

# Terms of Reference (ToR)

## **Terms of Reference for Design and Supervision Consultant for the works under Southern Chattogram Region Development Project (SCRDP)**

### **Chapter 1. Background**

- The Government of the People's Republic of Bangladesh has received a loan from the Japan International Cooperation Agency (hereinafter referred to as "JICA") to finance the Southern Chattogram Region Development Project which is to improve the living standard and enhance the quality of life in the southern Chattogram region by development of public infrastructure, thereby contributing to the economic development and redress of disparities. The Government of the People's Republic of Bangladesh also intends to use part of the proceeds of the loan for eligible payments for consulting services for which this ToR is issued.
- The outline of the Project is as follows:
  - Executing Agency (synonymous with "the Employer" or "Client"): Local Government Engineering Department (LGED)
  - Location of the Project: 3 Paurashavas (Chakaria, Moheshkhali, Teknaf) and 5 Upazilas (Chakaria, Moheshkhali, Ukhia, Teknaf & sadar) in Cox's Bazar District
  - Major output: Implementation of sub-projects and capacity development of the Executing Agency and target LGIs
  - Expected project completion: June 2028
  - Others:
- At this moment, the Project is expected to comprise the following component:

Component No.	Component name	Procurement method (ICB/LCB, following P/Q/ with Qualification)	Applicable Standard Bidding Documents
1	Component 1 Infrastructure Development	LCB with Qualification	N.A. (Local Bidding Documents)
2	Component 2 Consulting Service	Short listing (based on EOI from international companies), QCBS	SBD



- Technical information: *available relevant basic data and studies, technical standard or specifications to be used, etc.*

■ **Related projects:**

**JICA Assisted:**

- ✧ Northern Bangladesh Integrated Development Project (NOBIDEP),
- ✧ Strengthening Public Investment Management System (SPIMS) (Phase 1, 2),
- ✧ National Integrity Strategy Support Project (NISSP) (Phase 1,2)
- ✧ Strengthening Paurashava Governance Project (SPGP),
- ✧ Inclusive City Governance Project (ICGP),
- ✧ Project for Capacity Development of City Corporations (C4C),
- ✧ Upazila Governance Improvement Project (UGDP),
- ✧ Upazila Integrated Capacity Development Project(UICDP),
- ✧ Urban Development and City Governance Project(UDCGP)
- ✧ Project for Strengthening of Solid Waste Management in Dhaka North City, Dhaka South City and Chittagong City,
- ✧ Rural Urban Development Advisor,
- ✧ Fisheries Development Advisor

**ADB Assisted:**

- ✧ Urban Governance Infrastructure Improvement Project(UGIIP) (Phase 1,2,3)
- ✧ Emergency Assistance Project (LGED part)

**WB Assisted:**

- ✧ Program for Supporting Rural Bridges (SupRB)
- ✧ Emergency Multi-Sector Rohingya Crisis Response Project
- ✧ Municipal Governance and Services Project (MSGP)
- ✧ Multipurpose Disaster Shelter Project
- ✧ Second Rural Transport Improvement Project
- ✧ Municipal Governance and Services Project

**USAID Assisted:**

- ✧ Earthen Road Repair and Drain Excavation

**UNDP Assisted:**

- ✧ Efficient and Accountable Local Governance (EALG)

**UNDP & SIDA Funded:**

- ✧ Sustainable Solutions to Solid Waste Management Project

**DANIDA-SDC Funded:**

- ✧ Community Latrine, Household Latrine, Deep Shallow Tube Well, Reverse osmosis plant, Household Water Treatment, etc.

**8 UN Agencies:**

- ✧ 2020 Joint Response Plan for Rohingya Humanitarian Crisis

**NGOs:**

- ✧ Fecal Sludge Treatment Plant



## Chapter 2. Objectives of Consulting Services

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The consulting services shall be provided by consulting firm(s) (hereinafter referred to as "the Consultant") in compliance with Guidelines for the Employment of Consultants under Japanese ODA Loans, April 2012. The objective of the consulting services is to achieve the efficient and proper preparation and implementation of the Project through the following works:

- (1) Assistance for Detail Design, Tender and Supervision of Infrastructure Development
- (2) Capacity Development
- (3) Assistance for Project Management

## Chapter 3. Scope of Consulting Services

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### 3.1. Assistance for Detail Design, Supervision of Infrastructure Development

#### 3.1.1 Road/Bridge

- (1) Assist on definite planning and detailed design
  - 1) Prepare scope of works for surveys (traffic count survey, topographical survey, right-of-way survey, geotechnical investigation, subsoil investigation and material tests, etc.) and supervise the implementation of surveys
  - 2) Assess the results of surveys (traffic count survey, topographical survey, right-of-way survey, geotechnical investigation, subsoil investigation and material tests, etc.)
  - 3) Assist to organize public hearing/consultation meeting by LGIs
  - 4) Prepare the definite planning and detailed design including traffic demand forecast, cross section design, drainage design, right-of-way map, hydrological analysis, structural analysis, detailed design drawings, etc.
  - 5) Prepare construction schedule
  - 6) Prepare bill of quantities and detailed cost estimates
  - 7) Prepare all necessary documents
  - 8) Setting up value of OE indicators and calculation of EIRR of 2<sup>nd</sup> and 3<sup>rd</sup> batch
  - 9) Prepare Operational guideline, O&M plan, and manual for subprojects
- (2) Assist Tender
  - 1) Prepare construction and procurement plan, pre-qualification document, and tender document for tender process
  - 2) Assist evaluation of pre-qualification
  - 3) Assist tender evaluation
- (3) Assist Construction Supervision
  - 1) Assist to issue work orders and instructions
  - 2) Assist to make advance payments and other payments
  - 3) Assist to assess contractor's construction plan and programs
  - 4) Provide the contractor with all necessary survey data and reference for setting out the works
  - 5) Assist to carry out field inspections on the contractor's setting out to ensure the works in accordance with drawings
  - 6) Assist to supervise the laboratory testing of materials and related activities





- 7) Assist to conduct quality and safety control by DPCO
- 8) Assist to monitor physical and financial progress
- 9) Assist to prepare updated cost estimates and time to completion
- 10) Assist to carry out final inspection for issuance of completion certificate
- 11) Prepare necessary document for supervision works

### 3.1.2 Drainage/Flood Protection and Water Supply

#### (1) Assist on definite planning and detailed design

- 1) Prepare scope of works for surveys (topographical survey, geotechnical survey, and hydrological survey, groundwater quality survey, etc.) and supervise the implementation of surveys.
- 2) Assess the results of surveys (topographical survey, geotechnical survey, and hydrological survey, groundwater quality survey, etc.)
- 3) Assist to organize public hearing/consultation meeting by LGIs
- 4) Prepare the definite planning and detailed design including design discharge, water demand calculation, drainage design, right-of-way map, hydrological analysis, hydrogeological analysis, hydraulic analysis, structural analysis, detailed design drawings, etc.
- 5) Prepare construction schedule
- 6) Prepare bill of quantities and detailed cost estimates
- 7) Prepare all necessary documents
- 8) Setting up value of OE indicators and calculation of EIRR of 2<sup>nd</sup> and 3<sup>rd</sup> batch
- 9) Prepare Operational guideline, O&M plan, and manual for subprojects

#### (2) Assist Tender

- 1) Prepare construction and procurement plan, pre-qualification document, and tender document for tender process
- 2) Assist evaluation of pre-qualification
- 3) Assist tender evaluation

#### (3) Assist Construction Supervision

- 1) Assist to issue work orders and instructions
- 2) Assist to make advance payments and other payments
- 3) Assist to assess contractor's construction plan and programs
- 4) Provide the contractor with all necessary survey data and reference for setting out the works
- 5) Assist to carry out field inspections on the contractor's setting out to ensure the works in accordance with drawings
- 6) Assist to supervise the laboratory testing of materials and related activities
- 7) Assist to conduct quality and safety control by DPCO
- 8) Assist to monitor physical and financial progress
- 9) Assist to prepare updated cost estimates and time to completion
- 10) Assist to carry out final inspection for issuance of completion certificate
- 11) Prepare necessary document for supervision works

### 3.1.3 Solid Waste Management

#### (1) Assist on definite planning and detailed design

- 1) Prepare scope of works for surveys (topographical survey, geological survey, soil survey, water quality survey, etc.) and supervise the implementation of surveys
- 2) Assess the results of surveys (topographical survey, geological survey, soil survey, water quality survey, etc.)



- 3) Assist to organize public hearing/consultation meeting by LGIs
  - 4) Prepare the definite planning and detailed design including SWM development plan, waste generation quantity, collection rate, waste collection quantity, waste collection fee, transfer station, landfill area, right-of-way map, detailed design drawings, etc.
  - 5) Prepare the technical specification of equipment procurement including spare parts
  - 6) Prepare construction schedule
  - 7) Prepare bill of quantities and detailed cost estimates
  - 8) Prepare all necessary documents
  - 9) Setting up value of OE indicators and calculation of EIRR of 2<sup>nd</sup> and 3<sup>rd</sup> batch
  - 10) Prepare Operational guideline, O&M plan, and manual for subprojects
- (2) Assist Tender**
- 1) Prepare construction and procurement plan, pre-qualification document, and tender document for tender process
  - 2) Assist evaluation of pre-qualification
  - 3) Assist tender evaluation
- (3) Assist Construction Supervision**
- 1) Assist to issue work orders and instructions
  - 2) Assist to make advance payments and other payments
  - 3) Assist to assess contractor's construction plan and programs
  - 4) Provide the contractor with all necessary survey data and reference for setting out the works
  - 5) Assist to carry out field inspections on the contractor's setting out to ensure the works in accordance with drawings
  - 6) Assist to supervise the laboratory testing of materials and related activities
  - 7) Assist to conduct quality and safety control by DPCO
  - 8) Assist to monitor physical and financial progress
  - 9) Assist to prepare updated cost estimates and time to completion
  - 10) Assist to carry out final inspection for issuance of completion certificate
  - 11) Prepare necessary document for supervision works
- (4) Assist Tender and Contract with Private Contractor for SWM Operation**
- 1) Prepare tender and contract document including detailed scope of work, and implementation schedule. The detailed scope of works covers i) work item of SWM operation, ii) contract condition.
  - 2) Assist tender process and contract negotiation

