etc.<br>- Effective tool to disseminate information to and collect opinion from mass people on budget and development projects |
| 2. Administrative Reform | |
| 2.1 Establish & operationalize City Development Coordination Committee (CDCC) | - Coordination mechanism introduced under ICGP for coordination between CCs and national government agencies in compliance with PMO's circular (2016)<br>- Coordination/collaboration is imperative for appropriate execution of urban planning/infrastructure development and for avoiding overlapping of development efforts<br>- CDCC has been held in NCC as originally planned but not in GCC and CuCC.<br>- Coordination can be effectively carried out in council meetings where national government agencies are requested to participate. This modality may well replace CDCC. |
| 2.2 Establish Administrative Reform Committee (ARC) | - ARC formed to facilitate administrative reform in ICGP-supported CCs<br>- ICGP-supported CCs formulated their own administrative reform strategies but failed to prepare quarterly and annual progress reports. |
| 2.3 Clarify vision and mission of each department | - Vision and mission set in each department<br>- Activities (vision/mission reviewed periodically and displayed in citizen charter and website) are completed as proposed by ICGP. |
| 2.4 Establish Capacity Development Unit (CDU) to implement training plan | - CDU consists of top management officers like CEO, secretary and other heads of departments.<br>- CDU was formed and training plan was formulated in ICGP-supported CCs.<br>- Some Kaizen activities such as improved file management, office cleanliness, and waste collection with collaboration of citizen were implemented. |
| 2.5 Revise job descriptions | - Job description serves as guideline of daily work for CC staff.<br>- Job description is reviewed and revised every year in ICGP-supported CCs.<br>- New job description circulated to all CC staff in all ICGP-supported CCs. |
| 2.6 Initiate kaizen activities | - Officials of CCs are trained in Kaizen approach and deeper understanding of Kaizen activities is gained.<br>- Kaizen activities are not widely implemented on the ground. |
| 2.7 Establish & operationalize Comprehensive Planning Unit (CPU) | - CPU, headed by the head of Engineering Division, is formed in all target CCs.<br>- CPU is expected to "formulate policy paper to tackle multi-sector issues" and take initiative in revising IDP, but at present CPU is not so active. At a CC JICA Survey Team visited, it is virtually reduced to "name-exists-only" status. Further investigation is required to verify if it is a meaningful institutional set-up for CCs.<br>- At GCC, Urban Planner in Engineering Division is tasked to revise IDP (priority project list) and CPU plays a role in organizing CSCC and WLCC meetings.<br>- During the second performance review, in GCC CPU held 24 monthly meetings, in NCC 24 meeting and in CuCC 5 meetings in FY 2016/17 and FY2017/18. |
| 2.8 Activate Standing Committees | - All target CCs established 18 SCs (14 statutory SCs and another 4 SCs in accordance with ICGP recommendation) |

| ICGIAP Activities | Current status/Challenges/ Importance from the standpoint of accelerated infrastructure development and effective IDP management |
|---|---|
| | - Not all ICGP-supported CCs met meeting target (monthly meeting).<br>- Urban Planning and Development SC plays an important role during revising process of IDP. |
| 2.9 Prepare and publish Annual Administrative Report | - CC Act and Paurashava Act require CCs and Paurashavas to prepare an annual administrative report before September 30 every year[1].<br>- In reality, annual reports are not prepared in many CCs and Paurashavas.<br>- Training on preparation of annual administrative report is being conducted by C4C.<br>- Preparation of activity and financial statement is an important component of IDP management cycle. |
| 3. Tax Reform | |
| 3.1 Improve capacity/efficiency of tax assessment | - Holding tax is a major revenue source for CC. It is important to enhance capacity of its revenue section by establishing systematic assessment process.<br>- ICGP-supported CCs introduced software for tax assessment database and are executing regular (5-year interval) tax assessment.<br>- GCC failed to create link between holding tax ID and construction registration.<br>- In order to meet the growing demand of infrastructure development, ULBs are required to continue efforts in raising tax assessment capacity. |
| 3.2 Carry out interim tax assessment and increase collection | - ICGP requires its target CCs to conduct bi-annual survey for interim assessment of holding tax, which is examined by FE SC and approved by council<br>- ICGP-supported CCs have performed well in identification of missing holdings and integration to assessment registration, which resulted in actual increase of tax collection efficiency.<br>- It is advisable that income generation efforts by ULBs be monitored continuously to ensure that ULBs keep up with the enhanced tax collection. |
| 3.3 Identify other sources of CC taxes | - CCs can increase income not only from holding tax but also other tax and non-tax. ICGP promoted identification of new sources of tax to strengthen revenue basis.<br>- ICGP-supported CCs managed to identify new revenue sources and impose tax on newly-identified tax source successfully. |
| 4. Financial Management Reform | |
| 4.1 Introduce independent account system in water supply and waste management | - Independent accounting system for in water supply and waste management services was introduced in ICGP-supported CCs.<br>- ICGP advocates cost recovery for O&M expenses in water supply and waste management by properly adjusting water tariff and conservancy rate.<br>- NCC is currently collecting 7% of holding value as holding tax, 5% as lighting rate and 7% for conservancy. (Water supply service is provided by Dhaka WASA).<br>- In CBP there is no separate account for conservancy and water supply services. |
| 4.2 Diversify earnings from CC services (e.g. markets, bus/truck terminals) | - ICGP promotes diversification of earnings of CCs.<br>- ICGP-supported CCs are required to examine diversification of business operated (e.g. lease for markets, concession for bus/truck terminal, etc.) at Finance and Establishment SC and seek out new means for diversified earnings.<br>- NCC prepared 5 proposals in FY2016-17 and FY2017-18 and CuCC 2 prepared proposals during the same period for new business operation. |
| 4.3 Establish integrated computer-based financial management system | - At present, accounting data, budgetary data and tax database are not linked with one another in an integrated IT system.<br>- Upgrading/modification of the existing fragmentary system or introduction of new FMIS is essential for efficient financial management. |

[1] Article 43 of CC Act "Annual Administrative Report of City Corporation" and Article 52 of Paurashava Act

| ICGIAP Activities | Current status/Challenges/ Importance from the standpoint of accelerated infrastructure development and effective IDP management |
|---|---|
| | - An integrated FMIS should also yield effective IDP management in terms of asset management, preparation of O&M plan and monitoring reports and accounting transactions related to O&M.<br>- CBP does not avail themselves of integrated financial management system. Accounting Section using a software[2] for management of general account and Revenue Division using another system[3] for management of holding tax. |
| 4.4 Prepare financial statements and conduct internal audit | - Financial statements are prepared every year in all ICGP-supported cities, but internal audit is not conducted every year.<br>- CBP prepares financial statement every year. But CBP does not conduct internal audit at all.<br>- C4C is giving training on preparation of annual administrative report, which covers financial report. Cooperation with C4C is necessary. |
| 4.5 Increase non-tax revenues at least by the inflation rate in each year | - For a CC to secures stable sustainable revenue, it is essential to raise non-tax revenue, which includes lease/rent of its facilities, tolls and fees for services.<br>- The ICGIAP proposed activities like adoption of non-tax revenue collection plan and updating of rates in non-tax revenue sources are completed in ICGP-supported CCs. |
| 4.6 All debts due to GOB and other entities paid as per the schedule | - For resources allocated to capital infrastructure, CCs by and large depend on government subsidies, donor-funds and borrowing whether from state or private lenders.<br>- Under ICGIAP, it is a requirement that CCs are meet loan obligations.<br>- All ICGP-supported CCs managed to repay all due debts according to the schedule and submit quarterly repayment statements to PCO at quarterly basis. |
| 4.7 Outstanding bills (incl. electricity and telephone) older than 3 months paid | - Tasks under Activity 4.7 of the ICGIAP aim to strengthen the financial discipline in its target CCs.<br>- These tasks include settlement of disputes over electricity and telephone bills in arrears and their regular payment.<br>- ICGP-supported CCs perform the planned activities (electricity/telephone bills paid regularly) at a satisfactory level. |
| 4.8 Budget compared with the actual expenditure | - All planned activities (preparation of budget, discussion of proposed budget at CSCC, and approval of proposed budget by council) are implemented in all ICGP-supported CCs.<br>- Preparation of budget should be based on the revised IDP.<br>- Under the present circumstances, budget preparation is divorced from IDP revising (development planning) process in most CCs. |
| 5. Citizen Awareness & Participation | |
| 5.1 Establish & operationalize Civil Society Coordination Committee (CSCC) | - CSCC is a committee at city level for stakeholder meeting.<br>- Members include representatives from various community organizations (e.g. Youth Association, Women's Association), standing committees, national government agencies, relevant officers of CC.<br>- During the IDP revision process, CSCC is held to discuss draft IDP revision and provide comments/recommendations.<br>- Some ICGP-supported CCs failed to hold quarterly CSCC meetings. |
| 5.2 Establish & operationalize Ward Level Coordination Committee (WLCC) | - WLCC is citizen participation platform at the ward level.<br>- In relation to IDP revision, WLCCs are held mainly for the purpose of collecting the voices of community on on-going projects and as well as requests for new projects. |

[2] "Municipal Accounting Software" (developed by MSU-LGED)
[3] "Municipal Holding Tax Management Software" (developed by MSU-LGED)

| ICGIAP Activities | Current status/Challenges/ Importance from the standpoint of accelerated infrastructure development and effective IDP management |
|---|---|
| | - ICGP-supported CCs are encouraged to hold quarterly WLCC meetings, but not all meeting were conducted in some CCs. |
| 5.3 Community integration and formation of Community Group (CG) | - Tasks under Activity 5.3 of the ICGIAP aim to enhance community level planning and participatory needs assessment by formation of CG.<br>- The proposed tasks include selection of pilot wards, implementation of pilot activity in involving CGs in waste collection, conduct of training of 3R, and expansion of 3R activities in other wards.<br>- PCO provided training to 2-3 community group members of each CC on awareness and management of 3R in FY 2017/18. |
| 5.4 Prepare Gender Action Plan (GAP) - funded by the CC | - Planned actions under ICGIAP include preparation of GAP and its endorsement by CSCC, implementation of GAP and preparation of quarterly reports.<br>- The objective of GAP is to advance women's equal participation as decision makers in the CC development activities.<br>- All ICGP-supported CCs managed to achieve the planned activities. |
| 5.5 Prepare Poverty Reduction Action Plan (PRAP) - funded by ICGP | - CCs are expected to prepare draft PRAP, allocate budget for PRAP implementation and prepare annual report of PRAP implementation.<br>- It is Poverty Reduction and Slum Development SC which is to initiate formulation of the PRAP.<br>- ICGP-supported CCs have failed to produce annual reports. |
| 5.6 Revise Citizen Charter | - Citizen's Charter is a declaration-type document prepared by service providers about the quality, nature and standards of their services, their availability and delivery timeframes, service cost, contact person and contact information etc.<br>- Its main objectives are to give clear information about all available services and ultimately to enhance the quality of services.<br>- Expected tasks under ICGIAP include that presenting details of grievance redress mechanism in the Charter, review of revised Citizen's Charter by CSCC, and posting of Citizen's Charter in CC premise. |
| 5.7 Implement Citizen Report Card (CRC) system | - CRC survey is used for measuring level of public satisfaction on services a CC provides.<br>- ICGP required preparation/revision of CRC and its approval by CSCC.<br>- CRC survey was conducted in all ICGP-supported CCs.<br>- CBP does not conduct this kind of survey. |
| 5.8 Establish & operationalize Grievance Redress Cell (GRC) with revised terms of reference | - A grievance redress system is significant platform for handling grievances and making service delivery more citizen-centered.<br>- GRC monthly meetings have been held according to ICGP requirement.<br>- In CBP, a grievance redress committee is established, and a grievance box is installed within its premise.<br>- It is an important mechanism to handle grievances related to infrastructure development policy and activities. |
| 6. Urban Planning & Environment | |
| 6.1 Initiate/update Master Plan (MP) - in coordination with relevant authorities & agencies | - Comprehensive Planning Unit (CPU) is to take initiative in planning and revising Master Plan at CC level.<br>- Elaboration modality and stage of MP differ from one CC to another.<br>- In CuCC, new MP (2014-2034) was completed with the assistance of LGED.<br>- RAJUK is responsible for revising MPs for GCC and NCC. |
| 6.2 Implement development control | - CC is required to take necessary action against illegal land use and buildings.<br>- Identifying areas of illegal land use and squatting is included among the target activities (performance requirements) of ICGIAP.<br>- GCC took actions against more than 127 cases of illegal building during FY2017/18-FY2018/19. |

| ICGIAP Activities | Current status/Challenges/ Importance from the standpoint of accelerated infrastructure development and effective IDP management |
|---|---|
| 6.3 Infrastructure Development Plan (IDP) reviewed & revised through inter-governmental coordination and citizen participation | - IDP is one component of CC planning system by which CC can manage and coordinate entire infrastructure development. The most important output of an IDP is a list of priority projects (project pipeline) with details of project cost and methodology of financing laid out.<br>- The participatory process is emphasized in ICGP for preparation and revision of IDP. Ideally, during IDP revision process, CC ensures i) bottom-up approach in project identification, ii) citizen participation in prioritization/coordination of projects and iii) coordination with other service providers.<br>- Detailed procedure and modality of IDP preparation and revision is not clear. ICGP-PCO is preparing concept note on CC 5-year development plan. |
| 6.4 Prepare O&M Action Plan | - It is considered as a big challenge for CC to ensure proper O&M of its assets by establishing effective & efficient management system.<br>- ICGIAP proposes that each CC prepares its own O&M Action Plan.<br>- O&M Action Plan may include type, nature and volume of different assets (immovable infrastructure and service facilities as well as movable equipment and properties).<br>- This is one of low performing activities.<br>- ICGP-supported CCs failed to prepare O&M plans for FY 2016/17 and FY 2017/18, hold O&M SC quarterly meetings and implement O&M plan for ICGP batch-1 sub-projects.<br>- O&M Action Plan serves as guidance for efficient allocation of budget to priority operation and asset maintenance. |
| 6.5 Implement environmental laws & regulations | - The proposed activities under ICGIAP include assignment of officer in charge for environmental conservation, identification of environmentally vulnerable areas and taking actions to stop the illegal activities which are not in compliance with Environmental Conservation Act.<br>- GCC identified, for instance, 453 factories and issued notice to 18 owners to stop pollution. |
| 6.6 Improve sanitary situations - public toilets & drainage | - To improve the sanitary situation, CCs need to increase public toilets and waste water drainage.<br>- The tasks under ICGIAP include situation analysis on overall sanitation condition of CC, area selection for public and household toilets and facilitation of toilet installation and drainage connection for households.<br>- All ICGP-supported CCs selected areas for public toilets and increased drainage connection of waste water from households. |
| 6.7 Solid waste management - awareness raising & improving practices | - The ICGIAP aimed to enhance community awareness in the field of solid waste and improve solid waste collection coverage and frequency.<br>- The detailed tasks include preparation of solid waste management plan, but all ICGP-supported CCs could not achieve it. |
| 7. Law Enforcement | |
| 7.1 Awareness raising campaigns on specific law enforcement issues | - CC is supposed to make rules and regulation to implement law enforcement such as traffic rule, encroachment, licenses, etc.<br>- Under ICGIAP, CC is required to implement campaign activity about rules and regulation to create awareness in citizens.<br>- In all ICGP-supported CCs, law officer implemented at least two campaign activities and submit reports to respective Mayor/CEO. |
| 7.2 Establish and operationalize Law Enforcement Unit (LEU) | - Law and discipline must be maintained in CC for smooth functioning and management. To enforce law and discipline, Law Enforcing Unit (LEU), involving the law enforcing agencies like magistrate and police, is established in ICGP-supported CCs. |

| ICGIAP Activities | Current status/Challenges/ Importance from the standpoint of accelerated infrastructure development and effective IDP management |
|---|---|
| | - LEU at NCC implemented 3 actions proposed by SC. |
| 7.3 Capacity development of Law Enforcement & Discipline Standing Committee | - Establishment of Standing Committee on Law and Discipline is promoted under ICGP.<br>- The members of the said SC need to acquire knowledge in respect of rules and regulations of CC. CDU is expected to organize training for CC official (magistrate and law officer) and councilors to build their capacity to operate law enforcement activities.<br>- All ICGP-supported CCs managed to achieve the planned activities. |

*Source: JICA Survey Team*

## 5.2 Donor Funded Projects

### 5.2.1 Governance-related Urban Development Project

#### (1) UGIIP by ADB

The Urban Governance Infrastructure Improvement Project (UGIIP) funded by ADB was initiated in 2003 as Phase-1, and now Phase -3 is about to be completed with the executing agency of LGED. Summary of the three phases is shown in the following table:

**Table 5.2.1 Summary of UGIIP**

| Project Name (Donor) | Project Period | Total Project Cost (USD Million) | Scheme | Target | Project Component |
|---|---|---|---|---|---|
| UGIIP Phase-1 (ADB) | 2003 - 2010 | 87.23 | Loan | 27 Secondary Towns | Component 1:<br>Urban Infrastructure Improvement<br>Component 2:<br>Urban Governance Improvement<br>Component 3:<br>Capacity Building and Implementation Assistance |
| UGIIP Phase-2 (ADB) | 2009 - 2014 | 87 | Grant/ Loan | 51 Paurashava (including Cumilla and Cox's Bazar) | Component 1:<br>Urban Infrastructure and Service Delivery<br>Component 2:<br>Governance Improvement and Capacity Development<br>Component 3:<br>Project Management and Implementation Support |
| UGIIP Phase-3 (ADB) | 2014 - 2020 | 236 | Loan | 30 Paurashava (including Cox's Bazar) | Component 1:<br>Municipal Infrastructure Improved and Made Gender and Climate Responsive<br>Component 2:<br>Improved Capacity of Paurashava in Urban Service Delivery, Planning and Financial Management<br>Component 3:<br>Project Management and Administration System in Place |

*Reference: Technical Assistance Report of Urban Governance And Infrastructure, Completion Report of Second Urban Governance and Infrastructure Improvement (Sector) Project, Project Administration Manual and Report and Recommendation of the President to the Board of Directors of Third Urban Governance and Infrastructure Improvement (Sector) Project*

*Source: JICA Survey Team*

It started in 2003 and continuously has implemented up to the third phase for 17 years as of now. From the beginning, UGIIP has clearly targeted Paurashava (municipality) following Paurashava act. Once a Paurashava graduates from the status of Paurashava and grow to a City Corporation, such a government body becomes non-eligible for this project (like Cumilla CC in UGIIP-3).

Components of this project for all the phases are consistently the same as infrastructure development, governance improvement, and capacity development, though some betterments have been accommodated. This phase-3 on-going project includes Cox's Bazar Paurashava, one of the target ULBs in the new Project, and implements infrastructure subprojects as stated in Chapter 4 (4.3.2).

(2) MGSP by WB

Municipal Governance and Services Project (MGSP) is being implemented by World Bank and soon to be completed. Summary of this project is shown in the table below:

**Table 5.2.2 Summary of MGSP**

| Project Name (Donor) | Project Period | Total Project Cost (USD Million) | Scheme | Target | Project Component |
|---|---|---|---|---|---|
| MGSP (WB) | 2013 Dec to 2020 June | 471.76 | Loan | 26 ULBs + 2 additions (including Cumilla, Narayanganj and Cox's Bazar) | Component 1:<br>Municipal Governance and Basic Urban Services Improvement<br>Component 2:<br>BMDF Demand-based Financing for Urban Services<br>Component 3:<br>Capacity Building and Implementation Support<br>Component 4:<br>Contingent Emergency Response |

*Reference: Project Appraisal Document Bangladesh - Municipal Governance and Services Project (English), hearing from PD*
*Source: JICA Survey Team*

This project started in 2013 and will be completed in 2020, and its executing agency is LGED. Target local government body is Urban Local Bodies, which include both City Corporations and Paurashava, all located in the growth corridors extending from the center, Dhaka to e.g. Chittagong, Sylhet, and Rangpur. Components of the project is similar to UGIIP. The subprojects in the target ULBs of the Project are described in Chapter 4 (4.3.2).

Comparison among similar projects, ICGP, UGIIP-3, and MGSP is shown in Attachment 5.2.1. Succeeding projects are being discussed for both UGIIP as fourth phase and MGSP as second phase.

5.2.2 Performance based Approach in UGIIP and MGSP

In the above two projects, performance-based approaches are adopted, and fund allocation based on evaluation is conducted. The table below summarizes areas/activities evaluated under their performance-based approaches.

**Table 5.2.3 Summary of Performance-based Approach under UGIIP and MGSP**

| Project Name (Donor) | Summary of Area/Activities Evaluated |
|---|---|
| UGIIP Phase-1 (ADB) | ・1 area, Urban Governance, and 5 activities evaluated (refer to the Attachment 5.2.2) |
| UGIIP Phase-2 (ADB) | Phase-I<br>・7 activities evaluated (refer to the Attachment 5.2.2)<br>Phase-II<br>・6 area below and 27 activities evaluated (refer to the Attachment 5.2.2)<br>1. Citizen awareness and participation, including 6 activities |

| Project Name (Donor) | Summary of Area/Activities Evaluated |
|---|---|
| | 2. Urban Planning, including 3 activities<br>3. Women's participation, including 2 activities<br>4. Integration of the urban poor, including 3 activities<br>5. Financial accountability and sustainability, including 7 activities<br>6. Administrative transparency, including 6 activities<br>Phase-III<br>・No performance-based allocation |
| UGIIP Phase-3 (ADB) | ・7 area below and 28 activities evaluated (refer to the Attachment 5.2.2)<br>1. Citizen Awareness and Participation, including 4 activities<br>2. Urban Planning, including 3 activities<br>3. Equity and Inclusiveness of Women and Urban Poor, including 3 activities<br>4. Enhancement of Local Resource Mobilization, including 4 activities<br>5. Financial Management, Accountability and Sustainability, including 6 activities<br>6. Administrative Transparency, including 3 activities<br>7. Keeping Essential Paurashava Services Functional, including 5 activities |
| MGSP (WB) | ・3 area below and 10 elements (activities) evaluated (refer to the Attachment 5.2.2)<br>1. Municipal Planning Processes: integrated municipal planning, including master planning, capital investment planning, and environmental planning and there are 2 elements included<br>2. Social accountability strengthening: citizen awareness and participation, participatory and inclusive planning, women's participation and pro-poor urban development and there are 3 elements included<br>3. Public Financial Management (PMF) & Public Revenues: accountability and Sustainability PFM strengthening, revenue enhancing action plans, and financial accountability and there are 5 elements included |

*Reference: Technical Assistance Report of Urban Governance And Infrastructure, Completion Report of Second Urban Governance and Infrastructure Improvement (Sector) Project, Project Administration Manual and Report and Recommendation of the President to the Board of Directors of Third Urban Governance and Infrastructure Improvement (Sector) Project, Project Appraisal Document Bangladesh - Municipal Governance and Services Project (English)*

*Source: JICA Survey Team*

Performance-based approaches in these two projects monitor general governance improvements including citizens awareness and participation, urban planning, recourse mobilization as well as public financial management and accountability. Infrastructure subprojects are considered as incentive to improve general governance in ULBs. The idea of the approaches in the above two projects is quite similar to the JICA's performance evaluation approach so far implemented.

And, none of the projects adopts incentive system to improve "implementation of infrastructure subprojects" itself. Since the new Project is going to introduce the Performance-based approach which directly monitor and evaluate subproject implementation, this is a major difference between the Project and other related projects.

### 5.2.3 Other Projects related to Urban Development

There are three more donors' projects related to urban development targeting to our target ULBs.

**Table 5.2.4: Other Urban Development Projects by Donors**

| Project Name (Donor) | Project Period | Total Project Cost (USD Million) | Scheme | Target | Project Component |
|---|---|---|---|---|---|
| Urban Infrastructure Improvement Preparatory Facility (ADB) | - | 11 (for loan) | Loan | Selected Secondary Towns and city corporations through DPHE and Narayanganj CC | Selected secondary towns and CCs<br>Water supply and sanitation investment projects (from groundwater to surface water)<br>Narayanganj CC (direct assistance from ADB)<br>Water supply, drainage, and urban roads investment with O&M support. |

| Project Name (Donor) | Project Period | Total Project Cost (USD Million) | Scheme | Target | Project Component |
|---|---|---|---|---|---|
| Second City Region Development Project (ADB) | From August 2019, until December 2024 | 223 | Loan | Dhaka City Region (Gazipur City Corporation, 9 Paurashava and 9 Upazila) and Khulna City Region (Khuluna City Corporation, 5 Paurashava and 23 Upazila)<br><br>Implementing agency is LGED. | Component 1:<br>Urban infrastructure (including road and bridge, drainage and solid waste management) in the project areas in the Dhaka and Khulna city regions improved and made climate-resilient<br>Component 2:<br>Institutional capacity and community awareness strengthened |
| Livelihoods Improvement of Urban Poor Communities Project' (LIUPCP) (UNDP) | From July 2018, until June 2023 | 24.24 | Technical Assistance | 36 ULBs<br>12 CC and 24 Class A Paurashava (including Cox's Bazar)<br><br>Implementing agency is LGD | Component 1:<br>Improve Resilient Infrastructure as primary infrastructure in low-income settlements (such as drains and footpaths, latrines, reservoirs and water dwells, and access road improvements).<br>Component 2:<br>Climate Resilient Housing for Urban Poor<br>Component 3:<br>Strengthen Community Organization focusing on Community Development Committee and its federation at city/town level with collaboration with WLCC/TLCC<br>Component 4:<br>Skills & Employment for Women & Girls<br>Component 5:<br>Strong Urban Management, Policy & Planning (project specific activities focusing on urban poor)<br>Component 6:<br>Mutual Accountability Unit |

*Reference: Project Data Sheet of Urban Infrastructure Improvement Preparatory Facility, Home Page of National Urban Poverty Reduction Programme (http://www.urbanpovertybd.org/), Project Administration Manual (Second City Region Development Project)*

*Source: JICA Survey Team*

The Urban Infrastructure Improvement project to be prepared by the above preparatory facility is greatly similar to the Project in Narayanganj from the viewpoint of infrastructure. The team discusses with NCC to avoid overlap and intends to design to see synergy or complement each other.

The Second City Region Development Project covers Dhaka and Khulna City Region. Gazipur City Corporation is only included in this project among the target ULBs of the Project.

This UNDP project focuses on urban poor, and in this sense, infrastructure in this project is considered smaller than the ones in the Project.

## 5.3 Major Achievements of Previously Implemented and On-going Urban Governance Projects

A number of donor-assisted projects have been implemented so far with a view to improving governance and service delivery at ULBs. These projects include, among others, WB's Municipal Governance and Services Project (MGSP), ADB's Urban Governance Infrastructure Improvement (UGIIP-III), JICA assisted Northern Bangladesh Integrated Development Project (NOBIDEP), Inclusive City Governance Project (ICGP), and Project for Capacity Development of City Corporation (C4C) for on-going projects as well as WB's Municipal Services Project (MSP), ADB's UGIIP-I and II, and JICA's SPGP for previously implemented projects. Overall, these projects helped ULBs promote good governance (/transparency), enhance their capacity in mobilizing and managing resources, consolidate citizen engagement mechanism and carry out infrastructure development projects in a more efficient manner.

Revenue Generation

Paurashavas information management system was not as organized as today. Tax collection was inefficient as preparation and sending of tax bills to taxpayers was time-consuming. Computer software for Holding Tax Management, Trade License Management and Account Management, introduced by MSP during the early 2000s, changed the situation profoundly. **Revenue collection efficiency increased significantly** using the computerized management system. Currently all Paurashavas and newly formed CCs (GCC, NCC and CuCC) continue to avail themselves of the same software programs.

Budget Management

Before the interventions by donor-assisted projects, CCs and Paurashavas struggled to formulate their annual budgets properly and timely. Projects like UGIIP I and II helped greatly enhance the capacity of resource management, due to which Paurashavas are now able to **prepare annual budget and financial statement more easily**.

Citizen Participation

Mobilization of citizens during planning process was not a common practice at ULB at a time in the past. In many cases, decisions were made in an exclusive circle of elected representatives and office executives. Governance projects have made a sizable contribution to the **establishment of local committees such as ward committees and TLCC** as well as enhanced capacity of ULB officials in conducting these meetings on a regular basis.

Strategy Paper

To improve the public services provided by Paurashava the Government of Bangladesh formulated the **National Strategy for Paurashava Governance Improvement (NSPGI) 2016-2025** through the SPGP support.

Standard Reference Documents

CCs and Paurashavas used uncoordinated and sometimes fragmentary guidelines/manuals prepared in accordance with specific project activities under different urban governance projects. The government decided to break down this old pattern and undertake the preparation of manuals for ULB's activities in a more holistic manner. SPGP supported the **formulation of manuals in 12 subjects all Paurashavas can use as reference** (e.g. citizen participation, development plan preparation, financial management, etc.).

Awareness Development of Elected Representatives

Urban governance projects, both previously implemented and on-going, provide orientation and training for **the enhanced knowledge and awareness of elected representatives (Mayors and Councilors)** and officers at top-management level. This has contributed to more efficient overall management of CC and Paurashava. SPGP conducted training programs on the subjects of Paurashava Act, functions of Paurashava, responsibilities of Mayors and Councilors, importance of citizen engagement in decision making process, procurement system, preparation of development plan, etc. MGSP and UGIIP (II and III) also organized

awareness-raising programs for councilors concerning their responsibilities, their role in the standing committee, and how to conduct WC and TLCC, etc.

## 5.4 Past Assistance in Solid Waste Management Project

### 5.4.1 Overview

The starting time of the assistance in solid waste management sector by JICA is around 20 years ago. The Government of Bangladesh submitted to the Government of Japan a request for a survey and the preparation of a plan for solid waste management in Dhaka City[4] in 2002. In response to that, JICA implemented a development study entitled "Solid Waste Management Study in Dhaka City" from 2003 to 2006 and prepared the "Clean Dhaka Master Plan (referred to below as the "M/P")".

After the study, Dhaka City Corporation (DCC) at that time actively promoted its own initiatives including the collection and disposal of medical waste in cooperation with a local NGO, in accordance with the recommendations of the M/P. Therefore, JICA provided supplementary assistance to the activities of DCC in the form of the "Follow-up Cooperation on the Management and Improvement of the Existing Disposal Sites"(in 2006) to assist the introduction of sanitary landfill to existing waste disposal sites and the expansion of waste disposal sites via the Japan Debt Cancellation Fund (2006 – 2011). In that period, Japan Overseas Cooperation Volunteers in the environmental education sector were also dispatched to create awareness among the residents and to promote a system of participatory waste collection from 2006 to around 2016.

In addition, JICA implemented a technical cooperation project in order to resolve the technical and management problems of solid waste management, and the collection and transport of solid waste in particular, for a period of approx. six years from February 2007 to March 2013.

Furthermore, the JICA Grant Aid Project "Improvement of Solid Waste Management Equipment" was implemented to provide the compactor vehicle for Dhaka City Corporation and Chittagong City Corporation.

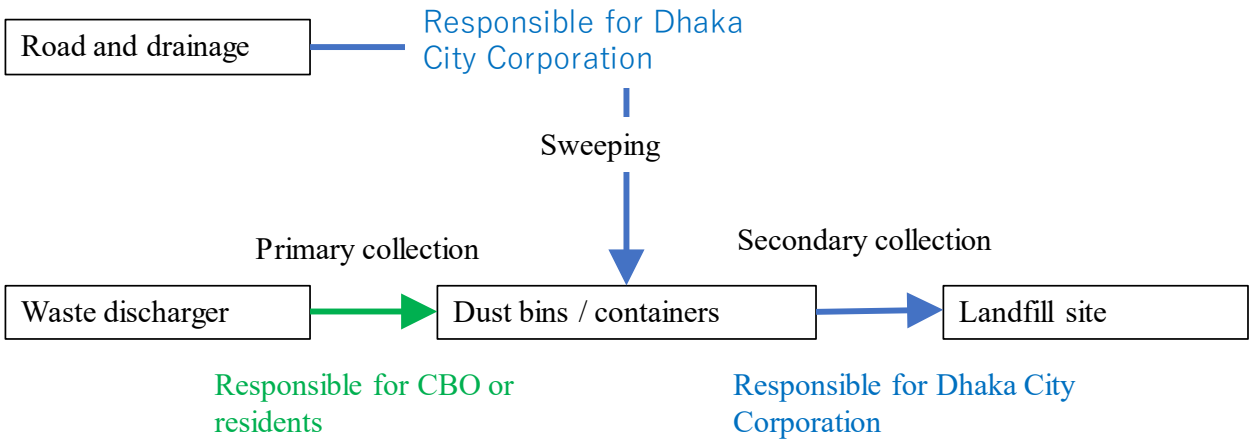
Currently JICA Technical Cooperation Project "The project for Strengthening of Solid Waste Management in Dhaka North City, Dhaka South City and Chittagong City"is being implemented to improve the solid waste management capacity of these ULBs.

### 5.4.2 Major Characteristics

The major characteristics about the assistance of solid waste management sector in JICA in Bangladesh are community based solid waste management, which is called as Ward Based Approach (WBA), and semi-landfill method (Fukuoka method) for sanitary landfill.

WBA is the system to implement solid waste management at ward level. The system is one of the community based approach that it involves originally existing various Community Based Organization (CBOs) or private sectors and the staff of solid waste management control and management. Based on the approach, the organization structure of ward level was prepared, and it contributes to coordinating the CBOs or obtaining private sectors or obtaining the public opinions or grievance to enhance the improvement of solid waste management as well as to monitoring and controlling by ward-wise about data management regarding waste collection, workers performance, improvement of work environment of workers. In addition, WBA include the environmental education and awareness raising activities for waste discharge. Image of collection and transportation system implemented in DNCC and DSCC by applying WBA is shown as below:

[4] Dhaka North City Corporation and Dhaka South City Corporation were as one CC, Dhaka City Corporation until 2011. Therefore, local government in Dhaka is described as Dhaka City Corporation for related events before 2011.




*Source: JICA Survey Team based on the review of the documents related to the past assistance.*

**Figure 5.4.1 Image of Collection and Transportation System**

Semi-aerobic landfill is the method that the waste decomposition situation is under semi-aerobic condition by fresh air inflowed through leachate collection pipe by connecting with gas collection pipe. The landfill gas generated in the process of waste decomposition is also transmitted to air promptly by natural circulation of high temperature landfill gas. This method is suitable for high temperature and humidity area due to prompt discharge of leachate and facilitation of disposed waste degradation with aerobic condition without artificial aeration. The water quality of leachate in this method is normally better than anaerobic condition. The semi aerobic method has been utilized for the landfill sites in Dhaka North City Corporation (DNCC) and Dhaka South City Corporation (DSCC). The following figure shows how this semi-aerobic landfill is like compared with the situation before the assistance.


*Source: Prepared by JICA Survey Team based on the information obtained from DNCC, DSCC*

**Figure 5.4.2 Image of Semi-Aerobic Sanitary Landfill Site**

## 5.5 Collaboration between the Past JICA Projects and the Project

### 5.5.1 Materials to be Referred

As discussed in the above, JICA has been implementing several governance projects. In formulation of the Project, some collaboration can be designed utilizing outputs produced by such projects.

In designing the new project, ICGP experiences are fully utilized, as planning capacity development components including governance and solid waste management, and infrastructure. And, many materials prepared in the past assistance which can be fruitful inputs in the related areas. In this regard, related documents are planned to be referred in the capacity development component of the Project, as shown in the table below:

**Table 5.5.1 Materials To Be Referred in Capacity Development, Prepared in the Past Assistance**

| Sector | Materials to be referred in the Capacity Development Component |
|---|---|
| City Governance / Urban Planning | ICGP<br>・ Orientation handbook on CC legal systems<br>・ Compendium of relevant legal instruments<br>SPGP<br>・ Manual for Orientation Course on the Basics of Paurashava<br>・ Compendium of Paurashava legal instruments<br>・ Operational Manuals, Course Guides and Teaching Materials for Paurashava Development Plan<br>・ Operational Manuals, Course Guides and Teaching Materials for Monitoring of Development Plan<br>・ Operational Manuals, Course Guides and Teaching Materials for Citizen Participation<br>・ Operational Manuals, Course Guides and Teaching Materials for Monitoring of Paurashava Activities<br>・ Operational Manuals, Course Guides and Teaching Materials for Budget Management (Paurashava)<br>・ Operational Manuals, Course Guides and Teaching Materials for Tax Management (Paurashava)<br>C4C<br>・ CC SC Model Regulation<br>・ CC 5-year Development Planning Guideline (Concept note as of Jan. 2018)<br>・ Guideline for Citizen Engagement and Guideline for GRS<br>・ Guideline for Operation and Maintenance<br>・ Manual on Budget Management (CC)<br>・ Manual on Tax Management (CC)<br>SPIMS<br>・ Handbook for DPP Preparation (Implementing Agency)<br>・ Manual on Cost Benefit Analysis |
| Road and Bridge | ICGP<br>・ Guidelines for Implementation of Infrastructure Subproject<br>・ Guidelines for Operation and Maintenance<br>SPGP<br>・ Operational Manuals, Course Guides and Teaching Materials 1. Orientation Course on the Basics of Paurashava Administration<br>・ Operational Manuals, Course Guides and Teaching Materials 9. Streets<br>NOBIDEP<br>・ Guidelines for the Operation and Maintenance for Paurashava |
| Drainage and Other Small-Scale Infrastructure | ICGP<br>・ Guidelines for Implementation of Infrastructure Subproject<br>・ Guidelines for Operation and Maintenance<br>SPGP<br>・ Operational Manuals, Course Guides and Teaching Materials 1. Orientation Course on the Basics of Paurashava Administration<br>・ Operational Manuals, Course Guides and Teaching Materials 10. Drainage<br>NOBIDEP<br>・ Guidelines for the Operation and Maintenance for Paurashava |
| Water Supply | ICGP<br>・ Guidelines for Operation and Maintenance<br>NOBIDEP<br>・ Guidelines for the Operation and Maintenance for Paurashava |

| Sector | Materials to be referred in the Capacity Development Component |
|---|---|
| Solid Waste Management | ICGP<br>・ Guidelines for Operation and Maintenance<br>・ Guidelines for Solid Waste Management<br>NOBIDEP<br>・ Guidelines for the Operation and Maintenance for Paurashava |
| Environment and Socio Consideration | ICGP<br>・ Guidelines for Implementation of Infrastructure Subproject<br>・ Guidelines for Environmental Conservancy |
| Procurement | ICGP<br>・ Guidelines for Implementation of Infrastructure Subproject<br>SPGP<br>・ Operational Manuals, Course Guides and Teaching Materials 1. Orientation Course on the Basics of Paurashava Administration |

*Source: JICA Survey Team*

### 5.5.2 Solid Waste Management

As explained section 5.4, JICA contributes to various assistance to DNCC or DSCC, and Chittagong. By this, The North Dhaka City and South Dhaka City has more capacity than the target ULBs. In that sense, the new project will collaborate these on-going technical cooperation projects and Dhaka North City and Dhaka South City, especially in the following points.

- The concept of WBA can be utilized for public awareness for waste discharge, improvement of collection and transportation system including transfer station management & monitoring and monitoring cleansing activity by street sweepers or the collectors of primary collection. Through WBA, the organization structure of solid waste management has been improved toward organizing by ward base and the working condition of each worker such as drivers of collection vehicle or cleansing staff has been improved.
- The maintenance workshop of collection and transportation vehicle or heavy equipment has been prepared in Dhaka. The knowledge related to maintenance will be utilized for the improvement of the maintenance capability for the target ULBs.
- The knowledge and experience of improvement to sanitary landfill including leachate collection and treatment system by semi-aerobic method and embankment construction can be utilized. Matuari and Amibazar landfills site was improved from open dumping site and expanded with consideration of future capacity. The subproject includes the component of the improvement and expansion of current open dumping site. Therefore, this experience can be utilized for the planning concept of sanitary landfill site.

# CHAPTER 6 EXAMINATION OF FUTURE NEEDS OF INFRASTRUCTURE DEVELOPMENT FOR THE PROJECT

## 6.1 Infrastructure Development Needs for the Project

### 6.1.1 Investment Planning and Development Needs

Under ICGP implementation, participating CCs must prepare IDPs, Infrastructure Development Plans which are supposed to include all development projects, both already committed ones as well as ones seeking fund sources. MGSP requests participating ULBs to prepare CIP, Capital Investment Plan, which is the similar concept to IDP. In the target UBLs in the Project, Narayanganj and Cumilla have both IDPs as well as CIPs, separately prepared. Substantially, it is desired that only one investment plan is available under a master plan; a ULB updates it annually; and such a list is shared by all development partners and even Government of Bangladesh (both central and local governments).

Through the initial visit to Gazipur, Narayanganj, Cumilla City Corporation, it came to know that the current available IDPs (2018/2019) didn't include comprehensive potential infrastructure projects which have not yet been committed for fund source, according to the explanation of the engineers in the ULBs. Since Cox's Bazar Paurashava is not a target city of ICGP, it doesn't have IDP. And, there is basically no comprehensive infrastructure lists available for new investments of which fund is not yet committed in all four ULBs. Therefore, the survey team requested the ULBs to submit needs of potential infrastructure development in a form of a list. In respond to the team's request, GCC prepared new IDP (19/20), of which infrastructure projects included are all not committed yet (a fresh list for new investment). The other three ULBs shared new lists specifically prepared for the new JICA Project.

In the above situation, to see how much extent IDP and newly prepared list are different, the survey team compared the available IDPs (18/19) and the new lists in NCC and CuCC and results are shown as follows.

**Table 6.1.1 Result of Comparison between Available IDPs and New Project Lists**

| | Subsector | NCC | | CuCC | |
|---|---|---|---|---|---|
| | | Number of project in IDP 18/19 | Number of project found in New List | Number of project in IDP 18/19 | Number of project found in New List |
| 1) | Road | 363 | 0 | 81 | 0 |
| 2) | Drain | 109 | 0 | 62 | 0 |
| 3) | Water Supply | 0 | 0 | 5 | 0 |
| 4) | Solid Waste Management | 2 | 0 | 5 | 0 |
| 5) | Others | 47 | 3 | 83 | 0 |
| | Total | 521 | 3 | 236 | 0 |

*Source: JICA Survey team*

Almost all the infrastructure projects in the IDPs do not match the projects proposed in the new list, indicating that current IDP could not possibly be managed with substantially desired objective. For the process of formulating the Project, the team decided to work with the newly shared lists.

### 6.1.2 Summary of Development Needs Newly Shared with the Team

From all the four target ULBs, the new lists of investment specifically designed for this JICA Project were submitted. This process took time to start the selection of priority subprojects. Summary of the new lists given by the ULBs by October are shown in the following two tables below.