### 3.1.4 Other Public Facilities and Training Center

#### (1) Assist on definite planning and detailed design

- 1) Prepare scope of works for surveys (topographical survey, geotechnical investigation, subsoil investigation and material tests, etc.) and supervise the implementation of surveys
- 2) Assess the results of surveys (topographical survey, geotechnical investigation, subsoil investigation and material tests, etc.)
- 3) Assist to organize public hearing/consultation meeting by LGIs
- 4) Assess users and/or traffic volumes, functions, area of building structure and accessibility
- 5) Confirmation of demand of users, building functions and structure, and necessary space and capacity



- 6) Prepare the definite planning and detailed design including building design, hydraulic analysis, structural analysis, detail design drawings, etc.
- 7) Prepare construction schedule
- 8) Prepare bill of quantities and detailed cost estimates
- 9) Prepare all necessary documents
- 10) Setting up value of OE indicators and calculation of EIRR of 2<sup>nd</sup> and 3<sup>rd</sup> batch
- 11) Prepare Operational guideline, O&M plan, and manual for subprojects

**(2) Assist Tender**

- 1) Prepare construction and procurement plan, pre-qualification document, and tender document for tender process
- 2) Assist evaluation of pre-qualification
- 3) Assist tender evaluation

**(3) Assist Construction Supervision**

- 1) Assist to issue work orders and instructions
- 2) Assist to make advance payments and other payments
- 3) Assist to assess contractor's construction plan and programs
- 4) Provide the contractor with all necessary survey data and reference for setting out the works
- 5) Assist to carry out field inspections on the contractor's setting out to ensure the works in accordance with drawings
- 6) Assist to supervise the laboratory testing of materials and related activities
- 7) Assist to conduct quality and safety control by DPCO
- 8) Assist to monitor physical and financial progress
- 9) Assist to prepare updated cost estimates and time to completion
- 10) Assist to carry out final inspection for issuance of completion certificate
- 11) Prepare necessary document for supervision works

### 3.1.5 Township Development

**(1) Assist on definite planning and detailed design**

- 1) Prepare scope of works for surveys (topographical survey, geotechnical investigation, subsoil investigation and material tests, etc.) and supervise the implementation of surveys
- 2) Assess the results of surveys (topographical survey, geotechnical investigation, subsoil investigation and material tests, etc.)
- 3) Assist to organize public hearing/consultation meeting by LGIs
- 4) Prepare the definite planning and detailed design including landfill design, hydraulic analysis, structural analysis, detail design drawings, etc.
- 5) Prepare construction schedule
- 6) Prepare bill of quantities and detailed cost estimates
- 7) Prepare all necessary documents
- 8) Setting up value of OE indicators and calculation of EIRR of 2<sup>nd</sup> and 3<sup>rd</sup> batch
- 9) Prepare Operational guideline, O&M plan, and manual for subprojects

**(2) Assist Tender**

- 1) Prepare construction and procurement plan, pre-qualification document, and tender document for tender process
- 2) Assist evaluation of pre-qualification
- 3) Assist tender evaluation

**(3) Assist Construction Supervision**

- 1) Assist to issue work orders and instructions



- 2) Assist to make advance payments and other payments
- 3) Assist to assess contractor's construction plan and programs
- 4) Provide the contractor with all necessary survey data and reference for setting out the works
- 5) Assist to carry out field inspections on the contractor's setting out to ensure the works in accordance with drawings
- 6) Assist to supervise the laboratory testing of materials and related activities
- 7) Assist to conduct quality and safety control by DPCO
- 8) Assist to monitor physical and financial progress
- 9) Assist to prepare updated cost estimates and time to completion
- 10) Assist to carry out final inspection for issuance of completion certificate
- 11) Prepare necessary document for supervision works

### 3.1.6 Environmental and Social Considerations

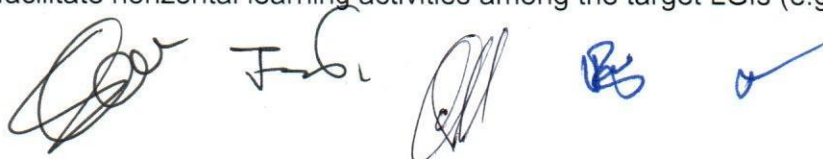
- (1) Update EMP and EMoP as appropriate; incorporate necessary technical specifications with design and contract documentation
- (2) Prepare / update IEE, EIA, EMP and EMoP for the required subprojects by deploying local firms in accordance with the Environmental Assessment and Review Framework. Their TOR is based on the requirements of the Bangladesh Environmental Conservation Act 1995, Environmental Conservation Rules 1997, and JICA Guidelines for Environmental and Social Considerations 2010
- (3) Supervise and monitor the progress of development of IEE, EIA, EMP and EMoP
- (4) During preparation of bidding documents, identify environmental responsibilities as explained in the EIA/IEE, EMP and EMoP, and Environmental Clearance Certificate (ECC) issued by the Department of Environment (DoE)
- (5) Monitor the effectiveness of EMP and negative impact on environment caused by the construction works and provide technical advice, including a feasible solution
- (6) Update, as necessary, or prepare the Abbreviated Resettlement Action Plan (ARAP) by deploying local firms in accordance with the Resettlement Policy Framework, including entitlement matrix and compensation plan; coordinate with various agencies in preparing the procedures for timely land acquisition and disbursement of compensation to project affected persons (PAPs). Their TOR is based on the requirements of JICA Guidelines for Environmental and Social Considerations 2010 and World Bank Safeguard Policy OP4.12 and its annexes
- (7) Supervise and monitor the progress of development of ARAP
- (8) Monitor land acquisition and compensation activities being undertaken by LGIs supported by field assistants deployed by the Consultant, and report the results in monthly progress reports

## 3.2. Capacity Development

The consultant shall perform the Capacity development activities (**Annexure-1**) as mentioned below:

### 3.2.1 Local Government Administration

- (1) Conduct a needs-assessment survey for capacity development programs
- (2) Prepare detailed plans of capacity development programs
- (3) Implement capacity development programs on budget formation/execution, monitoring/O&M budget formulation, taxation and revenue management
- (4) Implement and facilitate horizontal learning activities among the target LGIs (e.g.,





annual experience-sharing workshop)

### **3.2.2 Road/Bridges, Drainage/Flood Protection and Water Supply**

- (1) Conduct a needs-assessment survey for capacity development programs
- (2) Prepare detailed plans of capacity development programs
- (3) Implement capacity development programs as OJT basis to strengthen technical knowledge and capability of technical management in all stages (definite planning, detailed design, tendering, construction supervision, monitoring and evaluation) to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer of Upazila (in case of large drainage: Executive Engineer of BWDB)
- (4) Implement capacity development program as OJT basis to strengthen O&M skill and knowledge to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer of Upazila (in case of large drainage: Executive Engineer of BWDB)

### **3.2.3 Solid Waste Management**

- (1) Conduct a needs-assessment survey for capacity development programs
- (2) Prepare detailed plans of capacity development programs
- (3) Implement capacity development programs (planning, designing, O&M of SWM including collection, transportation, separation for recyclable and sanitary landfill, awareness raising of public, financial and contract management for outsourcing to private contractor, supervising and monitoring of private contract for O&M, and coordination among LGIs etc.) to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer of Upazila
- (4) Implement capacity development programs as OJT basis to strengthen O&M skill and knowledge to Conservancy Section of Paurashava and Upazila LGED office
- (5) Implement public awareness raising for SWM to introduce the provision of SWM service and service charge system to Beneficiaries

### **3.2.4 Other Public Facilities**

- (1) Conduct a needs-assessment survey for capacity development programs
- (2) Prepare detailed plans of capacity development programs
- (3) Implement capacity development programs as OJT basis to strengthen technical knowledge and capability of technical management in all stages (definite planning, detailed design, tendering, construction supervision, monitoring and evaluation) to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer of Upazila
- (4) Implement capacity development program as OJT basis to strengthen O&M skill and knowledge to related organization

### **3.2.5 Township Development**

- (1) Conduct a needs-assessment survey for capacity development programs
- (2) Prepare detailed plans of capacity development programs
- (3) Implement capacity development programs (development of land utilization plan for township area etc.) to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer of Upazila
- (4) Implement capacity development program as OJT basis to strengthen O&M skill and knowledge to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer of Upazila



### 3.2.6 Procurement

- (1) Conduct a needs-assessment survey for capacity development programs
- (2) Prepare detailed plans of capacity development programs
- (3) Implement capacity development programs on Bangladesh Public Procurement Rules and Regulations, and contract management

### 3.2.7 Environment and Social Consideration

- (1) Conduct a needs-assessment survey for capacity development programs
- (2) Prepare detailed plans of capacity development programs
- (3) Implement capacity development programs: i) lectures and site visits for guidance and instructions on planning, implementation and monitoring of Environmental Management Plan (EMP); and ii) OJT for the development of environmental assessment reports and supervision of EMP implementation

### 3.2.8 Overseas Training

The Consultant shall organize and manage the overseas training as per the requirement of the client.

### 3.3. Assistance for Project Management

- (1) Prepare plan of consulting service activities, supervise, monitor and assess the activities
- (2) Coordinate with PIO, PIUs and UEOs on project planning, DD, supervision, and O&M activities
- (3) Assist PMU, DPCO, PIO, PIUs and UEOs to collect progress of all works, including capacity development and infrastructure development, identify issues and countermeasures, and advise them for improvement when necessary
- (4) Assist PMU to prepare request for disbursement and its attachments to be submitted to JICA
- (5) Assist PMU to evaluate cancellation and replacement of subprojects through evaluation of new subprojects, and to prepare justification report, if necessary; and
- (6) Assist PMU to prepare Quarterly Progress Report, Annual Progress Report and Project Completion Report to be submitted to JICA quarterly

## Chapter 4. Expected Time Schedule

The total duration of consulting services will be 64 months. The implementation schedule expected is as shown in Table 4.1.

Table 4.1 Implementation Schedule Expected

Key Activities	Date	Duration in Months
Commencement of Consulting Services	March 2023	-
Completion of detail design, preparation of drawings and tender documents	1st batch: By November 2023 2nd batch : By July 2024 3rd batch : By July 2025	
Bidding process including prequalification	1st batch: By April 2024 2nd batch : By December 2024	



	3rd batch : By December 2025	
Commencement of Civil works	1st batch: By May 2024 2nd batch : By January 2025 3rd batch : By January 2026	
End of Civil works	1st batch: By April 2026 2nd batch : By December 2027 3rd batch : By December 2027	
End of Consulting Services	June 2028	64 months.

## Chapter 5. Staffing (Expertise required)

The consultant engagement will be a total of 190 person-months for International Experts and 1,027 person-months for Local Experts. Total consulting input will be 1,217 person-months.

### (1) Qualification of International Experts

The qualification of International Experts is shown in Table 5.1.

**Table 5.1 : Qualification of International Experts**

Designation	Qualification
A.1 Team Leader	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields.</li> <li>• Relevant higher education will be given preference.</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in the field of infrastructural development projects: 15 years or more</li> <li>• Experience of construction supervision or related management for more than 8 years as project management expert/project manager in ICB contract of consulting services</li> <li>• Experience of at least 2 projects implementation in leading a consultant's team as the Team Leader or the Deputy Team Leader</li> <li>• At least 5 years experiences of international projects</li> <li>• Working experience in South Asian Country is preferred</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
A.2 Road and Bridge Engineer	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields.</li> <li>• Relevant higher education will be given preference.</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in road and bridge design and construction supervision:</li> </ul>



Designation	Qualification
	<p>12 years or more</p> <ul style="list-style-type: none"> <li>• Experience of 5 years in related fields in ICB contract of consulting services</li> <li>• At least 2 years experiences of international projects</li> <li>• Working experience in South Asian Country is preferred</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
A.3 Drainage/ Flood Protection and Water Supply Engineer	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields.</li> <li>• Relevant higher education will be given preference.</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in drainage/flood projection and water supply design and construction supervision: 12 years or more</li> <li>• Experience of 5 years in related fields in ICB contract of consulting services</li> <li>• At least 2 years experiences of international projects</li> <li>• Working experience in South Asian Country is preferred</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
A.4 Solid Waste Management Engineer	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields.</li> <li>• Relevant higher education will be given preference.</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in solid waste management design and construction supervision: 12 years or more</li> <li>• Experience of 5 years in related fields in ICB contract of consulting services</li> <li>• At least 2 years experiences of international projects</li> <li>• Working experience in South Asian Country is preferred</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
A.5 Architect	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Architecture or related fields.</li> <li>• Relevant higher education will be given preference.</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in building planning, design and construction supervision: 12 years or more</li> </ul>

Designation	Qualification
	<ul style="list-style-type: none"> <li>• Experience of 5 years in related fields in ICB contract of consulting services</li> <li>• At least 2 years experiences of international projects</li> <li>• Working experience in South Asian Country is preferred</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
A.6 Township Development Engineer	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields.</li> <li>• Relevant higher education will be given preference.</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in township development design and construction supervision: 12 years or more</li> <li>• Experience of 5 years in related fields in ICB contract of consulting services</li> <li>• At least 2 years experiences of international projects</li> <li>• Working experience in South Asian Country is preferred</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
A.7 Private Contract Expert	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Laws, Public Administration and related fields.</li> <li>• Relevant higher education will be given preference.</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in private contract management: 12 years or more</li> <li>• Experience of 5 years in related fields in ICB contract of consulting services</li> <li>• At least 2 years experiences of international projects</li> <li>• Working experience in South Asian Country is preferred</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
A.8 Governance Expert	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Public Administration and related fields.</li> <li>• Relevant higher education will be given preference.</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in governance programs and projects: 12 years or more</li> <li>• Experience of 5 years in related fields in ICB contract of consulting services</li> <li>• At least 2 years experiences of international projects</li> </ul>



Designation	Qualification
	<ul style="list-style-type: none"> <li>Working experience in South Asian country is preferred</li> </ul> Language Skill: <ul style="list-style-type: none"> <li>English: Fluent in speaking and writing</li> </ul>
A.9 Environmental and Social Consideration Expert	Education: <ul style="list-style-type: none"> <li>Graduate in Engineering, Environment or related fields.</li> <li>Relevant higher education will be given preference.</li> </ul> Experience: <ul style="list-style-type: none"> <li>Experience in monitoring and evaluation in development projects: 12 years or more</li> <li>Experience of 5 years in related fields in ICB contract of consulting services</li> <li>At least 2 years experiences of international projects</li> <li>Working experience in South Asian country is preferred</li> </ul> Language Skill: <ul style="list-style-type: none"> <li>English: Fluent in speaking and writing</li> </ul>

## (2) Qualification of Local Key Experts

The qualification of Local Key Experts is shown in Table 5.2.

**Table 5.2 : Qualification of Local Key Experts**

Designation	Qualification
B.1 Deputy Team Leader	Education: <ul style="list-style-type: none"> <li>Any graduate related to the scope of works</li> <li>Relevant higher education will be given preference</li> </ul> Experience: <ul style="list-style-type: none"> <li>Experience in the field of infrastructural development projects: 15 years or more</li> <li>Experience of construction supervision or related management for more than 8 years</li> <li>Experience of at least 2 projects implementation as the Deputy Team Leader</li> </ul> Language Skill: <ul style="list-style-type: none"> <li>English: Fluent in speaking and writing</li> </ul>
B.2 Structural Design Engineer (Road)	Education: <ul style="list-style-type: none"> <li>Graduate in Engineering or related fields</li> <li>Relevant higher education will be given preference</li> </ul> Experience:



Designation	Qualification
	<ul style="list-style-type: none"> <li>• Experience in road design and construction supervision: 8 years or more</li> <li>• Experience of 3 years as road engineer in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.3 Structural Design Engineer (Bridge)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in bridge design and construction supervision: 8 years or more</li> <li>• Experience of 3 years as bridge engineer in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.4 Structural Design Engineer (Drainage/Flood Protection)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in drainage/flood protection design and construction supervision: 8 years or more</li> <li>• Experience of 3 years as drainage/flood protection engineer in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.5 Structural Design Engineer (Water Supply)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in water supply design and construction supervision: 8 years or more</li> <li>• Experience of 3 years as water supply engineer in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.6 Solid Waste Management Specialist	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields.</li> <li>• Relevant higher education will be given preference.</li> </ul> <p>Experience:</p>

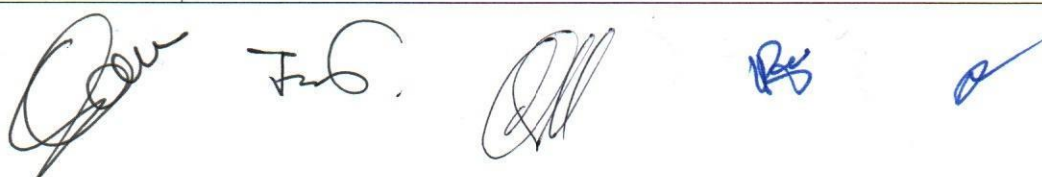








Designation	Qualification
	<ul style="list-style-type: none"> <li>• Experience in solid waste management planning: 8 years or more</li> <li>• Experience of 3 years as solid waste management specialist in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.7 Wastewater Treatment Specialist	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in wastewater treatment in the field of land fill for wastewater management: 8 years or more</li> <li>• Experience of 3 years as wastewater treatment specialist in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.8 Township Development Specialist	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in township development planning: 8 years or more</li> <li>• Experience of 3 years as township development specialist in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.9 Landfill Facility Specialist (Solid Waste Management)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in landfill facility (solid waste management) design and construction supervision: 8 years or more</li> <li>• Experience of 3 years as landfill facility (solid waste management) specialist in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.10 Landfill Facility Specialist	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul>



Designation	Qualification
(Township Development)	<p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in landfill facility (township development) design and construction supervision: 8 years or more</li> <li>• Experience of 3 years as landfill facility (township development) specialist in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.11 Environmental and Social Consideration Specialist	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering, Environment or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in environmental and social consideration assessment for infrastructure development projects: 8 years or more</li> <li>• Experience of 3 years as environmental and social consideration specialist in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.12 Resettlement Specialist	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering, Social or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in resettlement management and social development activities for infrastructure development projects: 8 years or more</li> <li>• Experience of 3 years as resettlement specialist in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.13 Procurement Specialist	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in procurement for infrastructure development projects: 8 years or more</li> <li>• Experience of 3 years as procurement specialist in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
B.14 Governance	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Public Administration and related fields.</li> </ul>



Designation	Qualification
Specialist	<ul style="list-style-type: none"> <li>• Relevant higher education will be given preference.</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in governance programs: 8 years or more</li> <li>• Experience of 3 years as governance specialist in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>

## (2) Qualification of Local Non-Key Experts

The qualification of Local Non-Key Experts is shown in Table 5.3.

**Table 5.3 : Qualification of Local Non-Key Experts**

Designation	Qualification
C.1 Transport Engineer (34 mm)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in transport planning, designing traffic survey and management: 5 years or more</li> <li>• Experience of 2 years as transport engineer in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
C.2 Survey Engineer (59 mm)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in surveying, preparing drawing, mapping, verifying data accuracy including measurements and calculations conducted at survey sites for infrastructure development: 5 years or more</li> <li>• Experience of 2 years as survey engineer in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
C.3 Geotechnical Engineer (28 mm)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in designing and implementing for infrastructure project in the field of geotechnical engineering: 5 years or more</li> <li>• Experience of 2 years as geotechnical engineer in related projects</li> </ul>

Designation	Qualification
	<p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
C.4 Hydrological Engineer (22 mm)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in hydrological assessment in drainage, irrigation or flood protection field: 5 years or more</li> <li>• Experience of 2 years as hydrological engineer in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
C.5 Hydrogeological Engineer (8 mm)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in hydrogeological assessment in water supply or water resource development field: 5 years or more</li> <li>• Experience of 2 years as hydrogeological engineer in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
C.6 Architect (51 mm)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Architecture or related fields.</li> <li>• Relevant higher education will be given preference.</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in building planning, design and construction supervision: 5 years or more</li> <li>• Experience of 2 years as architect in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
C.7 Electrical Engineer (46 mm)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Electrical Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in designing and implementing for infrastructure project in the field of electrical engineering: 5 years or more</li> <li>• Experience of 2 years as electrical engineer in related projects</li> </ul>



Designation	Qualification
	<p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
C.8 Quantity Engineer (78 mm)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in estimating, costing of different materials, prepare tender documents, bills of quantities and other documentation for infrastructure development: 5 years or more</li> <li>• Experience of 2 years as quantity engineer in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
C.9 Quality Control Engineer (88 mm)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in construction supervision, quality control for infrastructure project: 5 years or more</li> <li>• Experience of 2 years as quality control engineer in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
C.10 Private Contract Expert (8mm)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Laws, Public Administration or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in contract administration, contract management and procurement: 5 years or more</li> <li>• Experience of 2 years as contract expert in related projects</li> </ul> <p>Language Skill:</p> <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
C.11 Documentation and Media Consultant (20 mm)	<p>Education:</p> <ul style="list-style-type: none"> <li>• Graduate in Communication, publication or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> <p>Experience:</p> <ul style="list-style-type: none"> <li>• Experience in administrative documentation and publication expert: 5 years or more</li> </ul>

Designation	Qualification
	<ul style="list-style-type: none"> <li>• Experience of 2 years in related projects</li> </ul> Language Skill: <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>
C.12 Resident Engineer (244 mm)	Education: <ul style="list-style-type: none"> <li>• Graduate in Engineering or related fields</li> <li>• Relevant higher education will be given preference</li> </ul> Experience: <ul style="list-style-type: none"> <li>• Experience in construction management fields: 5 years or more</li> <li>• Experience of 2 years as construction management engineer in related projects</li> </ul> Language Skill: <ul style="list-style-type: none"> <li>• English: Fluent in speaking and writing</li> </ul>

The Consultant may propose other experts and supporting staffs required to accomplish the tasks outlined in the ToR in addition to experts indicated in the above Table in this Chapter. The non-key experts and support staffs will not be evaluated but the consultant must submit the CVs of the non-key experts.