**Table 6.1.2 Infrastructure Development Needs of Target ULBs (Nos. of Subprojects)**

| | | GCC | NCC | CuCC | CBP | Total |
|---|---|---|---|---|---|---|
| 1) | Road and Bridge | 94 | 40 | 118 | 272 | 524 |
| 2) | Drainage | 47 | 13 | 103 | 2 | 165 |
| 3) | Water Supply | 8 | 3 | 7 | 8 | 26 |
| 4) | Solid Waste Management | 8 | 3 | 7 | 8 | 26 |
| 5) | Other Small Infra. | - | - | - | - | - |
| | (Street Light) | 14 | 3 | 2 | 18 | 37 |
| | (Bus & Truck terminal) | 5 | 0 | 2 | 2 | 9 |
| | (Public Toilet) | 1 | 0 | 1 | 0 | 2 |
| | (Beautification) | 0 | 10 | 1 | 0 | 11 |
| | (Others) | 2 | 4 | 26 | 1 | 33 |
| | Total | 179 | 76 | 267 | 311 | 833 |

*Source: JICA Survey team based on the initial list submitted by the ULBs*

**Table 6.1.3 Major Characteristics of Infrastructure Projects in the New Lists**

| Name of Local Government | Sector | Needs | Summary of the Project List |
|---|---|---|---|
| Gazipur | Road and Bridges | Overpass (Flyover) Widening, new construction and improvement of roads Construction of bridges | The listed projects of more than BDT 100 million as estimated construction cost are integrated as 27 from listed 29 projects to fit the criteria, and their length is 2.7 km to 7.0 km, their width is 6 m to 9 m and their construction cost is BDT 108 – 366 million.<br>*A lot of small scale projects are not suitable for the Project since these project effects will not be expected.<br>There is one overpass project which is with large scale (length: 800 m) |
| | Drainage | Construction and rehabilitation of drainages | - 47 projects (improvement of natural stream and rehabilitation works) are listed.<br>*Because almost all drainages are constructed with roads in GCC, drainage projects which can be done individually are preferred for the Project. However, the scales of the proposed drainage are small (width is from 1.0m to 2.2m) |
| | Water Supply | Construction of water supply facilities | - All eight (8) water supply projects are listed as same contents (8 production well and 32 km distribution pipe in each zones) with same estimated amount (BDT 370 million). |
| | Solid Waste Management | Construction of transfer stations | - Projects of 8 transfer stations including collection and transportation equipment are listed and each project is estimated as BDT 370 million (Total BDT 2.96 billion). |
| Narayanganj | Road and Bridges | Overpass (Flyover) New construction, improvement and rehabilitation of roads Construction of bridges | - The listed projects of more than BDT 100 million as estimated construction cost are integrated to 8 subprojects, and their length is 3.7 km to 6.0 km, their width is 6 m to 8 m and their construction cost is BDT 170 to 438 million.<br>*A lot of small scale projects are not suitable for the Project since these project effects will not be expected.<br>*There are three overpass projects which are in large scale (length: 500 to 1,450 m) |
| | Drainage | Construction and rehabilitation of drainages | 13 projects (improvement of natural stream and rehabilitation works)<br>*6 new construction (2 deep drain, 4 RCC pile drain) and 7 rehabilitation (Re-excavation of canal or pond). |
| | Water Supply | Construction of water supply facilities | - All three (3) water supply projects are listed as same contents (installation of distribution pipe in each area) with same estimated amount (BDT 280 million).<br>- The water supply needs are planned to be covered by an ADB project. Therefore, this sector may not be involved in this Project. |

| Name of Local Government | Sector | Needs | Summary of the Project List |
|---|---|---|---|
| | Solid Waste Management | Construction of sanitary landfill site | - The development of landfill sites with separating area and consideration of waste to energy facilities are proposed. Total cost is BDT 28.8 million. The pre-feasibility study regarding one of the site is implemented by the Korean consultant. |
| Cumilla | Road and Bridges | Overpass (Flyover) New construction and improvement of roads | Since most of major projects have been committed / formulated by other fund, only small scale projects remains. The project list was prepared through discussion with the CC.<br>length: 0.6 km – 1.6 km, width: 3 m – 4 m,<br>Construction cost: BDT 30 – 78 million<br>*One overpass project of BDT 500 million is not considered suitable due to difficulty of land acquisition (not possible for 2 years implementation) |
| | Drainage | Construction and rehabilitation of drainages | 103 projects (improvement of natural stream and rehabilitation works) are listed.<br>*Primary drains which link to main canals are almost developed. Therefore projects proposed for the new JICA Project from CuCC are link drainages which are secondary and tertiary drainages. |
| | Water Supply | Construction of water supply facilities | - All seven (7) water supply projects are listed as pipeline, overhead reservoir, water quality test lab, surface water treatment plant, iron removal plant, pump station, but not detailed plans.<br>- It might be overburdened to construct the surface water treatment plant and iron removal plant by small scale water supply section in City Corporation. |
| | Solid Waste Management | Construction of landfill site and other facilities and procurement of equipment | - The development of sanitary landfill site, biogas plant, and other solid waste management facilities and equipment are listed. The total cost is BDT 260,330,000. |
| Cox's Bazar | Road and Bridges | New construction of road and bridges | - Listed projects of more than BDT 100 million are 2 projects, of which length is 1.8 km and 2.5 km, and of which width is 24m and 35 m.<br>Construction cost: BDT 108 or 175 million<br>*A lot of small scale projects are not suitable for the Project since these project effects will not be expected. |
| | Drainage | Construction of drainages | - 2 projects of 2.0km length and 4.5m width are listed and each cost is BDT 300 million. |
| | Water Supply | Construction of water supply facilities | - All eight (8) water supply projects are listed as pipeline, overhead reservoir, surface water treatment plant, iron removal plant, production tube well, and other small facilities.<br>- It might be overburdened to construct the surface water treatment plant and iron removal plant by small scale water supply section in Paurashava. |
| | Solid Waste Management | Construction and procurement of each facility and equipment | The procurement of equipment and construction of facilities (BDT 2,790 million in total) are listed. The contents of equipment and facility are collection vehicles, transfer stations, heavy equipment like excavator or payloader, waste treatment facilities |

*Source: JICA Survey Team based on the request letter from each City Corporation or Paurashava*

## 6.2 Selection Criteria of Priority Subprojects

Selection criteria for infrastructure subprojects in the Project is proposed referring to the above potential needs, and shown as below:

**Table 6.2.1 Selection Criteria to Identify Priority Subprojects**

| | Criteria | | Details |
|---|---|---|---|
| Eligibility criteria | | | |
| 1 | Ownership | | ULBs take responsibility in the implementation and O&M |
| 2 | Construction cost | | JPY 0.1 billion to 0.5 billion / subproject (BDT 8crore to 40 crores), basically*1 |
| 3 | Construction period | | Almost less than 2 years |
| 4 | Scope (including criteria) | Road and Bridges | Road for strengthening the network<br>Construction of bus terminal*2 |
| | | Drainage | Upgrading of natural stream/existing old drainage to new drainage<br>Excavation works of existing main canal<br>Priority : 1.Primary Drainages: they link to existing main canal, river and pond, 2.Secondary and Tertiary drainages: they link to existing primary canal. |
| | | Water Supply | Production Tube Well, Distribution Pipe Line, Over Head Tank, Ancillary Facility |
| | | Solid Waste Management | Procurement of collection bins<br>Procurement of collection vehicles<br>Development and/or improvement of transfer stations<br>Rehabilitation, improvement and/or extension and/or improvement of landfill site (Semi-aerobic sanitary landfill site with leachate treatment which require the discharge standard of waste quality in Bangladesh) |
| | | Other Infrastructure | Procurement and installation of street lights<br>Social infrastructure (public places) |
| 5 | Land acquisition related issues | | Cost as minimum as possible, minimum illegal encroachment |
| 6 | Environment and social consideration | | JICA Category: B and below |
| 7 | Relevance | | Selected subprojects should be urgently required, priority infrastructures by ULBs and residents, consistent with the master plans, and have certain impacts. |

*Remarks: *1: Even the case of exceeding BDT 40 crores, Maximum must be JPY 1 billion, or BDT 76 million. *2:Bus terminal subprojects are moved from Other Infrastructure to Road and Bridge subsector considering their nature of transportation related areas.*

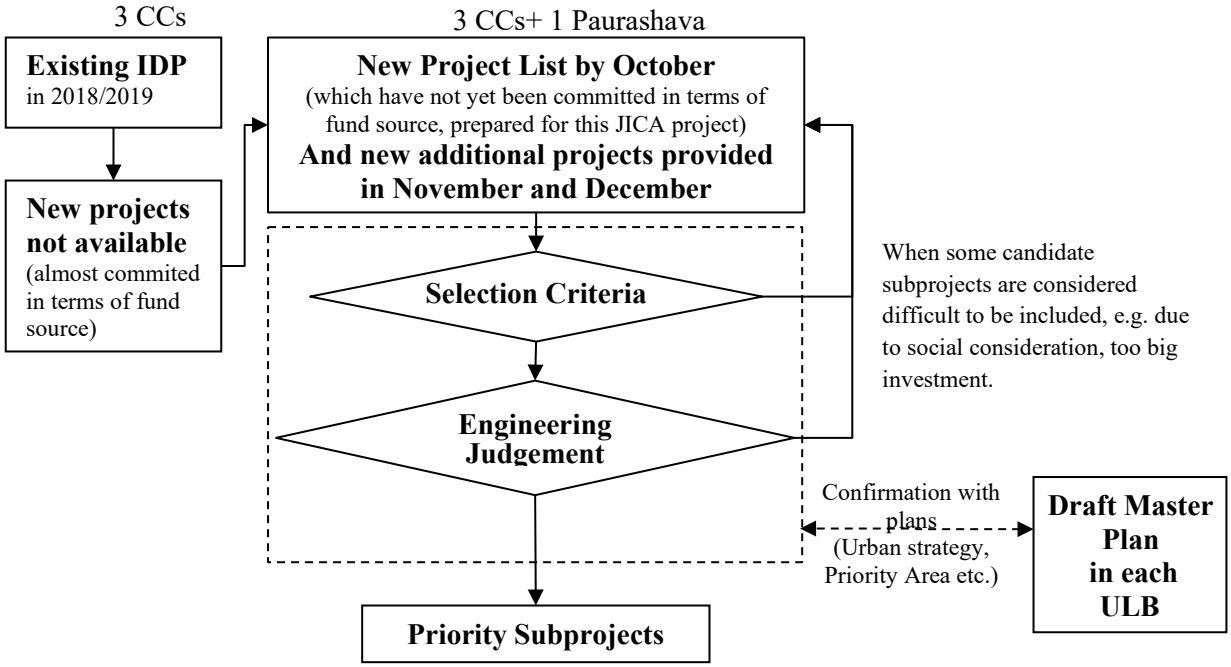
*Source: JICA Survey Team*

This selection criteria were agreed among LGED, JICA and the team during the first JICA FF mission. After the further examination, very minor adjustment was made. And these are the final criteria.

## 6.3 Selection of Priority Subprojects To Be Financed by New Project

### 6.3.1 Process of Selection of Priority Subprojects

From the new lists which are prepared and submitted by the ULBs by October 2019, which responded to the request by the team, selection activities have started. General process to select the priority subprojects were as follows:




*Source: JICA Survey Team*

**Figure 6.3.1 Process of Selection of Priority Subprojects**

Subprojects very preliminarily selected and reported at the time of Progress Report from the "new" lists provided by October were mainly by construction cost. From the late October to the early November, the team mainly examined subprojects from the viewpoints of resettlement. By this examination, the team excluded subprojects of which JICA environmental categories are potentially Category A. By this examination, there were concerns that infrastructure needs might not be sufficient for this Yen Loan project. Then, the team continued discussion with ULBs for some more additional investment projects. Through the process, some projects were strongly requested by Mayors of ULBs. These projects were also examined to make them fit in the project concept or not.

### 6.3.2 Engineering Judgement

By taking the above mentioned selection process, priority subprojects have been identified. Main engineering judgement made during the selection process are summarized as follows.

(1) Road and Bridge

1) Common

- For selection of priority subprojects, preliminary check was made from viewpoints of connecting missing link and strengthening the road network.
- The construction cost for each project/subproject was evaluated based on average cost per km (in case of bridge: square meter) in ongoing projects and/or the estimated scope.

2) Gazipur

- 27subprojects were identified integrating 29 projects to be able to exceed BDT 100 million as estimated construction cost.

3) Narayanganj

- Out of 8 integrated subprojects of which costs are more than BDT 100 million as estimated construction cost, 2 subprojects were selected as subprojects.
- Other 6 subprojects are new construction of roads with river bank protection along left and right bank of the major river. They were excluded since these will be huge scale subprojects

and could be considered as improvement of river needing hydrological analysis, etc., which is beyond road subsectors.

4) Cumilla
   - Due to background described in Clause 6.1.2, four (4) subprojects were identified as priority even small scale projects.

5) Cox's Bazar
   - 2 projects of more than BDT 100 million as estimated project cost were selected as subprojects.

Based on the above preliminary examination as well as new further addition made in November and December, judgement on major potential subprojects are shown in Table 6.3.1.

**Table 6.3.1 Judgement on Major Potential Subprojects Requested by CC in Road/bridge Subsector**

| Status 1/ | Name of Subproject | Evaluation | Reason/Justification |
|---|---|---|---|
| Gazipur | | | |
| PGS | Shimun Gofur Khan Road, Zone 1 | Excluded | Category A |
| PGS | Mudafa Prottesa Road, Zone 1 | Excluded | Category A |
| PGS | Vadam Tamisna – Ataur House Road, Zone 1 | Excluded | Category A |
| PGS | Fisons Road to Abdul Matin Road, Zone 1 | Excluded | Category A |
| PGS | Road from Pakair Deshi to Megdubi Mazu Khan, Zone 2 | Excluded | Excluded due to lower contribution to road network |
| PGS | Road from Mirer Bazar Tongi-kaligong Road to Paran, Zone 2 | Excluded | Excluded due to lower contribution to road network |
| PGS | Road from Tongi kaligonj Jaman Filling Station to Narayonkul Bypass, Zone 2 | Excluded | Category A |
| PGS | Bridge on Nagdha River at Nondi Bari and Narayonkul connecting road, Zone 2 | Excluded | Category A |
| PGS | Road from Jajhar Battola Road to Dhirasram Rail Station, Zone 3 | Excluded | Category A |
| PGS | Road from Gacha M.T. Sweater to Kamarjhuri Road, Zone 3 | Excluded | Category A |
| PGS | Road from Gacha Road to Shukhi Nagar Connecting Road, Zone 3 | Excluded | Category A |
| PGS | Road from Shanghata to BIDC Road, Zone 4 | Excluded | Excluded due to lower contribution to road network |
| PGS | Road from Rajbagan to Baluchakuli Bridge, Zone 4 | Excluded | Excluded due to lower contribution to road network |
| PGS | Road from Dhirasam Bazar to East Direction joydebpur koler Bazar road, Zone 4 | Excluded | Excluded due to lower contribution to road network |
| PGS | Road from Dirasam Joydepur Main Road to Freedom Fighter Jalal house, Zone 4 | Excluded | Excluded due to lower contribution to road network |
| PGS | Road from Kathora Bashbari to Bangla Market, Zone 5 | Excluded | Category A |
| PGS | Road from Dhake Mymensing Road to Turag River, Zone 5 | Excluded | Category A |
| PGS | Road from Masterbali to hatiabo connecting road, Zone 5 | Excluded | Excluded due to lower contribution to road network |
| PGS | Bridge at Salna – Moishan Bari Road, Zone 5 | Excluded | Excluded due to lower contribution to road network |
| | Bridge at Salna Karkhana Bazar, Zone 5 | | |

| Status 1/ | Name of Subproject | Evaluation | Reason/Justification |
|---|---|---|---|
| | Bridge at Salna Jolarpar Road, Zone 5 | | |
| PGS | Road from Dhaka-Tangali bypass to Natun Bazar, Zone 6 | Excluded | Category A |
| PGS | Road from Outpara City College to Kazimuddin Chowdhury school, Zone 6 | Excluded | Category A |
| PGS | Road from Baghia School to Bot-tala Ahaki, Zone 7 | Excluded | Excluded due to lower contribution to road network |
| PGS | Road from Arfan C.N.C to Megher Chaya, Zone 7 | Excluded | Excluded due to lower contribution to road network |
| PGS | Road from Dhaka Tangali Highway pollibiddut office to jorun intersection, Zone 7 | Excluded | Category A |
| PGS | Road from Lotifur Toyale Factory to Tetuie Bari Ananna Pump, Zone 8 | Excluded | Excluded due to lower contribution to road network |
| PGS | Road from Hatimara Ayanl Market Road to Hatimara Uttor Para Hozrot House, Zone 8 | Excluded | Excluded due to lower contribution to road network |
| PGS | Road from Saker Noll to Kashimpur-Sreepur Road, Zone 8 | Excluded | Category A |
| New | Road from Kodda Bridge2 to Dhaka-Asulia Highway | Selected | The subproject is strongly requested by CC.<br>The subproject road will function as bypass connected Dhaka – Ashulia Highway with Tangail – Joydebpur Road.<br>Instead of widening existing road section as proposed by CC, new route with straight alignment and shorter length (Proposed by GCC: 14.7km, Proposed by Survey Team: 11.5km) on west is recommendable to be more suitable for bypass. Existing road would have resettlement. |
| Pro | Construction of Joydebpur Railway Flyover | Selected | The subproject is strongly requested by CC<br>The serious traffic congestion on the at-grade railway crossing will be remarkably resolved by the overpass.<br>Cost of existing proposed alignment is much higher than the project concept, as well as possibility to be categorized as A, the survey team preliminarily proposed new alighment above the existing crossing with less cost and social consideration. |
| New | Naojor - Kashimpur Bridge | Selected | The subproject is strongly requested by CC<br>The subproject road section is missing link to connect between two truck roads (Dhaka Bypass and Chandra-Nabinagar Highway).<br>The road links will be completed by the subproject and contributed strengthening the road network |
| Narayanganj | | | |
| PGS | Ali Ahmed Cunka road | Excluded | Proposal of Tram Line project is ongoing on the subproject road, which affects subproject implementation. |
| PGS | Construction of Bridge over in Luhia canal at ward no-24. | Excluded | No access road to the bridges |

| Status 1/ | Name of Subproject | Evaluation | Reason/Justification |
|---|---|---|---|
| | Construction of bridge on Modonganj khal at ward no-19 | | |
| | Construction of Bridge over in Lakhankhola canal at ward no-25 | | |
| Pro | Construction of Overpass at Railgate No - 2 (From Chashara to Bangabandhu Road) | Selected | The subproject is strongly requested by CC<br>The serious traffic congestion on the at-grade railway crossing will be remarkably resolved by the overpass |
| Pro | Flyover at Chashara intersection | Selected | The subproject is strongly requested by CC<br>The serious traffic congestion on the major intersection and the at-grade railway crossing will be remarkably resolved by the overpass on both intersection and railway crossing |
| Cummila | | | |
| PGS | Road& Drain in Thakurpara Moha Sashan road up to BESIC link road | Excluded | Excluded due to very small scale and lower contribution to road network |
| PGS | Road & Drain in Bagichagawn Boter Goli Shimom house up to Reserve tank link drain | Excluded | Excluded due to very small scale and lower contribution to road network |
| PGS | Drain Staring for Nurpur Chowmohoni old Dhaka –Ctg Road to Cumilla Medical Collage Road | Excluded | Category A |
| PGS | Footpath starting from Nowagaw Chowomony to Katomtoly Bridge | Excluded | Excluded due to very small scale and lower contribution to road network |
| New | Multipurpose utilization of existing drainage and water body canal (near CC office to the Old Chittagong Highway) | Excluded | Not feasible due to environmental aspect (not allowed to cover on existing canal) |
| New | Flyover access to the city center. | Excluded | No connected road if the above subproject is not constructed |
| New | New Construction of Bus Terminal and expansion of another Bud Terminal | Included | Newly requested and considered higher priority to serve reduction of congestion |
| New | New Construction of Truck Terminal | Excluded | Due to total cost adjustment possibly over BDT 75 crore and concern of land acquisition |
| Cox's Bazar | | | |
| PGS | Road & bridge from Kasturaghat LGED bridge to Airport road | Selected | The subproject road will function as bypass of the existing north-south main road in the city |
| PGS | Road & drain including streetlight at Hotel Sayman to Sugandha point | Selected | The subproject road will function as bypass of the existing north-south main road in the city (the bypass will complete by construction of remaining south part section funded by world bank) |
| New | Improvement of Central Bus Terminal | Selected | Improvement of the existing bus terminal will contribute better transport system in the city |
| New | Development of bus and truck terminal facility with multipurpose facility | Excluded | Adjusted due to total costs and less priority |

*Source: JICA Survey Team*

*Notes:1/ PGS: Selected subproject in Progress Report, Pro: Proposed by CC, New: Newly proposed by CC after Progress Report*

(2) Drainage

1) Gazipur

- Projects of which locations are given by the CC were selected at the time of first screening.
- After the first screening, some projects were proposed from all eight zones. Then, the survey team selected four subprojects which seem to be smoothly implemented because of no/less land issues.

2) Narayanganj

- Small scale projects (less than JPY 0.1 billion) were eliminated at the time of first screening.
- A pipeline drainage was proposed with 15km by NCC. Since the road under this proposed pipeline are under construction by RHD and no discussion had been done between NCC and RHD, the project was not considered.
- Two deep drainages which are in both sides of Bangbandhu road, the main road of NCC, were selected. Since World Bank constructed a limited-length of drainage in west side of the road few years ago, and this drainage turns effective, but very short. NCC desires to expand this in the Project.

3) Cumilla

- Out of the originally listed projects, 39 projects were selected and integrated into some subprojects considering our selection criteria of construction cost, from JPY 0.1 billion to 0.5 billion, and those location.
- After the first screening, the survey team did field survey, considering our selection criteria, mainly of construction period, almost less than 2 years, environmental and social consideration, and discussed with ULB's engineer. As a result, five subprojects have been selected.
- Three subprojects in the eastern side of the CC will drain rainwater along old Dhaka -Cumilla-Chittagong Highway Road, and two subprojects of western side of the CC will drain rainwater in eastside of the railway which connects between Dhaka and Chittagong. Both will benefit important road and railway.

4) Cox's Bazar

- Two drainages linking to Bay of Bengal and Bakkhali River are proposed. Those drainages are earthen, and will be upgraded to RCC drain for upper stream, and block lining drain for downstream, which match with our selection criteria.
- Since the total construction costs for upgrading existing two drainage are more than JPY 0.5 billion each, the survey team divides the projects into four sub-projects.

(3) Water Supply

1) Gazipur

- It is difficult to select all listed eight (8) sub projects (8 production well and 32 km distribution pipe in each zones) in terms of securing construction site and O&M management.
- Basically, it is available to install small scale groundwater supply system following the existing system.
- At present, groundwater supply system has been installed in only Zone 1 and Zone 4, and GCC demands to install the water supply system in undeveloped suburb area of Zone 3, Zone 6, Zone 7, and Zone 8.
- The construction of ancillary facility for water storage is recommended for adjusting the hourly fluctuation, emergency water service, and firefighting in service area. Also, the construction of overhead tank is recommended for regulation of water pressure in service area.

- However, ground water supply system excluding water reservoir and overhead tank is planned to be installed in response to requests from GCC.
- Based on the above condition, groundwater supply system including 1 production tube well and 10 km distribution pipeline is proposed to be installed in Zone 3, Zone 6, Zone 7, and Zone 8, respectively.

2) Narayanganj

- Government of Bangladesh (GoB) has started processing a Technical Assistance (TA) from Asian Development Bank (ADB) to formulate implementation of the project, Urban Infrastructure Improvement Preparatory Facility (UIIPF).
- Improvement of existing water supply infrastructure and its expansion for future surface water treatment plant in NCC is proposed by ADB loan. This include non-revenue water reduction, rehabilitation and upgradation of water treatment plant, and rehabilitation and expansion of water distribution network.
- The feasibility study report including the detailed project component will be publicly disclosed in few months, and loan agreement between GoB and ADB is planned to be signed this year.
- Based on the above condition, it is considered that the improvement of water supply facilities has been covered by ADB loan, and the requested subprojects of water supply subsector in NCC is considered not taken up to the Project.

3) Cumilla

- The listed subprojects of water supply sector in CuCC include water treatment plant and iron removal plant, etc.
- Appropriate surface water resource with substantial volume and good water quality for particularly dry season is not located adjacent to CuCC.
- Water supply subsector staff have no experience of operation and maintenance for surface water treatment plant and iron removal plant, and short of skilled and enough manpower.
- Also, land availability of planned construction site has not been secured by CuCC.
- Based on the above condition, the requested subprojects of water supply subsector in CuCC is considered not taken up to the Project.

4) Cox's Bazar

- The requested projects of water supply subsector in CBP include water treatment plant, iron removal plant, these feasibility study and training, etc.
- Appropriate surface water resource with substantial volume and good water quality for particularly dry season is not located adjacent to CBP.
- Water supply subsector staff have no experience of operation and maintenance for surface water treatment plant and iron removal plant, and short of skilled and enough manpower.
- The construction of ancillary facility for water storage is recommended for adjusting the hourly fluctuation, emergency water service, and firefighting in service area. Also, the construction of overhead tank is recommended for regulation of water pressure in service area.
- Based on the above condition, groundwater supply system including production tube well, ancillary facility, overhead tank, and distribution pipeline is proposed to be installed in ward 6, 8, 9, 10, and 11, respectively.

(4) Solid Waste Management

1) Gazipur

- The proposed projects include the construction of transfer station and procurement of collection vehicles or other small equipment such as rickshaw van, hand cart or dust bin, etc. This is considered important thus this is taken up as one subproject.
- The situation of the sites of the transfer station varies, and it is necessary to plan and design for each site.
- The proposed sites of the transfer station are along highways managed by RHD, which is difficult to transfer the land for transfer station through the discussion with LGED and GCC.
- Through the discussion with GCC, they also need the landfill site for final disposal in the future due to the lack of future landfill capacity of current dumping site, of which land is RHD.

2) Narayanganj

- The proposed projects include new landfill construction projects with consideration of separation facility for recycling and waste to energy projects
- The site of Jalkuri is governmental land but the site of Lakkankhola is not sure.
- In the Jalkuri, Korean consultants implemented feasibility study but according to NCC, there is no financial source. The team contacted KOICA to inquire about this, and KOICA replied that FS was not designed and thus did not involve KOICA and Korean Exim Bank. NCC seeks financers of this project, and NCC approached KOICA, too. The team thinks that whether or not this project is taken up as JICA's subproject is subject for NCC's judgement.
- It could not be able to judge feasibility about recycling and waste to energy now due to lack of reliable waste characterization data as well, of which study would take longer time.

3) Cumilla

- The proposed projects include landfill construction, transfer system and other sophisticated infrastructure like biogas plant or electrical waste management system. These sophisticated infrastructures are necessary for the operation and maintenance technology and financial capacity.
- CuCC does not have specific ideas of institutional set up including financial matter for the operation of biogas plant or electronic waste management.
- Final disposal is an important issue for CuCC, though there is no candidate site of landfill. It is possible to utilize the current open dumping site as sanitary landfill site for short term after rehabilitation and improvement of the site.
- It is necessary to improve the collection and transportation system with procurement of compactor vehicles as well as the pilot activity about waste transfer.

4) Cox's Bazar

- Final disposal is important issues for CBP and there is candidate site for new landfill development. ADB implemented the survey of the site but there is no consideration of funding according to CBP.
- The current dumping site is near the central market in CBP which will affect the market. Therefore, it is necessary to rehabilitate and close the current dumping site urgently after the construction of new landfill site.
- It is necessary to improve the collection and transportation system with procurement of development/improvement of collection vehicles

(5) Other Infrastructure

1) Gazipur

- GCC requested LED street light in all 8 zones. Though the survey team selected 2 zones at the time of first screening, GCC requested to install street lights in all zone equally. Then, 2 subprojects which cover 4 zones each were formed finally.
- Though toilets and machineries & equipment were also requested, they were eliminated considering the selection criteria and the project impacts.

2) Narayanganj
   - LED street light and some beautification projects were requested at first. However, projects of beautification seemed to require more than 200 people's resettlement, meaning they become "category A" in JICA Environmental Guideline. So, those beautification projects were eliminated.
   - After the first screening, NCC proposed 10 projects additionally. Then the survey team selected four subprojects including community center, kitchen market, and public space/playground which seem eligible in addition to 3 street light projects which cover all ward in the CC.
3) Cumilla
   - Two subprojects (LED street light (1), city park (1)) were selected considering the selection criteria.
   - Some buildings and community center were proposed after the first screening, but since the CC have no concept and purpose except the location (just they have lands). Those were excluded.
4) Cox's Bazar
   - One subproject, LED street light installation, was selected considering the selection criteria. It includes the installation of LED street light with solar panel along the see beach.

Through the above process, relations of potential subprojects to the development direction in the master plans as described in Section 3.4 was also examined. It could be said that these infrastructure investment needs are somehow in line with the development direction in the master plans, although the new lists and some additions were shared with the survey team through the course of the survey period, in addition to several lists of infrastructure investment which have existed already such as IDP and CIP. This is probably because substantial development needs in these areas are technically not so much different.

### 6.3.3 Final Adjustment

Through the above process, draft final lists were prepared. Based on the lists, JICA and LGED discussed and finalized the final list, dropping some of the infrastructure subprojects as standby lists as a result of the possible loan amount to be provided to this project. Finalization process was taken with involvement of the target ULBs considered with the priority of the ULB basically as well as the opinions of LGED.

# Part II: The Project

# CHAPTER 7 CONTENTS OF THE PROJECT

## 7.1 Objective and Outline of the Project

### 7.1.1 Objective and Outline

The following table shows outline of the Project to be formulated in the Survey.

**Table 7.1.1 Outline of the Project**

| Items | Contents |
|---|---|
| Project Title | Urban Development and City Governance Project |
| Purpose | To improve urban functions by strengthening city governance related to infrastructure development in the target cities, thereby contributing to economic growth and improvement of living conditions toward sustainable cities. |
| Components | 1) Capacity Development<br>• Governance, urban planning, procurement, infrastructure related issues<br>2) Infrastructure Development<br>• Road and bridges, Drainage facilities, Solid waste management, Water supply facilities, Other infrastructure<br>3) Consulting services |
| Target Cities (Urban Local Bodies) | 4 cities, Urban Local Bodies (ULBs)<br>3 City Corporations (Gazipur, Narayanganj, Cumilla)<br>1 Municipality = Paurashava (Cox's Bazar) |
| Related Governments institutions | Executing Agencies: LGD, LGED,3 City Corporations (Gazipur, Narayanganj, Cumilla) and 1 Municipality = Paurashava (Cox's Bazar) |

*Source: JICA Survey Team*

The above will be implemented through Performance-based Approach (PBA) to allocate infrastructure development fund based on performance evaluation of project activities of ULBs. This is described in detail in Chapter 8.

There are two areas to be focused in the project activities through capacity development component, of which performance is to be evaluated through PBA as discussed in the next subsections.

### 7.1.2 Governance Activities

Governance improvement activities in UDCG center on the preparation and management of investment plan, more specifically IDP for the three CCs and PDP for CBP. Every year, prior to preparation of annual budget, target ULBs are expected to update the project list (project pipeline) of IDP and PDP on a rolling basis. This requires removal of completed projects from the list, incorporation of new projects, reprioritization among pipeline projects, and adjustment of budget allocation. Revising investment plan should also fulfill procedural requirements. For instance, revised investment plan should be built on due consultation with stakeholders (citizenry and other government agencies). Forms of consultation with citizenry include WLCC, TLCC and CLCC. Other core elements surrounding IDP/PDP revision include, among others, ensuring links with Master Plan, strategic vision and annual budget. The Project shall also see if investment project lists include all different funding sources and carry multi-year framework.

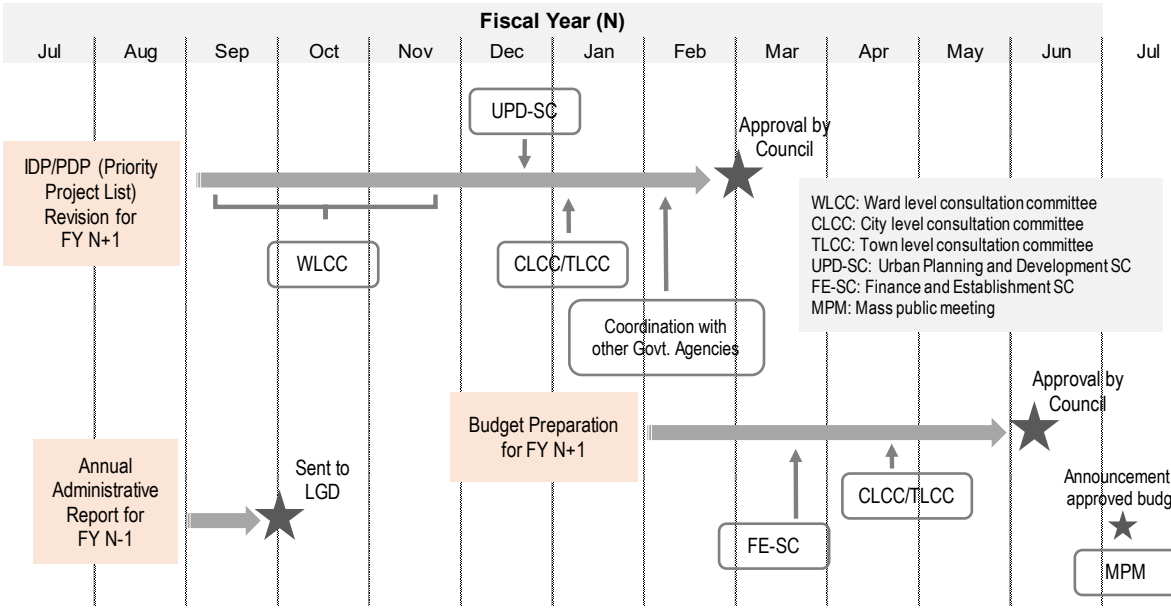
For effective overall investment management, allocation and mobilization of resources is critical as well. In light of this, the Project also pays attention to resource allocation (budget preparation and management) and resource mobilization (tax collection and management).

Annual cycle of investment plan management and budget management is described in the table below. Highlighted in grey-scale are the proposed governance performance indicators for UDCG.

**Table 7.1.2 Annual Activities related to IDP/PDP Revision and Budgeting**

| PDCA | | Steps | Timeline | Expected Activities |
|---|---|---|---|---|
| Plan | Plan Preparation | Prior arrangement | Sep. | - Working group (WG)[1] is formed to play central role in revising IDP/PDP project list. |
| | | Consultation at WLCC meetings | Sep. - Nov. | - Councilors conduct WLCC meeting in each Ward with the support of WG.<br>- Councilors and WG shares the progress of on-going projects, collects new project requests and brief grievance redress policy/procedure. |
| | Budget | Approval of budget | Before 1st June | - Budget is approved by council before June 1. |
| Do | | Announcement of budget | Jul. | - Approved budget (and revised IDP/PDP project list) is announced at MPM<br>- Approved budget is posted on website. |
| | | Monitoring of IDP/PDP Implementation | Jul. - Jun. | - Quarterly monitoring reports are prepared. |
| | | Collection and management of taxes and non-taxes | Jul. - Jun. | - Regular tax assessment is conducted every 5 years.<br>- Interim tax assessment is conducted.<br>- Taxes and non-taxes are collected.<br>- Financial reports are prepared and submitted to council. |
| Check Action | | Reporting | Before 30th Sep. | - Annual Administrative Report (AAR) is prepared before September 30. |

*Source: JICA Survey Team*




*Source: JICA Survey Team*

**Figure 7.1.1 Planning and Budgeting Annual Cycle**

### 7.1.3 Pilot Activities of Solid Waste Management

Solid waste management is becoming a big issue in ULBs recently as population increases and economy grows in Bangladesh. Therefore, solid waste management is the area which needs to be addressed urgently in this project as an important government service delivery.

[1] WG consists of Secretary/AO, Asst. Engineer, Urban (Town) planner, Social Welfare Officer, Waste Management Officer, Public Health Officer, Accounting Officer

As discussed in Chapter 4 and 5, waste collection and transportation system in each ULB are divided into the parts of road and drainage sweeping, primary collection and secondary transportation. The primary collection is implemented by each ULB or Community Based Organizations (CBO) and secondary collection and sweeping are implemented by ULBs.

These activities by each actor who deals with the above part are not done in a coordinated manner. For example, it takes long time to loading the waste to secondary transportation vehicle from the arrival of primary collection vehicle due to no schedule of the collection and transportation system. It is inevitable to unload the waste to the ground in order to transfer secondary transportation vehicle from primary collection vehicle such as rickshaw van in this system. Despite waste collection and transportation have been basically implemented by the above system in each ULB with cooperation with CBO, waste is scattered in transfer stations and along roads, as discussed in Chapter 4, and the system does not unfortunately work in efficient manner.

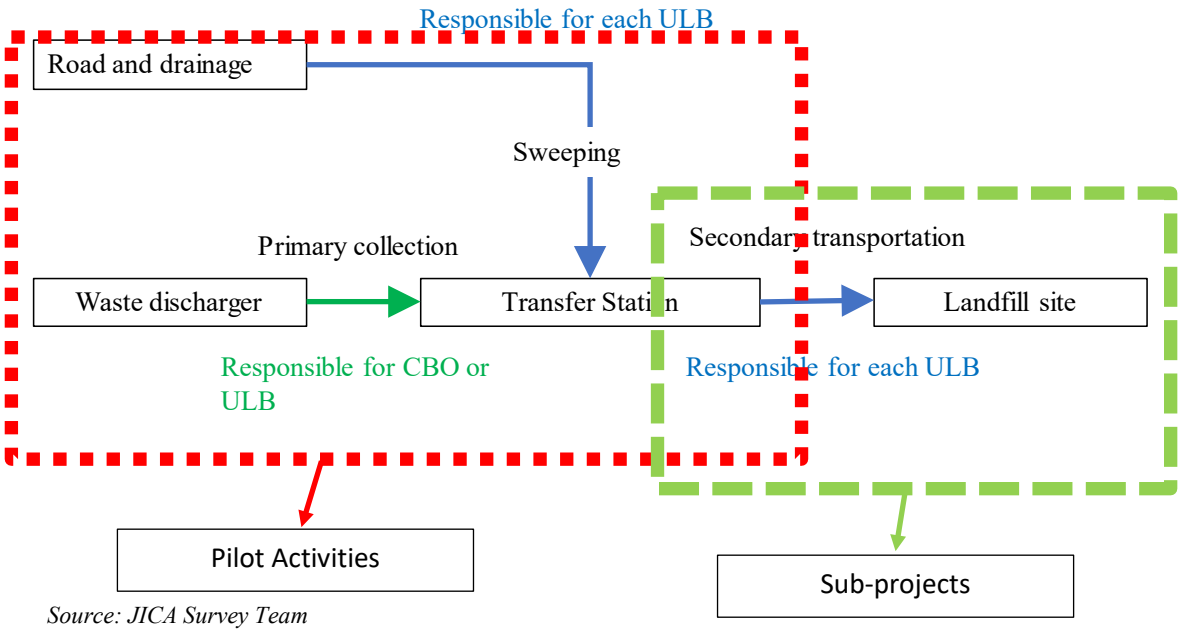
| | |
|---|---|
|  |  |
| Unloading from primary collection vehicle at transfer station | Temporary storage at transfer station (Preparation for loading to secondary transportation vehicle) |

*Source: JICA Survey Team*

**Figure 7.1.2 Current Situation of Waste Collection in Target ULBs**

Therefore, this pilot activity to solve these issues such as waste scattering in transfer stations and no efficient waste transfer will be implemented as an objective of improvement of the existing system of primary collection, waste transfer and secondary transportation by each actor by planning through coordination with actors with concept of Ward Based Approach, which is described in Chapter 5.

This pilot activity will be implemented in selected one or two wards in each ULB as pilot basis. Selection of pilot wards needs to mainly consider synergistic effect with subprojects of solid waste management and other points. Target parts to be covered by Pilot Activities are shown in the figures below:




*Source: JICA Survey Team*

**Figure 7.1.3 Target of Pilot Activities of Solid Waste Management by the Project**

In addition to this pilot activities (mainly focused on improvement of collection and transportation system), the subprojects will also be implemented in the solid waste management. The subprojects are procurement of collection vehicle and construction of sanitary landfills. By designing the pilot activities of solid waste management, synergy between the pilot activities and the subprojects is also considered.

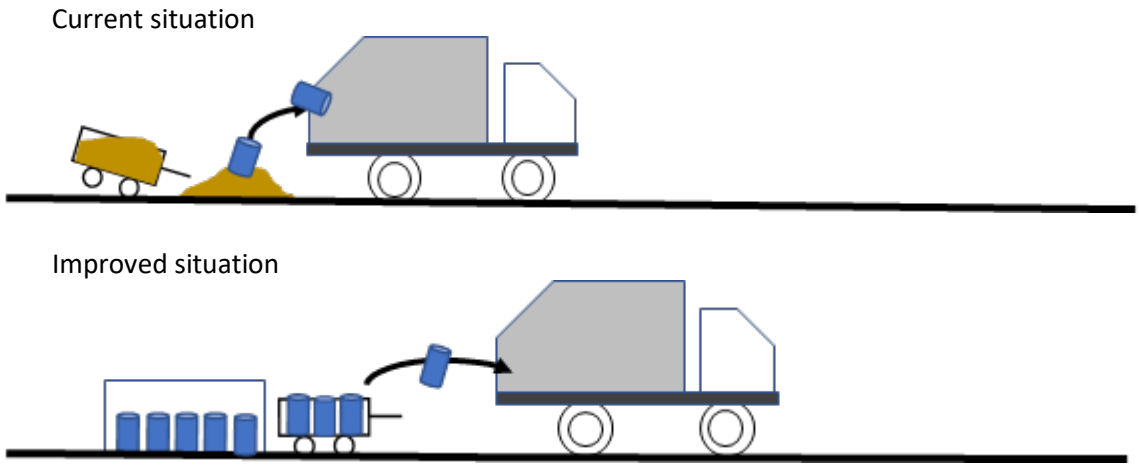
Target situation to be achieved by the pilot activities are in principle as follows.

1) Road sweeper or waste collector set the bucket for waste in primary collection vehicle such as rickshaw van or hand cart during primary collection

2) The waste collector collects the waste from each waste discharger and road sweeper sweep the road and collect the waste to the bucket in primary collection vehicles

3) A bucket can be used for each type of waste such as recyclable or residual based on the situation

4) The waste is loaded into secondary transportation vehicle from the bucket without unloading transfer stations because waste has already been in the buckets




*Source: JICA Survey Team*

**Figure 7.1.4 Improved Situation at Transfer Points To be Achieved by Pilot Activities**

5) If there are time difference between unloading time from primary collection vehicle and loading time to secondary transportation vehicle, the waste can be storage in the transfer point within the bucket without scattering in surrounding area.

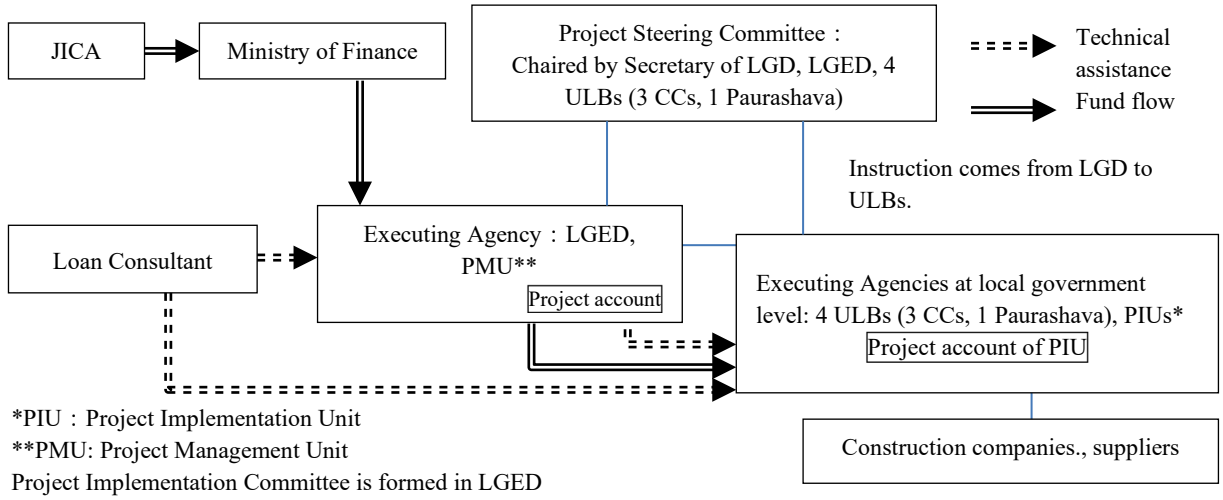
6) Platform for transferring waste or storage area of the buckets, scheduling and route setting collection and transportation should be prepared based on the condition of each target ward

The detail contents are described in Attachment 7.1.1. Since the above is just a current idea, contents will be modified and finalized to fit the situation of each ULB, when loan consultants will be assigned.

## 7.2 Implementing Organization

### 7.2.1 Overall Implementing Organization for the Project

Subprojects will be implemented by PIUs and engineers in the target cities. PIUs are responsible to manage and monitor overall subproject implementation by city, and overall Project implementation is managed by LGED. Technical assistance to the cities is to be provided by LGED, and loan consultants to be hired by LGED. Loan allocation by Performance-based Approach will be decided by LGED consulting the target cities based on the evaluation results prepared by loan consultants.



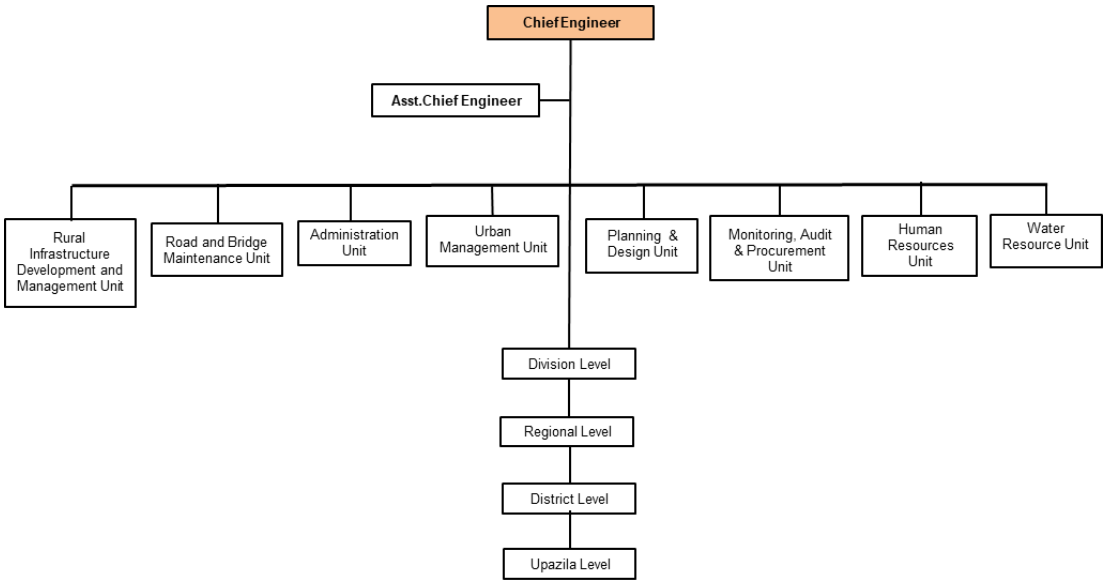

*Source: JICA Survey Team*

**Figure 7.2.1 Implementing Organization**

PMU in LGED is to follow the current PMU for ICGP basically. PIU of three cities also follow the current PIU. PIU will be established in Cox's Bazar Paurashava. Members of Project Steering Committee are to be modified considering a new governance component in the Project, though it is based on the current PSC.

### 7.2.2 LGED

Executing Agency of the Project is LGED. LGED has 13,394 staff of which 10,564 staff are permanent. There are 319 staff in the headquarter, and others are stationed in regional offices. In Urban Management unit, there are 17 staff in the headquarter. Organization Chart of LGED is shown in detail in Attachment 7.2.1 and summarized as below.




*Source: JICA Survey Team based on LGED website*

**Figure 7.2.2 Organization Chart of LGED**

## 7.3 Operation and Maintenance of Infrastructure Component

Referring to the discussion in Chapter 4, operation and maintenance (O&M) of infrastructure is different from one sector to another. Therefore, description of the O&M of the subprojects in this section is also different among the five technical sectors as discussed below:

### 7.3.1 Road and Bridges

(1) Road and bridges: common across all ULBs

As discussed in Chapter 4, operation and maintenance of roads and bridges are not well organized at this point of time. Recommendations to O&M for the proposed subprojects and even other roads are as follows:

**Table 7.3.1 Recommended O&M for Road and Bridge Subprojects**

| Item | Description |
|---|---|
| 1 Organization | |
| Supervision (No. of Staff) | Two to three technical staff of routine and periodic inspections to find problems in road conditions earlier, and two management staff |
| Implementation | By Contractors |
| 2 Financial Plan | |
| Budget source | Fund of ULBs |
| Budget amount (BDT/km/year) for routine/emergency | Road:<br>BDT 1.1million /km/year<br>Bridge<br>0.09 million /100m/year |
| Planned Activities | |
| ☐ Routine Maintenance (cleaning of drainage structures) | Mandatory |
| ☐ Emergency Maintenance (repair of damaged drainage, etc.) | Mandatory |
| ☐ Periodic Maintenance (patching potholes) | Conduct the periodic maintenance depending on the results of inspection. The necessary cost shall be ensured by applying revised budget during a fiscal year |
| ☐ Rehabilitation (overlay) | To be planned in 5 years after completion |

*Source: JICA Survey Team*

The following maintenance activities are recommended when appropriate budget is ensured.

Technical considerations

1) Cement concrete pavement case (applied in most of CGP projects and proposed subprojects in this survey)

**Table 7.3.2 Inspection and Maintenance Activity of Cement Concrete Pavement**

| Item | | | Recommendation |
|---|---|---|---|
| Inspection | | Routine (Monthly) | ➢Damaged portion on cement concrete slab<br>➢Condition of drainage facilities (necessity of cleaning) |
| | | Periodic (Yearly) | Not Required |
| Maintenance Activities | Routine | 1st Year – 10th Year | cleaning of ditches and culverts |
| | Periodic | 1st Year – 10th Year | Not Required |

*Source: JICA Survey Team*

If any damaged portion on cement concrete slab are found during 1st to 10th year period, repair or replacement should be considered. It is not a category of maintenance.
After 10th year, the followings shall be considered according to the condition.

**Table 7.3.3 Recommended Measures of Concrete Cement Pavement after 10 years**

| | |
|---|---|
| No particular damage on surface | Same maintenance activities as 1st to 10th year period could be continued |
| Damages are widely spread on surface | Rehabilitation (replacement of cement concrete slab) should be considered |

*Source: JICA Survey Team*

2) Asphalt concrete pavement case (applied on existing main streets)

**Table 7.3.4 Inspection and Maintenance Activity of Asphalt Concrete Pavement**

| Item | | | Recommendation |
|---|---|---|---|
| Inspection | | Routine (Monthly) | ➢Condition of drainage facilities (necessity of cleaning) |
| | | Periodic (Yearly) | ➢Damaged portion on pavement |
| Maintenance Activities | Routine | 1st Year – 5th Year | Cleaning of ditches and culverts |
| | Periodic | 1st Year – 5th Year | Patching potholes |

*Source: JICA Survey Team*

Technical staff for checking conditions and taking care necessity and scale of maintenance will be required. After 5th year, rehabilitation (overlaying) should be considered.