### (3) Scope of works for experts


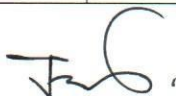



Detailed information on the major tasks and duties of each experts for the capacity development programs, definite plan /detailed design, and the construction supervision is provided as follows:

**Table 5.2 : Scope of Works by Experts**

No	Position	I :International Experts or L: Local Experts	Major Tasks and Duties
Assistance for Detail Design, Supervision of Infrastructure Development			
1	Road/Bridge <ul style="list-style-type: none"> <li>• Road and Bridge Engineer: I</li> <li>• Deputy Team Leader: L</li> <li>• Transport Engineer: L</li> <li>• Structural Design Engineer (Road): L</li> <li>• Structural Design Engineer (Bridge): L</li> <li>• Local engineers concerned: L</li> <li>• Procurement Expert: L</li> </ul>	I&L	(1) Assist on definite planning and detailed design 1) Prepare scope of works for surveys (traffic count survey, topographical survey, right-of-way survey, geotechnical investigation, subsoil investigation and material tests, etc.) and supervise the implementation of surveys 2) Assess the results of surveys (traffic count survey, topographical survey, right-of-way survey,



			<p>geotechnical investigation, subsoil investigation and material tests, etc.)</p> <ol style="list-style-type: none"> <li>3) Assist to organize public hearing/consultation meeting by LGIs</li> <li>4) Prepare the definite planning and detailed design including traffic demand forecast, cross section design, drainage design, right-of-way map, hydrological analysis, structural analysis, detailed design drawings, etc.</li> <li>5) Prepare construction schedule</li> <li>6) Prepare bill of quantities and detailed cost estimates</li> <li>7) Prepare all necessary documents</li> <li>8) Setting up value of OE indicators and calculation of EIRR of 2<sup>nd</sup> and 3<sup>rd</sup> batch</li> <li>9) Prepare Operational guideline, O&amp;M plan, and manual for subprojects</li> </ol> <p>(2) Assist Tender</p> <ol style="list-style-type: none"> <li>1) Prepare construction and procurement plan, pre-qualification document, and tender document for tender process</li> <li>2) Assist evaluation of pre-qualification</li> <li>3) Assist tender evaluation</li> </ol> <p>(3) Assist Construction Supervision</p> <ol style="list-style-type: none"> <li>1) Assist to issue work orders and instructions</li> <li>2) Assist to make advance payments and other payments</li> <li>3) Assist to assess contractor's construction plan and programs</li> <li>4) Provide the contractor with all necessary survey data and reference for setting out the works</li> <li>5) Assist to carry out field</li> </ol>
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			<p>inspections on the contractor's setting out to ensure the works in accordance with drawings</p> <ol style="list-style-type: none"> <li>6) Assist to supervise the laboratory testing of materials and related activities</li> <li>7) Assist to conduct quality and safety control by DPCO</li> <li>8) Assist to monitor physical and financial progress</li> <li>9) Assist to prepare updated cost estimates and time to completion</li> <li>10) Assist to carry out final inspection for issuance of completion certificate</li> <li>11) Prepare necessary document for supervision works</li> </ol>
2	<p>Drainage/Flood Protection and Water Supply</p> <ul style="list-style-type: none"> <li>• Drainage/Flood Protection and Water Supply Engineer: I</li> <li>• Deputy Team Leader: L</li> <li>• Structural Design Engineer (Drainage/Flood Protection): L</li> <li>• Structural Design Engineer (Water Supply): L</li> <li>• Hydrological Engineer: L</li> <li>• Hydrogeological Engineer: L</li> <li>• Local engineers concerned: L</li> <li>• Procurement Specialist: L</li> </ul>	I&L	<ol style="list-style-type: none"> <li>(1) Assist on definite planning and detailed design               <ol style="list-style-type: none"> <li>1) Prepare scope of works for surveys (topographical survey, geotechnical survey, and hydrological survey, groundwater quality survey, etc.) and supervise the implementation of surveys.</li> <li>2) Assess the results of surveys (topographical survey, geotechnical survey, and hydrological survey, groundwater quality survey, etc.)</li> <li>3) Assist to organize public hearing/consultation meeting by LGIs</li> <li>4) Prepare the definite planning and detailed design including design discharge, water demand calculation, drainage design, right-of-way map, hydrological analysis, hydrogeological analysis, hydraulic analysis, structural analysis, detailed design drawings, etc.</li> <li>5) Prepare construction</li> </ol> </li> </ol>


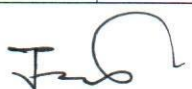



			<p>schedule</p> <ol style="list-style-type: none"> <li>6) Prepare bill of quantities and detailed cost estimates</li> <li>7) Prepare all necessary documents</li> <li>8) Setting up value of OE indicators and calculation of EIRR of 2<sup>nd</sup> and 3<sup>rd</sup> batch</li> <li>9) Prepare Operational guideline, O&amp;M plan, and manual for subprojects</li> </ol> <p>(2) Assist Tender</p> <ol style="list-style-type: none"> <li>1) Prepare construction and procurement plan, pre-qualification document, and tender document for tender process</li> <li>2) Assist evaluation of pre-qualification</li> <li>3) Assist tender evaluation</li> </ol> <p>(3) Assist Construction Supervision</p> <ol style="list-style-type: none"> <li>1) Assist to issue work orders and instructions</li> <li>2) Assist to make advance payments and other payments</li> <li>3) Assist to assess contractor's construction plan and programs</li> <li>4) Provide the contractor with all necessary survey data and reference for setting out the works</li> <li>5) Assist to carry out field inspections on the contractor's setting out to ensure the works in accordance with drawings</li> <li>6) Assist to supervise the laboratory testing of materials and related activities</li> <li>7) Assist to conduct quality and safety control by DPCO</li> <li>8) Assist to monitor physical and financial progress</li> <li>9) Assist to prepare updated cost estimates and time to completion</li> <li>10) Assist to carry out final</li> </ol>
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			inspection for issuance of completion certificate 11) Prepare necessary document for supervision works
3	<p>Solid Waste Management</p> <ul style="list-style-type: none"> <li>• Solid Waste Management Engineer: I</li> <li>• Private Contract Expert: I</li> <li>• Deputy Team Leader: L</li> <li>• Solid Waste Management Specialist: L</li> <li>• Landfill Facility Specialist (Solid Waste Management): L</li> <li>• Wastewater Treatment Specialist: L</li> <li>• Private Contract Expert: L</li> <li>• Local engineers concerned: L</li> <li>• Procurement Specialist: L</li> </ul>	I&L	<p>(1) Assist on definite planning and detailed design</p> <ol style="list-style-type: none"> <li>1) Prepare scope of works for surveys (topographical survey, geological survey, soil survey, water quality survey, etc.) and supervise the implementation of surveys</li> <li>2) Assess the results of surveys (topographical survey, geological survey, soil survey, water quality survey, etc.)</li> <li>3) Assist to organize public hearing/consultation meeting by LGIs</li> <li>4) Prepare the definite planning and detailed design including SWM development plan, waste generation quantity, collection rate, waste collection quantity, waste collection fee, transfer station, landfill area, right-of-way map, detailed design drawings, etc.</li> <li>5) Prepare the technical specification of equipment procurement including spare parts</li> <li>6) Prepare construction schedule</li> <li>7) Prepare bill of quantities and detailed cost estimates</li> <li>8) Prepare all necessary documents</li> <li>9) Setting up value of OE indicators and calculation of EIRR of 2<sup>nd</sup> and 3<sup>rd</sup> batch</li> <li>10) Prepare Operational guideline, O&amp;M plan, and manual for subprojects</li> </ol> <p>(2) Assist Tender</p> <ol style="list-style-type: none"> <li>1) Prepare construction and procurement plan, pre-qualification document,</li> </ol>



			<p>and tender document for tender process</p> <p>2) Assist evaluation of pre-qualification</p> <p>3) Assist tender evaluation</p> <p>(3) Assist Construction Supervision</p> <p>1) Assist to issue work orders and instructions</p> <p>2) Assist to make advance payments and other payments</p> <p>3) Assist to assess contractor's construction plan and programs</p> <p>4) Provide the contractor with all necessary survey data and reference for setting out the works</p> <p>5) Assist to carry out field inspections on the contractor's setting out to ensure the works in accordance with drawings</p> <p>6) Assist to supervise the laboratory testing of materials and related activities</p> <p>7) Assist to conduct quality and safety control by DPCO</p> <p>8) Assist to monitor physical and financial progress</p> <p>9) Assist to prepare updated cost estimates and time to completion</p> <p>10) Assist to carry out final inspection for issuance of completion certificate</p> <p>11) Prepare necessary document for supervision works</p> <p>(4) Assist Tender and Contract with Private Contractor for SWM Operation</p> <p>1) Prepare tender and contract document including detailed scope of work, and implementation schedule. The detailed scope of works covers i) work item of SWM operation, ii) contract condition.</p>
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			2) Assist tender process and contract negotiation
4	<p>Other Public Facilities</p> <ul style="list-style-type: none"> <li>• Architect: I</li> <li>• Deputy Team Leader: L</li> <li>• Architect: L</li> <li>• Local engineers concerned: L</li> <li>• Procurement Specialist: L</li> </ul>	I&L	<p>(1) Assist on definite planning and detailed design</p> <ol style="list-style-type: none"> <li>1) Prepare scope of works for surveys (topographical survey, geotechnical investigation, subsoil investigation and material tests, etc.) and supervise the implementation of surveys (topographical survey, geotechnical investigation, subsoil investigation and material tests, etc.)</li> <li>2) Assess the results of surveys (topographical survey, geotechnical investigation, subsoil investigation and material tests, etc.)</li> <li>3) Assist to organize public hearing/consultation meeting by LGIs</li> <li>4) Assess users and/or traffic volumes, functions, area of building structure and accessibility</li> <li>5) Confirmation of demand of users, building functions and structure, and necessary space and capacity</li> <li>6) Prepare the definite planning and detailed design including building design, hydraulic analysis, structural analysis, detail design drawings, etc.</li> <li>7) Prepare construction schedule</li> <li>8) Prepare bill of quantities and detailed cost estimates</li> <li>9) Prepare all necessary documents</li> <li>10) Setting up value of OE indicators and calculation of EIRR of 2<sup>nd</sup> and 3<sup>rd</sup> batch</li> <li>11) Prepare Operational guideline, O&amp;M plan, and manual for subprojects</li> </ol>



			<p>(2) Assist Tender</p> <ol style="list-style-type: none"> <li>1) Prepare construction and procurement plan, pre-qualification document, and tender document for tender process</li> <li>2) Assist evaluation of pre-qualification</li> <li>3) Assist tender evaluation</li> </ol> <p>(3) Assist Construction Supervision</p> <ol style="list-style-type: none"> <li>1) Assist to issue work orders and instructions</li> <li>2) Assist to make advance payments and other payments</li> <li>3) Assist to assess contractor's construction plan and programs</li> <li>4) Provide the contractor with all necessary survey data and reference for setting out the works</li> <li>5) Assist to carry out field inspections on the contractor's setting out to ensure the works in accordance with drawings</li> <li>6) Assist to supervise the laboratory testing of materials and related activities</li> <li>7) Assist to conduct quality and safety control by DPCO</li> <li>8) Assist to monitor physical and financial progress</li> <li>9) Assist to prepare updated cost estimates and time to completion</li> <li>10) Assist to carry out final inspection for issuance of completion certificate</li> <li>11) Prepare necessary document for supervision works</li> </ol>
5	<p>Township Development</p> <ul style="list-style-type: none"> <li>• Township Development Engineer: I</li> <li>• Private Contract Expert: I</li> <li>• Deputy Team Leader: L</li> <li>• Township Development</li> </ul>	I&L	<p>(1) Assist on definite planning and detailed design</p> <ol style="list-style-type: none"> <li>1) Prepare scope of works for surveys (topographical survey, geotechnical investigation, subsoil</li> </ol>

	<p>Specialist: L</p> <ul style="list-style-type: none"> <li>• Landfill Facility Specialist (Township): L</li> <li>• Private Contract Expert: L</li> <li>• Local engineers concerned: L</li> <li>• Procurement Specialist: L</li> </ul>		<p>investigation and material tests, etc.) and supervise the implementation of surveys (topographical survey, geotechnical investigation, subsoil investigation and material tests, etc.)</p> <ol style="list-style-type: none"> <li>2) Assess the results of surveys (topographical survey, geotechnical investigation, subsoil investigation and material tests, etc.)</li> <li>3) Assist to organize public hearing/consultation meeting by LGIs</li> <li>4) Prepare the definite planning and detailed design including landfill design, hydraulic analysis, structural analysis, detail design drawings, etc.</li> <li>5) Prepare construction schedule</li> <li>6) Prepare bill of quantities and detailed cost estimates</li> <li>7) Prepare all necessary documents</li> <li>8) Setting up value of OE indicators and calculation of EIRR of 2<sup>nd</sup> and 3<sup>rd</sup> batch</li> <li>9) Prepare Operational guideline, O&amp;M plan, and manual for subprojects</li> </ol> <p>(2) Assist Tender</p> <ol style="list-style-type: none"> <li>1) Prepare construction and procurement plan, pre-qualification document, and tender document for tender process</li> <li>2) Assist evaluation of pre-qualification</li> <li>3) Assist tender evaluation</li> </ol> <p>(3) Assist Construction Supervision</p> <ol style="list-style-type: none"> <li>1) Assist to issue work orders and instructions</li> <li>2) Assist to make advance payments and other payments</li> <li>3) Assist to assess contractor's construction plan and</li> </ol>
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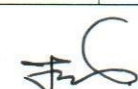










			<p>programs</p> <ol style="list-style-type: none"> <li>4) Provide the contractor with all necessary survey data and reference for setting out the works</li> <li>5) Assist to carry out field inspections on the contractor's setting out to ensure the works in accordance with drawings</li> <li>6) Assist to supervise the laboratory testing of materials and related activities</li> <li>7) Assist to conduct quality and safety control by DPCO</li> <li>8) Assist to monitor physical and financial progress</li> <li>9) Assist to prepare updated cost estimates and time to completion</li> <li>10) Assist to carry out final inspection for issuance of completion certificate</li> <li>11) Prepare necessary document for supervision works</li> </ol>
6	<p>Environment and Social Considerations</p> <ul style="list-style-type: none"> <li>• Environmental and Social Consideration Expert: I</li> <li>• Environmental and Social Consideration Specialist: L</li> <li>• Resettlement Specialist: L</li> </ul>	I&L	<ol style="list-style-type: none"> <li>(1) Update EMP as appropriate; incorporate necessary technical specifications with design and contract documentation</li> <li>(2) Prepare / update IEE, EIA, EMP for the required subprojects by deploying local firms in accordance with the Environmental Assessment and Review Framework. Their TOR is based on the requirements of the Bangladesh Environmental Conservation Act 1995, Environmental Conservation Rules 1997, and JICA Guidelines for Environmental and Social Considerations 2010</li> <li>(3) Supervise and monitor the progress of development of IEE, EIA and EMP</li> <li>(4) During preparation of bidding documents, identify environmental responsibilities as explained in the</li> </ol>


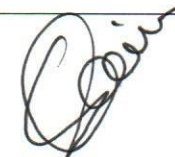









			<p>EIA/IEE and EMP, and Environmental Clearance Certificate (ECC) issued by the Department of Environment (DoE)</p> <p>(5) Monitor the effectiveness of EMP and negative impact on environment caused by the construction works and provide technical advice, including a feasible solution</p> <p>(6) Update, as necessary, or prepare the Abbreviated Resettlement Action Plan (ARAP) by deploying local firms in accordance with the Resettlement Policy Framework, including entitlement matrix and compensation plan; coordinate with various agencies in preparing the procedures for timely land acquisition and disbursement of compensation to project affected persons (PAPs). Their TOR is based on the requirements of JICA Guidelines for Environmental and Social Considerations 2010 and World Bank Safeguard Policy OP4.12 and its annexes</p> <p>(7) Supervise and monitor the progress of development of ARAP</p> <p>(8) Monitor land acquisition and compensation activities being undertaken by LGIs supported by field assistants deployed by the Consultant, and report the results in monthly progress reports</p>
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#### Capacity development

1.	<p>Local Governance Administration</p> <ul style="list-style-type: none"> <li>• Team Leader: I</li> <li>• Governance Expert: I</li> <li>• Governance Specialist: L</li> </ul>	I&L	<p>(1) Conduct a needs-assessment survey for capacity development programs</p> <p>(2) Prepare detailed plans of capacity development programs</p> <p>(3) Implement capacity development programs on budget formation/execution, monitoring/O&amp;M budget formulation, taxation and revenue management</p> <p>(4) Implement and facilitate horizontal learning activities among the</p>
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			target LGIs (e.g., annual experience-sharing workshop)
2	<p>Road/Bridges, Drainage/Flood Protection and Water Supply</p> <ul style="list-style-type: none"> <li>• Road and Bridge Engineer: I</li> <li>• Drainage/Flood Protection and Water Supply Engineer: I</li> <li>• Deputy Team Leader: L</li> <li>• Transport Engineer: L</li> <li>• Structural Design Engineer (Road): L</li> <li>• Structural Design Engineer (Bridge): L</li> <li>• Structural Design Engineer (Drainage/Flood Projection): L</li> <li>• Hydrological Engineer: L</li> </ul>	I&L	<ol style="list-style-type: none"> <li>(1) Conduct a needs-assessment survey for capacity development programs</li> <li>(2) Prepare detailed plans of capacity development programs</li> <li>(3) Implement capacity development programs as OJT basis to strengthen technical knowledge and capability of technical management in all stages (definite planning, detailed design, tendering, construction supervision, monitoring and evaluation) to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer of Upazila (in case of large drainage: Executive Engineer of BWDB)</li> <li>(4) Implement capacity development program as OJT basis to strengthen O&amp;M skill and knowledge to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer of Upazila (in case of large drainage: Executive Engineer of BWDB)</li> </ol>
3	<p>Solid Waste Management</p> <ul style="list-style-type: none"> <li>• Solid Waste: I Management Engineer: I</li> <li>• Deputy Team Leader: L</li> <li>• Solid Waste Management Specialist: L</li> <li>• Landfill Facility Specialist (Solid Waste Management): L</li> <li>• Wastewater Treatment Specialist: L</li> <li>• Private Contract Expert: L</li> </ul>	I&L	<ol style="list-style-type: none"> <li>(1) Conduct a needs-assessment survey for capacity development programs</li> <li>(2) Prepare detailed plans of capacity development programs</li> <li>(3) Implement capacity development programs (planning, designing, O&amp;M of SWM including collection, transportation, separation for recyclable and sanitary landfill, awareness raising of public, financial and contract management for outsourcing to private contractor, supervising and monitoring of private contract for O&amp;M, and coordination among LGIs etc.) to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer</li> </ol>

			<p>of Upazila</p> <p>(4) Implement capacity development programs as OJT basis to strengthen O&amp;M skill and knowledge to Solid Waste Management Section (SWMS) in each LGI and Private Service Provider</p> <p>(5) Implement public awareness raising for SWM to introduce the provision of SWM service and service charge system to Beneficiaries</p>
4	<p>Other Public Facilities</p> <ul style="list-style-type: none"> <li>• Architect: I</li> <li>• Deputy Team Leader: L</li> <li>• Architect: L</li> </ul>	I&L	<p>(1) Conduct a needs-assessment survey for capacity development programs</p> <p>(2) Prepare detailed plans of capacity development programs</p> <p>(3) Implement capacity development programs as OJT basis to strengthen technical knowledge and capability of technical management in all stages (definite planning, detailed design, tendering, construction supervision, monitoring and evaluation) to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer of Upazila</p> <p>(4) Implement capacity development program as OJT basis to strengthen O&amp;M skill and knowledge to related organization such as Market: Municipal Market Section of Paurashava, Bazar Management Committee chaired by UNO office of Upazila, Clinic cum Cyclone shelter: Health and Family Planning Section in Family Planning and Sanitary Department, Primary School cum Cyclone shelter: Upazila Primary Education Office, Park and Toilet: Conservancy section and etc.</p>
5	<p>Township Development</p> <ul style="list-style-type: none"> <li>• Township Development Engineer: I</li> </ul>	I&L	<p>(1) Conduct a needs-assessment survey for capacity development programs</p>