Institutional considerations

Two to three technical staff for routine and periodic inspections and two management staff are desirable as minimum requirements. In addition, for strengthening organization for maintenance activities, inhabitants in zone/ward concerned could contribute at least by means of the following actions:

- ► Inhabitants living near roads could find/identify the situations and report to CC/Municipality. It will contribute to appropriate action for maintenance.
- ► Participation of works from inhabitants is recommended. This is not only direct contribution to maintenance activities but their direct benefits (economic benefit to local people). The Contractors are encouraged to employ inhabitants concerned as labor.

Road users as beneficiaries are generally not defined nor specified). However, in case that the government maintenance budget is insufficient for the required works, the following action could be considered:

- ► Since local business has opportunity to get benefits by developed road, any fund could be collected as levies from businessmen and traders.

(2) Bus terminal: CuCC and CBP

In CuCC, two bus terminals are planned to be leased out to private organization for operation and maintenance. The central bus terminal of CBP is now managed by CBP. In both cases, clear operation rules should be set out for proper management. For the central terminal CBP, there is a possibility to earn income to lower burden

### 7.3.2 Drainage

Common across Four ULBs

Operation and maintenance (O&M) activities are done without any guidelines/manual and specific regulation. Frequency of maintenance and the expenditure depend on extent of emergency based demands by local people or councillor in each ward. In this sense, O&M is carried out on an ad-hoc basis to meet immediate priorities. O&M activities must be managed more systematically. Especially the maintenance of main canal and primary drainage should be prioritized to prevent water logging in suffered area.

Dredging of sediments for all primary drains/canals are needed to be done regular basis; for the hilly area it may require quarterly dredging; and stair type and L type drains existed in the hilly area contain much sediments and the engineering dept. needs to do dredging works frequently. Cleaning of secondary and tertiary drains also need to be done frequently. Analysing the capacity of drainage flow is also important for appropriate operation. Relevant Engineering section must need regular inspection and follow the scheduled maintenance & repairing works, which to be prepared in operation manuals. And, relevant engineering section needs strong coordination with the Conservancy division to guide cleaning, and maintaining drains. As mentioned in the section "7.2 capacity development", inventory ledger of existing facilities is recommended to be prepared and O&M should be done more systematically than present.

### 7.3.3 Water Supply

(1) GCC

At present, Water Supply and Sanitation Section is managed by executive engineer and assistant engineer in Engineering Division of GCC. Operation of production tube well and water tariff collection from each corresponding beneficiary are executed by each pump operator. Support worker is employed as non-permanent staff at the time of machinery failure and pipeline leakage.

In the future, additional staff corresponding to increased water supply facilities and beneficiaries will be required by implementation of proposed subproject GCC-WS-1&2. On the other hand, executive engineer and assistant engineer is in charge of other sectors, too, and busy. Moreover, permanent staff is difficult to be increased unless LGD authorizes proposed organogram, which takes more time. Therefore, at least sub assistant engineer and below position staff is expected to be increased in the discretion of GCC. Increase of section staff will contribute to stable water supply operation and tariff collection activities.

**Table 7.3.5 Proposed Necessary O&M Staff for Water Supply Subprojects in GCC**

| Position | Present (2019) | Future (2028) | Increment |
|---|---|---|---|
| Executive Engineer | 4 | 6 | - |
| Assistant Engineer | 2 | 6 | - |
| Sub Assistant Engineer | 1 | 5 | 2 persons for 4 PTW systems |
| Pump Operator | 125 | 137 | 12 persons for 4 PTW systems |
| Support Worker (non-permanent) | 8 | 18 | 4 persons for 4 PTW systems |
| Bill Clerk | 10 | 20 | 2 persons for 4 PTW systems |
| Total | 150 | 170 | 20 person for 4 PTW systems |

*Source: JICA Survey Team*

(2) CBP

At present, Water Supply and Sanitation Section is managed by executive engineer and assistant engineer in Engineering Division of CBP. Operation of production tube well and water tariff collection from each corresponding beneficiary are executed by each pump operator. Also, Support worker is employed as non-permanent staff at the time of machinery failure and pipeline leakage.

In the future, additional staff corresponding to increased water supply facilities will be required for implementation of proposed subproject CBP-WS-1&2. The same discussion is applied to CBP as GCC, and therefore, at least assistant engineer and below position staff is expected to be increased in the discretion of CBP. Increase of section staff will contribute to stable water supply operation and tariff collection activities.

**Table 7.3.6 Proposed Necessary O&M Staff for Water Supply Subprojects in CBP**

| Position | Present (2019) | Future (2028) | Increment |
|---|---|---|---|
| Executive Engineer | 1 | 1 | - |
| Assistant Engineer | 1 | 3 | 2 persons for 5 PTW systems |
| Pump Operator | 9 | 24 | 15 persons for 3 PTW systems |
| Support Worker (not permanent) | 5 | 10 | 5 persons for 5 PTW systems |
| Bill Clerk | 1 | 3 | 2 persons for 5 PTW systems |
| Total | 17 | 41 | 24 persons for 5 PTW systems |

*Source: JICA Survey Team*

### 7.3.4 Solid Waste Management

The improvement of operation and maintenance organization to implement the proposed subproject is necessary. Especially, there is no engineers who has the responsibility of only the solid waste management and engineers do have only the theoretical knowledge of solid waste management and no communication with operation and maintenance section such as conservancy departments in each ULB.

(1) GCC

In case of GCC, currently there is no engineers related to only solid waste management. Also, there is no concrete plan and design for solid waste management. In the proposed subprojects, it is necessary to secure staff of engineers, landfill operators including heavy equipment operators and other landfill facility operator including monitoring at new landfill site. Also, the driver and collector for secondary transport vehicles for this subproject are necessary. The necessary personnel for these subprojects are shown in Table 7.6.7.

**Table 7.3.7 Proposed Necessary O&M Staff for SWM Subprojects in GCC**

| Position | Current | Total (Future) after subprojects | | |
|---|---|---|---|---|
| | | GCC-SWM-1 | GCC-SWM-2 | Total (Future) after subprojects |
| Chief waste management officer | 1 | 0 | 0 | 1 |
| Assistant chief waste management officer | 1 | 0 | 0 | 1 |
| Engineers of solid waste management | 0 | 2 | 1 | 3 |
| Conservancy inspector | 1 | 1 | 1 | 3 |
| Conservancy supervisor | 6 | 1 | 3 | 10 |
| Road and drainage cleaning staff | 323 | 0 | 0 | 323 |
| Primary collection driver/helper | 0 | 0 | 0 | 0 |
| Secondary transportation driver | 43 | 0 | 18 | 61 |
| Secondary transportation helper | 43 | 0 | 36 | 79 |
| Heavy equipment operator in landfill site | 6 | 3 | 0 | 9 |
| Staff in landfill site | 0 | 5 | 0 | 5 |
| Total | 424 | 12 | 59 | 455 |

*Source: JICA Survey Team*

In addition, necessary O&M cost to operate and maintain shall be borne by GCC, not only increased staff salary but direct cost such as fuel, treatment/replacement costs necessary in sanitary landfills.

(2) NCC

In case of NCC, currently there are some engineers related to solid waste management, but they are not related to only solid waste management. There is no concrete plan and design for solid waste management. In the proposed subprojects, it is necessary to secure staff of engineers, landfill operators including heavy equipment operators and other landfill facility operator including monitoring at new landfill site. The necessary personnel for these subprojects are shown in Table 7.6.8.

**Table 7.3.8 Proposed Necessary O&M Staff for SWM Subprojects in NCC**

| Position | Current | Subproject persons for the subproject | | Total (Future) after subprojects |
|---|---|---|---|---|
| | | NCC-SWM-1 | NCC-SWM-2 | |
| Chief waste management officer | 1 | 0 | 0 | 1 |
| Assistant chief waste management officer | 3 | 0 | 0 | 3 |
| Engineers of solid waste management | 4 | 2 | 1 | 7 |
| Conservancy inspector | 0 | 1 | 1 | 2 |
| Conservancy supervisor | 15 | 1 | 1 | 17 |
| Road and drainage cleaning staff | 227 | 0 | 0 | 227 |
| Primary collection driver/helper | 597 | 0 | 0 | 597 |
| Secondary transportation driver | 22 | 0 | 0 | 22 |
| Secondary transportation helper | 43 | 0 | 0 | 43 |
| Heavy equipment operator in landfill site | 7 | 3 | 2 | 12 |
| Staff in landfill site | 0 | 5 | 3 | 8 |
| Total | 919 | 12 | 8 | 939 |

*Source: JICA Survey Team*

In addition, necessary O&M cost to operate and maintain shall be borne by NCC, the same as GCC.

(3) CuCC

There are no engineers related to solid waste management. There is no concrete plan and design for solid waste management. In the proposed subprojects, it is necessary to appoint specific staff of engineers for SWM, landfill operators including heavy equipment operators and other landfill facility operator including monitoring at the extended and improved current landfill site. Also, the driver and collector for secondary transport vehicles for this subproject are necessary. The necessary personnel for these subprojects are shown in Table 7.6.9. Necessary O&M cost should be secured from CuCC budget.

**Table 7.3.9 Proposed Necessary O&M Staff for SWM Subprojects in CuCC**

| Position | Current | Subproject persons for the subproject | Total (Future) after subprojects |
|---|---|---|---|
| | | CuCC-SWM-1 | |
| Chief waste management officer | 1 | 0 | 1 |
| Assistant chief waste management officer | 0 | 0 | 0 |
| Engineers of solid waste management | 0 | 2 | 2 |
| Conservancy inspector | 0 | 2 | 2 |
| Conservancy supervisor (field supervisor/monitor) | 49 | 4 | 53 |
| Office staff | 5 | 1 | 6 |
| Road and drainage cleaning staff | 89 | 0 | 89 |

| Position | Current | Subproject persons for the subproject | Total (Future) after subprojects |
|---|---|---|---|
| | | CuCC-SWM-1 | |
| Primary collection driver and helper | 45 | 0 | 45 |
| Secondary transportation driver | 34 | 11 | 45 |
| Secondary transportation helper | 99 | 22 | 121 |
| Heavy equipment operator in landfill site | 4 | 3 | 7 |
| Other staff regarding landfill | 5 | 5 | 10 |
| Mechanic | 2 | 1 | 3 |
| Total | 333 | 51 | 384 |

*Source: JICA Survey Team*

(4) CBP

Like others, currently there is no engineers related to solid waste management. There is no concrete plan and design for solid waste management. In the proposed subprojects, it is necessary to secure staff of engineers, landfill operators including heavy equipment operators and other landfill facility operator including monitoring at the extended and improved current landfill site. Also, the driver and collector for secondary transport vehicles for this subproject are necessary. The necessary personnel for these subprojects are shown in Table 7.6.10. Budget is also necessary to be allocated.

**Table 7.3.10 Proposed Necessary O&M Staff for SWM Subprojects in CBP**

| Position | Current | Subproject persons for the subproject | | Total (Future) after subprojects |
|---|---|---|---|---|
| | | CBP-SWM-1 | CBP-SWM-2 | |
| Chief waste management officer | 1 | 0 | 0 | 1 |
| Assistant chief waste management officer | 0 | 1 | 0 | 1 |
| Engineers of solid waste management | 0 | 2 | 1 | 3 |
| Office staff | 1 | 0 | | 1 |
| Conservancy inspector | 0 | 2 | 1 | 3 |
| Conservancy supervisor | 14 | 2 | 2 | 18 |
| Road and drainage cleaning staff | 0 | 0 | 0 | 0 |
| Primary collection driver/helper | 148 | 0 | 0 | 148 |
| Secondary transportation driver | 9 | 5 | 0 | 14 |
| Secondary transportation helper | 22 | 10 | 0 | 32 |
| Heavy equipment operator in landfill site | 2 | 0 | 3 | 5 |
| Staff in landfill site | 2 | 1 | 2 | 5 |
| Total | 199 | 23 | 9 | 231 |

*Source: JICA Survey Team*

### 7.3.5 Other Infrastructure

Common across Four ULBs

Though the frequency of street lights replacement will be reduced because the durable time of LED is about ten times compare to existing incandescent light, sometimes major repairs like braking of poles or any problem in the solar panel, instant damaging on the battery, disconnection etc. may need to be solved on an emergence basis. Availability of equipment or the source of equipment need to be ensured.

The electric section under the engineering division needs to have regular monitoring and inspection, since electricians in each ULB are not sufficient, numbers of electrician should be increased.

In case of community center and city park etc. also, regular maintenance must be done. For the sake of sustainable use, responsible section shall be appointed.

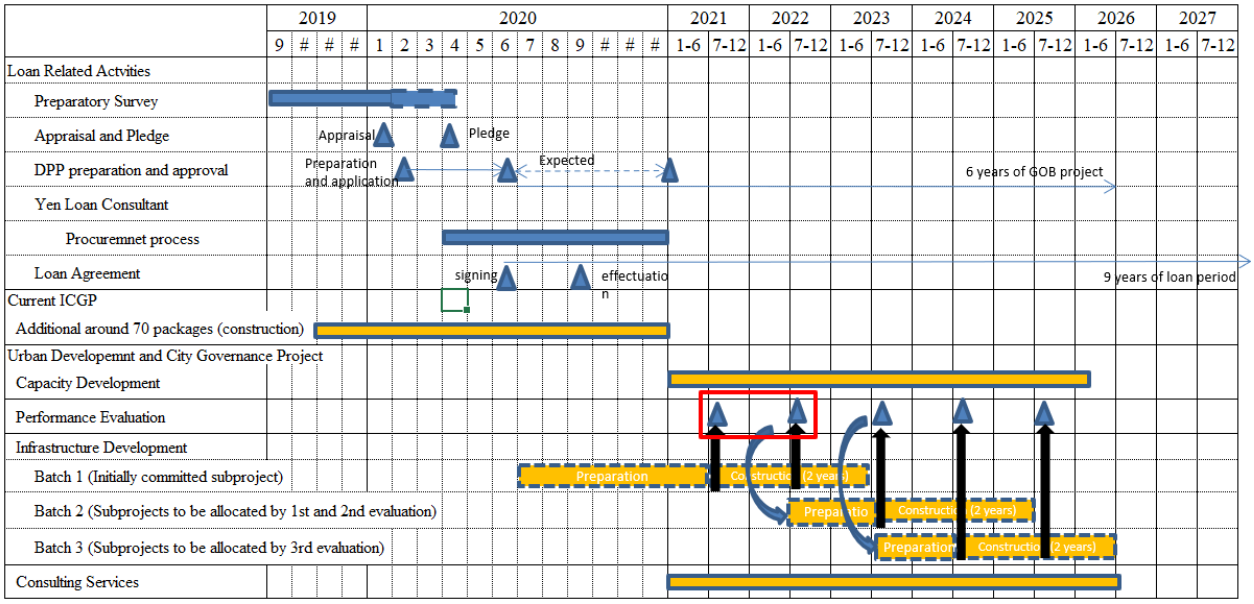
## 7.4 Implementing Schedule

The procurement process of consulting service should be started soon after the pledge of the Loan by GOJ which is expected to be made in March/April 2020. Loan agreement for the Project is assumed to be signed in June 2020. Selecting consultant(s) for consulting service is expected to be completed by the end of 2020. DPP will be prepared and submitted by LGED to ministries concerned soon after the appraisal mission is concluded in the early February 2020, and expected to be approved by GOB in June 2020, or at latest by the end of 2020. Detailed design, cost estimate of Batch 1 subprojects would commence after DPP is officially approved, from July 2020 at earliest considered with GOB's fiscal year.

The Project will start in July 2020 and continue until June 2026, six years if loan agreement as well as DPP approval in GOB is expected in June 2020.

The first evaluation is planned after consulting services commence in 2021 (the beginning of Bangladesh fiscal year) and evaluation will be conducted once a year, totaling to five evaluations before the Project completion. Apart from this performance evaluation, an interim review is proposed at a convenient and appropriate mid term of the project as LGED and JICA will agree, to see overall progress of the Project.

Overall implementing schedule is shown in the figure below;




*Source: JICA Survey Team*

**Figure 7.4.1 Overall Implementation Schedule of the Project**

## 7.5 Safety and Security Measures

### 7.5.1 Safety and Security Measures

(1) Contractors

In the Project, all of construction works will be implemented by Bangladeshi contractors in accordance with Bangladesh standard of contract since the size of the construction works are too small for foreign contractors to show their interests. Clause 27 of General Conditions of Contract applied to construction works for any value funded by developing partners stipulates that the Contractor shall provide and maintain at the Contractor's own cost all lights, guards, fencing, warning signs and watching for the protection of the Works or for the safety on-site.

Subprojects in the Project can be categorized into two types. One is the construction of an immobilized institution such as dumping site in one construction site and the other one is the

construction of linear infrastructure such as road and drain. In case of the construction of an immobilized institution, the following safety and security measures are proposed to be taken:

- Construction is segregated by fencing;
- Security gate and guards are arranged;
- CCTV is installed;
- Lights are installed;
- Generator is installed;
- Signboard indicating construction site is arranged; and
- Safety sears are arranged for workers.

Comparing with the immobilized institution, the subprojects of the linear infrastructure is required to move the consecution site along with the progress of the subprojects and, accordingly, the security items such as lights, fences and warning signs also need to be relocated. The same safety and security measures at above can be proposed to be taken except security gate:

Therefore, the target ULBs need to identify the necessity security measures considering the characteristic of each subprojects, include these costs into the estimate price, and instruct tenderers to propose appropriate security measures in the tender documents with assistance from the Consultant. On the other hand, the Contractor also needs to estimate these costs and include them into the tender price.

(2) Consultants

The international experts will be assigned in the Project as member of the Consultant. They are supposed to station in a project office in Dhaka and visit construction sites periodically with Bangladeshi experts during the construction period for the construction supervision. Considering the abovementioned working environment, the security measure should be taken at the project office and the site visit separately.

1) Project Office

At the time of setting up the project office, the following points should be cautioned:

- For Building,
  - Security guards are arranged;
  - Building is bounded by boundary wall;
  - Incoming vehicle is controlled at gate;
  - CCTV is installed;
  - Baggage inspection is carried out;
  - Emergency exit is secured;
  - Alarm system is installed; and
  - Generator is installed.
- For Office Space,
  - Entrance door with lock is installed;
  - Security guards are arranged;
  - Reception is arranged;
  - CCTV is installed;
  - Security grill on the window is installed;
  - Shatterproof sheet is installed in windows;
  - Safe heaven is installed; and
  - UPS is installed.

2) Site Visit

Regarding site visit, the following points should be cautioned:

- For Transportation,
  - Moved by automobile with shatterproof sheet in windows instead of CNG or rikshaw; and
  - Experienced drivers are arranged.
- For Communication,
  - Bring cell phone with enough battery and calling/internet balance
  - Bring mobile battery

### 7.5.2 Actions to be Taken by Each Party

For securing safety during the construction work in the Project, the following actions are proposed to be taken, considering the existing conditions as mentioned in 4.5.4 Safety Situations.

(1) PMU of LGED should collect the required budget for conducting safety measures during construction work of proposed subprojects from PIU and include such estimate in the DPP to secure the budget.

(2) PIU of target ULBs should:

During appraisal stage,

- identify the necessary safety measures of each proposed subprojects supported by the consultant and inform the estimated budget for safety measures to PMU;

During tender stage,

- instruct tenderers to propose safety plan and include required cost for implementing the safety plan in the tender prepared by the tenderers;
- evaluate the tenders prepared by the tenderers in terms of safety;

During construction stage,

- organize the contract management seminar including safety measures for the contractors engaging in the subprojects with assistance of the consultant; and
- monitor the safety measure taken by the contractors and instruct modification of the safety measure, if required, supported by the consultant.

(3) Contractors

During tender stage,

- prepare and propose safety plan considering the characteristic of the subprojects and include required cost for implementing the safety plan in the tender;

During construction stage,

- implement the safety measure based on the proposed safety plan, like site segregation by fencing, put sign board for construction etc.; and
- provide safety trainings to the workers.

(4) Consultant

During appraisal stage,

- support PIU to identify the necessary safety measures of each proposed subprojects and inform the estimated budget for safety measures to PMU;
- support PMU to prepare the DPP and confirm the budget for safety measures is included in the DPP;

During tender stage,

- organize the contract management seminars for PIU to acquire in-depth understanding on safety and appropriate safety measures depends on the types of works;

During construction stage,

- support PIU to organize the contract management seminar including safety measures for the contractors engaging in the subprojects; and
- support PIU to monitor the safety measure taken by the contractors and instruct modification of the safety measure.

## 7.6 Operation and Effect Indicators

### 7.6.1 Indicators

Operation and effect indicators are proposed in three categories, such as infrastructure subprojects, governance activities, and pilot activities for solid waste management. Impacts of the Project will be monitored by these indicators

### 7.6.2 Contents

(1) Infrastructure Subproject

Operation and effect indicators for infrastructure subprojects are proposed as below:

**Table 7.6.1 Summary of OEIs for Infrastructure Subprojects**

| Sector / Indicators | Unit | Baseline | | | Target | | |
|---|---|---|---|---|---|---|---|
| | | Per Subproject | | Total | Per Subproject | | Total |
| | | Range | Average | | Range | Average | |
| Road and Bridges | | | | | | | |
| Annual average daily traffic | pcu/day | 9,000 - 13,000 | 10,714 | - | 15,300 - 23,700 | 18,986 | - |
| Time saving | minute/10km | 26 - 38 | 30 | - | 20 - 20 | 20 | - |
| Bus Terminal | | | | | | | |
| Capacity of bus terminal | No of bus parking place | 0 80 | 27 | 80 | 85 150 | 117 | 351 |
| Average number of passengers per day | people | 0 15,000 | 5000 | 15,000 | 21,000 40,000 | 32,333 | 97,000 |
| | | | | | | | |
| Drainage | | | | | | | |
| Beneficiary Population | Person | 240 - 36,000 | 7719 | 100,340 | 500 - 40,000 | 11,085 | 144,100 |
| No. of suffered house hold from inundation | House hold | 24 - 2,300 | 759 | 9,864 | 0 - 0 | 0 | 0 |
| Area of suffered area from inundation | $m^2$ | 20,200 - 809,400 | 93,069 | 1,209,900 | 0 - 0 | 0 | 0 |
| | | | | | | | |
| Water Supply | | | | | | | |
| Beneficiary Population | person | 0 - 10,411 | 5,206 | 20,822 | 17,280 - 36,331 | 24,646 | 98,582 |
| Amount of Water Supply | M3/day | 0 - 2,400 | 1,200 | 4,800 | 1,728 - 4,992 | 3,144 | 12,576 |
| Coverage Ratio | % | 0 - 5 | 1.2 | - | 1 - 14 | 4 | - |
| Solid Waste Management | | | | | | | |
| (1) Subproject of collection and transportation | | | | | | | |
| Collected Waste Quantity | (ton/day) | 72 - 431 | 229 | 686 | 108 - 612 | 357 | 1,072 |
| Collection rate of waste | (%) | 60 - 65 | 62 | - | 65 - 70 | 63 | - |
| Reduction of places of illegal and/or unsanitary disposal | (%) | 0 - 0 | 0 | - | 50 - 50 | 50 | - |
| (2) Subproject of landfill extension/development | | | | | | | |
| Final Disposed Waste Quantity in Sanitary Landfill Site | (m3) | 0 - 0 | 0 | 0 | 201,700 - 692,700 | 432,220 | 2,161,100 |
| Rate of sanitary landfill | (%) | 0 - 0 | 0 | - | 90 - 90 | 90 | - |
| (3) Subproject of closure of existing open dumping site finally covered area as sanitary manner | (ha) | 0 - 0 | 0 | 0 | 0.8 - 0.8 | 0.8 | 0.8 |
| | | | | | | | |
| Other Infrastructure | | | | | | | |
| Beneficiary of Street Light | Person | 0 - 0 | 0 | 0 | 113,218 - 230,232 | 171,725 | 343,450 |
| Beneficiary of Buildings* | Person | 0 - 0 | 0 | 0 | 87,000 - 87,000 | 87,000 | 87,000 |
| Beneficiary of Play Ground | Person | 10,000 - 12,750 | 7,583 | 22,750 | 10,000 - 30,500 | 21,121 | 84,483 |
| Beneficiary of Kitchen Market | Person | 0 - 0 | 0 | 0 | 33,102 - 33,102 | 33,102 | 33,102 |
| Beneficiary of Public Place | Person | 0 - 0 | 0 | 0 | 101,255 - 101,260 | 101,258 | 205,515 |

*Remarks: * Community center only*
*Source: JICA Survey Team*

Baseline figures are as of 2019, and target year is set as of 2028, two years after the completion of the project. Estimation method of information by individual subprojects is described in Attachment 7.6.1.

(2) Governance and Pilot Activities of Solid Waste Management

Governance

Governance related OE indicators could be constructed based on the key governance activities listed in Table 7.1.2. The following table presents proposed OE indicators in relation to governance.

**Table 7.6.2 Proposed OEIs for Governance Activities**

| Areas | Indicators | Expected Change |
|---|---|---|
| PBA | Disbursement rate for the Project | Improved than ICGP at any time |
| | Delayed rate of subprojects (actual compare with FS plans), compared with the same indicator of ICGP | Lowered |
| Governance activities | Engineers, urban planner, all mayors, councilors awareness on proper development planning | Raised |
| | IDP/PDP is known to all the relevant officers used as a sole plan with any financers (donor, GOB) | Improved |
| | Planned annual IDP/PDP revision with citizen consultation process (times) | One time/year with proper process and contents |
| | Mechanism of development planning works routinely | Better |
| | Citizen satisfaction level (from questionnaire results at CLCC/TLCC/WLCC) on development planning | Raised |

*Source: JICA Survey Team*

Pilot Activities of Solid Waste Management

Operation and Effect Indicators of Pilot Activities of Solid Waste Management are proposed in the table below.

**Table 7.6.3 Proposed OEIs for Pilot Activities of Solid Waste Management**

| Indicators/areas | Contents | Expected Change |
|---|---|---|
| Number of Transfer station operated according to the transfer plan in pilot areas (number) | Based on the plan, number of transfer stations where there is no waste scattering | Increased |
| Transferring Time in pilot wards | Transfer time from primary collection vehicle to secondary transport vehicle | Reduced |
| Collection rate and amount of recyclable waste in pilot wards | Amount of collected recyclable waste | Increased |
| | Rate of collected recyclable waste per waste generation quantity | Increased |

*Source: JICA Survey Team*

## 7.7 Risk of the Project

### 7.7.1 Capacity of ULBs

Number of staff of ULBs is limited. Under the existing circumstance, it is difficult for ULBs to assign full-time staff members to PIU of the Project. Since the organogram of the 3 target CCs has not been approved, it is also difficult to hire new staff shortly. Therefore, the PIUs need support by the loan consultant, especially Bangladeshi experts who can assist drafting detail design, tender and other administration documents and supervising construction works in the Project. The PMU in LGED should prepare TOR of the loan consultant considering the above-mentioned situation with required person-months to support the PIUs in ULBs.

### 7.7.2 Sub-Contractors

In case that a prime contractor appoints less-capable subcontractors, there will be risks of the delay of work progress and the low qualify of work. As stipulated in Clause 53 of PPR, although subcontractors can be appointed, the prime contractor shall still retain full responsibility for the contract and cannot pass any contractual obligations to the subcontractors. Also as stipulated in Standard e-Tender Document for Procurement of Works (ePW3), subcontracting the whole of the works by the prime contractor shall be permissible and PE may request tenderer to change an acceptable substitute if the subcontractors are found ineligible or unsuitable to carry out the subcontracted tasks. The PIUs in ULBs in the Project should carefully evaluate the capacity of proposed subcontractor at tendering stage and request the prime contractor to manage the subcontractors at construction stage in accordance with the above-mentioned clauses.

### 7.7.3 Land Acquisition and Resettlement

In some proposed subprojects, land acquisition and resettlement will be required. Since the cost of land acquisition and resettlement is ineligible portion of JICA's finance in the Project, the GOB needs to prepare the budget for the land acquisition and resettlement. In other words, these costs should be clearly included as GOB portion in DPP. Otherwise, the ULBs have to compensate using their own revenue budget, which will be considered difficult, thereby be a cause of delay of the Project.

### 7.7.4 Safety Measures

Accidents during the construction works can be a cause of the delay of the subprojects in the Project. Not only the delay, but also the reputation of the Project might deteriorate. In order to reduce the accidents during the construction work in the subprojects, the following measures should be taken. First, the PE should clearly request tenderers to propose or explain the safety measures to be taken in the specifications of the tender documents. Furthermore, the estimated cost required for such safety measures should be kept in the DPP in advance. Second, for advocating the importance of the safety measures, training seminars should be conducted not only to the PIUs of ULBs, but also to the contractor. These training seminars will contribute the awareness of the safety to increase.

# CHAPTER 8 PERFORMANCE-BASED APPROACH

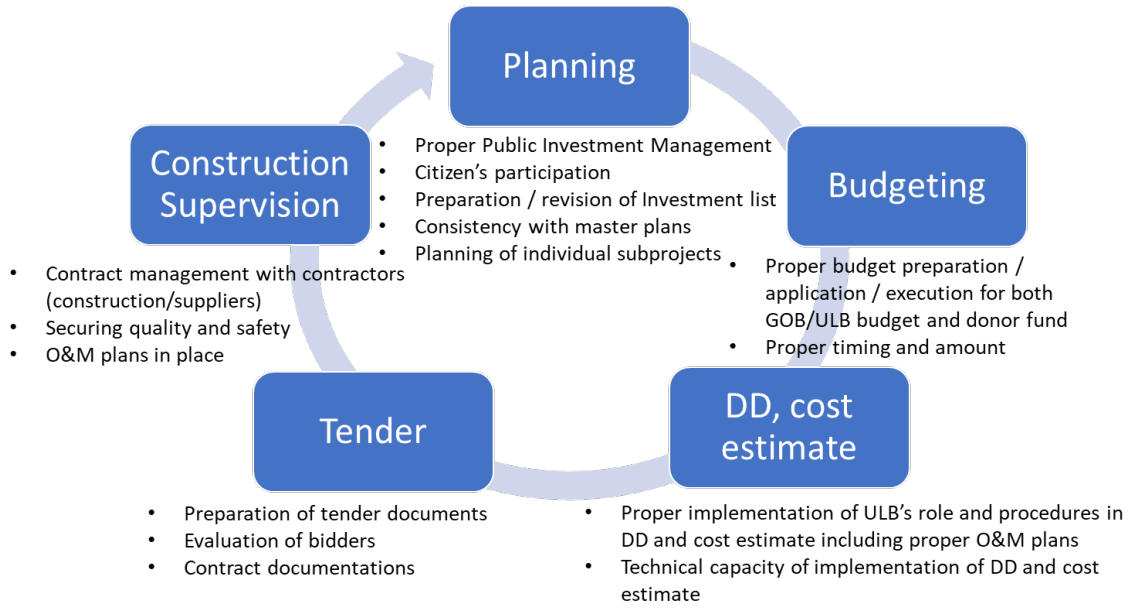
## 8.1 Framework of the Approach

### 8.1.1 General

As seen in Chapter 2, issues/challenges still remain in the city governance, the areas such as human resources, strategic planning/resource allocation, financial management, and citizen's engagement. Review results of ICGPAP implementation suggest that some activities could have become some burdensome for the ULB officers considering the current capacity of them. And, for individual subprojects in ICGP as well as ICGP as a whole, some delays are observed as shown in Chapter 4. Trigger indicators in ICGP have less direct linkage with infrastructure implementation, as not measured infrastructure project cycle, but governance improvement in general.

In this connection, in the new Project, it could be better to focus more on single issue, especially in infrastructure service delivery, so that project outcome would be expected in a more focused manner. This could also be supported by the fact that some achievement has been made many donor's supports on ULB governance capacity enhancement as discussed in Chapter 5. If future direction is predicted, infrastructure within a jurisdiction of ULB, supposed to be equipped by the ULBs in a long run, should be planned in an appropriate manner, and constructed appropriately (schedule, cost as planned) by engineers stationed at each ULB.

In the Project, a performance-based approach is planned to be adopted, too. However, designing of the approach will be different from ICGP, and other donors' approach. Based on this discussion, it is proposed to monitor and evaluate directly infrastructure planning and implementation. The following figure is depicted a project cycle to be monitored and evaluated by the performance-based approach in the new project.




*Source: JICA Survey Team*

**Figure 8.1.1 Project Cycle To Be Monitored and Evaluated in the Project**

### 8.1.2 Framework

As discussed, in the Project, a performance-based approach which directly measures infrastructure planning and implementation could be effective to further enhance capacities of the ULBs. There are three areas to specifically be monitored and evaluated following PDCA cycle as below:

1) Individual Priority Subprojects

It is essentially important to implement individual priority subprojects in a proper manner. Therefore, it is necessary to keep track on timeliness as well as quality of subprojects implementation to avoid delay and worse quality.

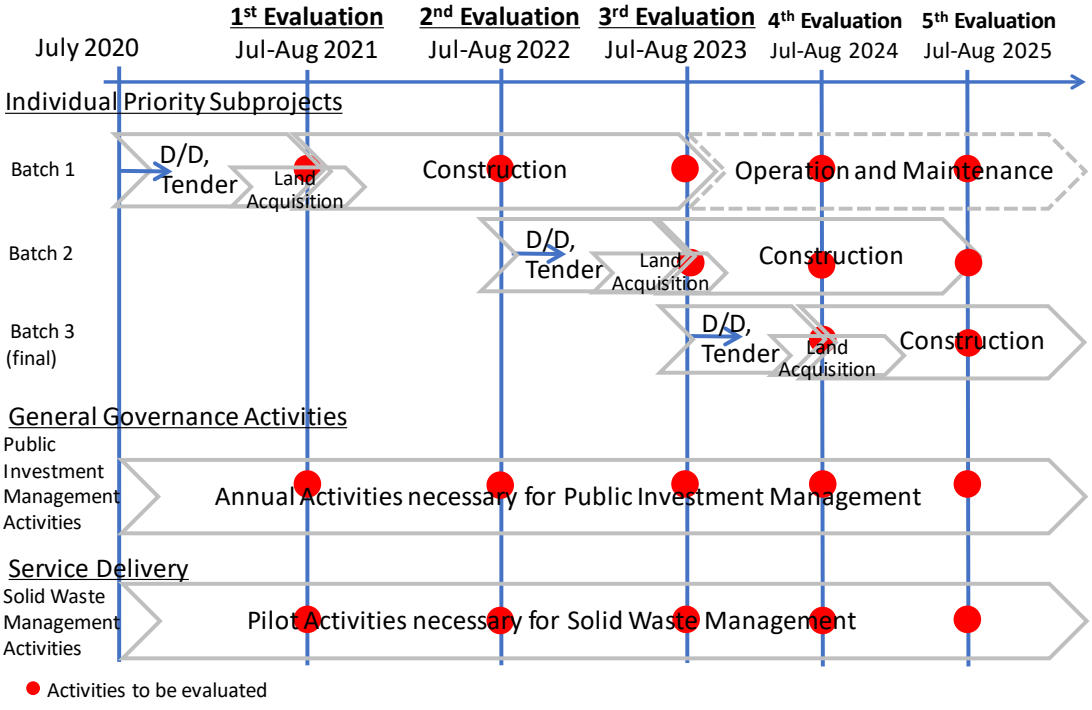
2) General Governance Activities

Public investment management activities are to be monitored in terms of infrastructure service delivery by ULBs. Annual proper planning process including citizen's participation to reflect needs for development plans and their link to budgeting, and also urban planning.

3) Service Delivery

Considering growing solid waste issues, as one of the service deliveries in ULBs, improvement in solid waste management is proposed to be monitored and evaluated.

The concept of this approach is depicted in the figure below:




*Source: JICA Survey Team*

**Figure 8.1.2 Conceptual Framework of Performance-based Approach to Allocate Infrastructure Fund**

Considering the project period (6 years), loan period (around 9 years) as well as subproject implementation (total three years per one subproject: preparation period including Detailed Design, cost estimate, tender is one year; and construction period is two years), three batches are proposed. Evaluation is proposed to be done annually, namely total five. Results of the first three evaluations are used for allocation of infrastructure subprojects as batches, and the last two are used to adjust scopes of delayed subprojects expecting appropriate completion of the whole project.

# CHAPTER 9 ENVIRONMENTAL AND SOCIAL CONSIDERATIONS

## 9.1 Environmental and Social Considerations

### 9.1.1 Outline of Project Components that may Cause Environmental and Social Impacts

It is anticipated that subprojects of each sector will likely have environmental and social impacts in the following tables.

Subprojects in road and bridge sector will have certain impacts, which will likely remain some extent and be managed with ordinary measures. Since all subprojects are planned within the boundaries of city corporations and paurashava, no major impact on natural environment is anticipated.

**Table 9.1.1 Anticipated Environmental and Social Impacts (Road and Bridge Sector)**

| Impact Item | Pre- / Construction Phase | Operation Phase |
|---|---|---|
| Significant impact is expected (A) | N/A | N/A |
| Impact is expected to some extent (B) | <Positive impacts><br>- Local economy | <Positive impacts><br>- Local economy<br>- Land use and utilization of local resources<br>- Disturbance to the existing social infrastructure and services<br>- Gender<br>- Children's Rights |
| | <Negative impacts><br>- Air quality<br>- Water quality<br>- Soil quality<br>- Noise and vibration<br>- Waste<br>- Topography and geology<br>- Land acquisition<br>- Land use and utilization of local resources<br>- Disturbance to the existing social infrastructure and services<br>- Infectious diseases<br>- Work environment<br>- Accidents | <Negative impacts><br>- Work environment<br>- Accidents |
| Whether there is impact, its extent and area is unknown, and further examination is required (C) | <Positive impacts><br>N/A | <Positive impacts><br>- Air quality<br>- Noise and vibration |
| | < Negative impacts><br>- Land acquisition<br>- Disturbance to poor people<br>- Local economy | <Negative impacts><br>N/A |
| No impact is expected (D) | - Sediment<br>- Odors<br>- Subsidence<br>- Protected area<br>- Ecosystem<br>- Hydrosphere<br>- Disturbance to ethnic minority groups and indigenous people<br>- Disturbance to water usage, water rights<br>- Social institutions such as social infrastructure and local decision-making institutions<br>- Misdistribution of benefits and losses<br>- Local conflicts of interest<br>- Cultural heritage | - Water quality<br>- Soil quality<br>- Sediment<br>- Odors<br>- Waste<br>- Subsidence<br>- Protected area<br>- Ecosystem<br>- Hydrosphere<br>- Topography and geology<br>- Land acquisition<br>- Disturbance to poor people<br>- Disturbance to water usage, water rights<br>- Disturbance to ethnic minority groups and indigenous people |

| Impact Item | Pre- / Construction Phase | Operation Phase |
|---|---|---|
| | - Landscape<br>- Gender<br>- Children's rights<br>- Cross-boundary impact and climate change | - Social institutions such as social infrastructure and local decision-making institutions<br>- Misdistribution of benefits and losses<br>- Local conflict of interest<br>- Cultural heritage<br>- Landscape<br>- Infectious diseases<br>- Cross-boundary impact and climate change |

Note 1: There are subprojects which require land acquisition, whereas some other remain unknown and further survey will be required. Local economy will likely to have positive impacts such as employment opportunities as well as negative ones due to road blockage during construction period.
*Source: JICA Survey Team*

Subprojects in drainage sector will also have certain impacts during construction phase. As this sector will improve one of the basic services from the target cities, they will likely bring benefits to local people in positive ways for better hygiene and sanitation during operation phase.

**Table 9.1.2 Anticipated Environmental and Social Impacts (Drainage Sector)**

| Impact Item | Pre- / Construction Phase | Operation Phase |
|---|---|---|
| Significant impact is expected (A) | N/A | N/A |
| Impact is expected to some extent (B) | <Positive impacts><br>- Local economy | <Positive impacts><br>- Soil quality<br>- Sediment<br>- Odors<br>- Waste<br>- Topography and geology<br>- Disturbance to poor people<br>- Local economy<br>- Land use and utilization of local resources<br>- Disturbance to water usage, water rights<br>- Disturbance to the existing social infrastructure and services<br>- Landscape<br>- Infectious diseases<br>- Work environment |
| | <Negative impacts><br>- Air quality<br>- Water quality<br>- Noise and vibration<br>- Waste<br>- Land acquisition<br>- Disturbance to poor people<br>- Land use and utilization of local resources<br>- Disturbance to the existing social infrastructure and services<br>- Infectious diseases<br>- Work environment<br>- Accidents | <Negative impacts><br>- Work environment<br>- Accidents |
| Whether there is impact, its extent and area is unknown, and further examination is required (C) | <Positive impacts><br>N/A | <Positive impacts><br>- Work environment |
| | < Negative impacts><br>- Land acquisition<br>- Disturbance to poor people<br>- Local economy<br>- Land use and utilization of local resources | <Negative impacts><br>N/A |
| No impact is expected (D) | - Soil quality<br>- Sediment<br>- Odors | - Air quality<br>- Water quality<br>- Noise and vibration |

| Impact Item | Pre- / Construction Phase | Operation Phase |
|---|---|---|
| | - Subsidence<br>- Protected area<br>- Ecosystem<br>- Hydrosphere<br>- Topography and geology<br>- Disturbance to ethnic minority groups and indigenous people<br>- Disturbance to water usage, water rights<br>- Social institutions such as social infrastructure and local decision-making institutions<br>- Misdistribution of benefits and losses<br>- Local conflicts of interest<br>- Cultural heritage<br>- Landscape<br>- Gender<br>- Children's rights<br>- Cross-boundary impact and climate change | - Subsidence<br>- Protected area<br>- Ecosystem<br>- Hydrosphere<br>- Land acquisition<br>- Disturbance to ethnic minority groups and indigenous people<br>- Social institutions such as social infrastructure and local decision-making institutions<br>- Misdistribution of benefits and losses<br>- Local conflict of interest<br>- Cultural heritage<br>- Gender<br>- Children's Rights<br>- Cross-boundary impact and climate change |

Note 1: There are subprojects which require land acquisition, whereas some other remain unknown and further survey will be required. Local economy will likely to have positive impacts such as employment opportunities as well as negative ones due to road blockage during construction period. Land use will be changed, which may impact local people's living. Some impacts remain unknown. Work environment will be improved because of better hygiene and sanitation although accidents may occur during maintenance work.
*Source: JICA Survey Team*

Subprojects in waster supply sector will also have certain impacts during construction phase, which will be manageable with common mitigation measures. As this sector will also improve one of the basic services from the target cities, they will likely benefit in positive ways during operation phase.

**Table 9.1.3 Anticipated Environmental and Social Impacts (Water Supply Sector)**

| Impact Item | Pre- / Construction Phase | Operation Phase |
|---|---|---|
| Significant impact is expected (A) | N/A | N/A |
| Impact is expected to some extent (B) | <Positive impacts><br>- Local economy | <Positive impacts><br>- Sediment<br>- Odors<br>- Waste<br>- Local economy<br>- Disturbance to poor people<br>- Disturbance to water usage, water rights<br>- Landscape<br>- Disturbance to the existing social infrastructure and services<br>- Gender<br>- Children's Rights<br>- Infectious diseases |
| | <Negative impacts><br>- Air quality<br>- Water quality<br>- Soil quality<br>- Noise and vibration<br>- Waste<br>- Topography and geology<br>- Disturbance to the existing social infrastructure and services<br>- Work environment<br>- Accidents | <Negative impacts><br>- Work environment<br>- Accidents |
| Whether there is impact, its extent and | <Positive impacts><br>N/A | <Positive impacts><br>N/A |

| Impact Item | Pre- / Construction Phase | Operation Phase |
|---|---|---|
| area is unknown, and further examination is required (C) | < Negative impacts><br>N/A | <Negative impacts><br>N/A |
| No impact is expected (D) | - Sediment<br>- Odors<br>- Subsidence<br>- Protected area<br>- Ecosystem<br>- Hydrosphere<br>- Land acquisition<br>- Disturbance to poor people<br>- Disturbance to ethnic minority groups and indigenous people<br>- Land use and utilization of local resources<br>- Disturbance to water usage, water rights<br>- Social institutions such as social infrastructure and local decision-making institutions<br>- Misdistribution of benefits and losses<br>- Local conflicts of interest<br>- Cultural heritage<br>- Landscape<br>- Gender<br>- Children's rights<br>- Infectious diseases<br>- Cross-boundary impact and climate change | - Air quality<br>- Water quality<br>- Soil quality<br>- Noise and vibration<br>- Subsidence<br>- Protected area<br>- Ecosystem<br>- Hydrosphere<br>- Topography and geology<br>- Land acquisition<br>- Disturbance to ethnic minority groups and indigenous people<br>- Land use and utilization of local resources<br>- Social institutions such as social infrastructure and local decision-making institutions<br>- Misdistribution of benefits and losses<br>- Local conflict of interest<br>- Cultural heritage<br>- Cross-boundary impact and climate change |

*Source: JICA Survey Team*

Subprojects in solid waste management sector will have certain impacts during construction phase. They will likely benefit in positive ways during operation phase as they will improve hygiene and sanitation condition.

**Table 9.1.4 Anticipated Environmental and Social Impacts (Solid Waste Management Sector)**

| Impact Item | Pre- / Construction Phase | Operation Phase |
|---|---|---|
| Significant impact is expected (A) | N/A | N/A |
| Impact is expected to some extent (B) | <Positive impacts><br>- Local economy | <Positive impacts><br>- Odors<br>- Waste<br>- Local economy<br>- Land use and utilization of local resources<br>- Landscape<br>- Disturbance to the existing social infrastructure and services<br>- Infectious diseases<br>- Work environment |
| | <Negative impacts><br>- Air quality<br>- Water quality<br>- Soil quality<br>- Noise and vibration<br>- Waste<br>- Land acquisition<br>- Disturbance to poor people<br>- Infectious diseases<br>- Work environment<br>- Accidents | <Negative impacts><br>- Water quality<br>- Soil quality<br>- Work environment<br>- Accidents |
| Whether there is impact, its extent and | <Positive impacts><br>N/A | <Positive impacts><br>N/A |

| Impact Item | Pre- / Construction Phase | Operation Phase |
|---|---|---|
| area is unknown, and further examination is required (C) | < Negative impacts><br>N/A | <Negative impacts><br>N/A |
| No impact is expected (D) | - Sediment<br>- Odors<br>- Subsidence<br>- Protected area<br>- Ecosystem<br>- Hydrosphere<br>- Topography and geology<br>- Disturbance to ethnic minority groups and indigenous people<br>- Land use and utilization of local resources<br>- Disturbance to water usage, water rights<br>- Disturbance to the existing social infrastructure and services<br>- Social institutions such as social infrastructure and local decision-making institutions<br>- Misdistribution of benefits and losses<br>- Local conflicts of interest<br>- Cultural heritage<br>- Landscape<br>- Gender<br>- Children's rights<br>- Cross-boundary impact and climate change | - Air quality<br>- Sediment<br>- Noise and vibration<br>- Subsidence<br>- Protected area<br>- Ecosystem<br>- Hydrosphere<br>- Topography and geology<br>- Land acquisition<br>- Disturbance to poor people<br>- Disturbance to ethnic minority groups and indigenous people<br>- Disturbance to water usage, water rights<br>- Social institutions such as social infrastructure and local decision-making institutions<br>- Misdistribution of benefits and losses<br>- Local conflict of interest<br>- Cultural heritage<br>- Gender<br>- Children's Rights<br>- Cross-boundary impact and climate change |

Note: Work environment will be improved because of better hygiene and sanitation although accidents may occur during maintenance work.
*Source: JICA Survey Team*

Subprojects in other infrastructure sector will have minimum impacts during construction phase, which will be managed with ordinary methods. They will likely benefit in positive way during operation phase.