	<ul style="list-style-type: none"> <li>Deputy Team Leader: L</li> <li>Township Development Specialist: L</li> <li>Landfill Facility Specialist (Township): L</li> </ul>		<ul style="list-style-type: none"> <li>(2) Prepare detailed plans of capacity development programs</li> <li>(3) Implement capacity development programs (development of land utilization plan for township area etc.) to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer of Upazila</li> <li>(4) Implement capacity development program as OJT basis to strengthen O&amp;M skill and knowledge to Executive Engineer/Assistant Engineer of Paurashava and LGED Engineer of Upazila</li> </ul>
6	<p>Procurement</p> <ul style="list-style-type: none"> <li>Private Contract Expert: I</li> <li>Deputy Team Leader: L</li> <li>Private Contract Expert: L</li> <li>Procurement Specialist: L</li> </ul>	I&L	<ul style="list-style-type: none"> <li>(1) Conduct a needs-assessment survey for capacity development programs</li> <li>(2) Prepare detailed plans of capacity development programs</li> <li>(3) Implement capacity development programs on Bangladesh Public Procurement Rules and Regulations, and contract management</li> </ul>
7	<p>Environment and Social Consideration</p> <ul style="list-style-type: none"> <li>Environmental and Social Consideration Expert: I</li> <li>Environmental and Social Consideration Specialist: L</li> <li>Resettlement Specialist: L</li> </ul>	I&L	<ul style="list-style-type: none"> <li>(1) Conduct a needs-assessment survey for capacity development programs</li> <li>(2) Prepare detailed plans of capacity development programs</li> <li>(3) Implement capacity development programs: i) lectures and site visits for guidance and instructions on planning, implementation and monitoring of Environmental Management Plan (EMP); and ii) OJT for the development of environmental assessment reports and supervision of EMP implementation</li> </ul>
Assistance for Project Management			
1	<p>Assistance for Project Management</p> <ul style="list-style-type: none"> <li>Team Leader: I</li> <li>Deputy Team Leader: L</li> <li>All related sector experts: I&amp;L</li> </ul>	I&L	<ul style="list-style-type: none"> <li>(1) Prepare plan of consulting service activities, supervise, monitor and assess the activities</li> <li>(2) Coordinate with PIO, PIUs and UEOs on project planning, DD, supervision, and O&amp;M activities</li> <li>(3) Assist PMU, DPCO, PIO, PIUs and UEOs to collect progress of all</li> </ul>

			<p>works, including capacity development and infrastructure development, identify issues and countermeasures, and advise them for improvement when necessary</p> <p>(4) Assist PMU to prepare request for disbursement and its attachments to be submitted to JICA</p> <p>(5) Assist PMU to evaluate cancellation and replacement of subprojects through evaluation of new subprojects, and to prepare justification report, if necessary; and</p> <p>(6) Assist PMU to prepare Quarterly Progress Report, Annual Progress Report and Project Completion Report to be submitted to JICA quarterly</p>
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## Chapter 6. Reporting

Within the scope of consulting services, the Consultant shall prepare and submit reports and documents to the LGED as shown in Table 6.1. The Consultant shall provide electronic copy of each of these reports.

**Table 6.1 Reports to be submitted**

Category	Type of Report	Timing	No. of Copies (incl. electronic data)
Periodical Reports	Inception Report	Within Two (2) months after commencement of the services	10
	Quarterly Progress Report	Every quarter	10
	Annual Progress Report	Every year	10
	Project Completion Report	At the end of Services	10
Technical Reports	Training reports by fields	Within 1 month after the training to be executed	10 x 5
	O&M manual by sectors	Within the assignment of experts	10 x 6
	Definite plan/DD report	Per each subproject	5 x 74
	Supervision report	Per each subproject	5 x 74
	Environment and social assessment and record	Annual	5 x 5

### 6.1 Periodical Reports

The Inception report shall comprise the outline of the consulting services, methodology of the technical services covering the capacity development, engineering, environmental and social consideration, monitoring and evaluation, and project management, implementation schedule, etc. The Quarterly and Annual Reports shall be prepared quarterly and annually, respectively after the Inception Report submission. The Quarterly and Annual Report shall comprise the summarized activities of consulting services by fields, progress of the infrastructure, financial disbursement, etc. The issues found and countermeasures proposed, future activity plan of the consultants will be presented.

The Project Completion Report shall be prepared at the end of consulting services. The Completion Report comprises all achievement of the consulting services, financial disbursement, record of subproject development, result of monitoring and evaluation, the completed subproject profile and photos, etc.



## 6.2 Technical Reports

The Technical Reports shall be prepared according to the assignment of foreign consultants periodically. The technical reports will be the training materials and training results by respective fields including definite plans and DD report of subprojects to be implemented, periodical supervision reports of subprojects to be constructed, environment and social assessment and record, monitoring and evaluation report. The technical reports will be utilized not only for the reports on consulting services, but also for capacity development of the LGIs' engineering and administrative staff.

## Chapter 7. Obligations of the Executing Agency (Client)

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A certain range of arrangements and services shall be provided by LGED to the Consultant for smooth implementation of the Consulting Services. In this context, LGED shall:

(1) Assistance and exemption

Use its best efforts to, as described in the Sub-Clause 5.1 of General Conditions of Contract:

Assist the Consultant with obtaining work permits and such other documents as shall be necessary to enable the Consultants to perform the Services.

- (a) Assist the Consultants with promptly obtaining, for the Experts and, if appropriate, their eligible dependents, all necessary entry and exit visas, residence permits, exchange permits, and any other documents required for their stay in the Client's country while carrying out the Services under the Contract.
- (b) Facilitate prompt clearance through customs of any property required for the Services and of the personal effects of the Experts and their eligible dependents.
- (c) Issue to officials, agents and representatives of the Government all such instructions and information as may be necessary or appropriate for the prompt and effective implementation of the Services.
- (d) Assist the Consultant and the Experts and any Sub-consultants employed by the Consultant for the Services with obtaining exemption from any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity in the Client's country according to the applicable law in the Client's country.
- (e) Assist the Consultant, any Sub-consultants and the Experts of either of them with obtaining the privilege, pursuant to the applicable law in the Client's country, of bringing into the Client's country reasonable amounts of foreign currency for the purposes of the Services or for the personal use of the Experts and of withdrawing any such amounts as may be earned therein by the Experts in the execution of the Services.

(2) Services, Facilities and Property of LGED





Make available to the Consultant and the Experts, for the purposes of the Services and free of any charge, the services, facilities and property in accordance with Sub-Clause 5.4 (a) of General Conditions of Contract, described as follows:

*- Provide an office space in the Headquarters of LGED with necessary equipment, furniture and utility. However, the Consultant's requirement for office space, including necessary equipment, furniture and utilities, should be clearly stated in the proposal with its rental cost for the case where LGED would be unable to provide such facilities;*

(3) Counterpart Personnel

Make available to the Consultant free of charge such professional and support counterpart personnel, to be nominated by LGED with the Consultant's advice, in accordance with Sub-Clause 5.5 (a) of General Conditions of Contract, if necessary.

(4) The Report of Preparatory Survey may be downloaded from the client's web address:

<https://oldweb.lged.gov.bd/UnitPublication.aspx?UnitID=9>

or may be collected directly from the office of the Focal Person, Southern Chattogram Regional development Project, LGED Bhaban, Level-09, Agargaon, Sherebangla Nagar, Dhaka-1207.

## **Chapter 8. Equipment, Vehicles and Materials Furnished by the Client**

Any equipment, vehicles and materials made available to the Consultant by the Client, or purchased by the Consultant wholly or partly with funds provided by the Client, shall be the property of the Client and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultant shall make available to the Client an inventory of such equipment, vehicles and materials and shall dispose of such equipment, vehicles and materials in accordance with the Client's instructions. While in possession of such equipment, vehicles and materials, the Consultant, unless otherwise instructed by the Client in writing, shall insure them at the expense of the Client in an amount equal to their full replacement value



## Outline of Capacity Development Program

## (1) Local Government Administration

## 1.1 Budget Formulation, Execution, and Monitoring/O&amp;M Budget Formulation

Program Title	<b>Budget Formulation, Execution, and Monitoring / O&amp;M Budget Formulation</b>
Objectives	<p>This program aims in part to foster greater understanding of rules and instructions used by Paurashavas for budget formulation, execution, and monitoring. It also covers the budget formulation, execution and monitoring/reporting to ensure the proper O&amp;M of the developed infrastructures under the project with sufficient allocation of budget.</p> <p>Timing: Before starting to prepare tender documents of subprojects in each batch</p> <p>Duration: 1 day (Lecture / ToT to LGI Officers). 0.5 day (Lecture to Elected Representatives by LGI Officers at each LGI)</p> <p>Frequency: 3 times (= 1 times / batch x 3 batch)</p>
Target participants	<p>[Lecture / ToT to LGI Officials]</p> <ul style="list-style-type: none"> <li>✧ LGI Officials who are in charge of budgeting (70): 10 officials from each target LGI</li> </ul> <p>[Lecture to Elected Representatives by LGI Officers]</p> <ul style="list-style-type: none"> <li>✧ Elected Representatives: 15 each from target LGI (Councilors of Paurashava Council / Members of Upazila Parishad)</li> </ul>
Brief description of the module contents	<p>[Lecture / ToT to LGI Officials]</p> <p>Part 1 Overview</p> <p>1. Introduction, 2. Legal background, 3. Budget Documents</p> <p>Part 2 Budget Formulation</p> <p>1. Overview of the Process of budget formulation, 2. Individual Process of Budget Formulation</p> <p>Part 3 Budget Execution</p> <p>1. Rule of budget execution</p> <p>Part 4 Monitoring of Budget Execution</p> <p>1. Rules on monitoring of budget execution, 2. Checkpoints on budget monitoring, 3. Revision of Budget, 5. Budget Reporting, 6. Reporting of Annual Development Program (Operational Manual on Paurashava Budget formulation, execution and monitoring developed by SPGP may be utilized for all parts above)</p> <p>[Lecture to Elected Representatives by LGI Officials] (Lectures on only the essence of the following will be delivered)</p> <p>Part 1 Overview</p> <p>1. Introduction, 2. Legal background, 3. Budget Documents</p> <p>Part 2 Budget Formulation</p> <p>1. Overview of the Process of budget formulation, 2. Individual Process of Budget Formulation</p> <p>Part 3 Budget Execution</p> <p>1. Rule of budget execution</p> <p>Part 4 Monitoring of Budget Execution</p> <p>1. Rules on monitoring of budget execution, 2. Checkpoints on budget monitoring, 3. Revision of Budget, 5. Budget Reporting, 6. Reporting of Annual Development Program (Operational Manual on Paurashava Budget formulation, execution and monitoring developed by SPGP may be utilized for all parts above)</p> <p>[OJT: Supported by Loan Consultant]</p> <p>Part 5 O&amp;M budget Formulation</p>



Method of instruction	[Lecture / ToT to LGI Officials] Lecture by LGD, LGED, NILG, possibly in cooperation with Institute of Public Finance Bangladesh (IPF) [Lecture to Elected Representatives by LGI Officials] Lecture by the LGI Official who received the ToT
Training site	[Lecture / ToT to LGI Officials] Conference room in Cox's Bazar District Office [Lecture to Elected Representatives by LGI Officials] Conference room in each target LGI

Source: JICA Survey Team

## 1.2 Taxation and Revenue Management

Program Title	<b>Taxation and Revenue Management</b>
Objectives	<p>This program seeks to improve the understanding and the skills related to revenue generation and management. It includes increased understanding on tax revenue sources, setting tariff, expanding non-tax revenue sources and management of generated resources.</p> <p>Timing: Before starting to prepare tender documents of subprojects in each batch</p> <p>Duration: 1 day (Lecture / ToT to LGI Officers). 0.5 day (Lecture to Elected Representatives by LGI Officers at each LGI)</p> <p>Frequency: 3 times (= 1 times / batch x 3 batch)</p>
Target participants	<p>[Lecture / ToT to LGI Officials]          ◇ LGI Officials who are in charge of taxation and revenue management (70): 10 officials from each target LGI</p> <p>[Lecture to Elected Representatives by LGI Officers]          ◇ Elected Representatives: 15 each from target LGI (Councilors of Paurashava Council / Members of Upazila Parishad)</p>
Brief description of the module contents	<p>[Lecture / ToT to LGI Officials]</p> <p>Part 1 Overview 1. Introduction</p> <p>Part 2 Legal Background 1. Rules on Tax Assessment, 2. Formation of Tax Assessment and Collection Standing Committee, 3. Rates of Tax and Rates, 4. Restriction of Tax Assessment</p> <p>Part 3 Process of Tax Assessment</p> <p>Part 4 Revenue Management 1. Preparation of Financial Statement</p> <p>Part 6 Auditing 1. Rules and Responsibility of Accounting and Auditing Standing Committee, 2. Steps of internal auditing (Operational Handbook on Paurashava Tax Assessment developed by SPGP may be utilized for all parts above)</p> <p>[Lecture to Elected Representatives by LGI Officials] (Lectures on only the essence of the following will be delivered)</p> <p>Part 1 Overview 1. Introduction</p> <p>Part 2 Legal Background 1. Rules on Tax Assessment, 2. Formation of Tax Assessment and Collection Standing Committee, 3. Rates of Tax and Rates, 4. Restriction of Tax Assessment</p> <p>Part 3 Process of Tax Assessment</p> <p>Part 4 Revenue Management 1. Preparation of Financial Statement</p> <p>Part 6 Auditing 1. Rules and Responsibility of Accounting and Auditing Standing Committee, 2. Steps of internal auditing (Operational Handbook on Paurashava Tax Assessment developed by SPGP may be utilized for all parts above)</p> <p>[OJT: Supported by Loan Consultant] Part 7 Institutionalization of fee collection mechanism for SWM</p>
Method of	[Lecture / ToT to LGI Officials]



instruction	Lecture by LGD, LGED, NILG, possibly in cooperation with Institute of Public Finance Bangladesh (IPF) [Lecture to Elected Representatives by LGI Officials] Lecture by the LGI Official who received the ToT
Training site	[Lecture / ToT to LGI Officers] Conference room in Cox's Bazar District Office [Lecture to Elected Representatives by LGI Officers] Conference room in each target LGI

Source: JICA Survey Team

## (2) Engineering and Infrastructure

### 2.1 Guidance of all stages including Definite Planning, Detail Design, Tendering and Construction Supervision

Objectives	Strengthen technical knowledge and capability of technical management in all stages including definite planning, detailed design, tendering and construction supervision
Target participants	LGI's officials ✧ Engineers ✧ Other officers related to implementation of subprojects
Brief description of the module contents	<p>Part 1 Definite Planning Stage</p> <ol style="list-style-type: none"> <li>Basic knowledge on preparation of definite planning           <ol style="list-style-type: none"> <li>Date collection (meteorological data, hydrological data), b) Peak flow estimate (design discharge) for drainage sector,</li> <li>Topographic survey, d) Finalization of definite plan (background and objectives, assessment of current condition, improvement/development direction and measures, scope of works, preliminary cost estimate, implementation schedule, effects and evaluation)</li> </ol> </li> <li>Utilization of the information of the past projects (location, priority in the M/P, design drawing, cost estimation, project management, etc.)</li> </ol> <p>Part 2 Detailed Design Stage</p> <ol style="list-style-type: none"> <li>Basic knowledge on preparation of detained design           <ol style="list-style-type: none"> <li>Geological and soil mechanical investigation, b) Hydrological analysis, c) Structural analysis, d) Detailed design drawings,</li> <li>Bill of quantities, f) Construction plan and schedule , g) Cost estimate</li> </ol> </li> <li>Maintenance guideline shall be prepared/provided by the loan consultant to develop appropriate activities in maintenance stage.</li> </ol> <p>Part 3 Tendering Stage</p> <ol style="list-style-type: none"> <li>Knowledge regarding tender document and approval process           <ol style="list-style-type: none"> <li>Pre-qualification Documents (PQ), b) Bidding Documents, c) Approval of Bidding Documents, d) Tender Process by e-GP,</li> <li>Review and Concurrence of JICA</li> </ol> </li> </ol> <p>Part 4 Construction Supervision Stage</p> <ol style="list-style-type: none"> <li>Methodology of construction supervision as the Employer           <ol style="list-style-type: none"> <li>Issue of commencement order to Contractor, b) Pre-construction meeting, c) Checking/approving of Contractor's method of work, d) Safety control, e) Inspection on construction methods and field conditions, f) Monitoring of physical and financial progress, g) Management meeting with Contractor, h) Field and laboratory tests, i) Modification of design drawings, j) Change in works and claim settlement, k) Progress and quality control, l) Final inspection, m) Acceptance of Contractor's performance, n) Preparation of reports and records</li> </ol> </li> </ol> <p><i>Guidelines for Implementation of Infrastructure Subproject prepared by ICGP and Operational Manuals, Course Guides and Teaching Materials 1. Orientation Course on the Basics of Paurashava Administration prepared by SPGP may be utilized for the parts above</i></p>
Method of instruction	Consultant implements the capacity development program by on the Job Training. LGI's engineers will be directed through joining to actual activities in consulting services.
Training site	Subproject site and LGIs' office

Note: ICGP: Inclusive City Governance Project, SPGP: Strengthening Paurashava Governance Project, CPTU:



## 2.2 Guidance of O&M and support for preparing manual

Objectives	This program has two objectives and implemented by On the Job Training Strengthen O&M skill and knowledge and support to prepare manual
Target participants	LGLs' officials ✧ Engineers ✧ Other officers related to implementation of subprojects
Brief description of the module contents	Part 1 O&M Skill and Knowledge <ol style="list-style-type: none"> <li>1. Prepare O&amp;M Plans</li> <li>2. Periodical Inspection</li> <li>3. Emergent Inspection</li> <li>4. Prepare Work Proposal for Rehabilitation</li> <li>5. Monitoring &amp; Evaluation of O&amp;M Activities</li> <li>6. Annual O&amp;M Assessment Meeting</li> </ol> Part 2 Preparation of O&M Manual <ol style="list-style-type: none"> <li>1. Support to prepare facility ledger (inventory)</li> <li>2. Guidance of knowledge regarding to standard O&amp;M procedure and methodology</li> <li>3. Supporting to prepare O&amp;M manual</li> <li>4. Guidance of recording O&amp;M result</li> <li>5. Provision of basic knowledge for supervision of O&amp;M and updating facility ledger.</li> </ol> <i>Guidelines for Operation and Maintenance prepared by ICGP and Guidelines for the Operation and Maintenance for Paurashava prepared by NOBIDEP may be utilized for part 5</i>
Method of instruction	Consultant implements the capacity development program by on the Job Training. LGLs' engineers will be directed through joining to actual activities in consulting services.
Training site	Subproject site and LGLs' office

Note: ICGP: Inclusive City Governance Project, SPGP: Strengthening Paurashava Governance Project, CPTU:

Central Procurement Technical Unit

Source: JICA Survey Team

### (3) Solid Waste management and Other Infrastructure

#### 3.1 Management Planning, Management and Monitoring Procedure of Solid Waste Management in case of Private Sector Participation

Objectives	This program has two objectives. <ul style="list-style-type: none"> <li>• One is to know planning, implementation and monitoring procedure of Solid Waste Management (SWM).</li> <li>• Second is to know contract management procedure from contract preparation to monitoring of SWM in case of Private Sector Participation</li> </ul>
Target participants	✧ Administrative staff like UNO, Secretary, Accountant, etc from each Local Administration Unit (LGI) ✧ Engineers related to Solid Waste Management in each LGI ✧ Conservancy Inspectors in each LGI ✧ Other staff related to SWM  Total 10 to 20 persons from each LGI
Brief description of the contents	<Lecture> Part1 Planning procedure of solid waste management <ul style="list-style-type: none"> <li>• Grasp of current situation and issues of solid waste management</li> <li>• Vision and goal of future and framework</li> <li>• Planning procedure of each component</li> </ul>