**Table 9.1.5 Anticipated Environmental and Social Impacts (Other Infrastructure Sector)**

| Impact Item | Pre- / Construction Phase | Operation Phase |
|---|---|---|
| Significant impact is expected (A) | N/A | N/A |
| Impact is expected to some extent (B) | <Positive impacts><br>- Local economy | <Positive impacts><br>- Local economy<br>- Land use and utilization of local resources<br>- Disturbance to the existing social infrastructure and services<br>- Landscape<br>- Gender<br>- Children's Rights |
| | <Negative impacts><br>- Air quality<br>- Water quality<br>- Soil quality<br>- Noise and vibration<br>- Waste<br>- Land acquisition<br>- Disturbance to the existing social infrastructure and services<br>- Work environment<br>- Accidents | <Negative impacts><br>- Work environment<br>- Accidents |
| Whether there is impact, its extent and area is unknown, and | <Positive impacts><br>N/A | <Positive impacts><br>N/A |
| | < Negative impacts><br>- Land acquisition | <Negative impacts><br>N/A |

| Impact Item | Pre- / Construction Phase | Operation Phase |
|---|---|---|
| further examination is required (C) | - Disturbance to poor people<br>- Local economy<br>- Land use and utilization of local resources | |
| No impact is expected (D) | - Sediment<br>- Odors<br>- Subsidence<br>- Protected area<br>- Ecosystem<br>- Hydrosphere<br>- Topography and geology<br>- Disturbance to ethnic minority groups and indigenous people<br>- Land use and utilization of local resources<br>- Disturbance to water usage, water rights<br>- Social institutions such as social infrastructure and local decision-making institutions<br>- Misdistribution of benefits and losses<br>- Local conflicts of interest<br>- Cultural heritage<br>- Landscape<br>- Gender<br>- Children's rights<br>- Infectious diseases<br>- Cross-boundary impact and climate change | - Air quality<br>- Water quality<br>- Soil quality<br>- Sediment<br>- Odors<br>- Waste<br>- Topography and geology<br>- Disturbance to water usage, water rights<br>- Disturbance to poor people<br>- Noise and vibration<br>- Subsidence<br>- Protected area<br>- Ecosystem<br>- Hydrosphere<br>- Land acquisition<br>- Disturbance to ethnic minority groups and indigenous people<br>- Social institutions such as social infrastructure and local decision-making institutions<br>- Misdistribution of benefits and losses<br>- Local conflict of interest<br>- Cultural heritage<br>- Infectious diseases<br>- Cross-boundary impact and climate change |

*Source: JICA Survey Team*

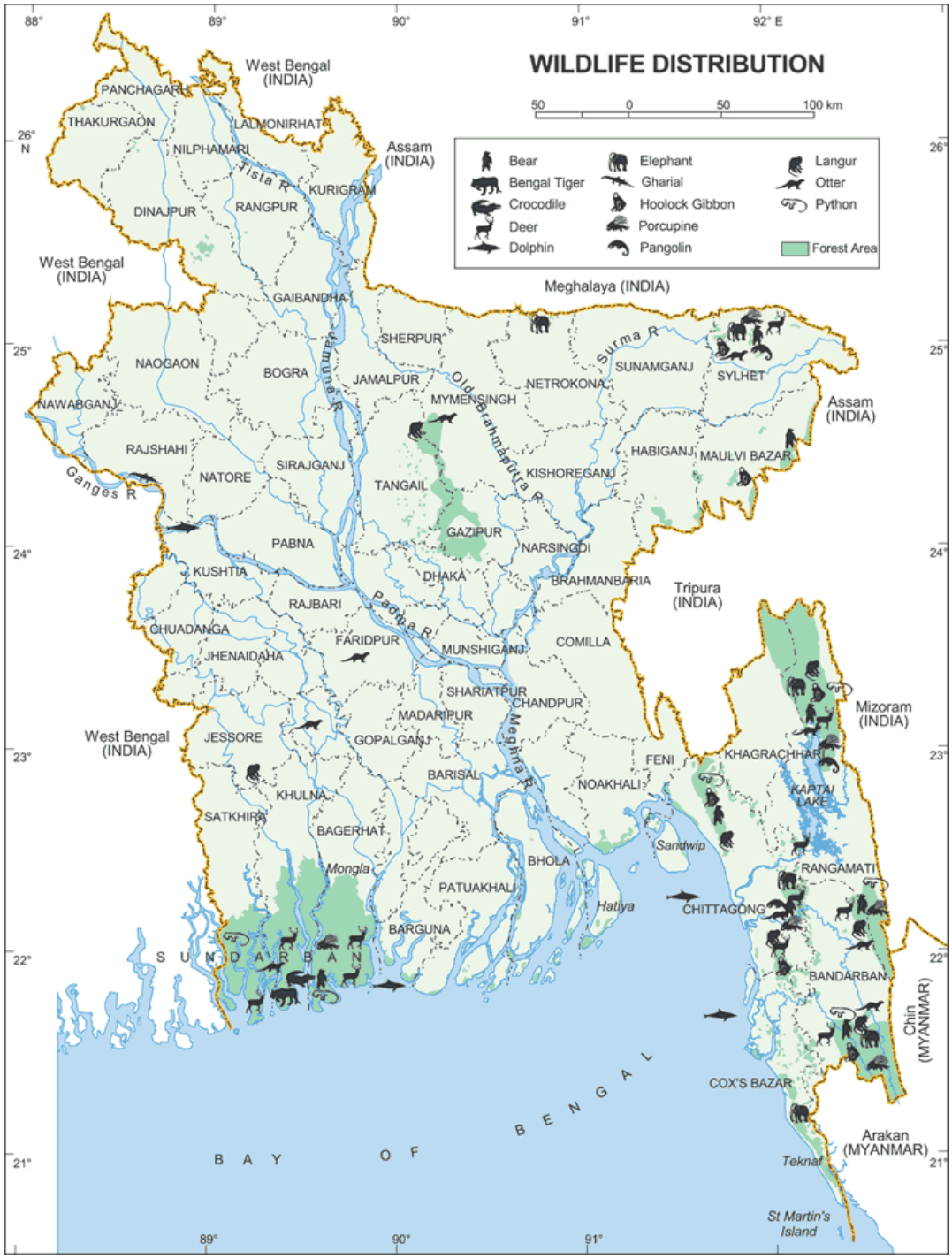
### 9.1.2 Overview of the Present State of the Proposed Project Area

(1) Natural environment

Proposed subprojects are located in four Urban Local Bodies (ULBs): Gazipur City Corporation and Narayanganj City Corporation in Dhaka Division, and Cumilla City Corporation and Cox's Bazar Paurashava in Chattogram Division. Their general information of natural conditions is described in 3.2.1 of this report.

With regard to protected area and forest area, there are national parks and wildlife sanctuaries within the boundaries of Gazipur and Cox's Bazar Districts: Bhawal National park (5,022 ha) in Gazipur District, Himchari National Park (1,729 ha), Medhakachhapia National Park (395 ha), Fashiakhali Wildlife Sanctuary (1,302 ha), Teknaf Wildlife Sanctuary (11,614 ha), and Sheikh Jamal Inani National Park (7,085 ha) in Cox's Bazar District. They are however all out of the project target area (See the map next page). There is no UNESCO World Natural Heritage Site in the target areas.

There are areas, on the other hand, in an environmentally critical situation or threatened to be in such situation declared as "ecologically critical areas (ECAs)" according to the Environmental Conservation Act (ECR) stipulated in 1995. Turag River (1,184 ha in total) and Balu (including Tongi Canal) (1,315 ha in total) in GCC and Sitalakhya (3,771 ha) in NCC are among the ECAs declared in 2009. Cox's Bazar - Teknaf Peninsula (20,373 ha), adjacent to CBP, is also a coastal-marine ECA declared in 1999. The Government specifies activities or processes that cannot be initiated or continued there.




Note: The forest area in Gazipur District is Bhawal National park (5,022 ha) (Sal forest ecosystem). Those in Cox's Bazar are: Himchari National Park (1,729 ha), Medha Kachhapia National Park (395 ha), Fashiakhali Wildlife Sanctuary (1,302 ha), Teknaf Wildlife Sanctuary (11,614 ha), and Sheikh Jamal Inani National Park (7,085 ha) (mixed evergreen ecosystem). They are all out of the target area.
*Source: http://www.poribesh.com/wildlife-distribution-in-bangladesh/ (accessed in January 2020)*

**Figure 9.1.1 Forest Area and Wildlife Distribution in Bangladesh**

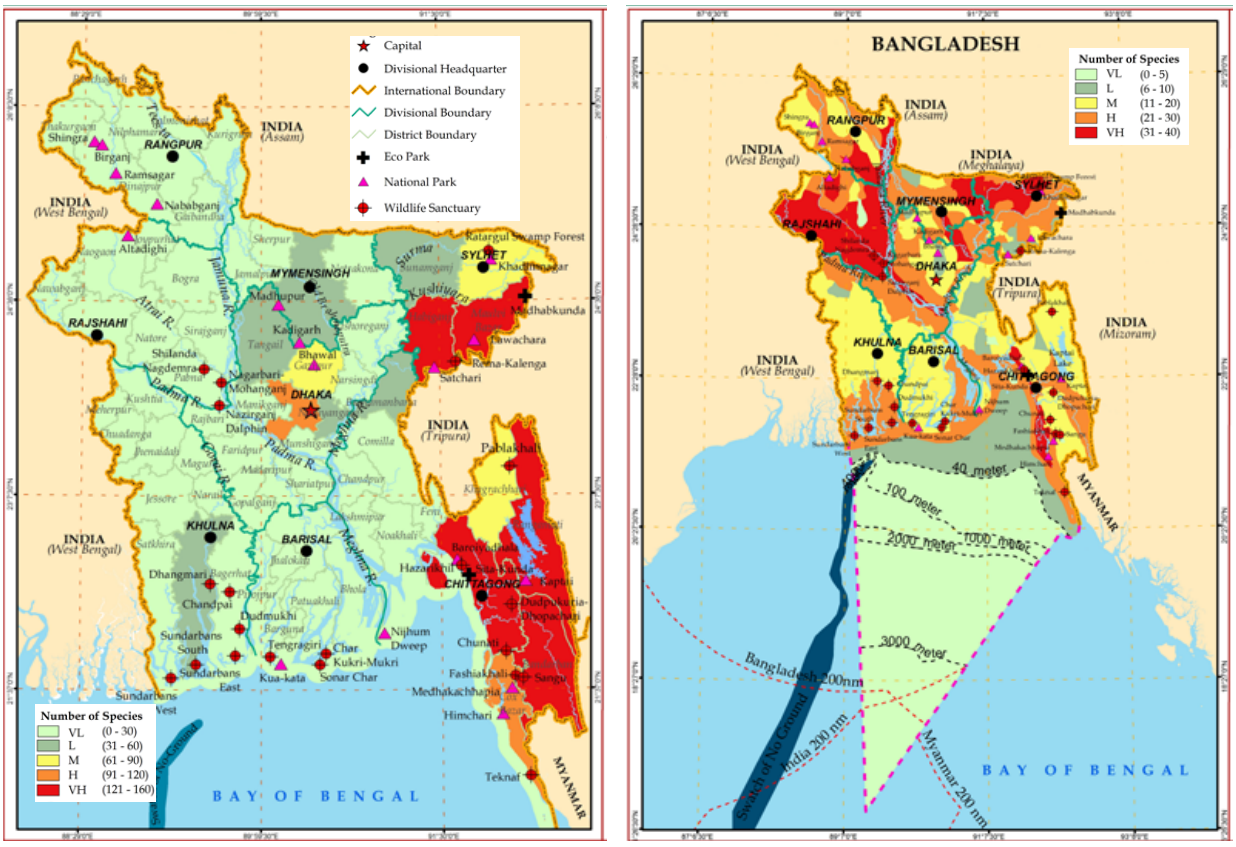
With regard to threatened species, 1,1619 species from seven groups, i.e.; mammals, birds, reptiles, amphibians, freshwater fishes, crustaceans, and butterflies were covered and evaluated in the latest assessment conducted by IUCN in 2015. According to their report, 31 species (2%) were regionally extinct (RE), 56 (3.5%) were critically endangered (CR), 181 (11.2%) were endangered (EN) and 153 (9.5%) were

vulnerable (VU). Among the remaining species, 90 species (6%) were assessed under Near Threatened (NT) and 802 (50%) as Least Concern (LC). No category could be assigned to 278 species (17%) due to lack of sufficient supporting documents, literature or field information. 28 species (2%) were considered under the category of Not Evaluated.

**Table 9.1.6 Analysis of Threatened Status of Wildlife in Bangladesh**

| Categories | Mammals | Birds | Reptiles | Amphibians | Freshwater Fishes | Crustaceans | Butterflies | TOTAL |
|---|---|---|---|---|---|---|---|---|
| EX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| EW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RE | 11 | 19 | 1 | 0 | 0 | 0 | 0 | 31 |
| CR | 17 | 10 | 17 | 2 | 9 | 0 | 1 | 56 |
| EN | 12 | 12 | 10 | 3 | 30 | 2 | 112 | 181 |
| VU | 9 | 17 | 11 | 5 | 25 | 11 | 75 | 153 |
| NT | 9 | 29 | 18 | 6 | 27 | 1 | 0 | 90 |
| LC | 34 | 424 | 63 | 27 | 122 | 47 | 85 | 802 |
| DD | 39 | 55 | 27 | 6 | 40 | 79 | 32 | 278 |
| NE | 7 | 0 | 20 | 0 | 0 | 1 | 0 | 28 |
| TOTAL | 138 | 566 | 167 | 49 | 253 | 141 | 305 | 1,619 |

Note: EX: Extinct, EW: Extinct in the Wild, RE: Regionally Extinct, CR: Critically Endangered, EN: Endangered, VU: vulnerable, NT: Near Threatened, LC: Least Concern, DD: Data Deficient, and NE: Not Evaluated.
*Source: IUCN Bangladesh Country Office (2015) Red List of Bangladesh Volume 1: Summary, Table 9, 37.*




Note: the left map shows the distribution of the threatened species of mammals, birds, amphibians, reptiles and butterflies, and the right one shows that of crustaceans and freshwater fishes
*Source: IUCN Bangladesh Country Office (2015) Red List of Bangladesh Volume 1: Summary, 39 and 40.*

**Figure 9.1.2 Distribution of the Threatened Species**

The distribution of the threatened species of terrestrial ecosystems (mammals, birds, amphibians, reptiles and butterflies) shows that Cox's Bazar District accommodates a high number of threatened species, Gazipur District has middle, and very low in the districts of Narayanganj and Cumilla. Water-based ecosystems, on the contrary, shows that most of the threatened species are distributed in low and middle levels in Gazipur, Narayanganj and Cumilla Districts, and in high and very high levels in Cox's Bazar District (See the distribution maps).

(2) Socioeconomic condition

Information regarding socioeconomic conditions is described in 3.2.2, 3.2.3, and 3.2.4 of this report, their organization structures, functions and services are presented in 2.3 and 2.4 respectively. Present conditions of basic infrastructure and their services in the target cities are described in 4.2

There is no UNESCO World Cultural Heritage Site in the target areas, whereas some important archaeological sites[1] are situated within their boundaries: Sonakanda Fort in Kadamrasul Municipality of NCC, and Salban Vihara in Ward 24 of CuCC. Salban Vihara constitutes a large assemblage of ancient Buddhist ruins at Mainamati-Lalmai Hill Range are found linearly in the west of CuCC.

<Sonakanda Fort in NCC>

<Salban Vihara in CuCC>

*Source: http://offroadbangladesh.com/ and http://www.bdhcdelhi.org/ (accessed in January 2020)*

**Figure 9.1.3 Archaeological Sites within Boundaries of Project Target Areas**

### 9.1.3 System and Organizations Related to Environmental and Social Considerations

(1) Relevant Policies, Strategies and Plans

The implementation of subprojects proposed under UDCGP will be governed by Environmental Acts, Rules, Policies, and Regulations of the Government of Bangladesh. The key national policies, strategies, and plans relevant to environmental management are briefly discussed below.

[1] http://www.archaeology.gov.bd/ (accessed in January 2020)

**Table 9.1.7: Summary of Relevant Government Policies, Strategies, and Plans**

| Policies, Strategies and Plans | Details | Relevance |
|---|---|---|
| National Environment Policy, 1992 | The National Environmental Policy, formulated in 1992, sets the policy framework for environmental action, in combination with a set of broad sectoral guidelines. It emphasizes the a) maintenance of the ecological balance and overall development of Bangladesh through conservation and improvement of the environment; b) protection of Bangladesh against natural disasters; c) identification and control of the activities related to pollution and degradation of the environment; d) environmentally sound environment; e) environmentally sustainable use of all natural resources; and f) active association with all environmental related international initiatives to the maximum possible level. | This policy is applicable to all UDCGP subprojects for their sustainable development |
| National Environment Management Action Plan, 1995 | Conservation of natural habitats, bio-diversity, energy, sustainable development and improvement of life of people | This action plan is applicable to all UDCGP subprojects for their sustainable development |
| National Land Use Policy (MoL, 2001) | The National Land Use Policy, enacted in 2001, aims at managing land use effectively to support trends in accelerated urbanization, industrialization and diversification of development activities. | This policy is applicable to the sustainable development of UDCGP subproject. |
| National Adaptation Programme of Action (NAPA) | In 2005, the Ministry of Environment and Forest (MOEF) has prepared the National Adaptation Program of Action (NAPA) for Bangladesh, as a response to the decision of the Seventh Session of the Conference of the Parties (COP7) of the United Nations Framework Convention on Climate Change (UNFCCC). The basic approach to NAPA preparation was along with the sustainable development goals and objectives of the country where it has recognized the necessity of addressing climate change and environmental issue and natural resource management. The NAPA is the beginning of a long journey to address adverse impacts of climate change including variability and extreme events and to promote sustainable development of the country. There are 15 adaptation strategies suggested to address adverse effects of climate change. | NAPA to address the adverse impacts of climate change in the design, preparation and implementation of all UDCGP sub-projects. |
| Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009 | The Government of Bangladesh has prepared the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 2009. The BCCSAP is built on six pillars: (i) food security, social safety and health; (ii) comprehensive disaster management; (iii) infrastructure; (iv) research and knowledge management; (v) mitigation and low carbon development; and (vi) capacity building. Five programs have been suggested related to improvement of the infrastructures development and management in areas of Bangladesh under pillar 3 (infrastructure) of BCCSAP. | UDCGP is relevant to BCCSAP and will contribute towards achieving the objective of the pillars of BCCSAP. |
| National Forestry Policy, 2016 | This policy specifically states the following relevant objectives (among many other objectives): (i)to arrest deforestation, and degradation of forest resources, enrich and extend areas under tree cover, through appropriate programs and projects, to ensure that at least 20% of the country comes under tree cover by 2035, with at least a canopy density of 50%; and (ii) to significantly increase tree cover outside state forest, through appropriate mechanisms, in both public and private land including urban areas. | UDCGP subprojects related to urban roads may have potential tree cutting activities when widening some of the alignments. This subproject activity should implement measures to comply and ensure support to the policy objectives. |

*Source: Government websites accessed in December 2019.*

(2) Relevant Legislations

Applicable National and Local Laws and Regulations are found below:

**The Environmental Conservation Act (ECA) of 1995** is the main legislative framework relating to environmental protection in Bangladesh. This umbrella Act includes laws for conservation of the environment, improvement of environmental standards, and control and mitigation of environmental pollution. According to this act (Section 12), no industrial unit or project shall be established or undertaken without obtaining, in a manner prescribed by the accompanying Rules, an Environmental Clearance Certificate (ECC) from the Director General of DOE.

In accordance with this Act, the UDCGP will need to be cleared by DOE before commencing the project following procedures given in the Environment Conservation Rules (ECR) 1997 (discussed below). Also the Ecologically Critical Areas in coastal zone, defined by DOE under this act, will be considered while planning and designing of the UDCGP project interventions.

The ECA1995 was amended in 2010, **Bangladesh Environment Conservation Act (ECA), (Amendments) 2010,** which provided clarification of defining wetlands as well as Ecologically Critical Areas and included many important environmental concerns such as conservation of wetlands, hill cutting, ship breaking, and hazardous waste disposal. This amendment empowered the government to enforce more penalties than before. Moreover, affected persons were given provision for putting objections or taking legal actions against the polluters or any entity creating nuisance to affected person.

**The Environment Conservation Rules (ECR), 1997** were issued by the Government in exercise of the power conferred under Section 20 of the ECA1995. Under these Rules, the following aspects, among others, are covered:

- Declaration of ecologically critical areas
- Classification of industries and projects into four categories
- Procedures for issuing the Environmental Clearance Certificate
- Determination of environmental standards.

The Rule 3 defines the factors to be considered in declaring an area as ‘the Ecologically Critical Areas’ as per Section 5 of ECA1995. It empowers the Government to declare an area 'ECA', if it is satisfied that the ecosystem of the area has reached or is threatened to reach a critical state or condition due to environmental degradation. The Government is also empowered to specify which of the operations or processes shall not be carried out or shall not be initiated in the ecologically critical area. Under this mandate, MOEF has declared Sundarban, Cox's Bazar - Teknaf Sea Shore, Saint Martin Island, Sonadia Island, Hakaluki Haor, Tanguar Haor, Marzat Baor and Gulshan - Baridhara Lake as ECA and prohibited certain activities in those areas. Beside these, recently the government of Bangladesh has declared four rivers such as Buriganga River, Turag River, Shitalakha River and Balu River around the Dhaka City as ECA.

The Rule 7 classifies industrial units and projects into four categories depending on environmental impact and location for the purpose of issuance of ECC. These categories are: Green, Orange A, Orange B, and Red[2].

[2] Amended in December 2017, Schedule-1 of ECR1997 now has additional industrial units or projects. The total numbers of each category’s industrial units and projects are: Green: 28, Orange A: 28, Orange B: 71 and Red: 72.

All existing industrial units and projects and proposed industrial units and projects, that are considered to be low polluting are categorized under "Green" and shall be granted Environmental Clearance. For proposed industrial units and projects falling in the Orange-A, Orange-B and Red Categories, firstly a site clearance certificate and thereafter an environmental clearance certificate will be required. A detailed description of these four categories of industries has been given in Schedule-1 of ECR1997. Apart from general requirement, for every Red category proposed industrial unit or project, the application must be accompanied with feasibility report, Initial Environmental Examination (IEE), Environmental Impact Assessment (EIA) based on approved ToR by DOE, Environmental Management Plan (EMP).

The ECR1997 describes the procedures for obtaining Environmental Clearance Certificates (ECC) from the Department of Environment for different types of proposed units or projects. Any person or organization wishing to establish an industrial unit or project must obtain ECC from the Director General. The application for such certificate must be in the prescribed form together with the prescribed fees laid down in Schedule 13, through the deposit of a Treasury Chalan in favor of the Director General. The fees for clearance certificates have been revised in 2010. Rule 8 prescribes the duration of validity of such certificate (three years for green category and one year for other categories) and compulsory requirement for renewal of certificate at least 30 days before expiry of its validity.

**Bangladesh Environment Court Act, 2010** has been enacted to make rules for protection of environmental pollution, resolve the disputes and establish justice over environmental and social damage raised due to any development activities. This act allows the Government to take necessary legal action against any parties who creates environmental hazards / damage to environmentally sensitive areas as well as human society. Environment Courts are situated at the District level and the Government may by notification in the Official Gazette, establish such courts outside the districts. Environment Courts were given power to directly take into cognizance of any offence relating to environmental pollution. Proceeding of this Court will be similar to criminal courts. One important feature of this Act is that it has been given retrospective effect of any crime committed under environment laws and thus any crime previously committed but is not taken before any court can be taken before the Environment Court or any special Magistrate. According to this act, the Government can take legal actions if any environmental problem occurs due to project interventions. The courts have jurisdiction over any project-related environmental cases or litigations or complaints elevated to them.

As for any planned development project under the Local Government Engineering Department (LGED), the LGED needs to coordinate with the DOE including preparation of IEE and EIA to obtain ECC. The LGED developed **the Environmental Guidelines for the LGED Projects** in 2008 (LGED Guidelines), aiming to implement all of its development projects in an environmentally sound and sustainable manner. It is specifically designed to fulfill the requirements of both the Government and International donors including JICA. It provides necessary procedures and formats for the IEE and EIA of both rural and urban infrastructure development projects. For example, analysis of alternatives, public consultations and preparation of the EMP are included in the suggested outline of the EIA report.

The Paurashava (Municipality) Ordinance of 1977, the City Corporation Ordinances of 1983 and the recently revised unified ordinance for all City Corporations of 14 May 2008 (Local Government Ordinances 16 and 17 of 2008), City Corporation Act 2009, 15 Oct 2009, and Paurashava Act 2009 have clearly assigned responsibilities to the urban local bodies (ULBs) to ensure the provision of a wide range of primary and public health services including primary health care, sanitation, water supply, drainage, food and drink, birth and death registration, vector and infectious disease control, etc. for the residents. ULBs have the

authority to address all related issues within their legal and administrative mandate. All subprojects are designed to help ULBs achieve or fulfill these mandates.

**The Bangladesh Labor Act, 2006** deals with occupational rights and safety of workers; provision of comfortable work environment and reasonable working conditions. Also provides the guidance of employer's extent of responsibility and workmen's extent of right to get compensation in case of injury by accident while working. Provides for security and safety of work force during construction period will be subject to this law.

**The Acquisition and Requisition of Immovable Property Act (ARIPA), 2017** repealed the Acquisition and Requisition of the Immovable Property Ordinance 1982 and the subsequent amendments made during 1993 and 1994. It constitutes the legal framework that governs all cases of land acquisition in Bangladesh. Land acquisition below 50 bigha (about 6.7 hectare) is handled by the Division Commissioner, and that of over 50 bigha by the Ministry of Land. Regardless of the size of land to be acquired, it is Deputy Commissioner (DC) who determines market price of the assets based on the approved procedure, and pays three hundred percent of the assessed value as compensation for land, crop compensation and tenant cultivators. However, the ARIPA2017 does not cover project-affected persons (PAPs) without titles of ownership record. For example, informal settlers or squatters, occupiers, and informal tenants and lease-holders without legal documents will not be compensated under it. Also, it does not ensure replacement value of the property acquired. It is applicable to UDCGP subprojects that will require private land and affect people without titles.

There are numbers of other laws and regulations applicable which are relevant for the project. These are presented in the table below.

**Table 9.1.8: Summary of Other Relevant Laws and Acts**

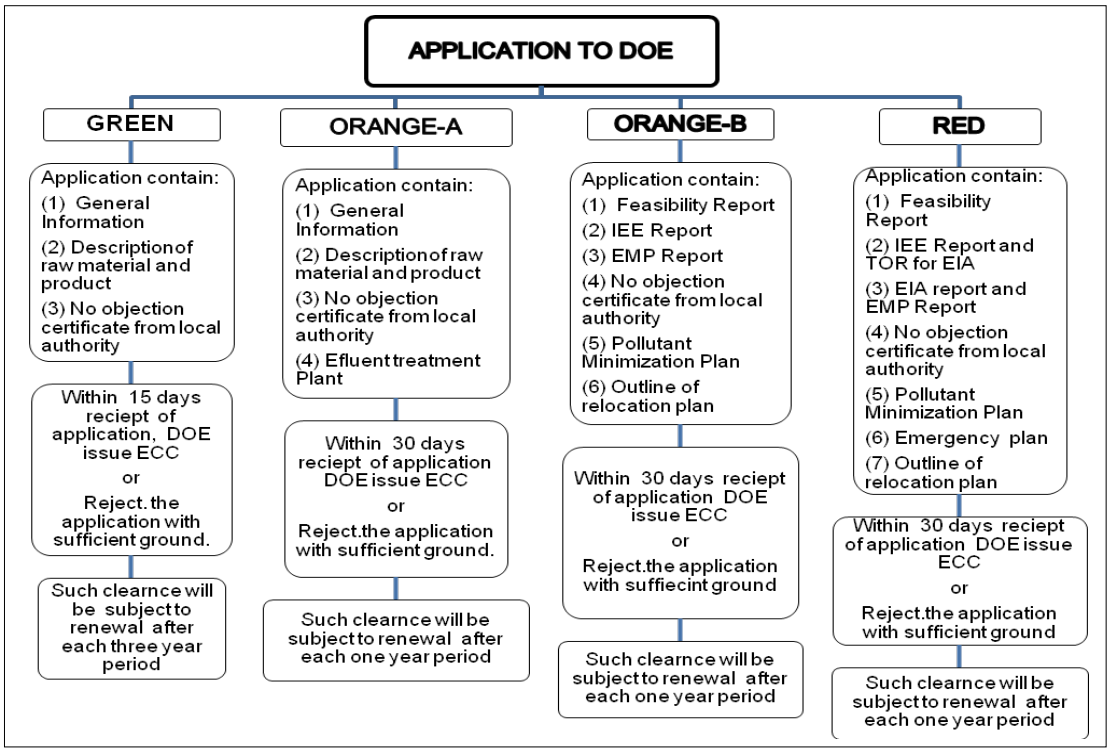
| Act/Law/Ordinance | Brief description | Responsible Agency |
|---|---|---|
| The Vehicle Act (1927) and the Motor Vehicles Ordinance (1983) | Provides rules for exhaust emission, air and noise pollution and road and traffic safety | Road Authority |
| The Water Supply and Sanitation Act (1996) | Regulates the management and control of water supply and sanitation in urban areas. | MOLGRDC |
| The Ground Water Management Ordinance (1985) | Describes the management of ground water resources and licensing of tube wells | Upazila Parishad |
| The Forest Act (1927) and Amendment Act 2000 | Regulates the protection of forests reserves, protected forests and village forests The Government can prohibit certain activities in the declared Reserved Forest area such as any intervention kindles, keeps or carries any fire; trespasses or pastures cattle, or permits cattle to trespass; causes any damage by negligence in felling any tree or cutting or dragging any timber; etc. | MOEF |
| The Private Forests Ordinance (1959) | Deals with the conservation of private forests and afforestation of wastelands. | MOEF |
| The Embankment and Drainage Act (1952) | Describes the protection of embankments and drainage facilities | MOWR |
| The Antiquities Act (1968) | Describes the preservation of cultural heritage, historic monuments and protected sites | Dept of Archaeology |

Source: Government websites accessed in December 2019.

(3) Administrative framework of DOE for clearing and monitoring of projects

According to the ECA1995 no industrial unit or project will be established or undertaken without obtaining, in the manner prescribed by the ECR1997, an ECC from the Director General. Therefore, every

development projects / industries which are specified under the Schedule–1 of the ECR1997 require obtaining site clearance and environmental clearance from the DOE. According to the Rule 7 (1) of the ECR1997; for the purpose of issuance of ECC, every industrial units or projects, in consideration of their site and impact on the environment, will be classified into the four categories and they are: Category I (green), Category II (Orange-A), Category III (Orange B) and Category IV (Red). For Orange B category projects, it is mandatory to carry out an IEE including EMP for getting environmental clearance from DOE, and an EIA with EMP for Red category projects. The figure below shows the summary of review process and timelines set under ECR1997, leading to the issuance of ECC by DOE.




*Source: EIA Guidelines for Industries (Department of Environment), 1997*

**Figure 9.1.4: Government Environmental Clearance Process**

(4) Applicable Environmental Standards

The ECR1997 also provides the environmental standards applicable to UDCGP. Schedule 2 presents the national standards for ambient air quality and Schedule 4 presents the national standards for ambient noise. Following requirements of JICA Guidelines, WB Safeguard Policy and IFC Environment, Health and Safety (EHS) Guidelines, UDCGP shall apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in EHS Guidelines. When the Government regulations differ from these levels and measures, the executing agency shall achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific subproject circumstances, will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in JICA Guidelines, WB Safeguard Policy and IFC EHS Guidelines. In view of this, the following tables show the ambient air quality standards and noise level standards to be followed by the subprojects of UDCGP.

**Table 9.1.9: Ambient Air Quality Standards**

| Parameter | Location | Bangladesh Ambient Air Quality Standard (µg/m³)[a] | WHO Air Quality Guidelines (µg/m³) | |
|---|---|---|---|---|
| | | | Global Update[b] 2005 | Second Edition[c] 2000 |
| TSP | Industrial and Mixed | 500 | - | - |
| | Commercial and Mixed | 400 | - | - |
| | Residential and Rural | 200 | - | - |
| | Sensitive | 100 | - | - |
| $PM_{10}$ | Industrial and Mixed | - | 50 (24-hr) | - |
| | Commercial and Mixed | - | 50 (24-hr) | - |
| | Residential and Rural | - | 50 (24-hr) | - |
| | Sensitive | - | 50 (24-hr) | - |
| $PM_{25}$ | Industrial and Mixed | - | 25 (24-hr) | - |
| | Commercial and Mixed | - | 25 (24-hr) | - |
| | Residential and Rural | - | 25 (24-hr) | - |
| | Sensitive | - | 25 (24-hr) | - |
| $SO_2$ | Industrial and Mixed | 120 | 20 (24-hr) | - |
| | Commercial and Mixed | 100 | 20 (24-hr) | - |
| | Residential and Rural | 80 | 20 (24-hr) | |
| | Sensitive | 30 | 20 (24-hr) | - |
| $NO_2$ | Industrial and Mixed | 100 | 200 (1-hr) | - |
| | Commercial and Mixed | 100 | 200 (1-hr) | - |
| | Residential and Rural | 80 | 200 (1-hr) | - |
| | Sensitive | 30 | 200 (1-hr) | - |
| CO | Industrial and Mixed | 5,000 | - | 10,000 (8-hr) 100,000 (15-min) |
| | Commercial and Mixed | 5,000 | - | 10,000 (8-hr) 100,000 (15-min) |
| | Residential and Rural | 2,000 | - | 10,000 (8-hr) 100,000 (15-min) |
| | Sensitive | 1,000 | - | 10,000 (8-hr) 100,000 (15-min) |

Note: If less stringent levels or measures are appropriate in view of specific project circumstances, the project proponent shall provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in IFC EHS Guidelines.

*Source: [a]:Schedule 2 of ECR, 1997, [b]: WB Environmental, Health and Safety General Guidelines, 2007, [c]: Air Quality Guidelines for Europe, Second Edition, 2000; WHO Regional Office for Europe, Copenhagen.*

**Table 9. 1.10: Ambient Noise Quality Standards**

| Receptor/ Source | National Noise Standard Guidelines[a] (dB) | | WHO Guidelines Value For Noise Levels Measured Out of Doors[b] (One Hour $L_{Aeq}$ in dBA) | |
|---|---|---|---|---|
| | Day | Night | 07:00 – 22:00 | 22:00 – 07:00 |
| Industrial area | 75 | 70 | 70 | 70 |
| Commercial area | 70 | 60 | 70 | 70 |
| Mixed Area | 60 | 50 | 55 | 45 |
| Residential Area | 55 | 45 | 55 | 45 |
| Silent Zone | 50 | 40 | 55 | 45 |

Note: If less stringent levels or measures are appropriate in view of specific project circumstances, PMU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in WHO Guidelines.

*Source: [a]: Bangladesh Noise Pollution (Regulation and Control) Rules 2006, [b]: Guidelines for Community Noise, WHO, 1999.*

(5) International Environmental Agreements

The following table lists the relevant international environmental agreements that the Government is party to, and their relevance to various subprojects under UDCGP.

**Table 9.1.11: International Environmental Agreements Relevant to the Project**

| International Environmental Agreement | Year Ratified | Details | Relevance |
|---|---|---|---|
| United Nations Framework Convention on Climate Change (UNFCCC) | 1997 | Parties to take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. | All UDCGP subprojects are subject to impact of climate change. Engineering designs of these subprojects should consider climate change impacts, such as flooding and river water level rise. |
| Paris Convention on Protection of the World Cultural and Natural Heritage, 1972 | 1983 | Parties to ensure the protection and conservation of the cultural and natural heritage situated on territory of, and primarily belonging to, the State | Prevention of damage or destruction of culturally and/or historically significant sites, monuments, etc. |
| Ramsar Convention on Wetlands of International Importance, 1971 | 1992 | Parties to conserve and wisely use wetlands (i.e., maintaining their ecological character) as a contribution towards achieving sustainable development locally and throughout the world | Protection of significant wetland and prevention of draining or filling during construction. |
| Convention on Biological Diversity, 1992 | 1997 | Parties to require the environmental assessment of projects that are likely to have significant adverse effects on biological diversity with a view of avoiding or minimizing such effects | Protection of biodiversity during construction and operation. |

*Source: Government websites accessed in December 2019.*

(6) JICA Guidelines for Environmental and Social Considerations

Since the Project is to be financed by Japanese ODA loan, it is mandate that executing agency and implementing agencies comply with the JICA Guidelines (2010) on top of Bangladesh laws and regulations, and confirm if appropriate environmental and social considerations are taken to avoid, reduce or minimize project's impacts on the environment and local communities and to prevent the occurrence of unacceptable adverse impacts.

The key requirements include, but are not limited to the following:

a) Any negative environmental and social impacts of proposed projects must be avoided. If it is not possible to avoid them, any negative impacts should be minimized or compensated.
b) Assessment of potential environmental and social impacts and elaboration of mitigation measures during the earliest possible planning stage, and incorporation of them into the project plan. Strategic Environmental Assessment must be conducted if applicable.
c) Participation of stakeholders at an early stage of planning.
d) Comparison of several alternatives, including zero-option, in order to minimize negative impacts to the environment and society.
e) Compliance with national laws, standards, and plans.
f) Avoidance and minimization of involuntary resettlement, where feasible, and preparation of RAPs, where involuntary resettlement is unavoidable.
g) Environmental monitoring
h) Information disclosure and grievance redress mechanism

As the executing agencies of subprojects under the UDCGP, the LGED and City Corporations must satisfy all of the above requirements, as well as others described in the JICA Guidelines, even if the national laws and policies do not fully prescribe requirements for these issues.

JICA classifies projects into four categories[3] according to the extent of environmental and social impacts, and the Project falls in the Category B. With updated environmental data and information on the subprojects on the final list, LGED is requested to reconfirm which categories they are classified into so as to ensure scope and scale of their adverse impacts do not exceed that of Category B level.

(7) Gap Analysis for Environmental Issues

The following table shows results of comparison between Bangladesh legislations and JICA Guidelines 2010 for environmental issues, and possible measures to bridge the gaps.

**Table 9.1.12: Gaps of Requirements and Measures by the Project**

| Requirements by JICA Guideline | GOB Policies | Gaps | Measures to be taken by the Project |
|---|---|---|---|
| Scope of impacts to be assessed | The ECR has no provision for the scope of impacts to be assessed for environmental assessment, but the LGED guidelines recommended using a checklist covering a broad range of environmental and social issues. | Scope of impacts to be assessed is not provided in legal instruments of GOB, but recommended in the LGED guidelines.<br>In case of land acquisition is unavoidable, GOB excludes informal settlers, indigenous peoples, and ethnic minorities from eligible PAPs.<br>GOB does not provide for social rehabilitation of persons loss of their livelihoods, and has no provision for giving special assistance to vulnerable groups.<br>There are differences in the valuation of land and prices of affected assets, where for example JICA prescribes the use of current market rates in the project area. The GOB does not ensure replacement value or restoration of pre-project income of the PAPs.<br>There is also no provision to assess the impacts on incomes and livelihood from the loss of employment and business or to restore lost incomes | the scope of impacts for the selected projects and avoid land acquisition and involuntary resettlement as much as possible.<br><br>In case the projects require land acquisition and involuntary resettlement, often donors (under the loan project component) provide financial support for the preparation of required documents such as EIA, Abbreviated Resettlement Action Plan (ARAP), Resettlement Action Plan (RAP), Resettlement Policy Framework (RPF) and IPP.<br><br>Therefore, the UDCGP suggests the same procedure to be taken for the each elected projects under the JICA loan for the CC.<br><br>The UDCGP will identify the required documents for the selected JICA loan project for further F/S. |
| Analysis of alternative options | The ECR has no provision for the analysis of alternative options, but it is recommended in the LGED guidelines. | Analysis of alternative options is necessary according to JICA Guidelines. | Alternative options will be analyzed in the process of EIA and IEE. |
| Information disclosure and stakeholder participation | The ECR has no provision for public consultation and information disclosure, but LGED guidelines provide general recommendation for | Information disclosure and stakeholder participation are required by the JICA guidelines. | Stakeholder meetings will be held before EIA/IEE is completed and their opinion will be taken into account. The EIA/IEE reports will be made available to the public. |

[3] **Category A projects** are likely to have significant adverse impacts on the environment and society. **Category B** projects have less adverse impacts on the environment and society than those of Category A projects. **Category C** projects are likely to have minimal or little adverse impact on the environment and society. **Category FI** projects satisfy all of the following requirements: JICA's funding of projects is provided to a financial intermediary or executing agency; the selection and appraisal of the sub-projects is substantially undertaken by such an institution only after JICA's approval of the funding, so that the subprojects cannot be specified prior to JICA's approval of funding (or project appraisal); and those subprojects are expected to have a potential impact on the environment.

| Requirements by JICA Guideline | GOB Policies | Gaps | Measures to be taken by the Project |
|---|---|---|---|
| | public consultation and information disclosure in the process of environmental assessment . | | |

*Source: JICA Survey Team*

### 9.1.4 Consideration of Alternative Plans

The subproject ideas were submitted by the target ULBs, which the JICA Survey Team examined from technical, financial, economical, environmental and social perspectives. In the screening process from longlist to shortlist, it was made a rule those subprojects which fall in Category A according to the JICA Guidelines for Environmental and Social Considerations issued in April 2010 must be excluded from the subproject list, taking into account that a) the Project has the nature of fast and flexible project implementation; and b) subprojects with significant environmental and social impacts must be avoided as they will take place in the heart of target cities. Alternative plans have been thoroughly examined throughout the screening process, which is described in detail in the Chapter 6 of this report. Selection priorities are also presented in the same chapter.

As this entire project is classified as Category B, it is necessary to reconfirm if subprojects do not cause large-scale environmental and social impacts, during their detail design survey, by using the sector-specific pre-screening forms. The issues described in the forms constitute part of the subproject summary sheets of each sector used during this preparation survey. LGED/PMU, on behalf of the project proponent, will be responsible this final screening with a technical support of loan consultants' team. JICA Screening Format and Environmental Checklist shall be then filled by each ULB/PIU for each subproject to be implemented. Loan consultants will support them in environmental review of each subproject.

### 9.1.5 Environmental and Social Survey Results

Survey results for the subprojects under the Batch-1 will be presented along with the preparation progress of project implementation. Those under the Batch-2 and Batch-3 will come out later in the project implementation.

### 9.1.6 Environmental Impact Evaluation

Environmental impact will be evaluated in accordance with the survey results. There may be unforeseen impacts that are unable to be anticipated until subprojects start. They will be reviewed during monitoring.

### 9.1.7 Mitigation Measures

Mitigation measures for each subproject shall be examined and developed based on the survey results and impact evaluation planned in 2020 until 2024 as per the schedule of the batches.

### 9.1.8 Environmental Monitoring Plan

The workability of mitigation measures examined in the environmental and social survey shall be reviewed during the monitoring process. Unforeseen impacts may also be found that were unable to be anticipated at the timing of this preparatory survey as well as at the beginning of subproject implementation, may become tangible at this stage. Monitoring results shall be reviewed during the construction period, examine alternative mitigation measures as required, and revise the monitoring plan accordingly.

### 9.1.9 Implementation Mechanism

LGED will be the executing agency responsible for overall guidance of UDCGP and subproject implementation.

Prior to the commencement of environmental procedures required by Bangladeshi law, LGED/PMU shall ensure there is no Category A subproject on the final implementation list, by collecting pre-screening forms to check the degree of environmental and social impacts of all subprojects in four ULBs comprehensively.

The PMU has the responsibility of fulfilling environmental requirements of the government and conducting required level of environmental assessment as per ECR1995, ECR1997 and JICA Guidelines. They will primarily be responsible to remain compliant to the statutory and legal requirements, including overall supervision of the implementation of the environmental management provisions in the IEEs/EMPs for the subprojects.

Subprojects will be directly implemented by PIUs and engineers in the target ULBs. The PIUs will be responsible for applying an ECC to the DOE for each subproject, conducting the day-to-day activities of project implementation in the field and will have direct supervision to all contractors at subproject sites. Each PIU will appoint at least one environment staff responsible for day-to-day monitoring of the project progress and implementation of the environmental provisions. Technical assistance to the ULBs shall be provided by LGED, and loan consultants will support PIUs in preparation of environmental documents for each subproject.

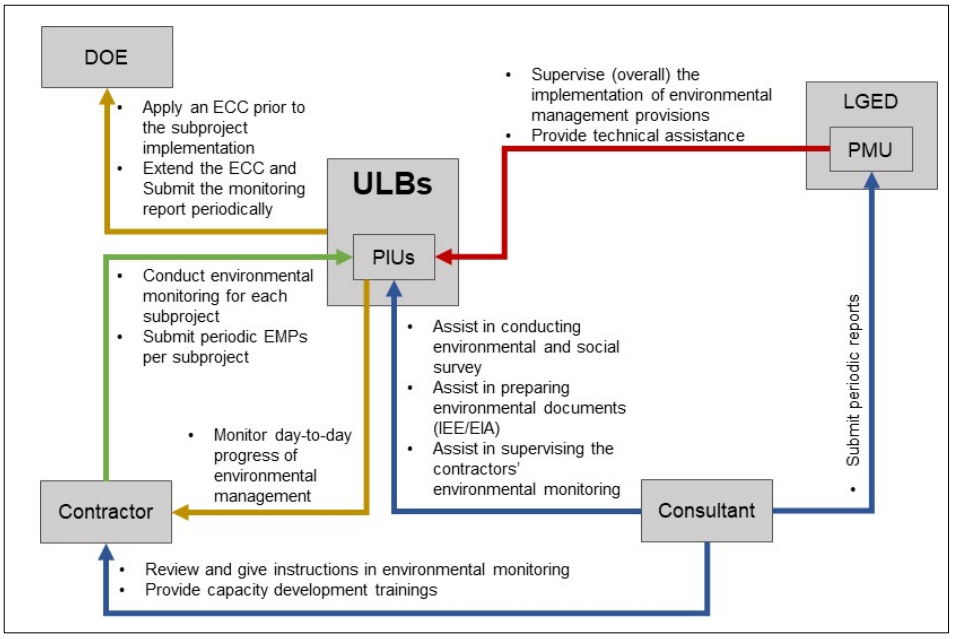
The Consultant shall include the environmental and social safeguards experts to effectively implement relevant provisions of the environmental reports of the subprojects to provide technical support to the PMU and PIUs including implementation of the environmental requirements, according to JICA's requirements on environmental safeguards, and assist in monitoring impacts and mitigation measures associated with subprojects. They will support PIUs to implement an environmental assessment for each subproject, environmental management functions including assisting in preparing and updating subprojects' environmental documents with respect to EMPs, and assist in monitoring impacts and mitigation measures associated with subprojects.