	<ul style="list-style-type: none"> <li>• Evaluation of plan, etc</li> </ul> <p>Part 2 Procedure for outsourcing to PSPs</p> <ul style="list-style-type: none"> <li>- Introduction of case study of outsourcing</li> <li>- Preparation procedure of technical specification of SWM operation</li> <li>- Preparation procedure of contract document</li> <li>- Operation and maintenance planning procedure by PSPs operation</li> <li>- Monitoring and evaluation procedure of PSPs activities, etc</li> </ul> <p>&lt;Site Visit&gt;</p> <p>Part 3 Site Visit</p> <ul style="list-style-type: none"> <li>- Site visit to SWM facilities or area (collection area, composting area, landfill site, etc) in Teknaf</li> <li>- Site visit to SWM facilities or area (collection area, transfer station, maintenance workshop, landfill site, etc) in Dhaka</li> <li>- Site visit to outsourcing area to PSPs in Dhaka</li> </ul> <p>&lt;Workshop&gt;</p> <p>Part 4 Share the experience of DNCC and DSCC</p> <ul style="list-style-type: none"> <li>• Share the experience of UNDP project</li> </ul> <p>Part 5 Exercise of planning, monitoring and evaluation of outsourcing activity by PSP</p> <ul style="list-style-type: none"> <li>• Exercise: Review and improvement of planning of SWM for each LGI</li> <li>• Exercise: Review and improvement of contract document between LGI and PSP</li> <li>• Exercise: Implementation of monitoring and evaluation of SWM</li> </ul>
Method of instruction	<p>Lecture from International Consultant, LGED, DNCC, DSCC, UNDP</p> <p>Site Visit of SWM facilities in DNCC, DSCC, Teknaf</p> <p>OJT training through workshop of each LGI</p>
Training site	Subproject site and LGIs' office, Sites in DNCC, DSCC, Teknaf

Source: JICA Survey Team

## (4) Procurement

### 4.1 Seminar on JICA's Procurement Guidelines

Objectives	<p>This is a seminar for PMU. Since PMU is supposed to be Procuring Entity for selecting consultant and procuring heavy equipment under the Project respecting JICA's procurement / consultant-selection guidelines, PMU needs to understand such guidelines.</p> <p>Timing: Beginning of the Project</p> <p>Duration: 2 days</p> <p>Frequency: 1 time</p>
Target participants	<p>PMUs' officials</p> <ul style="list-style-type: none"> <li>◇ Project Director</li> <li>◇ 2 Deputy Project Directors</li> <li>◇ 2 Assistant Engineers</li> <li>◇ Procurement Officer</li> </ul> <p>Estimated No. of Participants: 6 persons</p>
Brief description of the module contents	<p>Part 1 Introduction</p> <p>1. Objective of Seminar,</p> <p>Part 2 Guidelines for the Employment of Consultants under Japanese ODA Loans</p> <p>1. General, 2. Consulting Services, 3. Selection Procedures, 4. Contract, 5. Terms of Reference</p> <p>Part 3 Guidelines for Procurement under Japanese ODA Loans</p> <p>1. General, 2. Type and Size of Contract, 3/ Bidding Documents, 4. Opening of Bids, Evaluation and Award of Contract</p> <p>Part 4 Wrap-up</p>
Method of instruction	Lecture by JICA Expert
Training site	LGED's conference rooms



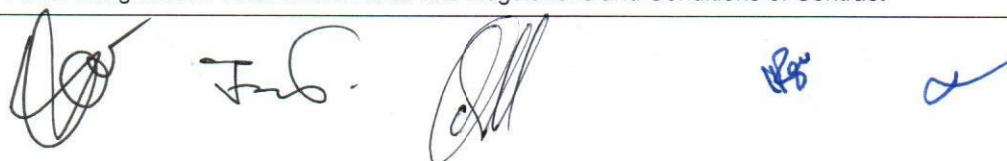
## 4.2 Seminar on Bangladesh Public Procurement Rules and Regulations

Objectives	<p>This program is for ULBs' officers to learn duties and responsibilities of the Employer and the Contractor based on Bangladesh Procurement Act and Rules and standard tender documents.</p> <p>Timing: Before starting to prepare tender documents of subprojects in each batch</p> <p>Duration: 5 days</p> <p>Frequency: 3 times (= 1 times/badge x 3 badges)</p>
Target participants	<p>LGLs' officials</p> <ul style="list-style-type: none"> <li>✧ Engineers</li> <li>✧ Other officers related to implementation of subprojects</li> </ul> <p>Estimated No. of Participants:</p> <ul style="list-style-type: none"> <li>✧ PIO: 15 (5 x 3 times)</li> <li>✧ UEO: 60 (5 x 4 Upazilas x 3 times)</li> <li>✧ PIU : 45 (5 x 3 Paurashavas x 3 times)</li> </ul>
Brief description of the module contents	<p>Part 1 Introduction</p> <p>1. Objective of Seminar, 2. Structure of PPA and PPR, 3. Structure of Standard Tender Documents</p> <p>Part 2 Bangladesh Procurement Act 2006 and Bangladesh Procurement Rules 2008</p> <p>1. Preliminary, 2. Preparation of Tender or Proposal, Committee, etc., 3. Principles of Public Procurement, 4. Methods of Procurement for Goods, Works, etc. and Their Use, 5. Methods of Procurement for Intellectual &amp; Professional Services and Their Use, 6. Processing of Procurement, 7. Professional Misconduct, Offences, etc., 8. Use of Electrical Processing System in Public Procurement, etc., 9. Miscellaneous</p> <p>Part 3 Standard Tender Documents – Instructions of Tenders</p> <p>1. General, 2. e-Tender Documents, 3. Qualification of Criteria, 4. Tender Preparation, 5. Tender Submission, 6. e-Tender Opening and e-Evaluation, 6. Contract Award</p> <p>Part 4 Standard Tender Documents – General Conditions of Contract</p> <p>1. General, 2. Time Control, 3. Quality Control, 4. Cost Control</p>
Method of instruction	Lecture by CPTU, LGED or Pro B Consultant
Training site	ULBs' conference rooms

Source: JICA Survey Team

## 4.3 Seminar on Contract Management

Objectives	<p>This program is for contractors to learn duties and responsibilities of the Employer and the Contractor, and how to manage contract in terms of technical aspect.</p> <p>Timing: After selecting contractors of subprojects in each batch</p> <p>Duration: 1 days</p> <p>Frequency: 3 times (= 1 times/badge x 3 badges)</p>
Target participants	<p>Awarded contractors</p> <p>Estimated No. of Participants: 231 persons (= 3 persons x 77 subprojects)</p>
Brief description of the module contents	<p>Part 1 Introduction</p> <p>1. Objective of Seminar, 2. Structure of PPA and PPR, 3. Structure of Standard Tender Documents</p> <p>Part 2 Bangladesh Procurement Rules and Regulations and Conditions of Contract</p>



	<p>Bangladesh Procurement Act and Rules General and Specific Conditions of Contract</p> <p>Part 3 Program of Works</p> <p>1.Preparation of Program, 2.Monitoring of Program, 3.Revision of Programme.3.Evaluation of Program 4. Improvement of Program</p> <p>Part 4 Method of Testing / Inspection</p> <p>I. Inspection of Progress, 2.Material Testing</p> <p>Part 5 Safety Measures</p> <p>1.Preparation of Safety Plan, 2.Method Statements on Safety, 3.Technical Guidance for Safe Execution (by the Type of Work), 4.Technical Guidance for Safe Execution (by the Type of Accident)</p> <p><i>Guidelines for Implementation of Infrastructure Subproject prepared by ICGP and Operational Manuals, Course Guides and Teaching Materials 1. Orientation Course on the Basics of Paurashava Administration prepared by SPGP may be utilized for all parts above.</i></p>
Method of instruction	Lecture by LGED or Pro B Consultant
Training site	LGED's district office in Cox's Bazar

Note: ICGP: Inclusive City Governance Project, SPGP: Strengthening Paurashava Governance Project, CPTU:

Central Procurement Technical Unit

Source: JICA Survey Team

## (5) Environmental and Social Consideration

### 5.1 Guidance and instructions on planning, implementation and monitoring EMP

Objectives	<p>This program aims at capacity development of PIO (District LGED) and PIU members (Paurashava and Upazila officers in charge of environmental and social safeguards and engineers) to obtain proper knowledge in planning, implementing and monitoring EMP.</p> <p>Timing: During EMP development period (before commencement of the construction work)</p> <p>Duration: 1 day</p> <p>Frequency: 3 times (one time per one batch. The latter two are follow-up sessions)</p>
Target participants	<p>✧ PIO staff: (2 persons x 3 times)</p> <p>✧ LGI Officers (Paurashavas and Upazilas): (3 persons ( Environmental Officer, Officer in charge of social development, and Engineer) x 7 LGIs x 3 times)</p> <p>Estimated number: 23 persons x 3 times</p>
Brief description of the module contents	<ul style="list-style-type: none"> <li>- EMP Implementation (roles and responsibilities, implementation process, monitoring, supervision and reporting procedures)</li> <li>- Grievance redress mechanism (roles and responsibilities, procedures)</li> <li>- Occupational and community health and safety (health safety measures, social safety measures, site-specific measures development, work site protocol)</li> <li>- Emergency preparedness and response</li> <li>- Pollution control and environmental monitoring</li> <li>- Inspection and reporting</li> <li>- Public consultation</li> <li>- Contractor engagement and management, including EMP enforcement and operation-phase environmental management and monitoring.</li> </ul>
Method of instruction	<p>Lecture by District DOE, Pro A and Pro B Consultant</p> <p>Site visits of good-performed projects in environmental monitoring</p>
Training site	District LGED conference room and project site

Source: JICA Survey Team



## 5.2 Development of environmental assessment reports and supervision of EMP implementation (on-the-job)

Objectives	<p>This program is on-the-job training for PIO (District LGED) and PIU members (Paurashava and Upazila officers in charge of environmental safeguards and engineers) to acquire practical skills in planning, implementing and monitoring EMP and supervise the contractors' EMP implementation.</p> <p>Timing: Prior to the commencement of construction work and during construction work</p> <p>Duration: ad-hoc</p> <p>Frequency: ad-hoc</p>
Target participants	<ul style="list-style-type: none"> <li>✧ PIO staff: (2 persons)</li> <li>✧ LGI Officers (Paurashavas and Upazilas): (2 persons (Environmental Officer, Officer in charge of social development) x 7 LGIs)</li> </ul> <p>Estimated number: 16 persons</p>
Brief description of the module contents	<ul style="list-style-type: none"> <li>- Preparation of environmental assessment reports;</li> <li>- Review of site-specific EMP;</li> <li>- Provision of technical guidance to the contractors on monitoring and recording environmental parameters; and</li> <li>- Supervision of EMP implementation.</li> </ul>
Method of instruction	Pro A and Pro B Consultant
Training site	PIU office (at each LGI) x 7 venues and on-site

Source: JICA Survey Team