The contractors of subprojects will have specific roles in the implementation of the EMPs. Each contractor shall have at least one environmental health and safety officer (or equivalent) responsible for implementing applicable measures in the EMP. All these specific roles and responsibilities will be defined in the environmental reports, which shall form part of the contract documents. PIUs will monitor contractors' environmental performance.

Monitoring parameters of air, water, noise, etc will be periodically collected according to the monitoring plan, and their results will be reported to PMU for a collective monitoring. If there is any necessity to update mitigation measures and alter parameters accordingly, PMU, with loan consultant's technical support, will guide PIU to do so.

On top of that, PMU will review if there is any accumulation of adverse impacts more than anticipated due to simultaneous implementation of several subprojects in adjacent areas. If such case occurs, PMU will guide PIU to adjust construction schedule of each subproject and avoid unfavourable situation caused to local communities. PIU will lead the Contractors to coordinate construction schedules of subprojects among them, and keep monitoring the construction progress of each subproject.

Project implementing organization of subprojects is shown in the following figure. Operation and Maintenance of each infrastructure will be solely done by each city and paurashava.




Note: ULBs will be solely responsible for O&M of infrastructures developed under the project during operation period. Source: JICA Survey Team

**Figure 9.1.5 Implementation Arrangements during Pre- / Construction Period**

### 9.1.10 Stakeholder Meetings

The nature of this project, that ULBs play the role of the PIU, has enabled it to identify infrastructure development needs from the ground level. They have had series of discussions with local communities represented by the Ward Counsellors from the beginning of subproject screening. They have been well consulted in the process of screening subprojects from the longlist to shortlist. The dialog will be continued in the detailed design stage, and minutes of stakeholder meetings in the environmental and social survey will be kept.

## 9.2 Land Acquisition and Resettlement

### 9.2.1 Necessity of Land Acquisition and Resettlement

In the process of screening candidate subprojects, exclusion of those classified as Category A according to the JICA Guidelines for Environmental and Social Considerations 2010 was one of the selection criteria, or design alterations were sought to minimize the acquired land area and involuntary resettlement (See Section 6.3). There is thus no such subproject that causes large-scale land acquisition, physical displacement of people and involuntary resettlement.

### 9.2.2 Legal Framework for Land Acquisition and Requisition, and Resettlement

(1) Legal Framework in Bangladesh

It is the Acquisition and Requisition of Immovable Property Act 2017 (ARIPA2017) which governs land acquisition and requisition, and asset compensation in Bangladesh. The Act repealed the Acquisition and Requisition of Immovable Property Ordinance 1982. It is the basic instrument governing land acquisition in the country and stipulates the Deputy Commissioner of District Administration to publish notices of

property acquisition or requisition when any property is acquired permanently / required temporarily for a public purpose or in the public interest.
It also provides specific issues which the Deputy Commissioner shall consider when estimating the amount of compensation. In determining the compensation amount for properties to be acquired, the Deputy Commissioner shall take into consideration the average market value of the properties of similar description and with similar advantages in the vicinity during the 12 months preceding the date of publication of the notice. The damages of standing crops or trees, property severing, affecting his other properties (movable or immovable) or his earnings, compelled changes in his residence or place of business and incidental expenses. The Act stipulates that the Government shall provide the persons interested with compensation of 200 % of the market price for government projects[4], and necessary steps may be taken to rehabilitate evicted persons due to acquisition.

(2) Legal Framework in Bangladesh
The key principle of JICA policies on involuntary resettlement is summarized below.

- Involuntary resettlement and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives.
- When, after such an examination, avoidance is proved unfeasible, effective measures to minimize impact and to compensate for losses must be agreed upon with the people who will be affected.
- People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported, so that they can improve or at least restore their standard of living, income opportunities and production levels to pre-project levels.
- Compensation must be based on the full replacement cost as much as possible.
- Compensation and other kinds of assistance must be provided prior to displacement.
- For projects that entail large-scale involuntary resettlement, resettlement action plans must be prepared and made available to the public. It is desirable that the resettlement action plan include elements laid out in the WB Safeguard Policy, OP 4.12, Annex A.
- The resettlement policy framework will be prepared for the sector loan project, where details of sub-projects will not be determined at the project preparation stage. The framework will cover the following: 1) sub-project specific resettlement plan; 2) compensation, and restoration and rehabilitation assistance; 3) institutional framework; for implementation; 4) monitoring and evaluation mechanism; 5) timeframe for implementation; and 6) detailed financial plan including budget.
- In preparing a resettlement action plan, consultations must be held with the affected people and their communities based on sufficient information made available to them in advance. When consultations are held, explanations must be given in a form, manner, and language that are understandable to the affected people.
- Appropriate participation of affected people must be promoted in planning, implementation, and monitoring of resettlement action plans.
- Appropriate and accessible grievance mechanisms must be established for the affected people and their communities.

[4] If the Government acquires the land for private projects / activities, the amount of compensation shall be 300 %.

Above principles are complemented by WB OP 4.12, since it is stated in the JICA Guidelines that "JICA confirms that projects do not deviate significantly from the WB's Safeguard Policies". Additional key principle based on WB OP 4.12 is as follows.

- Affected people are to be identified and recorded as early as possible to establish their eligibility through an initial baseline survey (including population census that serves as an eligibility cut-off date, asset inventory, and socioeconomic survey), preferably at the project identification stage, to prevent a subsequent influx of encroachers of others who wish to take advance of such benefits.
- Eligibility of Benefits include, the PAPs who have formal legal rights to land (including customary and traditional land rights recognized under law), the PAPs who don't have formal legal rights to land at the time of census but have a claim to such land or assets and the PAPs who have no recognizable legal right to the land they are occupying.
- Preference should be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based.
- Provide support for the transition period (between displacement and livelihood restoration.
- Attention must be paid to the needs of the vulnerable groups among those displaced, especially those below the poverty line, landless, elderly, women and children, ethnic minorities etc.
- For projects that entail land acquisition or involuntary resettlement of fewer than 200 people, ARAP is to be prepared.

In addition to the above core principles on the JICA policy, it also laid emphasis on a detailed resettlement policy inclusive of all the above points; project specific resettlement plan; institutional framework for implementation; monitoring and evaluation mechanism; time schedule for implementation; and, detailed Financial Plan etc.

(3) Comparison between requirements of JICA Guidelines and Bangladeshi Legislation

The following table presents gap analysis of the JICA Guidelines and the ARIPA 2017 on the issues relevant to the Project.

**Table 9.2.1: Differences between JICA Guidelines and ARIPA 2017**

| No | JICA Guidelines | ARIPA2017 | Gaps |
|---|---|---|---|
| 1 | Involuntary resettlement and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives. (Para 1, Sec 7, Appendix 1) | Acquisition of properties is exempted used by the public for religious worship, public or educational institutions, graveyards and cremation grounds (Section 4). | • There is no legal provision regarding avoidance of involuntary resettlement and loss of livelihood means. |
| 2 | When population displacement is unavoidable, effective measures to minimize impact and to compensate for losses should be taken. (Para 1, Sec 7, Appendix 1) | The law implicitly discourages unnecessary acquisition, as lands acquired for one purpose cannot be used for a different purpose, and lands that remain unused be returned to the original owners. (Section 19). | • There is no detailed provision on measures how to minimize resettlement.<br>• There is no mechanism to monitor if unnecessary acquisition is actually discouraged. |
| 3 | People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported, so that they can improve or at least restore their standard of living, income opportunities and production levels to pre-project levels. (Para 2, Sec 7, Appendix 1, | The law stipulates compensation for "person interested" who appear in the land administration records as titleholders. | • There is no stipulation in Bangladesh which recognizes the rights of those, such as squatters, who do not possess a legal title to lands they live in or make a living from. There is thus no provision to mitigate the adverse impacts they suffer.<br>• There is no provision to assess the impacts on peoples' incomes, livelihood, loss of employment and businesses for mitigation measures. |

| No | JICA Guidelines | ARIPA2017 | Gaps |
|---|---|---|---|
| | | | Socioeconomic rehabilitation of the involuntarily displaced persons is absent either in the legal regime of the country. |
| 4 | Compensation must be based on the full replacement cost as much as possible. (Para 2, Sec 7, Appendix 1)<br><br>Replacement cost is the amount calculated before displacement which is needed to replace an affected asset without depreciation. | The Act states that the Deputy Commissioner determines the amount of compensation by considering: (a) market value of the property at the date of notice publication, and average value of the properties of similar description and with similar advantages in the vicinity during the twelve months preceding the date of the notice publication; (b) damage on standing crops or trees which may be on the property at the time of making the joint list; (c) damage of severing such property from his other property; (d) damage caused to other properties (movable or immovable), or his earnings; and (e) the reasonable expenses incidental to such change if the person interested is likely to be compelled to change his residence or place of business in consequence of the property acquisition. While the government is acquiring land, it shall provide the persons interested with compensation of 200 % of the market price. Provided that if the government acquires the land for any non-government person then the amount of compensation shall be 300 %. (Section 9). | • The average market prices in the past 12 months till the date of public notification may not be equivalent to the current market prices on the day of actual land acquisition.<br>• The Act does not ensure replacement cost or restoration of pre-project incomes of the affected persons.<br>• The long legal assessment procedures often results in prices that are far below the actual market prices. The Act lacks standard methodology in determining compensation. It is therefore uncertain if premiums added to the fixed prices will reach or exceed full replacement cost of crops, trees, properties, his earnings, and expenses incidental to change of his residence or place of business.<br>• It does not stipulate if depreciation should be considered. |
| 5 | Compensation and other kinds of assistance must be provided prior to displacement. (Para 2, Sec 7, Appendix 1) | The property shall stand acquired and the Deputy Commissioner shall take possession of the property when the compensation is paid. (Section 13) | • Compensation and assistance prior to acquisition of land and property is specifically stipulated, but the timing is not certain if it is prior to resettlement. |
| 6 | Appropriate and accessible grievance mechanisms must be established for the affected people and their communities. (Para 3, Sec 7, Appendix 1s) | Persons interested are allowed to raise objections in writing within 15 days after the publication for the Deputy Commissioner to file. The Deputy Commissioner will hear the complaints and prepare a report and record of proceedings within 30 days following expiry of the 15-day period given to affected persons to file their objections. (Section 5) | • The mechanism itself has no gap.<br>• However, the Act allows titleholders to raise their voices, but not non-titleholders. |
| 7 | In preparing a resettlement action plan, consultations must be held with the affected people and their communities based on sufficient information made available to them in advance.<br>When consultations are held, explanations must be given in a form, manner, and language that are understandable to the affected people.<br>Appropriate participation of affected people must be promoted in planning, implementation, and | Whenever it appears to the Deputy Commissioner that any property in any locality is needed or is likely to be needed for any public purpose or in the public interest, he will publish a notice at convenient places on or near the property in the prescribed form and manner, stating that the property is proposed for acquisition. (Section 4) | • There is no provision in Bangladesh to organize public meetings or to disclose project information, so stakeholders are not informed about the purpose of land acquisition, its proposed use, or compensation, entitlements, or special measures. |

| No | JICA Guidelines | ARIPA2017 | Gaps |
|---|---|---|---|
| | monitoring of resettlement action plans. | | |
| 8 | Affected people are to be identified and recorded as early as possible in order to establish their eligibility through an initial baseline survey, preferably at the project identification stage, to prevent a subsequent influx of encroachers who wish to take advantage of such benefits. (WG OP 4.12 Para.16)<br>Eligibility of benefits includes: i) those with formal legal rights to the land (including customary and traditional land rights recognized under law); ii) those without formal legal rights to the land at the time of census but have a claim to such land or assets; and iii) those without recognizable legal right to the land they are occupying.<br>Persons who encroach on the area after the cut-off date are not entitled to compensation or any other form of resettlement assistance (WG OP 4.12 Para.15) | • The Deputy Commissioner conducts physical inventory of assets and properties found on the land before the publication of the notice, and develop a list of persons interested after the publication. The inventory form consists of the person's name, land area, the list of affected assets, and house construction materials. (Section 4)<br>• The cut-off date is the date of publication of notice that land is subject to acquisition, and that any alteration or improvement thereon will not be considered, if there is no objection, for compensation. | • Those people without recognizable legal right are not eligible.<br>• There is no provision to prevent an influx of encroachers. |
| 9 | Provide support for the transition period (between displacement and livelihood restoration). (WG OP 4.12 Para.6 I (i)) | Not applicable | • There is no provision of relocation / transitional assistance. |
| 10 | Preference should be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based. (WG OP 4.12 Para.11) | Not applicable | • The ARIPA 2017 does not address these issues. |
| 11 | Appropriate consideration must be given to vulnerable social groups, such as women, children, the elderly, the poor, and ethnic minorities, all members of which are susceptible to environmental and social impacts and may have little access to decision-making processes within society. (Para 2, Sec 5, Appendix 1, JICA Guidelines) | Not applicable. | • There is no regulation stipulating to provide support given or particular attention paid to vulnerable people. |
| 12 | In cases where sufficient monitoring is deemed essential for appropriate social considerations, project proponents must ensure that project plans include feasible monitoring plans. (Para 2, Sec 8, Appendix 1, JICA Guidelines) | Not applicable. | • There is no provision regarding monitoring of land acquisition and resettlement issue. |
| 13 | Project proponents provide relevant draft resettlement instrument and makes it available at a place accessible to displaced persons and local NGOs, in a form, manner, and language that are understandable to them. (WG OP 4.12 Para.22) | Not applicable. | • There is no provision regarding information disclosure on resettlement issue. |
| 14 | The full costs of resettlement activities necessary to achieve the project objectives are included in the total project costs. (WG OP 4.12 | The ARIPA 2017 has a provision to include all the costs related to land acquisition and compensation of legal property and assets. | • The Act does not consider the cost related to assistance for relocation and during transitional period to restore the livelihood of the affected |

| No | JICA Guidelines | ARIPA2017 | Gaps |
|---|---|---|---|
| | Para.20) | | people.<br>• There is no provision in Bangladesh that stipulates full cost of resettlement activities shall be included in the project cost. |
| 15 | For a project with multiple subprojects, the borrower is required to submit a resettlement policy framework prior to appraisal if (a) the zone of impact of subprojects cannot be determined, or (b) the zone of impact is known but precise sitting alignments cannot be determined because of the nature and design of the project or of a specific subproject or subprojects.<br>For each subproject included in a project described above, a satisfactory resettlement plan or an abbreviated resettlement plan is required that is consistent with the provisions of the policy framework be submitted for approval before the subproject is accepted for financing. (WG OP 4.12 Para.28 and 29) | Not applicable. | • There is no provision in Bangladesh that stipulates preparation of a resettlement policy framework, and resettlement plan or an abbreviated resettlement plan consistent with the provisions of the policy framework. |

*Source: The Acquisition and Requisition of Immovable Property Act 2017, JICA Guidelines for Environmental and Social Considerations (2010) and WB OP 4.12.*

(4) Guiding Principles for Land Acquisition, Resettlement and Rehabilitation in this Project

There are certain gaps between the legal framework of Bangladesh and JICA's Policy as in the above table. The Project falls in Category B, and subprojects with significant social impacts have been excluded. The following shall be the guiding principles and policy framework for the Project, based on which entitlement and eligibility as the affected people shall be identified for the subprojects that cause land acquisition, resettlement, losses of assets and/or livelihood means and income sources.

- Subprojects with involuntary displacement of 200 people or more must be excluded from the Project, since it is classified as Category A according to the JICA Guidelines for Environmental and Social Considerations.

Rapid environmental social assessment had been taken place in the screening process of subprojects, and those which would likely cause large-scale land acquisition and involuntary resettlement of 200 people or more had been already excluded. If any of the prioritized subprojects are found to cause involuntary relocation of 200 people during the detailed design and construction stage, and if it is found unavoidable to relocate them involuntarily, they must be eliminated then.

- Land acquisition causing physical displacement and loss of livelihood means must be avoided to the extent possible. Where physical displacement is unavoidable, adverse impacts must be minimized by adjusting and modifying the design of subprojects.

In unavoidable circumstances and in the circumstances additional land is required, effective measures for minimization of potential impacts and compensation shall be considered through examination of alternative locations and designs if it is technically viable. Proper alternate engineering design and adequate stakeholder consultations shall be conducted as measures for minimization of resettlement.

- Where physical displacement is unavoidable, social survey shall be conducted to identify the impacts (both positive and adverse) and their degrees, and develop an action plan.

In unavoidable circumstances, facts about the affected people must be identified through social survey comprised of census, asset inventory and socioeconomic survey. Measures shall be examined to mitigate adverse impacts, among which are provision of alternative land, compensation in cash / kind, assistance for livelihood restoration, etc.

- All kinds of people affected by the project must be eligible for compensation and assistance.

If social survey finds persons without recognizable legal right or claim to the land are occupying the project site, they shall be entitled to compensation for the loss of assets (such as structures), resettlement assistance to improve their livelihoods and living standards (or at least to restore them).
All those residing, working, running business within the subproject affected areas as of the cut-off date are entitled to compensation for their affected assets, and restoration and rehabilitation assistance.
In case the affected people lose part of their assets and the remaining portions are inadequate to sustain their current living standard, compensation and restoration and rehabilitation assistance should cover the whole assets.
People temporarily affected are also considered eligible. Temporary land acquisition and resettlement shall be compensated.

- Public notification or cut-off date shall be declared for people who must be resettled involuntarily, which shall include illegal occupants and other interested people to become eligible for compensation and assistance.

With regard to the official acquisition of land and other assets such as structures, standing crops and trees, it is the Deputy Commissioner who gives public notification and provides titleholders with eligibility of compensation, as stipulated in the ARIPA 2017. DC Office organizes a committee comprised of Public Works Department (PWD), Sub-Registrar's Office, Department of Agriculture Extension (DoAE) and Forest Department (BFD) to estimate the cost and provides compensation under law (CUL) to them. They acquire private land on behalf of the project proponent upon receipt of budget from them.
A cut-off date shall be declared for illegal occupants, on the other hand, to include them as eligible to compensation in this project. It would be desirable the declaration is made at the beginning of social survey, during / after the survey, or at the timing of holding a consultation meeting with them, whichever appropriate to avoid further influx of population.

- Appropriate consideration must be given to the vulnerable.

Vulnerable groups will include women, the poor, children, the elderly, the disabled, the landless, indigenous peoples, and other groups. They shall be well considered in the process of resettlement planning. Special assistance should be provided to help them improve their socioeconomic status such as additional support and preference when hiring unskilled labor during implementation.

- People whose means of livelihood will be hindered or lost must be sufficiently compensated and supported. Support for the transition period must be provided.

Such measures as income restoration program and employment opportunities for PAPs (shop owners, shop workers and street vendors, etc.) to maintain the same or better income and livelihood status shall be formed and conducted during the detailed design and implementation of subprojects. Restoration and rehabilitation assistance will be provided not only for immediate loss, but also for transitional period to restore their livelihood.

- Compensation must be based on the full replacement cost as much as possible.

Demolished physical structures and other assets shall be replaced or compensated. In case of cash compensation, it shall be based on the principle of full replacement cost. The full replacement cost is the

amount which is necessary to replace an affected asset without depreciation and without deduction for taxes and/or costs of transaction. Moving costs shall also be covered. The rates for compensation can be collected from PWD, Sub-Registrar's Office, DoAE and BFM, in addition to the primary data collection of current market rates. Compensation shall be paid at either of full replacement cost or CUL whichever is higher. The amount of compensation shall be estimated before the occurrence of the resettlement.

- Compensation and other kinds of assistance must be provided prior to displacement.

Acquisition of assets, payment of compensation, and resettlement shall be completed prior to any construction activities. Restoration and rehabilitation assistance activities for PAPs must also be in place but not necessarily completed prior to construction activities, as they may be ongoing activities even after the commencement of the construction activities.
A mechanism that confirms and entails prior payment of compensation and other assistance to resettlement shall be established and practiced.

- Preference should be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based.

Though this option may be a difficult proposition, given the lack of government land and the difficulties in the acquisition of private lands, an attempt shall be made to find alternate land for the loss of land, in case it is available and if it is feasible, looking at the concurrence of host community and land value.
The replacement lands should be within the immediate vicinity of the affected lands wherever possible, and be of comparable productive capacity and potentials. If such lands are not available there, sites where social disruption of PAPs can be minimized should be selected. Such lands shall have access to services and facilities similar to those available in the lands to be affected.
If replacement land is not available, cash compensation will be taken into account, together with other assistance including skill development and training, wage employment, and other restoration and rehabilitation assistance.

- Consultations should be held with PAPs in preparation of resettlement documents.

PAPs and their communities shall be consulted about the subprojects, the rights and options available to them, and proposed mitigation measures for adverse effects. They will also be involved in the decision making process concerning their resettlement to the extent possible. Consultation process which involves all stakeholders shall be continued throughout the project.

- Voluntary resettlement and dispossession shall be pursued if affected people show their willingness to do so.

The ULBs may seek **voluntary contribution** of land and assets, as long as the situation does not force the affected people to do so, by adopting transparent and accountable process that satisfies the following safeguards described in the WB Safeguard Policy document[5] are in place:

- The infrastructure must not be site specific;
- The impacts must be minor, that is, involve no more than 10 % of the area of any holding and require no physical relocation;
- The land required to meet technical project criteria must be identified by the affected community, not by line agencies or project authorities (nonetheless, technical authorities can help ensure that the land is appropriate for project purposes and that the project will produce no health or environmental safety hazards);

[5] The International Bank for Reconstruction and Development / The World Bank, *Involuntary Resettlement Sourcebook*, 2004, pp.

- The land in question must be free of squatters, encroachers, or other claims or encumbrances.
- Verification (for example, notarized or witnessed statements) of the voluntary nature of land contributions must be obtained from each person donating land.;
- If any loss of income or physical displacement is envisaged, verification of voluntary acceptance of community-devised mitigatory measures must be obtained from those expected to be adversely affected;
- If community services are to be provided under the project, land title must be vested in the community, or appropriate guarantees of public access to services must be given by the private titleholder; and
- Grievance mechanisms must be available.

Voluntary contribution is an act of informed consent, made with the prior knowledge of other options available and their consequences, including the right not to contribute or transfer the land. It must be obtained without undue coercion or duress.
Voluntary land contribution requires a declaration by the individual, household or group that they are donating their land rights for a specific purpose and a specific duration of time. An agreement shall be concluded between the Project and the affected people with witnesses (Ward Counsellor and other parties). The voluntary contribution shall be applied only to small-scale strips of land, **not** to the scale that affects the living standards of the affected people. Voluntary contribution from economically vulnerable people therefore must be avoided. ULBs may opt to purchase the required lands directly through negotiation, if the affected people prefer, at the full replacement cost or CUL whichever is greater.

- A project specific mechanism shall be established for land acquisition and involuntary resettlement with provisions of institutional arrangements, monitoring and reporting framework as well as budget and time-bound implementation schedule.

Organizational and administrative arrangements for an effective preparation and implementation of resettlement should be established prior to the commencement of the process. Provision of adequate human resources for supervision, consultation, and monitoring of land acquisition, involuntary resettlement, and restoration and rehabilitation assistance activities is included.
Resettlement and compensation costs of both CUL and other than CUL must be included in the total project cost. Adequate budgetary support should be fully committed by the GOB, and made available to cover the costs of land acquisition and involuntary resettlement, including compensation and restoration and rehabilitation assistance, within the agreed implementation period.
Monitoring indicators shall also be included as agreed. In case voluntary land contribution is conducted, the whole process shall be carefully monitored internally by subproject staff and by the Consultant, and properly documented to ensure transparency and accountability.

- Resettlement documents be disclosed and kept available in local language.

Resettlement documents shall be disclosed to the affected persons and other stakeholders in their local language in the relevant project locations and concerned government offices, and on the executing agency's website. Periodic monitoring reports shall be posted on the relevant websites.

### 9.2.3 Scope of Social Impact

Social assessment survey will identify the exact social impacts along with subproject details, which is scheduled to take place in 2020 and 2021 for the Batch-1 subprojects, 2022~23 and 2023~24 for those on the Batch-2 and Batch-3.

### 9.2.4 Compensation and Assistance Measures

Compensation for land acquisition, losses of crop and trees, losses of physical assets, livelihood means and income sources shall be paid in accordance with the guiding principles and methods of valuing affected assets.

Social assessment survey will identify the exact social impacts along with subproject details, which will take place in 2020 and 2021 for the Batch-1 subprojects, 2022~23 and 2023~24 for those on the Batch-2 and Batch-3, and assistance measures shall be examined based on the salient features of the affected people.

### 9.2.5 Grievance Redress Mechanism

A grievance redress mechanism shall be utilized along with the existing administration system to be convenient for all kinds of PAPs. A Grievance Redress Committees (GRC) shall work for social monitoring at each ULB which is an instrument where local communities will exercise their basic rights of participation in the project cycle. GRCs will also be para-legal court of the project at the ULB level to address local problems, suggestions and complaints related to social and environmental impacts and the procurement and construction quality issues.

Chairman of GRC will be Mayor, and Member-Secretary will be the Head of PIU (or Head of Engineering Section of ULB). Members will be the representative from the District Administration, teacher from a local educational institution, local NGO, representative of civil society, women and ward level elected representatives. Members of the GRC will be nominated by the Mayor who will seek advice from the local administration for the rest members. It will be further developed for each subproject in consultation with each ULB.

### 9.2.6 Implementation Arrangements

LGED will establish the PMU headed by a Project Director (PD). The PMU will be responsible for management and administration of all the subprojects on performance basis, which social performance is one of the issues to be reviewed and scored. PD will be mandated to oversee social development, planning and implementation of land acquisition, compensation payment and rehabilitation activities.

Physical components for urban infrastructure improvement under the project will be executed by ULBs. At the ULB level, PIUs will be created with existing municipal staff and headed by the Mayor or CEO. They will report to the PMU at LGED. The ULBs will assign one staff as the focal person for social development at each PIU for assisting the Head of PIU in implementation of social mitigation plans. Organization structure varies from one ULB to another and ULB is entrusted to tailor its own structure to meet the growing demands of urban services and to attend properly to specific functions assigned to it.

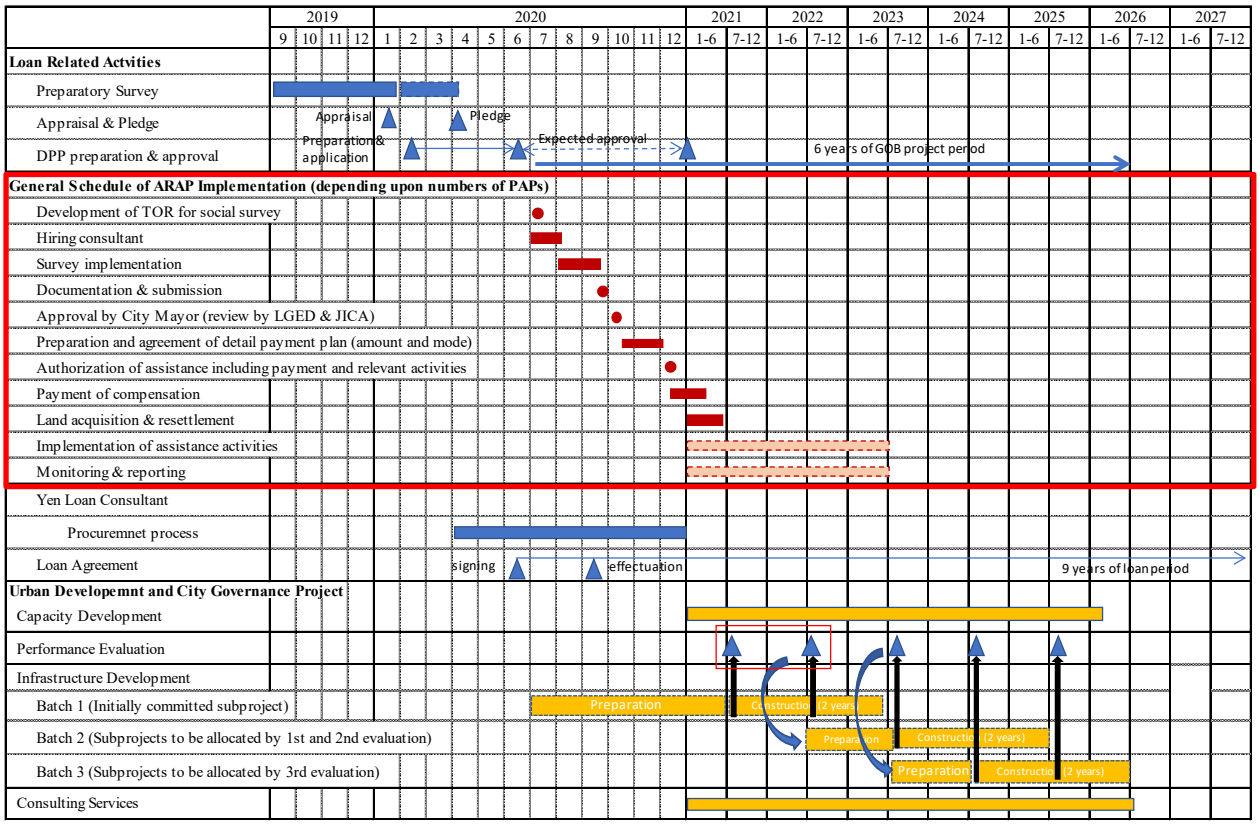
The implementation arrangements will be fixed for each subproject based on further survey in the project implementation stage.

### 9.2.7 Implementation Schedule

A rough sketch of implementation process of social survey, documentation and authorization, compensation payment, land acquisition, implementation of assistance activities, and monitoring and reporting for Batch-1 subprojects is inserted in the table below. That for those implemented later than Batch-1 will be done accordingly.

Compensation shall be paid to each PAP prior to his/her resettlement, if any. Assistance activities to them shall be available not only during their resettlement period but for the rest of the project implementation period to support them. Detailed implementation schedule will be designed and fixed for each subproject based on further survey in the project implementation stage.

PIU keep monitoring the construction progress of each subproject, and will instruct the Contractors to communicate and coordinate with local communities at ward level, and adjust construction schedule, if required, in order not to do harm to local activities.




*Source: JICA Survey Team*

**Figure 9.2.1 Implementation Process**

### 9.2.8 Monitoring Mechanism and Monitoring Form

The objectives of the monitoring during project implementation phase are i) to monitor progress of ARAP, ii) to monitor status of resettlement, payment of compensation, implementation of livelihood restoration activities and transitional assistance and iii) to examine further measures if necessary.

The principal items to be checked by internal monitoring include the following:

- Effectiveness of grievance mechanism and raised issues
- Status of implementing ARAP
- Issues for implementing ARAP (i.e. implementation schedule, budget or personnel, personnel capacity, facilitation among relevant parties) and proposed remedial measures

Appropriate reporting (including auditing and redress functions), monitoring and evaluation mechanisms, will be identified and set in place. Each ULB will implement ARAP with support of the Consultant. LGED will monitor the implementation of the ARAP and report the monitoring results to JICA on a regular basis.

LGED/PMU will keep a collective monitoring on the progress of land acquisition and requisition, involuntary resettlement and voluntary contribution of each subproject. PIU will update and report their

progress to PMU periodically to confirm social adverse impacts remain small-scale. PMU will initiate a joint meeting with PIU on an ad-hoc basis in case there are any deviances to seek solutions promptly. Further details on the monitoring mechanism will be fixed for each subproject in due course of time. Monitoring form shall be filled in based on the results of social survey in which parameters will be fixed.

### 9.2.9 Discussion with Local People

It is planned to have discussions with local communities who will be likely affected by the project implementation. Minutes of such consultation meetings will be kept and incorporated into the entitlements and assistance programs.

# CHAPTER 10 RECOMMENDATION

## 10.1 LGED

### 10.1.1 Project Formulation and Implementation

DPP (Development Project Proforma/Proposal) Approval and Acceleration of Loan Consulting Services

It is expected to have an appraisal mission in late January 2020, and agree the project contents. DPP for the Project will be prepared right after the mission. If things go as planned, approval of DPP would be one of key milestones. Current project implementing schedule assumes to start the Project from July 2020. Therefore, it is necessary that DPP is approved before June 2020, within the current Bangladesh fiscal year. Facilitation to accelerate this process is important.

Similarly, loan consultant is assumed to be mobilized in January 2021 according to the current schedule. The Project involves many different components and adopts PBA, management of the Project is very important. In this sense, procurement process of loan consultant shall be on time as per proposed schedule, so that the Project will be able to run with assistance of loan consultants as envisaged.

Land Acquisition and Compensation

There are some subprojects which require land acquisition and compensation. Since this is JICA financed loan project, social consideration should be made following the frameworks shown in the appraisal documents, which accommodate JICA's standard of procedures. Once DPP approves these costs, ULBs needs to implement the process receiving budget from GOB. Therefore, for LGED, it is necessary to secure the budget, and send the budget to ULBs in timely manner for smooth implementation of the Project. Because PBA evaluates appropriate implementation of land acquisition, too.

Preparatory work of Batch 1 Subproject

Loan consultants cannot be involved in preparation of detail design, cost estimate for most of the part of Batch 1 subprojects because preparation of Batch 1 subprojects is assumed to start from July 2020, and loan consultants will be mobilized in January 2021. Therefore, it is important to conduct preparation of these materials with necessary environmental and social consideration.

Working Relationship with ULBs

Construction of infrastructure subprojects is primarily managed by ULBs as they are contract signers with construction companies, and PIUs. LGED is overall PMU at central level of this Project. LGED may not be able to control contractors if serious delay occurs Therefore, mutual understanding and cooperation of the Project, especially infrastructure subprojects between LGED and ULBs are quite important for smooth implementation of the Project.

### 10.1.2 Governance

Harmonization with Other Donor-funded Projects

Some CCs are also beneficiary of MGSP. Under MGSP target CCs are to prepare CIP which contains a medium-term project list. NCC prepared CIP 2015-2020 and CuCC 2015-2020. These two CCs, also beneficiary of JICA-supported CGP and C4C, are required to prepare their next phase CIP sometime soon. CBP, with the assistance of UGIIP III, prepared PDP (2017-2021). Infrastructure development needs in CBP are laid out within PDP as "Investment Plan of CBP (2017-2021)". CBP is also expected to revise its PDP in 2022.

In light of the situation above, it is recommended that LGED take initiative in coordination among different donor-funded projects and find harmonization (/synchronization) of at least investment project list format. The existing formats under MGSP and UGIIP, CGP all carry a multi-year framework and there is not much difference from one form to another. However, there are some minor differences to be worked out. One example for such difference is that under MGSP and UGIIP target ULBs are not required to revise the

project list every year while UDCG envisages management of project list by rolling every year. This is very important to enhance ULBs capacity of appropriate public investment management.

Possible Collaboration with National Academy for Planning and Development (NAPD)

National Academy for Planning and Development (NAPD), a training institution under Ministry of Planning, organizes courses on planning and project management, project formulation, project feasibility /appraisal study, monitoring and evaluation of development projects, and procurement management. With the help of JICA-supported TA project, Strengthening Public Investment Management System (SPIMS) Phase 2, NAPD is expected to provide training to national agencies about public investment management (PIM) subjects in the future. The possible training related to PIM includes management of public investment plan in a multi-year framework and implications of strategic plan development on prioritization of development projects. Since PIM topics become the nucleus of governance-related capacity development under UDCG, collaboration with training institutions like NAPD should be sought where such collaboration is feasible and effective.

Facilitation to Increase of ULBs Manpower to Be Able to Deliver Their Services by Themselves

As discussed everywhere in the report, manpower, e.g. engineers, urban planner and other relevant officers are not quite sufficient to manage all the works of ULB, not only their own works but works from development donors. In a long run, it is understood that all the services are to be delivered by ULBs, especially CCs. In this sense, though appropriate work volume and manpower needs to be examined, manpower in ULBs must be increased at least from the current one. And then, OJT opportunities should be provided to learn necessary experiences and skills for their service delivery. It would be important to approach LGD and the above government institutions for approval of proposed organogram submitted from four CCs, though it takes time to realize.

Official Approval of Guidelines, Training Manuals Prepare by the Past JICA Technical Cooperation

In this Project, many guidelines, manuals prepared by the past JICA technical cooperation projects are designed to be used to expect synergy of Japanese assistance to Bangladesh (Refer to Table 5.5.1, Chapter 5). In the Project, they can be used as they are, or maybe refined/customized to fit in the context of the Project. If there are documents necessary/recommended to be approved by GOB referring to the recommendation of the relevant past JICA projects, approval process is advised to be expedited, so that the Project is able to use official documents for the project activities.

### 10.1.3 Urban Planning

It is pointed out that ULB's lack of ownership of the master plan could be attributed to delayed approval of the daft master plans in the target ULBs or vice versa.

## 10.2 ULBs

Appropriate Implementation of the Project Activities due to Performance-based Approach (PBA)

This Project introduces Performance-based Approach to expect proper implementation of the planned project activities. Governance, Pilot Activities of Solid Waste Management, and various process of infrastructure subprojects which include environmental and social consideration (land acquisition and compensation), proper selection of contractors, and appropriate construction supervision. Through PBA, it is expected for ULBs to raise their ownership to the Project, and keep their strong motivation to improve their infrastructure related service delivery. Mayors' commitment is indispensable in this regard.

Improvement of Infrastructure Related Governance

Capacity development component includes governance activities, which focus more on infrastructure related governance. The activities deal with training program of development planning and public investment management including citizen's participation mechanism. Increase of their own revenue is also very much important to deliver more and better service delivery to citizens, especially O&M of

infrastructure, and then one of the activities targets resource mobilization. Capacity development of infrastructure sector will give trainings on O&M of infrastructure technically. Through the Project, it is expected to enhance ULBs capacity comprehensively on infrastructure related service delivery from institutional, technical and financial aspects. ULBs related stakeholders are strongly recommended to learn knowledge and skills on these areas.

Infrastructure Subprojects

Actual decision on implementation of subprojects depends on performance evaluation at each time of evaluation. As a general guide, it is recommended that Batch 1 infrastructure subprojects are relatively easier to be implemented technically and socially. And, complicated, technically difficult subprojects are advised to be implemented in Batch 2 and 3 because loan consultants are able to assist ULBs in this matter from Batch 2. For example, all subprojects of sanitary land fill sites (only phase 1 if there are two phases) under solid waste management, and most of the subprojects of road and bridges except CBP RB-2 are to be implemented in Batch 2, because land fill subprojects need some support during O&M stage, and most of road/bridges subprojects need slight longer implementation period.

Operation and Maintenance of Subprojects

Especially for the subprojects of water supply and solid waste management, proper and continuing operation and maintenance are must things. Necessary technical skills, manpower deployment, and maintenance cost should be secured for these subprojects by ULBs own initiative and budget. Capacity development component will cover these points, and ULBs are expected to be proactively participate in the component. Needless to say, Mayors' proper understanding on this matter and his/her leadership is highly necessary to secure the O&M budget.

### 10.3 JICA

Application of Sector Loan-type of Project to Urban Development

From a viewpoint of assistance modality, when a sector loan type of project is intended to be applied to urban areas, it would be in general more suitable to select ULBs in relatively less-developed urban areas (closer to rural areas), or newly formed CC or Paurashava A. Because, infrastructure development needs of ULBs which are closer to mega cities and at a certain developed stage step up to a next level, and therefore are relatively large and not medium and small scale of infrastructure. Land value becomes higher, and project affected persons may be more due to higher population density. By this, social consideration may take time and be costly. Further, PBA requires proper implementation of subprojects within short periods like three years. In this sense, such urban development needs could be addressed as a single project, not a sector type subproject.

Formulation of the Project

GCC has a strong wish to implement a Joydebpur flyover project as one of the subprojects with FS proposed alignment and four lanes. Preliminary cost suggests if such scopes are kept, the cost will be more than the selection criteria. Since the alignment is difficult to be adopted in the Project, the alternative subproject is included in the priority subproject list. As this is just an example, during implementing the Project, referring to anticipated ULBs' updated wish, change of subprojects could happen within the allowable extent by the mechanism of the Project.

According to the current project schedule, loan consultants will only be able to mobilize after six months from commencement of the Project. Referring to the similar project experiences, procurement of consultants might take more time than the current schedule. At the inception stage, Operation Guideline is needed to be prepared by loan consultants to provide guidance to all stakeholders on how to implement the Project. If mobilization of loan consultants delays, this process also delays affecting proper implementation of the Project. To avoid this situation, some sorts of measures may be necessary to be taken to do this work

after the appraisal mission is successfully completed. Also, environmental and social consideration for Batch 1 subprojects are also necessary to be assisted, otherwise, implementation of Batch 1 may also delay. This could also be assisted together with preparation of Operation Guideline.

# CHAPTER 11 SUBCONTRACT AND ADDIRTIONAL WORK

## 11.1 Data Collection Survey on the Surrounding Area of Cox's Bazar

As the captioned data collection survey, JICA survey team prepared the draft of master plan revision for Paurashavas of Chakaria and Moheshkari, which are located in Cox's Bazar District. The data collection survey was started as a subcontracting work to a local consultant, but since the survey period is extremely short, JICA survey team provided technical guidance on each part of the master plan in addition to work supervision. However, due to the influence of Covid-19 after March 2020, the progress of the survey continued to be stagnant. Therefore, JICA survey team terminated the contract with the subcontractor, hired local staffs with experience in formulating the master plans, and completed the draft of master plan revision.

In the future, both Paurashavas need to carry out the necessary procedures to finalize the draft of master plan revision and make it a legal plan with the approval of the Ministry of Local Government, Rural Development and Co-operatives (LGRDC).

## 11.2 Operational Guideline

Operational guideline sets forth the objective, basic policy and operating procedures of Urban Development and City Governance Project (the Project) to be implemented in accordance with the loan agreement signed on 12th, August 2020 between Japan International Cooperation Agency (JICA) and Government of Bangladesh (GOB). Operational Guideline is technically based on the Minutes of Discussion signed by JICA, Local Government Engineering Department (LGED), and Local Government Division (LGD) as a result of the appraisal mission dispatched by JICA in January to February 2020.

The guideline is prepared to provide guidance in implementation of the Project. Specifically, it describes the policies and procedures that would be involved in the day-to-day operations of the Project, and enable JICA and Bangladesh counterparts (LGED and ULBs) to have uniform understanding of the operation and management of the Project.

Operational guideline is prepared in English and Bengali version and consists of six chapters. Chapter 1 of the guideline shows background, objectives, and contents of the guideline. Chapter 2 presents outline of the Project to understand contents of the Project. Chapter 3 argues Performance-based Approach, which is one of the core elements of the Project, explaining this approach; how performance is evaluated; and how loan is to be allocated.

Chapter 4 to 6 describes project components and activities. In Chapter 4, governance activities to be implemented by ULBs are explained. Chapter 5 includes details of service delivery which focuses on solid waste management in the Project. Finally, Chapter 6 sets procedures of subproject implementation.

Target users of operational guideline are LGED and ULBs officers involved in the implementation and monitoring of the Project.

## 11.3 Technical Guide For Detailed Design

As described in Chapter 7, "7.3.3 Batch 1 Subprojects", batch 1 subprojects of Urban Development and City Government Project (the Project) will be implemented by Local Government Engineering Department (LGED) prior to the formal commencement of the Project with the engineering services (E/S) by the Consultant hired based on Loan Agreement. For the effective implementation of the batch 1 subprojects without E/S, the preparation of the technical guide is stipulated in the Minutes of Discussion signed among JICA, LGED and Local Government Division (LGD) on February 5th, 2020 during JICA appraisal on the Project.

Overall objective of the technical guide is to provide technical guidance to the concerned engineers/staffs of LGED/LGD for the proper preparation of detailed designs (D/Ds) for the following batch 1 subprojects.

i) Drainage Subprojects
ii) Road Subprojects
iii) Water Supply Subprojects
iv) Playground and Park Subprojects

As for the drainage subprojects, the hydrological analysis is the most important factor to plan and design the proper and safe facilities. Therefore, the separate technical guide is prepared as "Hydrological Analysis for Drainage Subprojects".

Each technical guide is mainly composed of the following engineering requirements and supporting information for the preparation of D/Ds.

i) Required data
ii) Basic considerations for finalization of development plan
iii) Topographic survey
iv) Social and environmental assessment
v) Design criteria and methodology
vi) Outputs of design works

### 11.4 Environment Survey

Upon the requirements stipulated in the Environmental Conservation Act 1995 and Environmental Conservation Rules 1997, the JICA Survey Team has drafted an IEE for seven ORANGE-B CATEGORY subprojects (GCC-D-3, GCC-D-4, NCC-D-1, NCC-D-2, CuCC-D-1, CuCC-D-2 and CBP-RB-1) and EIA for two subprojects in RED CATEGORY (GCC-WS-1 and CBP-WS-1). The rest two, NCC-OI-1 and CuCC-OI-2, are found as GREEN CATEGORY which do not require an IEE or EIA to obtain an Environmental Clearance Certificate from the Department of Environment. Both of them also fall in Category C according to the JICA Environmental Guidelines since they are likely to have minimal or little adverse impact on the environment and society.

With regard to the seven subprojects under ORANGE-B CATEGORY, minor negative impacts will be felt during the construction phases which may involve hill erosion, water and waste pollution. The major impacts can come from disrupting local air quality, noise quality and waste pollution. These impacts of noise and increase in traffic are however limited within the existing level experienced by local people.

Likewise, minor negative impacts will be felt during the construction phase of two water supply subprojects of RED CATEGORY which may involve hillock erosion (in CBP), traffic jam, noise, solid waste, water and waste pollution. The local communities understand that noise, soil waste problem and traffic nuisance will occur along the ROW during pipeline laying. They however expressed their willingness, during public consultation, for greater benefit which the subprojects bring for them. The monitoring plan, if properly implemented during the pre-construction, construction and post-construction and operation phases, will ensure taking corrective measures. The proposed subprojects will have no residual adverse impact on the environment or the eco-system if mitigation measures are properly followed.

It is LGED to authorize the IEE and EIA reports and submit to the DoE for obtaining clearance from them prior to the construction work. For all subprojects, major impact may be caused by the prevailing COVID-19 pandemic situation. The contractor shall be under specific orders for providing personal protective equipment (PPE) to the workers engaged in the construction work. Strict site and labor camp health and safety regulation shall be forced as per the government and JICA Guidelines. Site specific EMPs shall be developed by the Contractor after detail design is developed.

# Attachment

*Attachment 2.1.1*
*Governance Issues in Perspective Plan (2010-2021), 6th Five Year Plan (2010-2015) and 7th Five Year Plan (2016-2020)*

## Attachment 2.1.1 Governance Issues in Perspective Plan (2010-2021), 6th Five Year Plan (2010-2015) and 7th Five Year Plan (2016-2020)

### I. Perspective Plan

### 1. Urban challenges/Urban Governance Challenges

**Urban Challenges**

Development priorities of the Perspective Plan include ensuring broad-based growth and reducing poverty; ensuring effective governance and sound institutions but creating a caring society; addressing globalization and regional cooperation; providing energy security for development and welfare; building a sound infrastructure and managing the urban challenge; mitigating the impacts of climate change; and promoting innovation in a knowledge-based society. These thematic approaches will shape and form the foundation on which specific strategies are developed over the period of two five-year plans (Sixth and Seventh Five Year Plans).

The tremendous challenge of absorbing such a massive number of people in urban areas and providing them with food, shelter, employment, healthcare, education, municipal services and recreation facilities is made more difficult given shortage of existing urban facilities and resources, scarcity of skilled manpower and good governance. The urbanization challenge unless managed well could become a binding constraint choking off future growth acceleration envisaged in the Perspective Plan. The Government is cognizant of this challenge and is well aware of the fact that the back-log of unmet demand and new demand for basic urban services require huge resources, sound planning, and strong implementation capacity. Ambitious urban development programs, therefore, will be taken up during the perspective plan period based on the policies and strategies that will cover spatial, economic, social, cultural, aesthetic and environmental aspects of urban life. It is expected that implementation of these programs will be instrumental in achieving an urban reality that can enhance capacity to live a healthy life; ensure access to education, shelter, and basic services, and lead to a secure and livable environment at home and at the workplace.

### 2. Importance of Governance/Local Governance/Urban governance in the plan

In the perspective plan governance issue is one of the development priorities. Development priorities of the Perspective Plan are distilled from the vision statement formulated to take Bangladesh to where it needs to be in the year 2021. Those development priorities may be articulated as follows:

1) Ensuring broad-based growth and food security
2) Addressing globalization and regional cooperation
3) Providing energy security for development and welfare
4) Establishing a knowledge-based society
5) Building a sound infrastructure
6) Ensuring effective governance
7) Mitigating the impacts of climate change
8) Creating a caring society

9) Promoting innovation under a digital Bangladesh.

Effective governance is the strongest means to achieving the goals of the Perspective Plan. The administration of justice, good governance, effective institutional structures for development, law administration and legal affairs, national security, and public safety are essential for fair contracts, dispute resolution, promotion of entrepreneurship, and to encourage businesses and individuals to take risks. Without upholding rights and adhering to basic tenets of justice, the poor and disadvantaged groups will remain unable to seize economic and social opportunities for economic growth. Effective governance will employ public resources efficiently in activities with high social returns, will strengthen public institutions, take steps to eliminate corruption, terrorism, and extortion, and encourage citizen compliance and respect for the rule of law.

**Urban Governance**

**Policies and strategies in this area focus on institutional reforms and decentralization of responsibilities and resources to local governments; participation of civil society including women in the design, implementation and monitoring of local priorities; building capacity of all actors (institutions, groups and individuals) to contribute fully to decision-making and urban development processes; and facilitating networking at all levels.**

**E-governance**

E-government is related to the delivery of government services and information to the public using electronic devices. E-governance will manage the way that citizens deal with the government and with each other, allow citizens to communicate with government, participate in government policy making and planning, and to communicate with each other. Strategy for E-Government: A sound e-government policy should include a focus on end-users and demand-driven services. Government services will be made available through e-government. Government should prioritize the services that they will initially offer online, such as (i) revenue collection, (ii) improved financial management, and (iii) creation of a better investment environment.

## II. 6th Five Year Plan

### 1. Urban challenges/Urban Governance Challenges

Along with sound development strategy, good programs and good policies, the ability to implement the Plan and evaluate the results of the Plan are critical determinants of the success of the planning effort. Proper implementation of the Plan requires attention to good governance, public administration capacity and monitoring and evaluation. The challenge of ensuring good governance in Bangladesh is well known. Low public administration capacity, occasional weaknesses in economic management and corruption lie at the heart of the overall shortcoming in national governance. As a result, the public sector has not been able to play as effective a role as could have been the case in providing services and creating an environment for growth.

The Government understands that without fundamental reforms of core institutions, improvement in public administration capacity and a strong anti-corruption strategy, the ability to implement Vision 2021 and the underlying five-year development plans will be seriously compromised. Similarly, an effective monitoring and evaluation (M&E) system is essential to monitor the implementation of the plan and associated programs. Without a solid M&E capability, there is a risk that resources might get locked in over the medium-term into programs that are not working or relevant in the changing economic environment. A strong M&E capacity is therefore an urgent national priority. The Government also recognizes that these are long-term challenges and require long-term coordinated and sustained efforts.

**Governance Challenge in Bangladesh (Overall)**

Governance has been conceptualized in a variety of ways and ranging from a very narrow to a very broad definition. Broadly defined governance reflects all rules and procedures, formal and informal, in economic, political and administrative spheres, organizational entities entrusted with formulating and implementing such rules of the game as well as macro, micro, or economy wide polices. A recent World Bank study outlines the principal dimensions of governance or institutional quality that includes: voice and accountability, political stability and absence of corruption, violence, government effectiveness, and regulatory quality, rule of law and control of corruption.

From a pragmatic point of view the quality of governance depends on the quality of institutions. A country that has good governance also has good institutions. Effectiveness of government institutions is imperative for good governance through which a country could achieve its policy targets and development goals. The governance issues, particularly the quality of government institutions, have important implications for long-term economic growth and poverty reduction in Bangladesh and other developing countries.

Governance, which mostly deals with institutions, is a long-term challenge. There is very little debate that good institutions are necessary for sustaining higher growth and progress with other indicators of development including poverty reduction and social equity. Bangladesh has instituted good policies and made progress with a number of institutions that have helped secure progress with development since independence. But there is a long way to go to achieve middle class status and further progress with the development of good institutions will be critical for that. So, the governance challenge moving forward is the need to establish institutions that support the sustainability of the development effort including restoring the gains from missed opportunities. These require that governance, measured in terms of progress with institution building and reduction of corruption, must improve continuously. Good institutions like the rule of law, a functioning judiciary, accountable and effective public service agencies, sound government agencies dealing with finance, taxation, planning, public administration and monetary policies are essential to ensure sustained progress with development.

**Sixth Plan Strategy for Addressing the Governance Challenges (broader than Urban Governance)**

The Government recognizes that the lack of good governance is felt in all sectors of the economy to a varying degree and their manifestations are also different. Unless there is improvement in overall governance poor people will suffer from deprivation, service delivery will be remain poor, and economic opportunities will be limited. To achieve the goals of vision 2021 and underlying development plans

and programs it is imperative to improve governance by strengthening institutions and reducing corruption. The Government also recognizes that Bangladesh's citizens are entitled to expect good governance as an end unto itself. Citizens expect the Government to ensure the delivery of key public goods and services, such as safety and security of person and property or regulation of elements of the market. Citizens can also expect that the Government carries out its duties transparently, without corruption, and in due consultation with stakeholders in society. Attaining better governance requires stronger public sector institutions which are able to carry out their functions effectively and in the public interest. Institutions need an effective system for recruiting and retaining human resources, efficient deployment of these resources at national and local levels, and ever increasing capacity, including through the use of ICT. At the same time, institutions need to have robust accountability mechanisms, both through checks and balances within the government and feedback mechanisms for society at large. Accountability spurs better performance and counters corruption and inefficiency.

The challenge of ensuring good governance for sustaining development cannot be over emphasized. Capacity constraints in public administration, occasional weaknesses in economic management, and corruption lie at the heart of overall shortcoming in national governance in Bangladesh. The Government recognizes that without fundamental reforms of core institutions, improvement in public administration capacity and a strong anti-corruption strategy, the ability to implement Vision 2021 and the underlying 5 year development plans will be seriously compromised. The Government also recognizes that these are long-term challenges and require long-term coordinated and sustained efforts.

The challenge of ensuring good governance in Bangladesh is well known. Low public administration capacity, occasional weaknesses in economic management and persistent corruption lie at the heart of the overall shortcoming in national governance. As a result, the public sector has not been able to play as effective a role as could have been the case in providing services and creating an environment for growth.

**Establishing strong local governments**

**The strengthening of local governments is a key institutional development challenge for Bangladesh.** International evidence suggests that properly instituted and accountable local governments can play a major role in spreading the benefits of development. While the lessons of experience from other countries can play an important role in helping the design and implementation of a proper system of local government, successful local governments must be based on the realities of the underlying political, social, administrative and economic realities of Bangladesh. The Government is committed to instituting an effective and accountable local government to help implement Vision 2021 and the programs of associated development plans. Importance of governance/Local Governance/Urban governance in the plan Good governance and institutions are interlinked. Ensuring good governance requires establishing strong institutions. For the Sixth Plan the governance improvement strategy will focus on a number of key areas that require immediate attention.

## 2. Urban challenges/Urban Governance Challenges

Ensuring sustainable development sound governance system help for achieving it and we can't ignore the importance of good governance/urban governance. Improving governance system contribute the followings:

Improving governance:

Along with sound development strategy, good programs and good policies, the ability to implement the Plan and evaluate the results of the Plan are critical determinants of the success of the planning effort. Proper implementation of the Plan requires attention to good governance, public administration capacity and monitoring and evaluation.

The Government understands that without fundamental reforms of core institutions, improvement in public administration capacity and a strong anti-corruption strategy, the ability to implement Vision 2021 and the underlying five-year development plans will be seriously compromised. Similarly, an effective Monitoring and Evaluation (M&E) system is essential to monitor the implementation of the plan and associated programs. Without a solid M&E capability, there is a risk that resources might get locked in over the medium-term into programs that are not working or relevant in the changing economic environment. A strong M&E capacity is therefore an urgent national priority. The Government also recognizes that these are long-term challenges and require long-term coordinated and sustained efforts. Good governance and institutions are interlinked. Ensuring good governance requires establishing strong institutions. For the Sixth Plan the governance improvement strategy will consist of focus on a number of key areas that require immediate attention and strengthening of a number of core institutions.

- First, efforts will continue to ensuring equality of opportunity and full mobility for all with freedom and dignity, and without religious, social or political barriers. The equal opportunity vision should also be accompanied by vast improvements in the opportunities for economic and social advancement. More specifically, individuals belonging to disadvantaged groups such as minorities and women will be provided with special opportunities to develop their skills and integrate themselves in the growth process.
- Second, good governance requires not only rule of law but also harmony and consistency of the laws. Good laws are a sine qua non of the rule of law. Review of the laws and their proper implementation will be considered as a subject matter of priority. The capacities and efficiency of the law enforcing agencies and the judiciary will be strengthened.
- Third, to provide better and speedier service and to improve the transparency and accountability of public service agencies, priority will be given to the implementation of e governance through the implementation of the Digital Bangladesh initiative.

•Attention will be focused on developing and strengthening a number of core public institutions including the Central Bank, the Ministry of Finance, the Tax Department, the Planning Commission, Audits and Accounts, the parliamentary sub-committees, land administration, and the public utilities.
•Emphasis will be given to improving service delivery in basic services such as education, health, nutrition and water supply.
• Steps will be taken to strengthen public administrative capacity by reforming the civil service.
•Emphasis will be placed in developing capacities of local governments to play their development role in terms of delivery of basic services.

•Efforts will be made to implement the medium-term budgetary framework in all line ministries and to institute and implement an effective results-based Monitoring and Evaluation (M&E) system for public programs.
•All efforts will be made to reduce corruption in public services and take appropriate actions when corruption happens in an open and transparent manner. Enhancing administrative capacity:

## III. 7th Five Year Plan

### 1. Urban challenges/Urban Governance Challenges

**7th Five year plan emphasis to complete the unfinished agenda in governance:**

The Pan takes a relatively more focused approach to develop strong institutions in order to substantially improve performance in strategic areas that are central for achievement of overall development goals. These critical areas for intervention include: (a) public administration capacity; (b) judiciary; (c) financial sector; and (d) local government. Lastly, to complete the unfinished agenda in governance, the 7th Plan also prioritizes the implementation of strategies and policies that were charted out in the 6th Plan and are still relevant.

**Policy and Regulatory Framework In The Urban Sector (9.4)**

**Institutional Framework for Urban Governance and Management (9.4.1)**

Towns and cities have tremendous potential to stimulate economic and social development, especially by creating jobs and innovating ideas and technologies. Such potential, however, cannot be realized if cities and towns are badly managed. One of the main reasons why our urban centres are beset with problems is the inadequacy in the institutions and the institutional framework for their management and development. Currently too many agencies are involved in regulating the functioning and development of cities and towns and providing services to citizens. At present urban development activities in Bangladesh are carried out mostly by central government organizations. There are at least eighteen main ministries and 42 organizations, which are involved in the development of urban areas.

**Central Government Agencies (9.4.2)**

National level agencies provide services to different urban areas including city corporations, paurashavas and other urban centres as part of their national responsibilities. Some of the important national agencies are Urban Development Directorate (UDD), National Housing Authority (NHA), RAJUK, CDA, RDA, KDA and the Public Works Department (PWD) under the Ministry of Works, the Department of public Health Engineering (DPHE) and the Local Government Engineering Department (LGED) under the Ministry of Local Government, Rural Development and Cooperatives, the Roads and Highways Department under the ministry of Communication, the Directorate of Environment under the Ministry of Environment and Forest and the power Development Board under the Ministry of Energy and Mineral Resources. Other Ministries such as the Ministries of Commerce, Education, Finance, Agriculture, Youth and Sports, and Water Resources Development are also actively involved in the process of urban development mainly through their regional and local level agencies.

**In order to strengthen the beneficial aspects of urbanization and at the same time to achieve sustainable urbanization the following four (4) areas are challenging in contest of local governance as well as governance issues, (i) Decentralization: (ii) Institutional Reform at the Local Level: (iii) strengthening of municipal capacity: and (iv) Mobilization of resources**

9.6.1 Urban Governance Strategies

In order to strengthen the beneficial aspects of urbanization and at the same time to achieve sustainable urbanization, policies and strategies are proposed keeping in view the multi-dimensional nature of urbanization process. **In this respect good governance need to be ensured through accountability, responsiveness, equity and inclusiveness in the urban bodies.** Urban governance, therefore, will be based on a holistic and comprehensive view of urban development and should encompass institutional strengthening and capacity building, governance improvement, decentralization, community participation, and involvement of the public and private sector in the development of the urban sector. More specifically the strategy will include:

**Decentralization**

A prudent decentralization programme would be followed and will include the following;

- The simultaneous decentralization of responsibilities, resources, and autonomy;
- Strengthening of local government capabilities, powers, and responsibilities;

**Institutional Reform at the Local Level**

Reforming the urban local government institutions is a pre-requisite to any meaningful attempt to evolve an efficient urban system. This would include strengthening and democratization of urban local governments such as paurashavas and city corporations. Moreover, financial support from central government is especially critical in poor regions where local authorities often fail to generate sufficient revenue at the local level but where provision of infrastructural facilities is very important for economic growth.

**Strengthening of municipal capacity**

**Capacity-building efforts at municipal level should focus on augmenting human resources in line with the discharge of responsibilities in major areas of urban planning, community mobilization, and ICT.** This will generally imply augmentation of municipal manpower, training and equipment of such manpower, and often a review of the terms and conditions of employment of municipal staff, particularly remuneration levels and career perspectives.

**Mobilization of resources**

The focus of such efforts should be on augmenting municipalities' own resources through automation of property tax and introduction of software-based holding tax assessment, enhancing the effectiveness of intergovernmental transfer of resources to municipalities. Effectiveness of local government current

and capital expenditures should be improved. Adequate financing is necessary for sustainable infrastructure systems. Governments (central and local), donors and private actors are major funding sources. In most cases, central government has maintained responsibility for infrastructure provision. Intergovernmental transfers have been the primary source of finance for local governments. In view of public sector budget deficits and competing demand from social sectors, more reliance will be placed on local sources as explained below:

**Challenges for City Corporations**

Chittagong, Khulna, Rajshahi, Sylhet, Barisal, Rangpur, Narayanganj, Comilla City Corporation's face similar challenges, including unplanned and uncontrolled spontaneous urbanization and expansion of the city area. Growth of urban centres at dispersed location has led to decline in agricultural land. Lack of advanced planning for road infrastructure and public transportation, installation of electric, gas water sewerage and telephone lines, provision of civic amenities like parks, lakes and other recreational facilities, utilization of urban public land and rivers and waste management stands in the way of providing adequate and quality urban utility services. To ensure the planned development and provide infrastructure facilities, it will require of preparing Action Area Plan or Capital Investment Plan (CIP) for the City Corporations. Besides there is the challenge of providing proper services to the urban poor and slum dwellers leads to their continued impoverishment.

To overcome the challenges the City Corporation's strategic goals will include, among other things, building of integrated drainage facilities for the entire city, restoring and re-excavating canals, development of effective solid waste management system, improving the transport system through introduction of public transport (bus) system, and road network and traffic intersection improvement, optimization of available land resources. There are also programmes planned for improving services to the urban poor and promotion of housing development. **Institutional capacity building is another challenge and increasing revenue income, improving municipal financial system and capital budget planning will be a priority for sustainability.** As part institutional capacity building there will be review existing laws, regulations and introduce appropriate framework to cope with present need. All these city corporations will need urban planning sections with sufficient number of urban planning professionals for planning, implementation and managing the activities of the corporations.

## 2. Importance of Governance/Local Governance/Urban governance in the plan

**Local Government and Rural Development**

The Government places special emphasis on strengthening the local government in order to bring the public services closer to the people and also to make sure local people's preferences are well reflected 7th in the planning process. Thus the FYP is committed to undertake a comprehensive set of actions, including: i) A Local Government Legal Framework (LGFL) - This single legal instrument (LGFL) will cover all units and tiers, irrespective of urban and rural, regarding their formation, function, jurisdiction, taxation, finance, budget account, electoral process, and central-local and local-local relationships; ii) Building the capacity of local governments through assignment of appropriate officials, technical assistance and training programmes; iii) Developing planning and budgeting capacities at the local level to help design and implement local level programmes; iv) Fostering initiatives to provide technical assistance to link local level plan to the national medium to long term planning. 7th Five Year Plan also

focuses on issues related to development of rural areas of Bangladesh and identification of priority areas, such as increasing local production, solving energy problems, reducing poverty

Through undertaking Programmes on agriculture, Employment generation and rural infrastructure. The rural institutions will be strengthened to support the ongoing rural transformation including support for non-farm job creation, rural mobility, and rural finance along with reducing poverty through undertaking programmes on rural infrastructure, connectivity, water supply and sanitation also with agriculture and employment generation.

**Seventh Plan Core Targets in the Context of Vision 2021**

The Perspective Plan sets the strategic directions and provides a broad outline for the course of actions for making the Vision 2021 a reality. The broad development goals underlying the Perspective Plan include:

- building a secular tolerant liberal progressive democratic state.
- promoting good governance and curbing corruption.
- promoting sustainable human development.
- reducing the growth of population
- instituting a prudent macroeconomic policy mix
- promoting a favourable industrialization and trade policy regime
- addressing globalization and regional cooperation challenges
- ensuring adequate supply of electricity and fuel
- achieving food security
- making available adequate infrastructure
- pursuing environmentally friendly development, and
- building a digital Bangladesh

7th FYP may be divided into ten broad categories which arose from the fourteen sectoral strategic sectors urban development is one of them:

Urban Development

- Infrastructural investment and civic facilities in peri-urban growth centres especially around Special Economic Zones
- Inclusive housing and other civic services for urban inhabitants including for people living in informal settlements and slums
- Inclusive urban planning based on sustainable land use planning and zoning
- Increased productivity, access to finance, and policy support for urban micro-small and medium enterprises

*Attachment 2.5.2*

*Original Budget and Actual Income/Expenditure of 4 ULBs with Three Years' Average*

## Attachment 2.5.2 Original Budget and Actual Income/Expenditure of 4 ULBs with Three Years' Average

### Gazipur City Corporation

### Income: FY 2015/16-FY 2017/18

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | | Average (Actual, FY2015/16-17/18) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | | |
| **1. Revenue Account** | | | | | | | | | | |
| **General** | | | | | | | | | | |
| 1.1 Taxes | 2,253,000,000 | 930,826,904 | 64% | 2,495,500,000 | 1,010,384,436 | 69% | 1,588,500,000 | 1,142,351,589 | 78% | 1,027,854,310 |
| 1.2 Non-taxes | 567,580,000 | 96,296,343 | 7% | 849,170,000 | 141,980,940 | 10% | 337,680,000 | 97,611,629 | 7% | 111,962,971 |
| 1.3 Government Grant | 50,000,000 | 18,202,333 | 1% | 50,000,000 | 8,000,000 | 1% | 45,000,000 | 18,000,000 | 1% | 14,734,111 |
| 1.4 Others (Donation, etc.) | | - | 0% | - | - | 0% | - | - | 0% | - |
| 1.5 Balance carried forward | 450,642,022 | 320,811,668 | 22% | - | 19,869,459 | 1% | - | 26,036,858 | 2% | 122,239,328 |
| **Water** | | | | | | | | | | |
| 1.6 Water Billing and Other Income | 176,420,000 | 86,135,086 | 6% | 107,020,000 | 117,041,243 | 9% | 152,964,000 | 139,009,250 | 10% | 114,061,860 |
| 1.7 Balance carried forward | 9,771,220 | 11,272,978 | 1% | 13,090,000 | 5,144,243 | 0% | - | 2,044,196 | 0% | 6,153,806 |
| **Sub-total (A)** | **3,507,413,242** | **1,463,545,312** | **100%** | **3,514,780,000** | **1,302,420,321** | **100%** | **2,124,144,000** | **1,425,053,522** | **100%** | **1,397,006,385** |
| **2. Development Account** | | | | | | | | | | |
| 2.1 ADP (Block Grant) | 200,000,000 | 80,032,940 | 4% | 200,000,000 | 310,000,000 | 14% | 300,000,000 | 100,000,000 | 6% | 163,344,313 |
| 2.2 ADP (DPP) | 3,900,000,000 | - | 0% | 4,770,000,000 | 93,956,757 | 4% | 5,602,500,000 | 225,000,000 | 14% | 106,318,919 |
| 2.3 ADP (Special) | 1,000,000,000 | 255,000,000 | 12% | 600,000,000 | - | 0% | 500,000,000 | - | 0% | 85,000,000 |
| 2.4 Received from Donor Programs | 5,229,894,834 | 658,373,541 | 30% | 4,910,439,000 | 931,271,798 | 41% | 5,943,094,000 | 746,882,523 | 45% | 778,842,621 |
| 2.5 Others (BMDF loan, etc.) | - | 5,454,371 | 0% | - | 4,137,230 | 0% | 6,000,000 | - | 0% | 3,197,200 |
| 2.6 Transfer from Revenue Account | 2,650,068,022 | 1,048,417,214 | 48% | 2,377,212,000 | 768,297,343 | 34% | 1,217,235,000 | - | 0% | 605,571,519 |
| 2.7 Balance carried forward | 300,382,850 | 148,550,640 | 7% | 218,200,000 | 150,412,075 | 7% | - | 580,162,000 | 35% | 293,041,572 |
| **Sub-total (B)** | **13,280,345,706** | **2,195,828,706** | **100%** | **13,075,851,000** | **2,258,075,203** | **100%** | **13,568,829,000** | **1,652,044,523** | **100%** | **2,035,316,144** |
| **Grand total (A+B)** | **16,787,758,948** | **3,659,374,018** | | **16,590,631,000** | **3,560,495,524** | | **15,692,973,000** | **3,077,098,045** | | **3,432,322,529** |

### Expenditure: FY 2015/16-FY 2017/18

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | | Average (Actual, FY2015/16-17/18) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | | |
| **1. Revenue Account** | | | | | | | | | | |
| **General** | | | | | | | | | | |
| 1.1 Office Operation Expenses | 262,634,000 | 242,719,734 | 17% | 471,400,000 | 227,332,106 | 17% | 360,330,000 | 371,859,944 | 26% | 280,637,261 |
| 1.2 Social Services Operation Expenses | 408,520,000 | 75,000,300 | 5% | 546,060,000 | 184,605,386 | 14% | 400,615,000 | 175,526,727 | 12% | 145,044,138 |
| 1.3 Transfer to Development Account | 2,650,068,022 | 1,048,417,214 | 72% | 2,377,212,000 | 768,297,343 | 59% | 1,217,235,000 | - | 0% | 605,571,519 |
| 1.4 Balance carried down | - | - | | - | - | 0% | - | 736,613,405 | 52% | 245,537,802 |
| **Water** | | | | | | | | | | |
| 1.5 Office Operation Expenses | 143,691,220 | 92,263,822 | 6% | 120,110,000 | 114,251,607 | 9% | 152,964,000 | 137,391,700 | 10% | 114,635,710 |
| 1.6 Balance carried down | 42,500,000 | 5,144,242 | 0% | - | 7,933,879 | 1% | - | 3,661,746 | 0% | 5,579,956 |
| **Sub-total (D)** | **3,507,413,242** | **1,463,545,312** | **100%** | **3,514,782,000** | **1,302,420,321** | **100%** | **2,131,144,000** | **1,425,053,522** | **100%** | **1,397,006,385** |
| **2. Development Account** | | | | | | | | | | |
| 2.1 Infrastructure Development and Maintenance | 7,833,930,973 | 1,297,224,433 | 59% | 8,165,410,000 | 1,130,437,353 | 50% | 2,016,235,000 | 836,713,405 | 51% | 1,088,125,064 |
| 2.2 Infrastructure Development (Donor Programs) | 5,231,352,711 | 535,945,277 | 24% | 4,910,439,000 | 544,363,380 | 24% | 11,545,594,000 | 769,725,330 | 47% | 616,677,996 |
| 2.3 Balance carried down | 215,062,022 | 362,658,996 | 17% | - | 583,274,470 | 26% | - | 45,605,788 | 3% | 330,513,085 |
| **Sub-total (E)** | **13,280,345,706** | **2,195,828,706** | **100%** | **13,075,849,000** | **2,258,075,203** | **100%** | **13,561,829,000** | **1,652,044,523** | **100%** | 2,035,316,144 |
| **Grand Total (D+E)** | **16,787,758,948** | **3,659,374,018** | | **16,590,631,000** | **3,560,495,524** | | **15,692,973,000** | **3,077,098,045** | | **3,432,322,529** |

*Source: JICA Survey Team*

## Narayanganj City Corporation

### Income: FY 2015/16-FY 2017/18

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | | Average (Actual, FY2015/16-17/18) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | | |
| **1. Revenue Account** | | | | | | | | | | |
| **General** | | | | | | | | | | |
| 1.1 Taxes | 438,972,260 | 311,551,126 | 55% | 379,968,523 | 400,120,069 | 58% | 469,634,800 | 429,530,724 | 49% | 380,400,640 |
| 1.2 Non-taxes | 254,445,720 | 164,581,296 | 29% | 258,987,500 | 180,664,120 | 26% | 482,991,000 | 304,978,638 | 35% | 216,741,351 |
| 1.3 Government Grant | 8,000,000 | 8,000,000 | 1% | 8,000,000 | 8,775,000 | 1% | 10,000,000 | 9,000,000 | 1% | 8,591,667 |
| 1.4 Others (Donation, etc.) | - | - | 0% | - | - | 0% | - | - | 0% | - |
| 1.5 Balance carried forward | 33,805,003 | 85,591,445 | 15% | 167,711,472 | 106,225,375 | 15% | 80,361,966 | 125,428,657 | 14% | 105,748,492 |
| **Water** | | | | | | | | | | |
| 1.6 Water Billing and Other Income | - | - | 0% | - | - | 0% | - | - | 0% | - |
| 1.7 Balance carried forward | - | - | 0% | - | - | 0% | - | - | 0% | - |
| **Sub-total (A)** | **735,222,983** | **569,723,867** | **100%** | **814,667,495** | **695,784,564** | **100%** | **1,042,987,766** | **868,938,019** | **100%** | **711,482,150** |
| **2. Development Account** | | | | | | | | | | |
| 2.1 ADP (Block Grant) | 90,000,000 | 70,000,000 | 3% | 70,000,000 | 210,000,000 | 11% | 200,000,000 | 150,000,000 | 3% | 143,333,333 |
| 2.2 ADP (DPP) | 1,120,000,000 | 601,001,315 | 28% | 1,220,000,000 | 607,402,680 | 33% | 1,184,968,000 | 2,681,429,666 | 57% | 1,296,611,220 |
| 2.3 ADP (Special) | 100,000,000 | 160,000,000 | 7% | 100,000,000 | - | 0% | 200,000,000 | 245,000,000 | 5% | 135,000,000 |
| 2.4 Received from Donor Programs | 2,188,095,000 | 640,078,593 | 30% | 2,927,900,000 | 233,274,807 | 13% | 3,426,300,001 | 918,031,750 | 19% | 597,128,383 |
| 2.5 Others (BMDF loan, etc.) | 12,500,000 | - | 0% | 180,000,000 | - | 0% | - | - | 0% | - |
| 2.6 Transfer from Revenue Account | 361,620,548 | 372,357,136 | 17% | 295,197,495 | 377,091,284 | 20% | 332,667,466 | 542,000,139 | 11% | 430,482,853 |
| 2.7 Balance carried forward | 643,269,634 | 324,525,615 | 15% | 699,462,296 | 417,287,222 | 23% | 812,487,858 | 181,336,868 | 4% | 307,716,568 |
| **Sub-total (B)** | **4,515,485,182** | **2,167,962,659** | **100%** | **5,492,559,791** | **1,845,055,993** | **100%** | **6,156,423,325** | **4,717,798,423** | **100%** | **2,910,272,358** |
| **Grand total (A+B)** | **5,250,708,165** | **2,737,686,526** | | **6,307,227,286** | **2,540,840,557** | | **7,199,411,091** | **5,586,736,442** | | **3,621,754,508** |

### Expenditure: FY 2015/16-FY 2017/18

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | | Average (Actual, FY2015/16-17/18) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | | |
| **1. Revenue Account** | | | | | | | | | | |
| **General** | | | | | | | | | | |
| 1.1 Office Operation Expenses | 160,400,000 | 96,144,565 | 17% | 201,000,000 | 128,060,445 | 18% | 214,640,000 | 137,235,589 | 16% | 120,480,200 |
| 1.2 Social Services Operation Expenses | 213,202,435 | 38,372,433 | 7% | 318,470,000 | 190,632,835 | 27% | 495,680,300 | 189,702,291 | 22% | 139,569,186 |
| 1.3 Transfer to Development Account | 361,620,548 | 372,357,136 | 65% | 295,197,495 | 377,091,284 | 54% | 332,667,466 | 542,000,139 | 62% | 430,482,853 |
| 1.4 Balance carried down | - | 62,849,733 | 11% | - | - | 0% | - | - | 0% | 31,424,867 |
| **Water** | | | | | | | | | | |
| 1.5 Office Operation Expenses | - | - | 0% | - | - | 0% | - | - | 0% | - |
| 1.6 Balance carried down | - | - | 0% | - | - | 0% | - | - | 0% | - |
| **Sub-total (D)** | **735,222,983** | **569,723,867** | **100%** | **814,667,495** | **695,784,564** | **100%** | **1,042,987,766** | **868,938,019** | **100%** | **711,482,150** |
| **2. Development Account** | | | | | | | | | | |
| 2.1 Infrastructure Development and Maintenance | 1,869,404,390 | 1,194,797,787 | 55% | 2,168,283,416 | 1,173,592,100 | 64% | 6,032,884,900 | 2,758,142,901 | 58% | 1,708,844,263 |
| 2.2 Infrastructure Development (Donor Programs) | 2,625,059,000 | 556,710,418 | 26% | 3,097,900,000 | 316,034,271 | 17% | 40,000,000 | 553,039,061 | 12% | 475,261,250 |
| 2.3 Balance carried down | 21,021,792 | 416,454,454 | 19% | 226,376,375 | 355,429,622 | 19% | 83,538,425 | 1,406,616,461 | 30% | 726,166,846 |
| **Sub-total (E)** | **4,515,485,182** | **2,167,962,659** | **100%** | **5,492,559,791** | **1,845,055,993** | 100% | **6,156,423,325** | **4,717,798,423** | **100%** | **2,910,272,358** |
| **Grand Total (D+E)** | **5,250,708,165** | **2,737,686,526** | | **6,307,227,286** | **2,540,840,557** | | **7,199,411,091** | **5,586,736,442** | | **3,621,754,508** |

*Source: JICA Survey Team*

## Cumilla City Corporation

### Income: FY 2015/16-FY 2017/18

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | | Average (Actual, FY2015/16-17/18) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | | |
| **1. Revenue Account** | | | | | | | | | | |
| **General** | | | | | | | | | | |
| 1.1 Taxes | 189,238,965 | 157,860,551 | 44% | 211,289,938 | 196,607,550 | 46% | 235,943,229 | 206,751,223 | 69% | 187,073,108 |
| 1.2 Non-taxes | 216,010,000 | 41,288,063 | 12% | 177,219,996 | 152,018,748 | 35% | 171,874,999 | 44,722,594 | 15% | 79,343,135 |
| 1.3 Government Grant | 12,000,000 | 8,000,000 | 2% | 16,000,000 | 8,000,000 | 2% | 17,000,000 | 8,000,000 | 3% | 8,000,000 |
| 1.4 Others (Donation, etc.) | 8,000,000 | 124,014 | 0% | 7,000,000 | 243,246 | 0% | 500,000 | 1,242,034 | 0% | 536,431 |
| 1.5 Balance carried forward | 125,000,000 | 134,196,547 | 38% | 85,000,000 | 53,902,671 | 13% | 85,000,000 | 20,018,327 | 7% | 69,372,515 |
| **Water** | | | | | | | | | | |
| 1.6 Water Billing and Other Income | 22,869,000 | 13,968,920 | 4% | 24,384,300 | 17,175,421 | 4% | 28,613,666 | 16,939,773 | 6% | 16,028,038 |
| 1.7 Balance carried forward | 2,490,077 | 185,600 | 0% | 889,403 | 280,655 | 0% | 528,389 | 252,621 | 0% | 239,625 |
| **Sub-total (A)** | **575,608,042** | **355,623,695** | **100%** | **521,783,637** | **428,228,291** | **100%** | **539,460,283** | **297,926,572** | **100%** | **360,592,853** |
| **2. Development Account** | | | | | | | | | | |
| 2.1 ADP (Block Grant) | 205,000,000 | 120,000,000 | 13% | 150,000,000 | 80,000,000 | 6% | 120,000,000 | 130,000,000 | 11% | 110,000,000 |
| 2.2 ADP (DPP) | 350,000,000 | 10,000,000 | 1% | 450,000,000 | 400,000,000 | 32% | 338,800,000 | 170,000,000 | 14% | 193,333,333 |
| 2.3 ADP (Special) | - | - | 0% | - | - | 0% | - | - | 0% | - |
| 2.4 Received from Donor Programs | 989,517,927 | 607,802,505 | 68% | 1,469,600,000 | 542,121,345 | 44% | 2,973,200,000 | 737,427,441 | 61% | 629,117,097 |
| 2.5 Others (BMDF loan, etc.) | 70,500,000 | 4,874,292 | 1% | 110,000,000 | - | 0% | 100,000,000 | 64,525,232 | 5% | 23,133,175 |
| 2.6 Transfer from Revenue Account | 245,523,965 | 133,482,550 | 15% | 194,029,934 | 200,311,421 | 16% | 204,368,229 | 64,083,884 | 5% | 132,625,952 |
| 2.7 Balance carried forward | 800,000 | 13,915,525 | 2% | 5,308,839 | 21,217,882 | 2% | 28,569,874 | 45,912,137 | 4% | 27,015,181 |
| **Sub-total (B)** | **1,861,341,892** | **890,074,872** | **100%** | **2,378,938,773** | **1,243,650,648** | **100%** | **3,764,938,103** | **1,211,948,694** | **100%** | **1,115,224,738** |
| **Grand total (A+B)** | **2,436,949,934** | **1,245,698,567** | | **2,900,722,410** | **1,671,878,939** | | **4,304,398,386** | **1,509,875,266** | | **1,475,817,591** |

### Expenditure: FY 2015/16-FY 2017/18

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | | Average (Actual, FY2015/16-17/18) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | | |
| **1. Revenue Account** | | | | | | | | | | |
| **General** | | | | | | | | | | |
| 1.1 Office Operation Expenses | 120,990,000 | 73,032,399 | 21% | 121,800,000 | 91,569,852 | 21% | 109,445,000 | 83,889,129 | 28% | 82,830,460 |
| 1.2 Social Services Operation Expenses | 93,735,000 | 81,051,555 | 23% | 90,680,000 | 92,044,347 | 21% | 106,505,000 | 94,308,150 | 32% | 89,134,684 |
| 1.3 Transfer to Development Account | 245,523,965 | 133,482,550 | 38% | 194,029,934 | 200,311,421 | 47% | 204,368,229 | 64,083,884 | 22% | 132,625,952 |
| 1.4 Balance carried down | 90,000,000 | 53,902,671 | 15% | 90,000,000 | 26,846,595 | 6% | 90,000,000 | 38,453,014 | 13% | 39,734,093 |
| **Water** | | | | | | | | | | |
| 1.5 Office Operation Expenses | 24,445,000 | 13,873,865 | 4% | 22,710,000 | 14,985,434 | 3% | 27,990,000 | 15,847,975 | 5% | 14,902,425 |
| 1.6 Balance carried down | 914,077 | 280,655 | 0% | 2,563,703 | 2,470,642 | 1% | 1,152,050 | 1,344,419 | 0% | 1,365,239 |
| **Sub-total (D)** | **575,608,042** | **355,623,695** | **100%** | **521,783,637** | **428,228,291** | **100%** | **539,460,279** | **297,926,571** | **100%** | **360,592,852** |
| **2. Development Account** | | | | | | | | | | |
| 2.1 Infrastructure Development and Maintenance | 838,800,000 | 253,754,485 | 29% | 895,500,000 | 828,582,308 | 67% | 758,300,000 | 467,542,626 | 39% | 516,626,473 |
| 2.2 Infrastructure Development (Donor Programs) | 1,019,517,927 | 607,802,505 | 68% | 1,478,200,000 | 361,989,870 | 29% | 2,976,200,000 | 315,823,595 | 26% | 428,538,657 |
| 2.3 Balance carried down | 3,023,965 | 28,517,882 | 3% | 5,238,773 | 53,078,470 | 4% | 30,438,107 | 428,582,474 | 35% | 170,059,609 |
| **Sub-total (E)** | **1,861,341,892** | **890,074,872** | **100%** | **2,378,938,773** | **1,243,650,648** | **100%** | **3,764,938,107** | **1,211,948,695** | **100%** | **1,115,224,738** |
| **Grand Total (D+E)** | **2,436,949,934** | **1,245,698,567** | | **2,900,722,410** | **1,671,878,939** | | **4,304,398,386** | **1,509,875,266** | | **1,475,817,591** |

*Source: JICA Survey Team*

## Cox's Bazar Paurashava

### Income: FY 2015/16-FY 2017/18

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | | Average (Actual, FY2015/16-17/18) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | | |
| **1. Revenue Account** | | | | | | | | | | |
| **General** | | | | | | | | | | |
| 1.1 Taxes | 122,872,888 | 83,005,977 | 54% | 107,930,000 | 94,682,901 | 68% | 121,445,332 | 124,857,800 | 59% | 100,848,893 |
| 1.2 Non-taxes | 70,220,000 | 49,336,834 | 32% | 77,870,000 | 39,157,659 | 28% | 76,870,000 | 58,983,686 | 28% | 49,159,393 |
| 1.3 Government Grant | 450,000 | 0 | 0% | 550,000 | 464,542 | 0% | 1,380,000 | - | 0% | 154,847 |
| 1.4 Others (Donation, etc.) | - | 13,595,413 | 9% | - | 1,373,030 | 1% | - | 23,445,004 | 11% | 12,804,482 |
| 1.5 Balance carried forward | 6,359,025 | 4,271,049 | 3% | 498,295 | - | 0% | - | - | 0% | 1,423,683 |
| **Water** | | | | | | | | | | |
| 1.6 Water Billing and Other Income | 6,830,000 | 3,056,622 | 2% | 3,245,400 | 3,475,948 | 2% | 7,066,910 | 3,188,321 | 2% | 3,240,297 |
| 1.7 Balance carried forward | 473,594 | 260,773 | 0% | 4,157,884 | 188,113 | 0% | - | 97,151 | 0% | 182,012 |
| **Sub-total (A)** | **207,205,507** | **153,526,668** | **100%** | **194,251,579** | **139,342,193** | **100%** | **206,762,242** | **210,571,962** | **100%** | **167,813,608** |
| **2. Development Account** | | | | | | | | | | |
| 2.1 ADP (Block Grant) | 5,000,000 | 7,000,000 | 11% | 45,000,000 | 6,000,000 | 11% | 10,000,000 | 6,400,000 | 4% | 6,466,667 |
| 2.2 ADP (DPP) | - | - | 0% | - | 5,000,000 | 9% | - | 25,000,000 | 16% | 10,000,000 |
| 2.3 ADP (Special) | 200,000,000 | 600,000 | 1% | - | 4,500,000 | 8% | 52,000,000 | - | 0% | 1,700,000 |
| 2.4 Received from Donor Programs | 300,000,000 | - | 0% | 780,000,000 | 562,851 | 1% | 580,000,000 | 55,578,064 | 36% | 18,713,638 |
| 2.5 Others (BMDF loan, etc.) | 155,000,000 | - | 0% | 20,000,000 | - | 0% | 450,000,000 | 1,629,843 | 1% | 543,281 |
| 2.6 Transfer from Revenue Account | 25,000,000 | 57,558,083 | 88% | 55,000,000 | 38,763,222 | 71% | 15,453,000 | 60,762,874 | 40% | 52,361,393 |
| 2.7 Balance carried forward | 4,113,710 | - | 0% | 1,679,000 | 114,421 | 0% | 1,414,846 | 2,918,912 | 2% | 1,011,111 |
| **Sub-total (B)** | **689,113,710** | **65,158,083** | **100%** | **901,679,000** | **54,940,494** | **100%** | **1,108,867,846** | **152,289,693** | **100%** | **90,796,090** |
| **Grand total (A+B)** | **896,319,217** | **218,684,751** | | **1,095,930,579** | **194,282,687** | | **1,315,630,088** | **362,861,655** | | **258,609,698** |

### Expenditure: FY 2015/16-FY 2017/18

| Description | FY2015/16 | | | FY2016/17 | | | FY2017/18 | | | Average (Actual, FY2015/16-17/18) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Original Budget | Actual | | Original Budget | Actual | | Original Budget | Actual | | |
| **1. Revenue Account** | | | | | | | | | | |
| **General** | | | | | | | | | | |
| 1.1 Office Operation Expenses | 57,515,000 | 55,904,422 | 36% | 72,790,000 | 65,561,353 | 47% | 86,516,000 | 73,041,883 | 35% | 64,835,886 |
| 1.2 Social Services Operation Expenses | 102,105,000 | 36,746,768 | 24% | 56,390,000 | 31,353,557 | 23% | 95,593,559 | 72,869,419 | 35% | 46,989,915 |
| 1.3 Transfer to Development Account | 25,000,000 | 57,558,083 | 37% | 55,000,000 | 38,763,222 | 28% | 15,453,000 | 60,762,874 | 29% | 52,361,393 |
| 1.4 Balance carried down | 15,281,913 | - | 0% | 2,668,295 | - | 0% | 2,632,155 | - | 0% | - |
| **Water** | | | | | | | | | | |
| 1.5 Office Operation Expenses | 3,515,000 | 2,999,875 | 2% | 2,855,000 | 3,566,910 | 3% | 6,429,000 | 3,897,786 | 2% | 3,488,190 |
| 1.6 Balance carried down | 3,788,594 | 317,520 | 0% | 4,548,284 | 97,151 | 0% | 138,527 | - | 0% | 138,224 |
| **Sub-total (D)** | **207,205,507** | **153,526,668** | 100% | **194,251,579** | **139,342,193** | **100%** | **206,762,241** | **210,571,962** | **100%** | **167,813,608** |
| **2. Development Account** | | | | | | | | | | |
| 2.1 Infrastructure Development and Maintenance | 410,400,000 | 65,158,083 | 100% | 121,300,000 | 52,021,583 | 95% | 526,867,847 | 96,711,629 | 64% | 71,297,098 |
| 2.2 Infrastructure Development (Donor Programs) | 275,000,000 | - | 0% | 780,000,000 | - | 0% | 580,000,000 | 55,578,064 | 36% | 18,526,021 |
| 2.3 Balance carried down | 3,713,710 | - | 0% | 379,000 | 2,918,911 | 5% | 2,000,000 | - | 0% | 972,970 |
| **Sub-total (E)** | **689,113,710** | **65,158,083** | 100% | **901,679,000** | **54,940,494** | 100% | **1,108,867,847** | **152,289,693** | 100% | **90,796,090** |
| **Grand Total (D+E)** | **896,319,217** | **218,684,751** | **100%** | **1,095,930,579** | **194,282,687** | | **1,315,630,088** | **362,861,655** | | **258,609,698** |

*Source: JICA Survey Team*

*Attachment 4.3.1*
*Subprojects of MGSP and UGIIP-3*
*in the target UPBs*

**Attachment 4.3.1 Subprojects of MGSP and UGIIP-3 in the target UPBs (1/4)**

**Narayanganj City Corporation**

| SI.No. | Project Name & Fund | Package Number | ProjectType | Name of Subproject | Contract Amount (BDT) |
|---|---|---|---|---|---|
| 1 | MGSP (World Bank) | MGSP/NCC/W-01 | Road | a) Construction of road by HBB along Boalia khal starting from Daradir Culvert to Golachipa Moszid in ward no. 13 & 14 Under Narayanganj City Corporation (Ch.00 to 760m) Length=760.00m | 33187765.00 |
| | | | Drain | b) Construction of RCC Drain along Boalia khal starting from Daradir Culvert to Golachipa Moszid in ward no. 13 & 14 Under Narayanganj City Corporation (Ch.460m to 760m) Length=300.00m | |
| | | | Road | c) Rehabilitation of Mobarakshah road by BC in ward No.16 Under Narayanganj City Corporation (Ch.00m to Ch. 950.00m ) Length =950.00m | |
| | | | Road | d) Rehabilitation of Bangabondhu extension road by BC from Netaiganj Intersection to Komodini via Sadhinata Chatter in ward No.18 Under Narayanganj City Corporation (Ch.00m to Ch. 1050.00m ) Length | |
| 2 | MGSP (World Bank) | MGSP/NCC/W-02 | Drain | a) Construction of RCC & Brick drain starting from 2 no.Rail Gate to ex BKMEA president Mr.Fazlul Haque's house beside Rail line via Golachipa Sugondha factory in ward no 13 &14. under NCC (Ch.0-352m&Link 1 to 7=531m (Total Length =1320.00m) | 40869380.00 |
| | | | Road | b) Construction of RCC road starting from 2 no. rail gate to Ex President of BKMWA Mr. Fazlul Haque's house beside Rail line via Golachipa Sugondha factory in ward no 13 &14. under NCC (Ch.0-352m & Link 1 to 7=531m | |
| | | | Drain | c) Construction of footpath cum drain by the side of Khalghat road. In ward no: 15 Under NCC (Ch:0.00-270m) | |
| 3 | MGSP (World Bank) | MGSP/NCC/W-03 | Drain | a) Construction of RCC Drain with footpath om both side of T-hossain road starting from Modonganj -Modonpur road to Nobiganj ghat in word no. 24 under Narayanganj CC (Ch:0.00-760m) (Total Length =1050.00m) | 75785604.00 |
| | | | Road | b) Rehabilitation of T-hossain road by RCC starting from Modonganj - Modonpur road to Nobiganj ghat in word no. 24 under Narayanganj CC | |
| 4 | MGSP (World Bank) | MGSP/NCC/W-04 | Drain | a) Construction of footpath cum RCC Drain starting from Jimkhana bridge to Joy Gobidha School via Paikpara bridge in Ward no. 17 under NCC (Ch.-0.00-395m, Link-1 (Ch0-85, Link-2 Ch.0-120m, Drain L=600 & Fothpath | 30890355.00 |
| | | | Road | b) Rehabilitation of Jalterpar road by RCC starting from Jimkhana bridge to Joy Gobidha School via Paikpara bridge in Ward no. 17 under NCC (Ch.-0.00-600m, Link-1 (Ch0-85, Link-3 Ch.0-25m, L=710 | |
| | | | Road | c) Rehabilitation of Shah Suja road by Rcc starting from Foodland Bakery with link on Nayapara road & Link-2 Bhuyanpara road link road. in Ward no. 17 under NCC (Ch.-0.00-354m, Link-1 (Ch0-285, Link-2 Ch.0-372m, | |
| | | | Drain | d) Construction of RCC Drain along Nayapara road (link-1), in Ward No. 17, under NCC (Link-1 Ch-0-150m) | |
| 5 | MGSP (World Bank) | MGSP/NCC/W-05 | Drain | (a) Construction of RCC Drain starting from Modongonj-Modonpur RHD road to Shitalakyha river via Willson road Khan bari in ward no. 22 & 23 Under NCC (Ch.00 to 1290m) Length=1290.00m | 46281632.00 |
| | | | Road | (b)Construction of road by RCC starting from Willson road to Shitalakyha river via Khan bari in ward no. 22 & 23 Under NCC (Ch.800 to 1290m) | |
| | | | Drain | (c)Construction of RCC Drain starting from CSD Intersection to Akiz cement factory Road via Ispahani bazar in ward no. 23 Under NCC (Ch.280m to 585m) Length=305.00m | |
| | | | Drain | (d)Construction of RCC Drain starting from CSD Intersection to Akiz cement factory Road via Ispahani bazar in ward no. 23 Under NCC (Ch.00m to 585m) Length=585.00m | |
| 6 | MGSP (World Bank) | MGSP/NCC/2015-16/W-06 | Road and Drain | 24 | 34392787.00 |
| | | | Electrification | (b) Beautification of NCC Own pond with Coffee shop & Electrification at North Lakkhonkhola in Ward No.-25. Supply and Installation of beautification & Street lighting necessary fitting, fixing including SS Pole, SS bracket with underground electrical line | |
| 7 | MGSP (World Bank) | MGSP/NCC/2015-16/W-07 | Drain | 1) Excavation, Landscaping, Beautification and Lighting of Shitalkyha Dholeswary River via Baburail. (Ch.0.00-395.00m) in Ward No 15. (RCC | 124242988.80 |
| | | | Beautification | 2) Excavation, Landscaping, Beautification and Lighting of Shitalkyha Dholeswary River via Baburail. (Ch.0.00-395.00m) in Ward No 15. (Excavation Landscaping and Beautification) | |
| | | | Electrification | 3) Excavation, Landscaping, Beautification and Lighting of Shitalkyha Dholeswary River via Baburail. (Ch.0.00-395.00m) in Ward No 15. (Street | |
| 8 | MGSP (World Bank) | MGSP/PBG/NCC/2017-18/W-08 | Drain | a) Rehabilitation of RCC drain from MizmiziHazrotSahebbari to Grave yard Connecting road via Eidgah in ward no : 02. Ch. 00-220m &Link : Ch. 00- | 15771901.00 |
| | | | Road | b) Rehabilitation of RCC Road from MizmiziHazrotSahebbari to Grave yard Connecting road via Eidgah in ward no : 02. Ch. 00-220m &Link : Ch. 00- | |
| | | | Drain | c) i) Rehabilitation of RCC drain from Inter district Tract Office to Shittalakhaya river via Power house beside boundary wall ch. 00-240m ii) Rehabilitation of RCC drain from AEPZ road TatkhanaChowdhurybari to Major bari in ward no: 08 Ch. 00-140m | |
| | | | Road | d) Rehabilitation of RCC Road from AEPZ road TatkhanaChowdhurybari to Major bari in ward no: 08 Ch. 00-130m | |
| 9 | MGSP (World Bank) | MGSP/PBG/NCC/2017-18/W-09 | Drain | a) i) Rehabilitation of RCC drain from Khanpur hospital road to Khanpur branch road in ward no-11&12 Ch. 00-310m ii) Rehabilitation of RCC drain (Outfall) from Kali bazar road to Shittalakhaya river in ward no-13 ch. 00-40m | 16991713.00 |
| | | | Drain | b) i) Rehabilitation of RCC new drain & rise drain from ShahidSabbirAlamKhondokar road (Masdahir bazar) to GolaChipaAllamaIqbal connecting road Ward. no-13 Ch: 00-625m | |
| | | | Road | b) ii) Rehabilitation of RCC road from ShahidSabbirAlamKhondokar road (Masdahir bazar) to GolaChipaAllamaIqb | |
| 10 | MGSP (World Bank) | MGSP/PBG/NCC/2017-18/W-10 | Drain | a) i) Rehabilitation of RCC Road & drain from Shahid Nagar road AzaherCouncilerbari to MoklesUddingbari in ward no-18 Ch. 00-150m | 25861720.80 |
| | | | Road | b) i) Rehabilitation of RCC Road from Shahid Nagar road AzaherCouncilerbari to MoklesUddingbari in ward no-18 Ch. 00-150m ii) Rehabilitation of RCC Road &Socher drain from 1 No. Ghate Police fari front road in Ward no: 15 Ch. 00-80m | |
| | | | Road | c) Rehabilitation of RCC Road from BiddahNikaton School to GulshanCenama hall ward no-15 Ch. 00-310m | |
| | | | Drain | d) i) Rehabilitation of RCC drain from Sayetpur main road to GMC gale No. 1&2 in ward no-18 Ch. 0.00m - 275m&ch.0.00m-295m, Linkch. 00-40m | |
| | | | Road | d) ii) Rehabilitation of RCC Road from Sayetpur main road to GMC gale in ward no-18 Ch. 0.00m-275m&ch.0.00m-295m, Linkch. 00-40m | |

| SI.No. | Project Name & Fund | Package Number | ProjectType | Name of Subproject | Contract Amount (BDT) |
|---|---|---|---|---|---|
| 11 | MGSP (World Bank) | MGSP/PBG/NCC/2017-18/W-11 | Drain | a) Rehabilitation of RCC drain from ModanpurMadonganjRHD beside HaziAbulKasembari to Ram Nagar GPS road in ward no-26 Ch. 350m | 17333223.00 |
| | | | Road | b) Rehabilitation of RCC road from ModanpurMadonganjRHD beside HaziAbulKasembari to Ram Nagar GPS road in ward no-26 Ch. 350m | |
| | | | Drain | c) Rehabilitation of RCC Road& drain from Sayetpurmohammodi club road to Fakir bari main road in ward no-18 at Ch. 00-370m. | |
| | | | Road | d) Rehabilitation of RCCRoad fromSayetpurmohammodi club road to Fakir bari main road in ward no-18 at Ch. 00-370m. | |
| 12 | MGSP (World Bank) | MGSP/PBG/NCC/2017-18/W-12 | Drain | (a) (i) Rehabilitation of RCC drain from Sayetpur Mohammodi Club road to Fakir bari main road in ward no: 18 at Ch. 370-750m. (ii) Rehabilitation of RCC drain from Sayetput main road to GMC gale no.-3 in ward no. 18 Ch. 00-295.00m. (iii) Rehabilitation of | 22234533.00 |
| | | | Road | b) (i) Rehabilitation of RCC road from Sayetpur Mohammodi Club road to Fakir bari main road in ward no. 18 at Ch. 370-750m, (ii) Rehabilitation of RCC road from Sayetpur main road to GMC gale no-3 in ward no. 18 Ch. | |
| 13 | MGSP (World Bank) | MGSP/PBG/NCC/2017-18/W-13 | Drain | a) (i) Rehabilitation of RCC drain from Mission para Solimulla road to Mr. Babul Saheb bari to Mission para Mr. Faruque Saeber bari road in ward no. | 14243138.00 |
| | | | Cross Drain | (ii) Rehabilitation of RCC cross drain in Mission para Solimulla road in ward no. 12 at Ch. 00-30m | |
| | | | Drain | (iii) Rehabilitation of RCC drain from Sonakanda Anayet Nagar Ali Ahmed Chunku road to Sonakanda Anayet Nagar Mr. Raza mia bari road Ch. 00- | |
| | | | Drain | (iv) Rehabilitation of RCC drain from Madonpur Madonganj RHD beside Hazi Abul Kasem bari to Ram Nagar GPS Road in Ward no. 26 Ch. 350- | |
| | | | Road | b) i) Rehabilitation of RCC Road from Mission para Solimulla road to Mr. Babul Saheb bari to Mission para Mr. Faruque Saeber bari road in ward no. | |
| | | | Road | (ii) Rehabilitation of RCC road from Sonakanda Anayet Nagar Ali Ahmed Chunku road to Sonakanda Anayet Nagar Mr. Raza mia bari road Ch. 00- | |
| | | | Road | (iii) Rehabilitation of RCC road from Madonpur Madonganj RHD beside Hazi Abul Kasem bari to Ram Nagar GPS road in ward no. 26 Ch. 350- | |
| 14 | MGSP (World Bank) | MGSP/NCC/2017-18/W-14 | Public place | Rehabilitation/Restoration of Baburail Canal (Site Preparation,Sludge removal, Protection works, Walk way & Seating, Construction of RCC Ghat, Road widening, Construction of RCC Viewing Deck, Construction of RCC Bridge, Construction of RCC Box Drain, Elec | 188867947.80 |
| 15 | MGSP (World Bank) | MGSP/NCC/2017-18/W-15 | Public place | Rehabilitation/Restoration of Baburail Canal (Site Preparation,Sludge removal, Protection works, Walk way & Seating, Construction of RCC Ghat, Road widening, Construction of RCC Viewing Deck, Construction of RCC Bridge, Construction of RCC Box Drain, Elec | 164041849.96 |
| 16 | MGSP (World Bank) | MGSP/NCC/2017-18/W-16 | Public place | Rehabilitation/Restoration of Baburail Canal (Site Preparation,Sludge removal, Protection works, Walk way & Seating, Construction of RCC Ghat, Road widening, Construction of RCC,Public Toilet, Construction of RCC Bridge, Construction of RCC Box Drain, Ele | 238220057.03 |
| 17 | MGSP (World Bank) | MGSP/NCC/2017-18/W-17 | Public place | Rehabilitation/Restoration of Baburail Canal (Site Preparation,Sludge removal, Protection works, Walk way & Seating, Construction of RCC Ghat, Road widening, Construction of RCC Bridge, Construction of RCC Box Drain& RCC Pipe drain, Electrical & Lighting, | 172105224.44 |
| 18 | MGSP (World Bank) | MGSP/NCC/2017-18/W-18 | Public place | Rehabilitation/Restoration of Baburail Canal (Site Preparation,Sludge removal, Protection works, Walk way & Seating, Road widening, Construction of RCC Bridge, Construction of RCC Box Drain & RCC Pipe drain, Electrical & Lighting, Environmental management | 232628652.93 |
| 19 | MGSP (World Bank) | MGSP/NCC/2017-18/W-19 | Public place | Rehabilitation/Restoration of Baburail Canal (Site Preparation,Sludge removal, Protection works, Walk way & Seating, Construction of RCC Ghat, Road widening, Construction of RCC Bridge, Construction of RCC Box Drain & RCC Pipe drain, Electrical & Lighting | 203129939.19 |
| 20 | MGSP (World Bank) | MGSP/NCC/2017-18/W-20 | Public place | Rehabilitation/Restoration of Baburail Canal (Site Preparation,Sludge removal, Protection works, Walk way & Seating, Construction of Metal Bridge, Construction of RCC Box Drain & RCC Pipe drain, Electrical & Lighting, Environmental management & Monitoring | 235214820.07 |
| 21 | MGSP (World Bank) | MGSP/NCC/2017-18/W-21 | Public place | Rehabilitation/Restoration of Baburail Canal (Site Preparation,Sludge removal, Protection works, Walk way & Seating, Construction of RCC Ghat, Construction of RCC Box Drain & RCC Pipe drain, Electrical & Lighting, Environmental management & Monitoring et | 281682214.94 |
| 22 | MGSP (World Bank) | MGSP/NCC/2018-19/W-22 | Bridge | (a) Construction of 20m Bridge over Baburail Canal on Bangabandhu Sarak at Ch. 0+375 | 64196262.43 |
| 23 | MGSP (World Bank) | MGSP/PBG/NCC/2018-19/W-23 | Drain | 1) Rehabilitation of RCC Drain from Mizmizy Road to H/O Sohed Ahmed Khan House Vai Aaleya Monzil Via DND Canal in Ward no- 02 at Ch. 00-300m, Link -1 Ch. 00-200m, Link-2 Ch. 00-150m, Link-3 Ch. 00-120m | 28578017.83 |
| | | | Road | 2) Rehabilitation of RCC Road from Mizmizy Road to H/O Sohed Ahmed Khan House Vai Aaleya Monzil Via DND Canal in Ward no- 02 at Ch. 00-300m, Link -1 Ch. 00-200m, Link-2 Ch. 00-150m, Link-3 Ch. 00-120m | |
| 24 | MGSP (World Bank) | MGSP/PBG/NCC/2018-19/W-24 | Drain | 1) Rehabilitation of RCC Drain from Chowdhury Bary Bus-stand to 2-No Dakessori Road in Ward No-8 Ch. 00-1000m, Link-1 Ch. 00-75m, Link-2 | 53497613.09 |
| | | | Road | 2) Rehabilitation and Maintenance of RCC Road from Chowdhury Bary Bus-stand to 2-No Dakessori Road in Ward No-8 Ch. 00-1000m, Link-1 Ch (00- | |
| 25 | MGSP (World Bank) | MGSP/PBG/NCC/2018-19/W-25 | Drain | 1) Rehabilitation of (R K Mitra Road) RCC Drain From Mandol Para Bridge to Hangso Bridge in Ward No- 15 at Ch. 00-240m. | 20286000.00 |
| | | | Road | 1) Rehabilitation of (R K Mitra Road) RCC Road From Mandol Para Bridge to Hangso Bridge in Ward No- 15 at Ch. 00-230m. | |
| 26 | MGSP (World Bank) | MGSP/PBG/NCC/2018-19/W-26 | Drain | 1. (a) Rehabilitation of RCC Drain from Chitta Ranjan River Ghat to Rasulbag Jame Mosque Road in Ward No- 10 at Ch. 00-180m. (b) Rehabilitation of RCC Drain at Netaigonj Morh in Ward No- 18. Ch. 00-50m | 19742563.71 |
| | | | Road | 2. (a) Rehabilitation of RCC Road from Chitta Ranjan River Ghat to Rasulbag Jame Mosque Road in Ward No- 10 at Ch. 00-170m. (b) Rehabilitation of RCC Road at Netaigonj Morh in Ward No- 18. Ch. 00-50m | |
| | | | Ghattla | 3. Construction of RCC Ghatla at Chitta Ronjan River Ghat in Ward No-10 Under NCC. | |
| | | | | **Total BDT =** | **2400277904.03** |
| | | | | **Total (BDT Million)=** | **2400** |

Source: MGSP Project Office, LGED

**Attachment 4.3.1 Subprojects of MGSP and UGIIP-3 in the target UPBs (2/4)**

**Cumilla City Corporation (CuCC)**

| SI.No. | Project Name & Fund | Package Number | Name of Subproject | Length (m) | Contract Amount (BDT) |
|---|---|---|---|---|---|
| 1 | MGSP (World Bank) | MGSP/CCC/2015-16/W-04 | Development of Bypass road from Amtoli to Tickarchor beside river Gomoty under Comilla City Corporation. | 5150 | 78367349.58 |
| 2 | MGSP (World Bank) | MGSP/CCC/2015-16/W-06 | Development of Bypass road from Amtoli to Tickarchor (Vatpara to Jagonnathpur moar) beside river Gomoty under Comilla City Corporation | 5159 | 113499853.35 |
| 3 | MGSP (World Bank) | MGSP/CCC/2015-16/W-07 | Construction of Road Protection wall from Nawab Bari Chowmohoni to Kadamtoli Bridge by the side of katakhali khal under Comilla City | 3280 | 92707230.32 |
| 4 | MGSP (World Bank) | MGSP/CCC/2015-16/W-08 | Development of Road from Nowgaow Chowmohoni at Lacsam Road to Beltoly at Dhaka-Chittagong Highwaw and Link including Bridge & | 2404 | 69436615.51 |
| 5 | MGSP (World Bank) | MGSP/CCC/2015-16/W-09 | Improvement of Road from Kachua-Chowmuhuni at Lacsam Road to Eidgah at Dhaka Chittagong Highway including Protection Wall, Culvert, Drain & Street Lighting, under Comilla City Corporation. | 2915 | 52652215.00 |
| 6 | MGSP (World Bank) | MGSP/CCC/2015-16/W-10 | Construction of Road Protection wall from Race course to old Dhaka-Chittagong Highway. | 900 | 31583394.29 |
| 7 | MGSP (World Bank) | MGSP/CCC/2015-16/W-11 | a) Re-construction of rcc road ,brick drain & carpating road at comilla Ramakrishna Ashrama Anath Anbish (L= 346.20 m). b) Re-Construction of RCC road in south side of Raiscourse Cannel up to Badsha mia bazar with 5 nos cross culvert (L=585.00m) | 931 | 20247719.00 |
| 8 | MGSP (World Bank) | MGSP/CCC/2015-16/W-12 | a) Construction of road from Dakbanglo to ranir Bazar road and link Road and Drain (main road part) (L=1300m). b) Construction of road from Dakbanglo to ranir Bazar road and link Road and Drain (link road part) (L=1300m). c) Improvement of road in Victoria College Gate West par of Ranir Dhegee including road side drain (road part) (L=775m). d) Construction of drain from Dakbanglo to ranir Bazar Road (L= 740m) and link road and drain (Drain L=1510) e) Constrruction of drain in ictoria College Gate West par of ranir Dhegee (L=447m) | 6072 | 88096546.71 |
| 9 | MGSP (World Bank) | MGSP/CCC/2015-16/W-05 | Development of bus terminal Comilla ( Ashrafpur) (CIP-2 of 2015-16) | - | 98632629.67 |
| 10 | MGSP (World Bank) | MGSP/CCC/2015-16/W-13 | 1) Improvement of road start from old dhaka-chattagram highway via mohespur,dhanpur,Rajendra pur with link road fron Dhanpur eidgha to city boundary main; Link: Dhanpur Eidgawn to Nongonia khal up to city boundary started from main road,Link-2; dhanpur Ali Mia market to Dhanpur Madrasha started from main road, and Branch-1: Rajendrapur purbapara moszid to nangoria khal to started from main road, Branch-2: Dhanpur primary school to dhaka-chattagram highway started from main road ,Branch-3: Dhanpur Madrasha road to changiny moszid road started from link-2 ,Estimate of box culvert-1.00m x 1.00m at main road =7nos. and link-1 = 1nos. a) road part (Total length= 3099m) b) Culvert part=08 nos Culvert. c) Drain part Lentgh =968m. 2) Environmental Management | 4067 | 50416652.24 |
| 11 | MGSP (World Bank) | MGSP/CCC/2015-16/W-14 | a) Re-construction & mintenance work at ashoktola road and road side RCC drain started from ranir bazar road to rail Line.b) Re-Construction maintenance work at kandirpar mosque to pubali chattar and city market to central eidghga extend position. c) Re-Construction maintenance work at jawtola road to nazrul avenue road via talpukor par road and bagiachagone voter goli to fair service gate in complete drain road. d)fe-construction od road at 2nd muradpur chowmohoni to circular road | 3191 | 54436000.00 |
| 12 | MGSP (World Bank) | MGSP/CCC/W-01 (2014-15) | a) Improvement of nazrul avenue BC road from (i) Kandirpar,pubali chattar to Dharmapur east chowmohuni via ranir bazar (ii)Dharmapur west chowmuhuni to Daulatpur via Victoria Degree college (Total Length= 2100m) (Road). b) a)Improvement of nazrul avenue BC road from (i) Kandirpar,pubali chattar to Dharmapur east chowmohuni via ranir bazar.ii)Dharmapur west chowmuhuni to Daulatpur via Victoria Degree college with cross drain (drain & cross drain) (Total length=2300) | 4400 | 52771417.93 |
| 13 | MGSP (World Bank) | MGSP/CCC/W-02 (2014-15) | a)Improvement of BC road from chortha chowmohani to EPZ road (length=700m) (Road). b)Construction of RCC drain from chortha chowmohani to EPZ road with cross drian (Length= 700m). c)Improvement of mogotoly shah suja mosque BC road (length=750m).d) Improvemnt of othindra mohon roy road (Length=530m) .e) Improvemennt of othindra mohon roy road side RCC drain & slab with | 3210 | 30863168.72 |
| 14 | MGSP (World Bank) | MGSP/CCC/W-03 (2014-15) | a) Improvement of station BCC road from old Dhaka--Chittagong road Badsha mia bazar portion to dharmapur east chowmohini (Length=800m) (Road). b) Improvement of road side RCC drain & slab from station road from old Dhaka-Chittagong road Badsha mia bazar portion to dharmapur east chowmohini with cross drain (Length=800m). c) Improvement Abu | 3050 | 32149735.03 |
| | | | | Total (BDT) = | **865860527.34** |
| | | | | **Total (Million BDT) =** | **866** |

Source: CuCC

**Attachment 4.3.1 Subprojects of MGSP and UGIIP-3 in the target UPBs (3/4)**

| Cox's Bazar Paurashava (CBP) | | | | |
|---|---|---|---|---|
| **SI. No.** | **Project Name & Fund** | **Package Number** | **Name of Subproject** | **Contract Amount (BDT)** |
| 01 | MGSP, World Bank | MGSP / COX / 2018 - 19 / W - 05 | a) Improvement of Road from Thana Road Khurushkul Road. Road Part - Length 3430 m.<br>b) Construction of RCC Drain from Thana Road to Khurushkul Road. Drain Part - Length 3430 m.<br>c) Supply, fitting & fixing of street light starting from Thana Road to Kurushkul Road. Electrical Part - Length 3430 m. | 165,865,707.45 |
| 02 | MGSP, World Bank | MGSP / COX / 2018 - 19 / W - 04 | a) Improvement of RCC Road from Jelerpak to Airforce Gate and Riduan Jame Mosque to Sutki Mahal. Road Part - Length 3310 m.<br>b) Improvement of RCC Drain from Jelerpak to Airforce Gate and Riduan Jame Mosque to Sutki Mahal. Drain Part - Length 3310 m.<br>c) Supply, fitting & fixing of street light from Jelerpak to Airforce Gate and Riduan Jame Mosque to Sutki Mahal. Eelctrical Part - Length 3310 m. | 170,451,012.64 |
| 03 | MGSP, World Bank | MGSP / COX / 2018 - 19 / W - 03 | a) Improvement of road from Bailla para to Shahid Sharani road via Goal Dighir par. Road Part - Length 3854 m.<br>b) Improvement of road from Bailla para to Shahid Sharani road via Goal Dighir par. Drain Part - Length 3262 m. | 186,446,128.21 |
| 04 | MGSP, World Bank | MGSP / COX / 2018 - 19 / W - 02 | a) Improvement of RCC Road at Shahid Sarani. Road Part - Length 2380 m<br>b) Improvement of RCC Drain at Shahid Sarani. Drain Part - Length 2380 m<br>c) Supply, fitting & fixing of street light at Shahid Sarani. Electrical Part - Length 2380 m | 160,039,459.71 |
| 05 | MGSP, World Bank | MGSP / COX / 2018 - 19 / W - 01 | a) Improvement of RCC Road from Airport Gate to Tuitta Para. Road Part - Length 3441<br>b) Improvement of RCC Drain from Airport Gate to Tuitta Para. Drain Part - Length 3441<br>c) Supply, fitting & fixing of street light from Airport Gate to Tuitta Para. Drain Part - Length 3441 m. | 178,365,739.31 |
| | | | **Total BDT =** | **861,168,047.32** |
| | | | **Total (BDT Million) =** | **861** |

Source: CBP

**Attachment 4.3.1 Subprojects of MGSP and UGIIP-3 in the target UPBs (4/4)**

| Cox's Bazar Paurashava (CBP) | | | | | |
|---|---|---|---|---|---|
| **Serial No.** | **Project Name & Fund** | **Package Number** | **Name of the Sub - Project** | **Length/Unit (km/m/no)** | **Contract Amount (BDT)** |
| 01 | UGIIP-III, ADB | UGIIP-III-2/AF/COX'S/DR-01/2017 | D-01 A) Construction of RCC Drain From R R R C Office To Airport Culvert | 1.545 km | 123,771,741.16 |
| | | | B) Construction of RCC Box Culvert (Box Culvert 2vant) | 1 Nos | |
| | | | D-04 A) Construction of RCC drian with footpath at Chol Bazar Chara from Bara Bazar to Bakkhali River. | 0.875 km | |
| | | | B) Construction of RCC U-Drain at Tek Para from ful bag Culvert to Bakkhali River | 0.265 km | |
| | | | C) Construction of RCC Culvert at Chol Bazar Chara from Bara Bazar to Bakkhali River. | 1 Nos | |
| 02 | UGIIP-III, ADB | UGIIP-III-2/AF/COX'S/DR-02/2017 | D-08 A) Consruction of RCC U-Drain From Dolphin Mour To Ocean Paradise. | 0.353 km | 102,394,221.55 |
| | | | B) Construction Of RCC U-Drain With Slab From Dolphin Mour TO Nirsorgo. | 1.700 km | |
| | | | C) Construction Of RCC U-Drain From Nirsorgo To Bara Chara. | 0.900 km | |
| 03 | UGIIP-III, ADB | UGIIP-III-2/AF/COX'S/UT+DR-01/2017 | R-12 A) Construction of RCC Road at Kalatoli Hotel & Motel areas | 3.408 km | 114,097,172.88 |
| | | | 1. Jolpori road | 0.160 km | |
| | | | 2. Laymishto Sama Plaz, | 0.338 km | |
| | | | 3. Hotel Quality Home to Green Palace, | 0.338 km | |
| | | | 4. Light House Resort to Jabar Mulicuk House | 0.150 km | |
| | | | 5. K-Life Road | 0.142 km | |
| | | | 6. Silver Resort Road | 0.142 km | |
| | | | 7. Seam Hatchery Road | 0.142 km | |
| | | | 8. K-Life to Sea Bizzch | 0.330 km | |
| | | | 9. Laboni Beach to Hill Tower | 0.330 km | |
| | | | 10. White Orchid Road | 0.163 km | |
| | | | 11. Beach Way Road | 0.163 km | |
| | | | 12. White Orchid to atomic Energy Office Road | 0.280 km | |
| | | | 13. Saikat Para Jame Mosque to atomic Energy Office | 0.550 km | |
| | | | 14. RHD to Devine Hotel Road | 0.180 km | |
| | | | B) Construction of RCC U-Drain Kalatoli Hotel & Motel areas | 5.133 km | |
| | | | C) Construction of 16 nos of Cross Drain at kalatoli Hotel & Motel areas | 16 Nos | |
| | | | D)Construction of RCC Stair RHD to evine Hotel (Ending Point). L=12.00m | 0.012 km | |
| 04 | UGIIP-III, ADB | UGIIP-III-2/COX'S/UT+DR-02/2017 | R-03 A) Construction of RCC Road starting from Chonkola Ghat to S.M.Para Mosque via Sikdar Para to Barua Para | 2.530 km | 96,607,805.05 |
| | | | Link-1 | 0.634 km | |
| | | | Link-2 | 0.208 km | |
| | | | X-Drain | 10 Nos | |
| | | | Retaining Wall | 0.150 km | |
| | | | Palisading | 0.175 km | |
| | | | B) Construction of RCC U-Drain | 0.100 km | |
| | | | R-06 A) Construction of B.C Road starting from Kollol Hotel to Cultural Institute Gate | 0.559 km | |
| | | | C) Construction of RCC U-Drain at Sugandha beach mour (Five Star Shop) to Cultuar Institute Gate | 0.993 km | |
| 05 | UGIIP-III, ADB | UGIIP-III-2/COX'S/DR-01/2017 | R-05 A) Improvement of B.C Road Starting form Dolphin More to Bally Hatchery | 1.550 km | 81,575,885.24 |
| | | | | 0.420 km | |
| | | | B) Construction of RCC Road starting from RHD to Gazipur Resort | 0.125 km | |
| | | | C) Construction of U-Drain Starting from RHD to Gazipur Resort | 0.125 km | |
| | | | R-02 A Construction of RCC Road Starting from Pallyanna Kata (Habib Shop) to samiti Bazar | 1.366 km | |
| | | | B) Construction of RCC U-Drain | 0.990 km | |
| | | | X-Drain | 4 Nos | |
| | | | C) 2 vent Box Culvert | 2 Nos | |
| 06 | UGIIP-III, ADB | UGIIP-III-2/AF/COX'S/DR-03/2017 | C-03A-A) Construction of RCC U-Drain With Footpath at Rumaliar Chara From Police Line to Bakkhali River Link-2 Ch-2059-3509m | 1.450 km | 230,000,000.00 |
| | | | C-03A-A) Construction of RCC U-Drain With Footpath at Rumaliar Chara From Police Line to Bakkhali River Link-1 Ch-0.00-750.00m | 0.750 km | |
| | | | C-03A-A) Construction of RCC U-Drain With Footpath at Rumaliar Chara From Police Line to Bakkhali River Link-3 Ch-0.00-100.00m | 0.100 km | |
| 07 | UGIIP-III, ADB | UGIIP-III-2/AF/COX'S/DR-04/2017 | C-03 B) Construction of RCC U-Drain With Footpath At Rumaliya Chara From Police Line to Bakkhali River . Ch-940-2059m | 1.119 km | 88,367,250.10 |
| 08 | UGIIP-III, ADB | UGIIP-III-2/AF/COX'S/DR-05/2017 | C-03C- A) Construction of RCC Drain With Footpath At Rumaliya Chara From Police Line to Bakkhali River . Ch-0.00-940.00m | 0.940 km | 93,871,297.40 |
| | | | C-03C- B) Construction of RCC Drain With Footpath At Rumaliya Chara From Police Line to Bakkhali River. Link-02 Ch-0.00-200.00m | 0.200 km | |
| | | | | **Total BDT =** | **930,685,373.38** |
| | | | | **Total (BDT Million) =** | **931** |

Source: CBP

*Attachment 4.3.2*
*ICGP Batch 2 - Progress of the Works as of the end of Aug'19*

## Attachment 4.3.2 ICGP Batch 2 - Progress of the Works as of th end of Aug'19

25-Sep-19

| | Package No | Tender Status | Contract Amount (BDT) | Completion Date | | | Physical Progress ( % ) | | | | Financial Progress | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Signing date | Completion Date as per contract | Extended Completion Date | Up to Jun 2019 | Monthly Progress Jul'19 | Monthly Progress Aug'19 | Cumulative | Progress (%)/Amount (BDT) Aug'19 | Progress (%)/Amount (BDT) Amount (BDT) | |
| Gazipur City Corporation (GCC) | **Gazipur City Corporation (GCC)** | | | | | | | | | | | | Overall monthly performance GCC dropped (2.15%-->1.25%). |
| | GCC2-1 | Complete | 328,342,815.00 | 16.11.2017 | 10.11.2018 | 30.06.2019 | 75.00 | 5.00 | 1.00 | 81.00 | 71.86% | 235,936,603 | |
| | GCC2-2 | Complete | 103,304,287.00 | 22.06.2017 | 17.06.2018 | 30.05.2019 | 82.00 | 0.00 | 3.00 | 85.00 | 60.86% | 62,875,125 | De-scope (delete road works) |
| | GCC2-3 | Contract signed | 118,302,539.00 | 17.04.2017 | 11.04.2018 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0 | contract signed on 20 Aug'19 |
| | GCC2-4 | Contract signed | 156,039,456.00 | 26.02.2017 | 21.04.2018 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0 | contract signed on 19 Aug'19 |
| | GCC2-5 | Complete | 212,343,360.71 | 29.11.2017 | 23.11.2018 | 30.06.2019 | 31.00 | 2.00 | 2.00 | 35.00 | 15.58% | 33,087,838 | work program received, not realistic, instructed to revise. |
| | GCC2-6 | Complete | 132,903,622.91 | 18.05.2017 | 12.05.2018 | 23.01.2019 | 27.00 | 3.00 | 5.00 | 35.00 | 22.02% | 29,265,699 | work program received. Completion by Mar'20 |
| | GCC2-7 | Complete | 153,341,156.00 | 19.05.2017 | 25.06.2018 | 30.05.2019 | 60.00 | 5.00 | 1.00 | 66.00 | 51.39% | 78,799,752 | work program received. Completion by Mar'20 |
| | GCC2-8 | | 97,694,972.00 | 31.01.2018 | 26.01.2019 | | 26.00 | 0.00 | 0.00 | 26.00 | 20.97% | 20,483,698 | one tenderer under evaluation |
| | GCC2-9 | Complete | 88,398,912.00 | 30.03.2017 | 24.03.2018 | 27.05.2019 | 28.00 | 0.00 | 0.00 | 28.00 | 10.44% | 9,229,191 | very poor progress. Consider cancellation of the contract. |
| | GCC2-10 | Complete | 116,730,246.72 | 17.04.2017 | 11.04.2018 | 30.04.2019 | 60.00 | 4.00 | 5.00 | 69.00 | 54.12% | 63,174,951 | work program received. Completion by Dec'19 |
| | GCC2-11 | Contract signed | 96,233,418.00 | 26.02.2017 | 21.04.2018 | | 3.00 | 0.00 | 0.00 | 3.00 | 0.00% | 0 | contract signed on 19 Aug'19 |
| | GCC2-12 | Contract signed | 158,441,802.00 | 20.08.2019 | 15.08.2020 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0 | contract signed on 20 Aug'19 |
| | | | 17,216,238.00 | | | | 100.00 | 0.00 | 0.00 | 100.00 | 100.00% | 17,216,238 | |
| | GCC2-13 | Complete | 157,237,719.14 | 26.02.2017 | 20.06.2018 | 28.07.2019 | 62.00 | 0.00 | 1.00 | 63.00 | 49.25% | 77,442,843 | work program received. Completion by Feb'19 |
| | GCC2-14 | Complete | 159,534,830.00 | 02.01.2019 | 28.12.2019 | | 25.00 | 5.00 | 0.00 | 30.00 | 23.81% | 37,984,446 | Design change for 2 tube wells completed. |
| | **Total** | | **2,096,065,374.48** | | | | **38.28** | **2.15** | **1.25** | **41.67** | **31.75%** | **665,496,384** | |
| Cumilla City Corporation (CuCC) | **Comilla City Corporation (CoCC)** | | | | | | | | | | | | Overall monthly progress dropped (7.6% -->3.2%). |
| | CoCC 2 -1 | Complete | 104,087,183.59 | 17.12.2017 | 16.12.2018 | 26.02.2019 | 52.00 | 20.00 | 3.00 | 75.00 | 68.46% | 71,263,201 | work program received, assessed completion - Dec'19 |
| | CoCC 2 -2 | Complete | 381,570,268.10 | 26.06.2018 | 25.10.2019 | | 56.00 | 9.00 | 4.00 | 69.00 | 36.52% | 139,343,675 | work program received, proposed completion -Nov'19 |
| | CoCC 2 -3 | Complete | 425,942,046.80 | 26.06.2018 | 25.10.2019 | | 48.00 | 8.00 | 2.00 | 58.00 | 49.39% | 210,376,787 | work program received, proposed completion-Sep'19 |
| | CoCC 2 -4 | Complete | 52,805,428.31 | 17.12.2017 | 16.12.2018 | 26.02.2019 | 38.00 | 1.00 | 5.00 | 44.00 | 24.94% | 13,172,104 | work program received, proposed completion-Jun'20 |
| | CoCC 2 -5 | Complete | 166,391,319.71 | 09.07.2018 | 30.09.2019 | | 25.00 | 20.00 | 5.00 | 50.00 | 35.02% | 58,265,835 | work program received, proposed completion-Sep'19 |
| | CoCC 2 -6 | Complete | 58,456,000.00 | 27.11.2018 | 26.11.2019 | | 12.00 | 1.00 | 2.00 | 15.00 | 0.00% | 0 | work program received, proposed completion-Nov'19 |
| | CoCC 2 -7 | Complete | 194,959,981.00 | 22.01.2018 | 21.01.2019 | 04.04.2019 | 27.00 | 3.00 | 8.00 | 38.00 | 24.94% | 48,615,900 | work program received, proposed completion-Sep'19 |
| | CoCC 2 -8 | Complete | 156,577,124.40 | 22.01.2018 | 21.01.2019 | 04.04.2019 | 90.00 | 0.00 | 0.00 | 90.00 | 78.52% | 122,936,936 | work program received, proposed completion-Sep'19 |
| | CoCC 2 -9 | Complete | 146,621,533.70 | 17.12.2017 | 16.12.2018 | 30.05.2019 | 74.00 | 0.00 | 0.00 | 74.00 | 56.45% | 82,760,635 | |
| | **Total** | | **1,687,410,885.61** | | | | **49.96** | **7.67** | **3.24** | **60.87** | **44.25%** | **746,735,073** | |
| Narayanganj City Corporation (NCC) | **Narayanganj City Corporation (NCC)** | | | | | | | | | | | | Aug'19 progress slightly dropped (2.38 % -->2.0 %). |
| | NCC 2 -1 | Contract signed | 54,712,711.00 | 01.08.2019 | 01.08.2020 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0 | Contract signed 1 Aug'19. Instruct the Contractor to submit work program. |
| | | previous contract | 26,000,235.68 | | | | 100.00 | 0.00 | 0.00 | 100.00 | 100.00% | 26,000,236 | |
| | NCC 2 -2 | Complete | 169,373,609.66 | 8.10.2017 | 03.10.2018 | 08.02.2019 | 96.00 | 4.00 | 0.00 | 100.00 | 91.37% | 154,749,276 | |
| | NCC 2 -3 | Contract signed | 286,296,019.00 | 01.08.2019 | 01.08.2020 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0 | Contract signed 1 Aug'19. Instruct the Contractor to submit work program. |
| | | previous contract | 70,660,117.00 | | | | 100.00 | 0.00 | 0.00 | 100.00 | 100.00% | 70,660,117 | |
| | NCC 2 -4 | Complete | 77,915,535.74 | 05.03.2017 | 28.02.2018 | 30.04.2019 | 88.00 | 1.00 | 1.00 | 90.00 | 74.33% | 57,918,468 | |
| | NCC 2 -5 | Complete | 184,594,977.81 | 05.03.2017 | 28.02.2018 | 30.06.2019 | 70.00 | 8.00 | 2.00 | 80.00 | 60.93% | 112,475,817 | |
| | NCC 2 - 6 | Complete | 48,235,730.63 | 05.03.2017 | 28.02.2018 | 20.04.2019 | 88.00 | 1.00 | 1.00 | 90.00 | 64.76% | 31,237,938 | |
| | NCC 2 -7 | Contract signed | 634,863,615.37 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0 | demolition commenced |
| | NCC 2-8 | Dropped | | | | | | | | 0.00 | 0.00% | | |
| | NCC 2 - 9 | Complete | 191,736,277.53 | 08.10.2017 | 03.10.2018 | 30.03.2019 | 100.00 | 0.00 | 0.00 | 100.00 | 86.98% | 166,775,445 | |
| | NCC 2-10 | Complete | 358,847,439.06 | 25.11.2018 | 19.03.2020 | | 16.00 | 9.00 | 9.00 | 34.00 | 31.61% | 113,416,504 | Instruct contractor to update work program |
| | NCC 2 -11 | Complete | 74,943,389.24 | 23.05.2017 | 17.05.2017 | 14.02.2019 | 100.00 | 0.00 | 0.00 | 100.00 | 88.68% | 66,462,008 | |
| | NCC 2 -12 | Complete | 106,811,358.00 | 8.10.2017 | 03.10.2018 | 10.03.2019 | 91.00 | 4.00 | 2.00 | 97.00 | 47.30% | 50,518,058 | |
| | | | | | | | | | | | | | |
| | **Total** | | **2,284,991,015.72** | | | | **40.30** | **2.60** | **1.72** | **44.62** | **37.21%** | **850,213,866** | |

NCC 2 - 10 **Critical Packages**

**Package subject to scope change**

**Dropped, or Cancelled, or packages require immediate action**

Source: ICGP loan consultant

*Attachment 4.4.1*
*Water Tariff at Each ULB*

## Attachment 4.4.1 Water Tariff at Each ULB

Gazipur (BDT/month)

| SI.No | Dia (mm Φ ) | Family | Residential | Non-Residential | Tin-Shed Family (for Low Income Group) | Residential | Non-Residential |
|---|---|---|---|---|---|---|---|
| 1 | 19mm Φ | 1 Family | 400 | 800 | Tin-Shed 1 Family | 400 | 800 |
| 2 | 19mm Φ | 2 Family | 600 | 1,200 | Tin-Shed 2 Family | 500 | 1,000 |
| 3 | 19mm Φ | 3 Family | 800 | 1,600 | Tin-Shed 3 Family | 600 | 1,200 |
| 4 | 19mm Φ | 4 Family | 1000 | 2,000 | Tin-Shed 4 Family | 700 | 1,400 |
| 5 | 19mm Φ | 5 Family | 1200 | 2,400 | Tin-Shed 5 Family | 800 | 1,600 |
| 6 | 19mm Φ | 6 Family | 1400 | 2,800 | Tin-Shed 6 Family | 900 | 1,800 |
| 7 | 19mm Φ | 7 Family | 1600 | 3,200 | Tin-Shed 7 Family | 1000 | 2,000 |
| 8 | 19mm Φ | 8 Family | 1800 | 3,600 | Tin-Shed 8 Family | 1100 | 2,200 |
| 9 | 19mm Φ | 9 Family | 2000 | 4,000 | Tin-Shed 9 Family | 1200 | 2,400 |
| 10 | 19mm Φ | 10 Family | 2200 | 4,400 | Tin-Shed 10 Family | 1300 | 2,600 |
| 11 | 19mm Φ | 11 Family | 2400 | 4,800 | Tin-Shed 11 Family | 1400 | 2,800 |
| 12 | 19mm Φ | 12 Family | 2600 | 5,200 | Tin-Shed 12 Family | 1500 | 3,000 |
| 13 | 19mm Φ | 13 Family | 2800 | 5,600 | Tin-Shed 13 Family | 1600 | 3,200 |
| 14 | 19mm Φ | 14 Family | 3000 | 6,000 | Tin-Shed 14 Family | 1700 | 3,400 |
| 15 | 19mm Φ | 15 Family | 3200 | 6,400 | Tin-Shed 15 Family | 1800 | 3,600 |
| 16 | 19mm Φ | 16 Family | 3400 | 6,800 | Tin-Shed 16 Family | 1900 | 3,800 |
| 17 | 19mm Φ | 17 Family | 3600 | 7,200 | Tin-Shed 17 Family | 2000 | 4,000 |
| 18 | 19mm Φ | 18 Family | 3800 | 7,600 | Tin-Shed 18 Family | 2100 | 4,200 |
| 19 | 19mm Φ | 19 Family | 4000 | 8,000 | Tin-Shed 19 Family | 2200 | 4,400 |
| 20 | 19mm Φ | 20 Family | 4200 | 8,400 | Tin-Shed 20 Family | 2300 | 4,600 |
| 21 | 25mm Φ | 1 Family | 800 | 1600 | Tin-Shed 1 Family | 800 | 1600 |
| 22 | 25mm Φ | 2 Family | 1000 | 2000 | Tin-Shed 2 Family | 900 | 1800 |
| 23 | 25mm Φ | 3 Family | 1200 | 2400 | Tin-Shed 3 Family | 1000 | 2000 |
| 24 | 25mm Φ | 4 Family | 1400 | 2800 | Tin-Shed 4 Family | 1100 | 2200 |
| 25 | 25mm Φ | 5 Family | 1600 | 3200 | Tin-Shed 5 Family | 1200 | 2400 |
| 26 | 25mm Φ | 6 Family | 1800 | 3600 | Tin-Shed 6 Family | 1300 | 2600 |
| 27 | 25mm Φ | 7 Family | 2000 | 4000 | Tin-Shed 7 Family | 1400 | 2800 |
| 28 | 25mm Φ | 8 Family | 2200 | 4400 | Tin-Shed 8 Family | 1500 | 3000 |
| 29 | 25mm Φ | 9 Family | 2400 | 4800 | Tin-Shed 9 Family | 1600 | 3200 |
| 30 | 25mm Φ | 10 Family | 2600 | 5200 | Tin-Shed 10 Family | 1700 | 3400 |
| 31 | 25mm Φ | 11 Family | 2800 | 5600 | Tin-Shed 11 Family | 1800 | 3600 |
| 32 | 25mm Φ | 12 Family | 3000 | 6000 | Tin-Shed 12 Family | 1900 | 3800 |
| 33 | 25mm Φ | 13 Family | 3200 | 6400 | Tin-Shed 13 Family | 2000 | 4000 |
| 34 | 25mm Φ | 14 Family | 3400 | 6800 | Tin-Shed 14 Family | 2100 | 4200 |
| 35 | 25mm Φ | 15 Family | 3600 | 7200 | Tin-Shed 15 Family | 2200 | 4400 |
| 36 | 25mm Φ | 16 Family | 3800 | 7600 | Tin-Shed 16 Family | 2300 | 4600 |
| 37 | 25mm Φ | 17 Family | 4000 | 8000 | Tin-Shed 17 Family | 2400 | 4800 |
| 38 | 25mm Φ | 18 Family | 4200 | 8400 | Tin-Shed 18 Family | 2500 | 5000 |
| 39 | 25mm Φ | 19 Family | 4400 | 8800 | Tin-Shed 19 Family | 2600 | 5200 |
| 40 | 25mm Φ | 20 Family | 4600 | 9200 | Tin-Shed 20 Family | 2700 | 5400 |

Note: Fixed rate based

Narayanganj (BDT/m3)

| SI.no | Residential | Non-Residential |
|---|---|---|
| 1 | 11.54 | 37.04 |

Note: Measured rate based

Cumilla (BDT/month)

| SI.no | Pipe Dia (mm Φ) | Residential | Institutional | Commercial | Industrial |
|---|---|---|---|---|---|
| 1 | 15mm Φ | 200 | 300 | 400 | 500 |
| 2 | 20mm Φ | 300 | 600 | 800 | 900 |
| 3 | 25mm Φ | 600 | 2,000 | 2,500 | 3,000 |
| 4 | 40mm Φ | 5,000 | 6,000 | 6,500 | 7,000 |
| 5 | 50mm Φ | 9,500 | 10,000 | 20,000 | 25,000 |
| 6 | 100mm Φ | 100,000 | - | - | - |

Note: Fixed rate based

Cox' Bazar (BDT/month)

| SI.no | Pipe Dia (mm Φ) | Residential | Non-Residential |
|---|---|---|---|
| 1 | 12mm Φ | 200 | 300 |
| 2 | 19mm Φ | 350 | 600 |
| 3 | 25mm Φ | 550 | 700 |

Note: Fixed rate based

Source: Each ULB engineering department

*Attachment 5.2.1*
*Comparison among Similar Projects, ICGP, MGSP, UGIIP-3*

**Attachment 5.2.1: Comparison among similar projects, ICGP, MGSP, UGIIP-3**

| | | ICGP | MGSP | UGIIP-3 |
|---|---|---|---|---|
| Project Period | | June 2014 – March 2020, 70 Months | December 2013 – June 2020, 79 months | July 2014 – Dec 2020, 78 months |
| Project Cost | | JPY 37,824 mil. | USD 471.76 mil. | USD 236 mil. |
| (1) | Donor | JPY 30,690 mil. | USD 410 mil, | ADB: USD 125 mil.,<br>OPEC: USD 40 mil. |
| (2) | GOB | JPY 7,134 mil. | GOB: USD 37.26 mil.,<br>ULBs: USD 24.50 mil. | USD 71 mil. |
| (3) | Estimated Cost for Construction Subprojects | JPY 22,363 mil. | USD 375.5 mil. (for total)<br>USD 28.61 mil. (for 18 months) | USD 138.9 mil. (for total)<br>USD 26.35 mil. (for 18 months) |
| (4) | No. of Construction Subprojects' Package | 134 | 50 (for 18 months) | 21 (for 18 months) |
| (5) | Average Estimated Cost of each Construction Subproject | JPY 166 mil. | USD 0.57 mil. | USD 1.25 mil. |
| Design Condition and Specification | | | | |
| (1) | Scope of Construction Subprojects | Transport, Drain Improvement, Water Supply System, Municipal Facilities | Drainage, Urban Transport, Sanitation, Municipal Facilities/Infrastructure, Water Supply, Solid Waste | Urban Road, Drainage, Water Supply, Solid Waste Management, Sanitation, Municipal Facilities, Basic Services in Slums |
| (2) | No. of Target ULBs | 5 | 26 | 30 |
| Procurement Method of Construction Subprojects | | | | |
| (1) | ICB or LCB/NCB | LCB | >= USD 10 mil.: ICB<br>< USD 10 mil.: NCB<br>< USD 10,000: National Shopping | > USD 4 mil.: ICB,<br>=< USD 4 mil., >= USD 100,000: NCB,<br>< USD 100,000: Shopping |

| | | ICGP | MGSP | UGIIP-3 |
|---|---|---|---|---|
| (2) | e-Tendering or Manual Tendering in case of LCB/NCB | e-Tendering | e-Tendering | e-Tendering |
| (3) | Pre-Qualification in case of LCB/NCB | Not required | Not required | Not required |
| Contract Conditions of Construction Subprojects in case of LCB/NCB | | | | |
| (1) | Lump-sum or Bill of Quantities (BOQ) | BOQ | BOQ | BOQ |
| (2) | Payment Schedule | Progress Payment | Progress Payment | Progress Payment |
| (3) | Advanced Payment | Depends on contract conditions. (Maximum 10%) | Depends on contract conditions. (Maximum 10%) | Depends on contract conditions. (Maximum 10%) |
| (4) | Retention Money | Depends on contract conditions. (Normally 10%) | Depends on contract conditions. (Normally 10%) | Depends on contract conditions. (Normally 10%) |
| (5) | Performance Security | Required (Normally 10%) | Required (Normally 10%) | Required (Normally 10%) |
| (6) | Price Adjustment | Applied if contract period is more than 18 months. | Applied if contract period is more than 18 months. | Applied if contract period is more than 18 months. |
| Construction Supervision in case of LCB/NCB | | | | |
| (1) | Quality Management | Project manager appointed by PE checks the works executed by the contractor. | Project manager appointed by PE checks the works executed by the contractor. | Project manager appointed by PE checks the works executed by the contractor. |
| (2) | Time Management | Contractor submits work schedule at the beginning and proceed work with the schedule | Contractor submits work schedule at the beginning and proceed work with the schedule | Contractor submits work schedule at the beginning and proceed work with the schedule |
| (3) | Safety Management | Contractor has full responsibility to take all necessity safety measures | Contractor has full responsibility to take all necessity safety measures | Contractor has full responsibility to take all necessity safety measures |

*Source: Compiled by JICA Survey Team based on The Project for Developing Inclusive City Governance for City Corporation: Final Report, March 2014, Project Appraisal Document for Municipal Governance and Services Project, November 26, 2013, and Third Urban Governance and Infrastructure Improvement (Sector) Project: Project Administration Manual, July 2016*

*Attachment 5.2.2*
*Area/activities Evaluated under Performance-based Approaches (UGIIP and MGSP)*

**Attachment 5.2.2 Area/activities Evaluated under Performance-based Approaches (UGIIP and MGSP)**

| UGIIP Phase-1 | UGIIP Phase-2 | | | UGIIP Phase-3 | MGSP |
|---|---|---|---|---|---|
| | Phase-I | Phase-II | Phase-III | | |
| **1. Urban Governance**<br>1-1. Citizen's awareness and participation<br>1-2. Women's participation<br>1-3. Integration of the urban poor<br>1-4. Financial accountability and sustainability<br>1-5. Administrative transparency | 1. Town-level coordination committee established and operating according to the guidelines<br>2. Ward-level coordination committees established and operating according to the guidelines<br>3. Community-based organizations established<br>4. Formation of a gender committee headed by female ward commissioners<br>5. Planning unit established in Paurashava<br>6. Paurashava development plan prepared, including poverty reduction action plan and gender action plan<br>7. Interim assessment of holding tax carried out | **1. Citizen awareness and participation**<br>1-1. Citizen charter approved by town-level coordination committee (TLCC) and displayed at the Paurashava office<br>1-2. Citizens report cards prepared, approved, and implemented by the TLCC<br>1-3. Grievance redress cell established with clear terms of reference and made functional<br>1-4. TLCC and WLCC (Ward Level of Coordination Committee) meetings held on a regular basis<br>1-5. Budget proposal compared with the budget and actual outlays in the previous year, displayed at the Paurashava office, and discussed at TLCC meetings<br>1-6. Mass-communication cell established and campaign plan developed and implemented as planned<br>**2. Urban Planning**<br>2-1. Base map verified and updated land use plan prepared<br>2-2. Annual operation and maintenance (O&M) plan, including budget requirement, prepared and approved as part of Paurashava development plan (PDP)<br>2-3. A full-time Paurashava urban planner recruited (class A Paurashavas only)<br>**3. Women's participation**<br>3-1. Gender action plan (GAP) prepared and included in the PDP | None | **1. Citizen Awareness and Participation**<br>1-1. Formation and working of committee for exchange of views with the Paurashava citizens: commonly known as TLCC<br>1-2. Formation and working of ward committee<br>1-3. Preparation and implementation of citizen charter<br>1-4. Formation and working of Information and Grievance Redress Cell (IGRC)<br>**2. Urban Planning**<br>2-1. Preparation and implementation of Paurashava Development Plan<br>2-2. Control of development activities<br>2-3. Preparing annual O&M plan including budget provision<br>**3. Equity and Inclusiveness of Women and Urban Poor**<br>3-1. Form & activate Standing Committee (SC) on women & children to prepare & steer customized GAP (Gender Action Plan)<br>3-2. Form & activate SC on poverty reduction & slum improvement to prepare and steer customized PRAP<br>3-3. Form Slum Improvement Committee to implement slum improvement activities<br>**4. Enhancement of Local Resource Mobilization**<br>4-1. Revenue mobilization through holding tax<br>4-2. Revenue mobilization through collection of indirect taxes & fees from other sources (Other than Holding Tax)<br>4-3. Computerize tax record system and generate computerized tax bill<br>4-4. Fixation and collection of water tariff | **1. Municipal Planning Processes**<br>1-1. Capital Investment Plan<br>1-2. Annual O&M plan<br>**2. Social accountability strengthening**<br>2-1. Town Level Coordination Committee (TLCC) and Ward Level Coordination Committee (WLCC)<br>2-2. Grievance Redress Cell (GRC)<br>2-3. Inclusive Budget Process<br>**3. Public Financial Management & Public Revenues**<br>3-1. Computerized accounting system and computer-generated accounting reports (including computerized tax-record system and computer- |

| | | | | | |
|---|---|---|---|---|---|
| | | 3-2. Budget to implement GAP identified and approved<br>**4. Integration of the urban poor**<br>4-1. Slum improvement committees (SICs) established in targeted slums<br>4-2. Poverty reduction action plan (PRAP) prepared and included in the PDP<br>4-3. Budget allocation for PRAP<br>**5. Financial accountability and sustainability**<br>5-1. Computerized accounting system introduced and computer-generated accounting reports produced<br>5-2. Computerized tax record system introduced and computer-generated bills produced<br>5-3. Financial statements prepared and account and audit standing committee carry out audit within 3 months after closure of fiscal year<br>5-4. Interim tax assessment carried out annually and collection increased<br>5-5. Non-tax own revenue source increased at least by inflation rate<br>5-6. All debts due to Government of Bangladesh and other entities fully repaid according to schedule and ratio of debt servicing to annual revenue receipts remain less than 25%<br>5-7. All outstanding bills older than 3 months, including electricity and telephone, paid in full<br>**6. Administrative transparency**<br>6-1. Development of adequate staff structure (according to size and needs) with detailed job descriptions to enable the Paurashava to effectively | | **5. Financial Management, Accountability and Sustainability**<br>5-1. Preparation of annual Paurashava budget with involvement of Standing Committee on establishment & finance<br>5-2. Carrying out audit of accounts with involvement of standing committee on accounts & audit<br>5-3. Establishing computerized accounting system & generating computerized accounting reports<br>5-4. Payment of electric & telephone bills<br>5-5. Carrying out inventory of fixed assets, opening of fixed asset register, designing fixed asset database and creation of fixed asset depreciation fund account<br>5-6. Repayment of all GoB (Government of Bangladesh) loans<br>**6. Administrative Transparency**<br>6-1. Formation and working of standing committees<br>6-2. Ensure participation and assistance in conducting all training programmes<br>6-3. Using Improved Information Technology (IIT) for good governance<br>**7. Keeping Essential Paurashava Services Functional**<br>7-1. Collection, disposal and management of solid waste<br>7-2. Cleaning and maintenance of drains<br>7-3. Arrangement for making street lighting functional<br>7-4. Carrying out Operation & Maintenance (O&M) of infrastructure & establishment & operation of Mobile Maintenance Team (MMT)<br>7-5. Managing sanitation | generated billing reports)<br>3-2. Property assessment carried out regularly<br>3-3. Tax collection effort<br>3-4. Non-tax own revenue source management<br>3-5. Settlement of outstanding bills, especially for services (power & telephone, etc.) by GoB & other agencies during project implementation period |

| | | | | | |
|---|---|---|---|---|---|
| | | undertake its current and future obligations<br>6-2. Elected representatives, Paurashava officials, and concerned citizens actively participate in training programs<br>6-3. Progress report on Urban Governance Improvement Action Program implementation and other activities submitted on time to project management office<br>6-4. Standing committees established and/or activated<br>6-5. Ensuring evaluation and monitoring by regional Local Government Engineering Department on progress and quality of physical works<br>6-6. Activities for e-governance initiated | | | |

Reference: Project Appraisal Document Bangladesh - Municipal Governance and Services Project (English), Completion Report of Urban Governance and Infrastructure Improvement (Sector) Project, Completion Report of Second Urban Governance and Infrastructure Improvement (Sector) Project, Project Administration Manual and Report and Recommendation of the President to the Board of Directors of Third Urban Governance and Infrastructure Improvement (Sector) Project

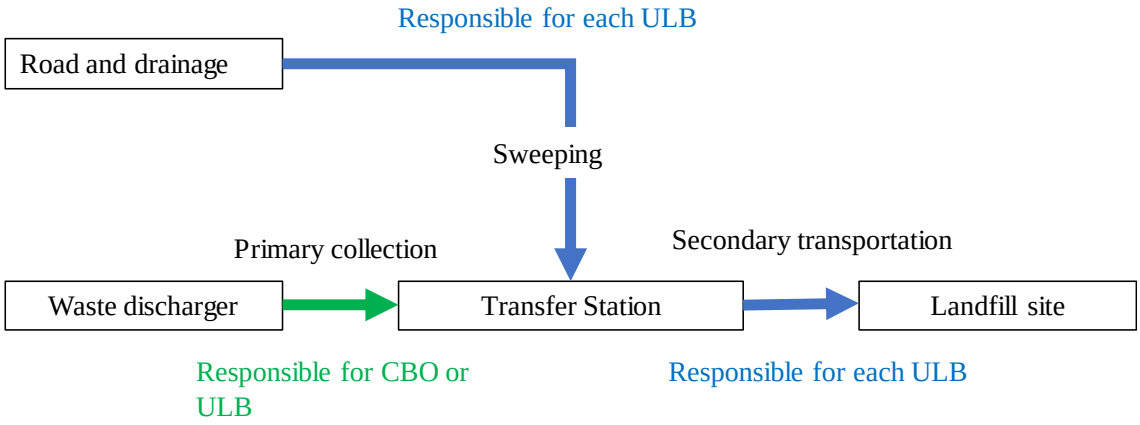
Source: JICA Survey Team

*Attachment 7.1.1*
*Implementation of Pilot Activities (Improvement of Collection and Transportation) for Solid Waste Management*

## Attachment 7.1.1: Implementation of Pilot Activities (Improvement of Collection and Transportation) for Solid Waste Management

### 1. Background and Objectives

Waste collection and transportation system in each Urban Local Body (ULB) are divided into the parts of road and drainage sweeping, primary collection and secondary transportation. The primary collection is implemented by each ULB or Community Based Organizations (CBO) and secondary collection is implemented by ULBs. Sweeping is implemented by each ULB. The waste flow of generation from final disposal is basically shown as following figures.




Though waste collection and transportation has been basically implemented by the above system in each ULB, waste is scattered in transfer stations and along roads. Current situation of transfer station and roads are shown as follows.

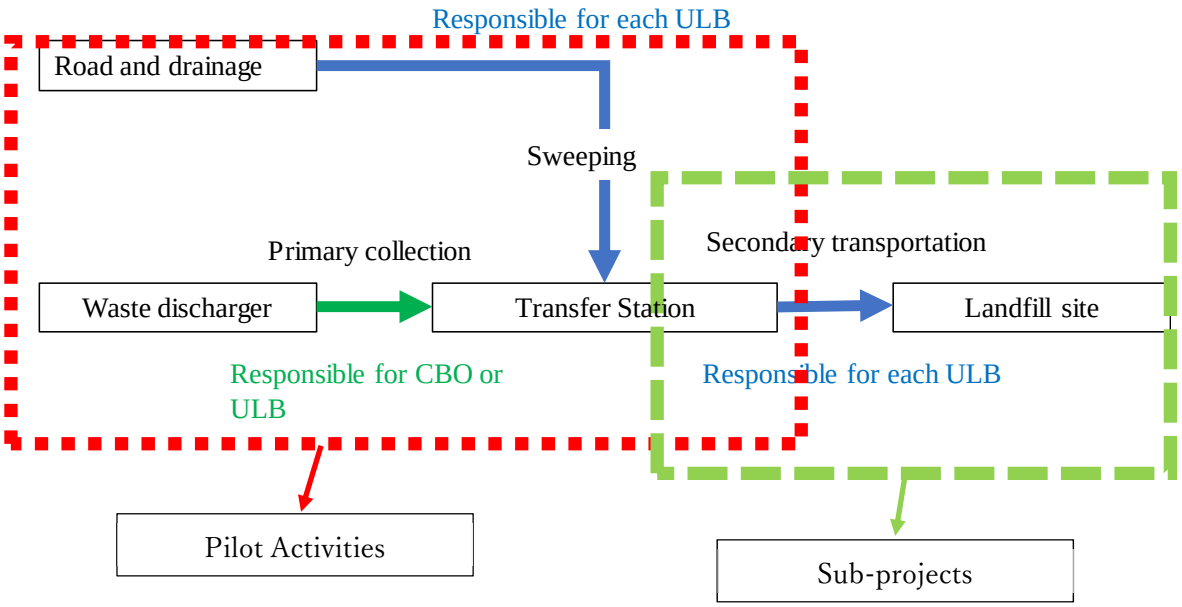
| | |
|---|---|
|  |  |
| Unloading from primary collection vehicle at transfer station | Temporary storage at transfer station |

| | |
|---|---|
|  |  |
| Temporary storage at transfer station (Preparation for loading to secondary transportation vehicle) | Loading to secondary transportation vehicle at transfer station |

Based on the field observation, the main issues are identified as follows;

1) There is no primary collection and secondary transportation plans for smooth operation which causes the unorganized situation in transfer stations
2) Though there are many road sweepers but there is no concrete plan for their work like working time or responsible area
3) After waste is unloaded and scattered in ground from primary collection, it is loaded to secondary transportation vehicle. Therefore, waste is remained after loading.
4) There is no monitoring system in transfer stations or vacant area along road or drainage. Some of the people dump waste in waste scattering area because they think that they can dump their waste. Therefore, it is necessary to set the monitoring staff and to involve neighboring residents for monitoring activities to prevent illegal dump in waste as well as they clean the area
5) There is enough equipment for secondary transportation or equipment for transfer the waste effectively

Except the issue related 5), it can be implemented before the procurement of equipment, which will be implemented in sub-projects. Therefore, the Pilot Activity is implemented before sub-projects which is procurement of equipment or facility construction. The components of the pilot activities and the sub-project are shown in the following figure.




## 2. Area for Pilot Activity

The area for the pilot activity will be selected based on the following criteria

- Selection one or two wards in each ULB
- Enthusiasm of ward level for pilot activity
- Effectiveness of pilot activity
- Easy access area to demonstrate the staff of ULB
- Synergistic effect with subproject
- Possible other factors will be discussed in the planning stage for final selection

## 3. Target Situation to be achieved by Pilot Activities

Pilot activities are implemented based on the Ward Based Approach (WBA)[1], such as community based solid waste management. The target situation of the Pilot activities are as follows.

1) Road sweeper or waste collector set the bucket for waste in primary collection vehicle such as rickshaw van or hand cart during primary collection
2) The waste collector collects the waste from each waste discharger and road sweeper sweep the road and collect the waste to the bucket in primary collection vehicles
3) A bucket can be used for each type of waste such as recyclable or residual based on the situation
4) The waste is loaded into secondary transportation vehicle from the bucket without unloading transfer stations because waste has already been in the buckets
5) If there are time difference between unloading time from primary collection vehicle and loading time to secondary transportation vehicle, the waste can be storage in the transfer point within the bucket

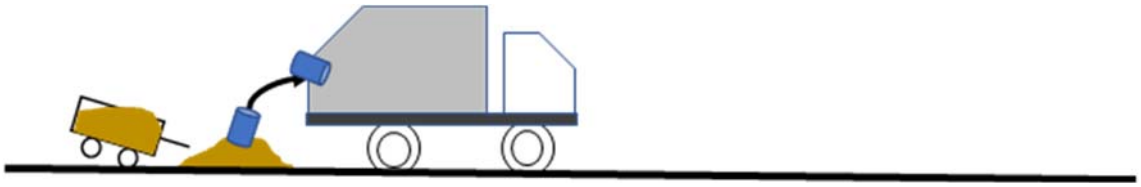
[1] WBA is Ward Based Approach applied in DNCC or DSCC successfully for community based solid waste management

without scattering in surrounding area.

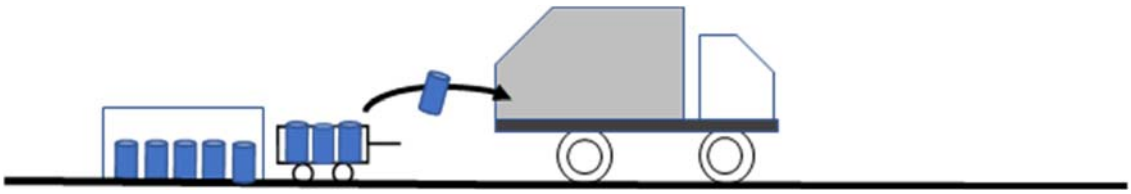
6) Platform for transferring waste or storage area of the buckets, scheduling and route setting collection and transportation should be prepared based on the condition of each target ward

The current situation and improved situation are shown as following figure.

(1) Current situation



(2) Improved situation



## 4. Necessary Performance by each actor

### 4.1 Primary collection

- Prepare the plan for primary collection including collection area and route, schedule and responsible persons such as collectors, etc by each ULB through discussion with CBO, with assistance of consultant
- Explain the waste dischargers about the plan to be understood concisely
- Allocate the necessary responsible persons and equipment (collection vehicle and buckets, etc)
- Implementation of the primary collection based on the plan
- Monitoring the implementation to feed back the planning revision, if necessary

### 4.2 Road and drainage sweeping

- Prepare the plan for road and drainage sweeping including sweeping area and schedule and responsible persons such as sweepers, etc by each ULB with assistance of consultant
- Allocate the necessary responsible persons and equipment (sweeping equipment, collection vehicle and buckets, etc)
- Implementation of the road and drainage sweeping based on the plan
- Monitoring the implementation to feed back the planning revision, if necessary

### 4.3 Waste transfer

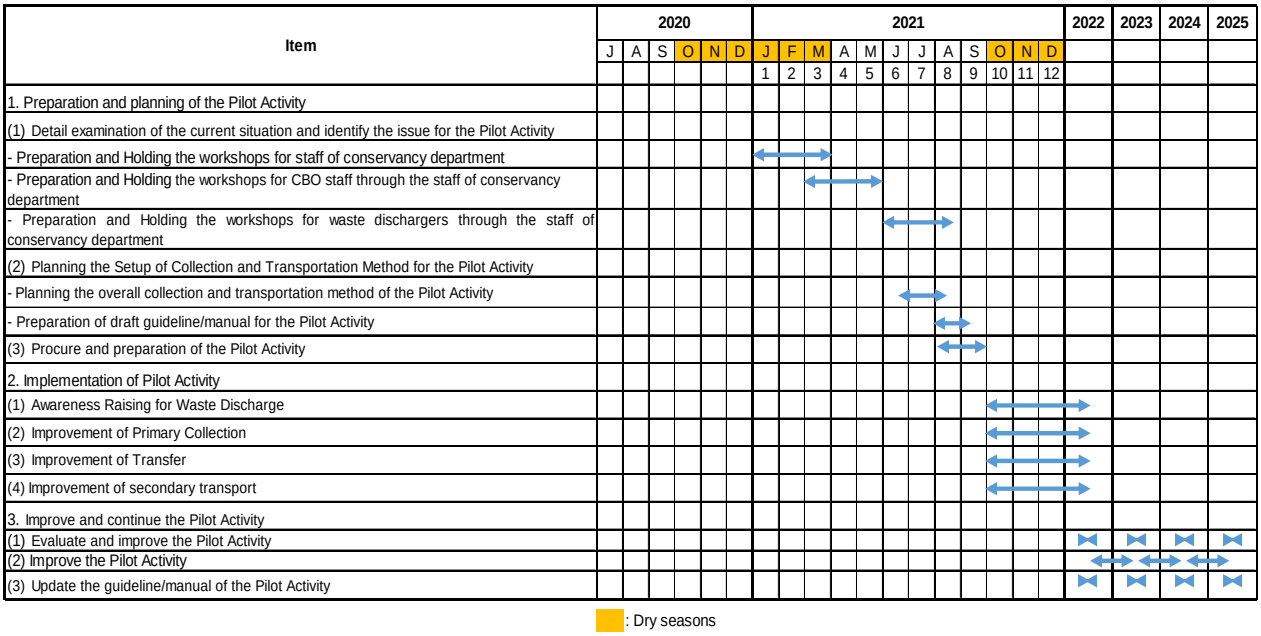
- Prepare the plan for waste transfer including transfer point, schedule and responsible persons to monitor the point by each ULB with assistance of consultant
- Allocate the necessary responsible persons and equipment (collection vehicle and buckets, etc)
- Implementation of the waste transfer based on the plan
- Monitoring the implementation to feed back the planning revision, if necessary

### 4.4 Secondary transportation

- Prepare the plan for secondary transportation including transfer point, route, schedule and responsible persons, etc by each ULB with assistance of consultant
- Allocate the necessary responsible persons and equipment (collection vehicle and buckets, etc)
- Implementation of the primary collection based on the plan
- Monitoring the implementation to feed back the planning revision, if necessary

## 5. Schedule of Pilot Activities

The preliminary schedule each activity to implementation of the Pilot Activities are shown as follows.




## 6. Evaluation criteria for Performance-based Approach

Performance Base evaluation criteria are set to evaluate the set-up situation of pilot activity with its sustainability.

| Activities/evaluation criteria | | Score proportion | |
|---|---|---|---|
| Primary collection | Preparation of the plan for primary collection | 35 | 10 |
| | Allocation for the necessary staff, equipment, and resources (budget) based on the plan including organogram approval | | 10 |
| | Implementation of primary collection based on the plan<br>Implement public awareness and 3R promotion activities based on the plan. | | 15 |
| Road and drainage sweeping | Preparation of the plan for road sweeping | 20 | 5 |
| | Allocation for the necessary staff, equipment, and resources (budget) based on the plan | | 7 |
| | Implementation of road and drainage sweeping based on the plan | | 8 |
| Transfer station | Preparation of the plan for transfer activities from primary collection vehicle to secondary transportation vehicle | 20 | 5 |
| | Allocation for the necessary staff and equipment based on the plan | | 7 |
| | Implementation of transfer activity based on the plan | | 8 |
| Secondary transportation | Preparation of the plan for secondary transportation | 25 | 5 |
| | Allocation for the necessary staff and equipment based on the plan | | 10 |
| | Implementation of secondary transportation based on the plan | | 10 |

## 7. Operation and Effect Indicator

### 7.1 Quantitative Indicator

To evaluate the operation and maintenance situation, the following items is preliminary set.

| Item | Contents of indicator | Methodology |
|---|---|---|
| Number of suitably operated transfer Number of Transfer station operated according to the transfer plan in pilot areas (number) | Based on the plan, number of transfer stations where there is no waste scattering | Measurement of transfer station |
| Transferring Time in pilot wards | Transfer time from primary collection vehicle to secondary transport vehicle | Measurement of transferring time |
| Collection rate and amount of recyclable waste in pilot wards | Amount of collected recyclable waste | Measurement of the number of the bucket for recyclable waste and the weight of recyclable as some samples |
| | Rate of collected recyclable waste per waste generation quantity | Measurement of recyclable and residual waste based on the number of bucket |

### 7.2 Qualitative Indicator

| Item | Contents of indicator | Methodology |
|---|---|---|
| Cleansing situation in the transfer stations/points in pilot wards | Cleansing situation of transfer stations and points | Comparison by pictures |
| Cleansing situation along streets in pilot wards | Cleansing situation of road or drainage | Comparison by pictures |
| Awareness of primary collector in pilot wards | Compliance rate of work rule | Check by check sheet |
| Public awareness in pilot wards | Public awareness on cleansing activity or condition | Questionnaire survey |

*Attachment 7.2.1*
*Organogram of LGED*

# ATTACHMENT 7.2.1 ORGANOGRAM

## Local Government Division

## LOCAL GOVERNMENT ENGINEERING DEPARTMENT

**LEGEND:**

| | | | |
|---|---|---|---|
| CE | : Chief Engineer | CO | : Community Organizer |
| Asst.CE | : Assistant Chief Engineer | Pro.O | : Promotion Officer |
| ACE | : Additional Chief Engineer | APro.O | : Assistant Promotion Officer |
| SE | : Superintending Engineer | LO | : Law Officer |
| EE | : Executive Engineer (Civil) | St.Gr/Co | : Steno Gr./Computer Oprtr |
| Sr. (Socio.) | : Sociologist | St.Typst/Co | : Steno Typist/Comp. Oprtr |
| Sr.Sy.An | : Senior System Analyst | OACumTypist/Co | : Off.Asst-Cum-Typist/Co. |
| UP | : Urban Planner | Dup.Mach.Oprtr | : Duplicating Machine Oprtr |
| Trans.Eco | : Transport Economist | Amn.Mach.Oprtr | : Ammonia Machine Oprtr |
| Sr.AE | : Senior Assistant Engineer (Civil) | | |
| UE | : Upazila Engineer | | |
| AE | : Assistant Engineer | | |
| UAE | : Upazila Assistant Engineer | | |
| SAE | : Sub Assistant Engineer | | |
| WA | : Works Assistant | | |
| MF | : Mechanical Foreman | | |
| LT | : Laboratory Technician | | |

**Total Manpower : 13394**

**Chief Engineer**
Total Manpower: 5

| | |
|---|---|
| 1 Chief Engineer | 1 Driver |
| 1 St.Gr/CO | 2 MLSS |

**Manpower**

| | |
|---|---|
| Permanent Manpower | 10564 |
| Temporary Manpower | 2211 |
| Outsourcing Manpower | 619 |
| **Total Manpower** | **13394** |

**Summary of manpower according to operation unit**

| Operation units | Total Positions |
|---|---|
| Headquarter Level | 319 |
| Division Level ( Division-8) | 110 |
| Regional Level (Region -20) | 300 |
| District Level (District-64) | 2156 |
| Upazila Level (Upazila-491) | 10305 |
| Deputation (District Council-61 & Hill Track District -3) | 204 |
| **Total Manpower** | **13394** |

### Asst. Chief Engineer
Manpower : 4

| | |
|---|---|
| 1 Asst.CE | 1 Driver |
| 1 St.Typst/CO | 1 MLSS |

### Deputation Post
Manpower : 204

| | |
|---|---|
| 1 EE | 73 SAE |
| 67 AE | 61 WA |

### Rural Infrastructure Development and Management Unit
Manpower : 5

| | |
|---|---|
| 1 ACE | 1 Driver |
| 1 AE | 2 MLSS |

#### Road Implementation Branch
Manpower : 19

| | |
|---|---|
| 1 SE (R.I) | 1 St.Gr/CO |
| 2 EE (R.I) | 1 Driver |
| 1 OACumTypst/CO | 2 MLSS |

#### Building Management and bridge Implementation

| | |
|---|---|
| 2 EE (Br.I) | 1 St.Gr/CO |
| 1 EE (B.I) | 1 St.Typst/CO |
| 1 AE (Br.I) | 3 OACumTypst/CO |
| 1 AE | 1 MLSS |

### Road and Bridge Maintenance Unit
Manpower : 5

| | |
|---|---|
| 1 ACE | 1 Driver |
| 1 AE (R.M) | 1 MLSS |
| 1 St.Typst/CO | |

#### Road Maintenance
Manpower : 20

| | |
|---|---|
| 1 SE (R.M) | 1 St.Typst/CO |
| 1 EE (R.M) | 1 Surveyor |
| 1 Sr.AE | 1 Driver |
| 1 AE (R.M) | 1 MLSS |
| 1 St.Gr/CO | 1 MLSS |

#### Road Maintenance Security Branch

| | |
|---|---|
| 1 EE (Br.M) | 1 St.Gr/CO |
| 1 EE (R.S) | 1 St.Typst/CO |
| 1 AE (Br.M) | 1 Driver |
| 1 AE (R.S) | 1 MLSS |
| 1 Est.(SAE) | 1 MLSS |

### Administration Unit

#### Recruitment and posting Branch
Manpower : 84

| | |
|---|---|
| 1 SE | 1 Account Asst. |
| 1 EE (Admin) | 4 H Asst. |
| 1 EE (Eco.) | 1 St.Typst/C |
| 1 Sr.AE (Admin.) | 2 OACumTypst/CO |
| 1 Sr.AE (Admin.) | 1 Moazzen |
| 1 Pro.O | 2 Driver |
| 1 APro.O | 1 Amn.Mach.Oprtr |
| 1 Account. Officer | 1 Dup.Mach.Oprtr |
| 1 Imam | 4 MLSS |
| 1 Accountant | 1 Mali |
| 1 Chief Asst. | 2 Clinic staff |
| 1 St.Gr/CO | |

#### Discipline & Investigation Branch

| | |
|---|---|
| 1 EE (D&Invst) | 1OACumTypst/CO |
| 1 EE ((D&Invst) | 1 Driver |
| 1 Sr.AE(D&Invst) | 2 MLSS |
| 1 Accountant | 2 MLSS |
| 1 Account Asst. | 2 Clinic staff |
| 1 St.Typst/CO | |

#### Law Branch

| | |
|---|---|
| 1 Law O | 2OACumTypst/CO |
| 1 Law O | 1 Driver |
| 1 St.Typst/CO | 1 MLSS |

#### Electro-Mechanical Branch

| | |
|---|---|
| 1 EE (Mecha.) | 1 Mechanic |
| 1 EE (Mecha.) | 2 Mechanic |
| 1 Sr.AE (Mecha.) | 1 St.Gr/CO |
| 1 Sr.AE (Mecha.) | 1 St.Typst/CO |
| 1 AE | 3OACumTypst/CO |
| 1 AE | 1 Electrician |
| 1 AE(Mecha.) | 6 Lift Operator |
| 1 MF | 1 Driver |
| 1 MF | 1 MLSS |
| 2 SAE | 4 Clinic staff |
| 1 Accountant | |

### Urban Management Unit
Manpower : 4

| | |
|---|---|
| 1 ACE | 1 Driver |
| 1 St.Gr/CO | 1 MLSS |

#### Urban Management Branch
Manpower : 13

| | |
|---|---|
| 1 SE(UP &UID) | |
| 2 EE (UID) | |
| 2 EE (UP) | |
| 1 Urban Planner | |
| 1 Asst.Urban Planner | |
| 1 St.Gr/CO | |
| 1 St.Typst/CO | |
| 1 Driver | |
| 3 MLSS | |

### Planning & Design Unit
Manpower : 4

| | |
|---|---|
| 1 ACE | 1 Driver |
| 1 St.Typst/CO | 1 MLSS |

#### Bridge Design Branch
Manpower : 15

| | |
|---|---|
| 1 SE (Br.D) | 1 OACumTypst/CO |
| 3 EE (Br.D) | 1 Driver |
| 2 AE (Br.D) | 1 MLSS |
| 2 Draftsman | 2 MLSS |
| 2 Estimator (SAE) | |

#### Road Design Unit
Manpower : 14

| | |
|---|---|
| 1 SE (Rd &B.D) | 2 Draftsman |
| 2 EE (Rd.D) | 2 St.Gr/CO |
| 1 Transport Economist | 1 OACumTypst/CO |
| 1 Estimator (SAE) | 1 Driver |
| | 3 MLSS |

#### Building Design Branch
Manpower : 9

| | |
|---|---|
| 1 Sr. Architect | 1 Asst.Architect |
| 2 EE (B.D) | 1 St.Gr/CO |
| 1 Architect | 1 MLSS |
| 1 AE (B.D) | 1 MLSS |

#### Planning Branch
Manpower : 11

| | |
|---|---|
| 1 SE (P.Research) | 2 St.Typst/CO |
| 2 EE (P) | 1 MLSS |
| 1 Statisticians | 2 MLSS |
| 2 AE (P) | |

### Monitoring, Audit & Procurement Unit
Manpower : 5

| | |
|---|---|
| 1 ACE | 1 Driver |
| 1 AE | 1 MLSS |
| 1 OACumTypst/CO | |

#### Monitoring & Evaluation Branch
Manpower : 13

| | |
|---|---|
| 1 SE (Mo.&E) | 1 A.Pro.O |
| 2 EE (Mo.&E) | 1 OACumTypst/CO |
| 1 EE (Mo.&E) | 1 Driver |
| 1 Pro.O | 4 MLSS |
| 1 AE (Mo.&E) | |

#### Procurement Branch
Manpower : 9

| | |
|---|---|
| 1 SE (Procure.) | 1 OACumTypst/CO |
| 1 EE (Procure.) | 1 Driver |
| 2 Sr.AE(Procure.) | 3 MLSS |

#### Audit Branch
Manpower : 6

| | |
|---|---|
| 2 EE (Audit) | 1 OACumTypst/CO |
| 1 AE (Audit) | 2 MLSS |

#### ICT Branch
Manpower : 9

| | |
|---|---|
| 1 SE (ICT) | 1 EE (MIS) |
| 1 Sr.System Analyst | 1 APro.O |
| | 1 OACumTypst/CO |
| 1 System Analyst | 2 MLSS |
| 1 SE (GIS) | |

### Human Resources Unit
Manpower : 6

| | |
|---|---|
| 1 ACE | 1 OACumTypst/CO |
| 1 AE | 1 Driver |
| 1 Accountant | 1 MLSS |

#### Human Resource Branch
Manpower : 10

| | |
|---|---|
| 1 SE (HR, E&G) | |
| 4 EE (HR) | 2 OACumTypst/CO |
| 1 AE (HR) | 2 MLSS |

#### Environment & Gender Branch
Manpower : 5

| | |
|---|---|
| 1 Env.E (EE.) | 1 OACumTypst/CO |
| 1 EE (E&G.) | 1 MLSS |
| 1 AE (E&G.) | |

#### Quality Control Branch
Manpower : 12

| | |
|---|---|
| 1 SE (QC) | 1 AE(QC) |
| 1 EE (QCt) | 1 OACumTypst/CO |
| 1 EE(QC) | 2 Lab Asst. |
| 2 Sr.AE(QC) | 2 MLSS |
| 1 AE (QC) | |

### Water Resource Unit
Manpower : 5

| | |
|---|---|
| 1 ACE | |
| 1 Accountant | 1 Driver |
| 1 OACumTypst/CO | 1 MLSS |

#### Water Resource Maintenance Branch
Manpower : 15

| | |
|---|---|
| 1 SE (O&M) | 1 St.Typst/CO |
| 2 EE (W&M) | 1 C.Operation |
| 3 SrAE (P&M) | 2 Driver |
| 1 AE (P&M) | 1 MLSS |
| 1 AE (W&M) | 2 MLSS |

#### Water Resource Infrastructure Planning Branch
Manpower : 12

| | |
|---|---|
| 1 SE(P And D) | 1 AE (P&M) |
| 1 SE (P&D) | 1 Sociologist |
| 1 Sr. (Socio.) | 1 St.Typst/CO |
| 1 Agronomist | 1 OACumTypst/CO |
| 1 Aqua culturist | 1 MLSS |
| 1 Sr.AE(WRP) | 1 MLSS |

**FIELD LEVEL**

### Dhaka Division
Total Manpower : 16

Dhaka,Narayangong,Faridpur& Madaripur Region
Total Manpower : 60

District Level (District-13)
Total Manpower : 435

Upazila Level (Upazila-88)
Total Manpower : 1848

### Mymensingh Division
Total Manpower : 13

Mymensingh Region
Total Manpower : 15

District Level (District-4)
Total Manpower : 136

Upazila Level (Upazila-35)
Total Manpower : 735

### Chittagong Division
Total Manpower : 13

Chittagong,Cumilla,Rangamati& Noahkhali Region
Total Manpower : 60

District Level (District-11)
Total Manpower : 375

Upazila Level (Upazila-103)
Total Manpower : 2157

### Sylhet Division
Total Manpower : 13

Sylhet Region
Total Manpower : 15

District Level (District-4)
Total Manpower : 134

Upazila Level (Upazila-39)
Total Manpower : 819

### Barisal Division
Total Manpower : 13

Barisal & Potuakhali Region
Total Manpower : 30

District Level (District-6)
Total Manpower : 202

Upazila Level (Upazila-42)
Total Manpower : 882

### Khulna Division
Total Manpower : 13

Khulna,Jessore & Kustia Region
Total Manpower : 45

District Level (District-10)
Total Manpower : 336

Upazila Level (Upazila-59)
Total Manpower : 1239

### Rangpur Division
Total Manpower : 13

Rangpur & Dinajpur Region
Total Manpower : 30

District Level (District-8)
Total Manpower : 268

Upazila Level (Upazila-58)
Total Manpower : 1218

### Rajshahi Division
Total Manpower : 16

Rajshahi ,Bagura & Pabna Region
Total Manpower : 45

District Level (District-8)
Total Manpower : 270

Upazila Level (Upazila-67)
Total Manpower : 1407

Source : LGED Website ( http://www.lged.gov.bd/site/organogram/801e93a1-54f4-4867-8fae-b24629b18b50 )

*Attachment 7.6.1*
*Estimated Method of Operation and Effect Indicators (Infrastructure)*

**Attachment 7.6.1: Estimated Method of Operation and Effect Indicators (Infrastructure)**

## 1. Operation and Effect Indicators

Current idea of the operation and effect indicators is shown in the table below:

Table 1 Proposed Operation and Effect Indicators

| Road and bridge | Bus terminal | Drainage | Water Supply | Solid Waste Management | Other Infra |
|---|---|---|---|---|---|
| ・Annual Average traffic volume (pcu) /day<br>・Time Saving (Reduction of travel time) (minutes /10km) | ・Capacity of bus terminal (No of bus parking place)<br>・Average number of passengers per day (people) | ・Beneficiary Population (Person)<br>・No. of suffered household from inundation (Household)<br>・Area of suffered area from inundation (m2) | ・Beneficiary Population (person)<br>・Amount of Water Supply (M3/day)<br>・Coverage Ratio (%) | (1) Subproject of collection and transportation<br>・Collected Waste Quantity (ton/day)<br>・Collection rate of waste (%)<br>・Reduction of places of illegal and/or unsanitary disposal (%)<br>(2) Subproject of landfill extension/ development<br>・Final Disposed Waste Quantity in Sanitary Landfill Site (m3)<br>・Rate of sanitary landfill (%)<br>(3) Subproject of closure of existing open dumping site<br>・finally covered area as sanitary manner (ha)<br>・Rate of sanitary landfill (%) | ・Beneficiary of Street Light<br>・Beneficiary of Buildings<br>・Beneficiary of Play Ground<br>・Beneficiary of Kitchen Market<br>・Beneficiary of Public Place |

*Source: JICA survey team*

Baseline figures are as of 2019, and target year is set as of 2028, two years after the completion of the project.

## 2. Methodology to estimate OEI for the Survey Work

Methodology to estimate O&E indicators in this survey is as follows:

(1) Road and Bridges:

Table 2 Estimation method for road and Bridges OEIs

| Items | Present (Year 2019) | Future/After completion (Year 2028) |
|---|---|---|
| 1) Annual average daily traffic (pcu/day) | Based on data from “Online roa network RHD” | Traffic volume base on growth rate 2014 – 2025 in RSTP 1/<br>Gazipur: 1.82<br>Narayanganj: 1.73<br>Estimate due to no available data<br>Cumilla, Cox’s Bazar: 1.70 |
| 2) Time saving (minutes/10km) | Based on actual count in the city area | 15 to 20 minutes / 10km (30 to 40 km / hr.) |

*1/ RSTP: The Project on the revision and updating of the Strategic Transport Plan for Dhaka*

*Source: JICA survey team*

(2) Bus terminal

Capacity of bus terminal

- Present data of those terminal was estimated based on the area size. Target figures are counted based on preliminary layout of terminal.

Numbers of passenger served by the terminal

- For the calculation of present passenger data of CBP, this was prepared assuming user people who use the terminal from actually possible bus operation schedule. Through this, present (2019) passenger numbers were computed for CBP's bus terminal. After that, future passenger (2030) of CBP's terminal was processed, referring projected rate of floating people growth as calculated based on floating city population in 2019 (around 30% of total population) and floating city population in 2030 taken from Paurashava Development Plan (PDP) of CBP. Floating population of city could be used as a proxy of passengers of bus terminal.
- After assessing CBP's future passenger data, other terminal's future passenger data was calculated, focusing on mutual relation between land area and passenger, using unitary method, to estimate CuCC data.

(3) Drainage

- Beneficiary: Define the beneficial area considering existing drainages and household in Google map and GIS map. Then, suffered household because of no drain and suffered area as present condition were measured using defined beneficial areas and counted using the map.
- Floor no. of the structures considered "house" (average floor no for each structures), potential no. of household in that structures i.e. number of unit are assumed. Using this assumption, referring to the average household size 5, beneficiary population is estimated.
- The figure of above indicators in the future were calculated considering extended beneficial area by the project, and growth rate of population in each city in case of people related indicators.

(4) Water Supply

In water supply sector, amount of water supply and beneficiary population are set as operation indicator, and water supply coverage ratio as effect indicator.

- Amount of water supply is total water supply flow measured by pump operator in each production tube well.
- Beneficiary population is calculated value based on the amount of water supply and general water demand per capita (0.100 m3/day/capita).
- Water supply coverage ratio is calculated value based on the beneficiary population and total population in each administrative district.

(5) Solid Waste Management

In solid waste management sector, the proposed subprojects are related to (1) collection and transportation, (2) landfill extension/development and (3) closure of existing open dump site.

The calculation methods of each indicator are summarized as follows.

Table 3 Estimation method for SWM OEIs

| Type of subproject | Indicator | Calculation method |
|---|---|---|
| collection and transportation | collected waste quantity | The calculation method is as follows.<br>(collected waste quantity [ton/day]) = (capacity of collection vehicle [ton/vehicle]) x (number of vehicle [vehicle]) x (trip number per day [trip /vehicle/day]) x |
| | collection rate of waste | The calculation method is as follows. |

| Type of subproject | Indicator | Calculation method |
|---|---|---|
| | | (collection rate of waste [%]) = (collected waste quantity [ton/day]) / (generated waste quantity [ton/day] |
| | reduction of places of illegal and/or unsanitary disposal | The calculation method is as follows.<br>((number of illegal dumping site (after)) – (number of illegal dumping site (before)))/ (Number of illegal dumping site (before)) |
| landfill extension/development | finally disposed waste quantity in sanitary landfill site | Measurement by weighing bridge |
| | rate of sanitary landfill | Calculated based on the measured in weighing bridge |
| subproject of closure of existing open dumping site | finally covered area as sanitary manner | Measured after the subproject |
| | rate of sanitary area | Calculated based on the finally covered area as sanitary area and non sanitary area |

*Source: JICA survey team*

(6) Other infrastructure

Method to calculate benefited population by street light:
After installing the street lights pedestrians and traffic will be the ultimate beneficiary group.
So, population on both sides of the street has considered as the future beneficiary group.
Households of 100 m buffer area from the street have considered calculating approximate number of future beneficiary population.
For this purpose, population density of the area was multiplied by the estimated buffer area (10 m buffer from the street) area to get the exact population.

Park/open space/market/community center

Target beneficiary is counted in the possible catchment areas (nearby wards) as estimated projected population in target areas.