

# Project Administration Manual

Project Number: 50165-003

Loan and Grant Numbers: 3668-BHU and 0573-BHU, LXXXX and GXXXX

November 2020

Kingdom of Bhutan: Phuentsholing Township  
Development Project–Additional Financing

## ABBREVIATIONS

ADB	–	Asian Development Bank
APFS	–	audited project financial statements
AEFS	–	audited entity financial statements
ALDTP	–	Amochhu Land Development and Township Project
CDCL	–	Construction Development Corporation Ltd.
CEMP	–	contractor's environmental management plan
COVID-19	–	coronavirus disease
DHI	–	Druk Holding and Investment Ltd.
DMEA	–	Department of Macroeconomic Affairs
DMF	–	design and monitoring framework
EIA	–	environmental impact assessment
EMP	–	environmental management plan
FMA	–	Financial Management Assessment
GRC	–	grievance redress committee
GRM	–	grievance redress mechanism
ha	–	hectares
MOF	–	Ministry of Finance
MOWHS	–	Ministry of Works and Human Settlements
NEC	–	National Environment Commission
Nu	–	Ngultrum
O&M	–	operations and maintenance
PFS	–	project financial statements
PIC	–	Project Implementation Consultant
PIU	–	project implementation unit
PMU	–	project management unit
PPMS	–	project performance management system
RMA	–	Royal Monetary Authority of Bhutan
SCADA	–	supervisory control and data acquisition
SOE	–	statement of expenditures
SPS	–	ADB Safeguard Policy Statement (2009)
TA	–	technical assistance
TOR	–	terms of reference

## **CONTENTS**

I.	PROJECT DESCRIPTION	1
II.	IMPLEMENTATION PLAN	4
	A. Project Readiness Activities	4
	B. Overall Project Implementation Plan	5
III.	PROJECT MANAGEMENT ARRANGEMENTS	9
	A. Project Implementation Organizations: Roles and Responsibilities	9
	B. Key Persons Involved in Implementation	14
	C. Project Organization Structure	15
IV.	COSTS AND FINANCING	16
	A. Cost Estimates Preparation and Revisions	17
	B. Key Assumptions	17
	C. Detailed Cost Estimates by Expenditure Category	18
	D. Allocation and Withdrawal of Loan and Grant Proceeds	19
	E. Detailed Cost Estimates by Financier (\$ million)	21
	F. Detailed Cost Estimates by Component	22
	G. Detailed Cost Estimates by Year	23
	H. Contract and Disbursement S-Curve	24
	I. Contract and Disbursement S-Curve, ADB Grant	25
	J. Fund Flow Diagram	26
V.	FINANCIAL MANAGEMENT	27
	A. Financial Management Assessment	27
	B. Disbursement	30
	C. Accounting	32
	D. Auditing and Public Disclosure	33
VI.	PROCUREMENT AND CONSULTING SERVICES	36
	A. Advance Contracting and Retroactive Financing	36
	B. Procurement of Goods, Works, and Consulting Services	37
	C. Procurement Plan	37
	D. Consultant's Terms of Reference	38
VII.	SAFEGUARDS	38
	A. Environment	38
	B. Institutional roles and responsibilities	38
	C. Grievance Redress Mechanism	41
	D. Health and safety	43
	E. Prohibited investment activities	43
VIII.	GENDER AND SOCIAL DIMENSIONS	43
IX.	PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION	44
	A. Project Design and Monitoring Framework	44
	B. Monitoring	44
	C. Evaluation	45
	D. Reporting	46
	E. Stakeholder Communication Strategy	46

X.	ANTICORRUPTION POLICY	47
XI.	ACCOUNTABILITY MECHANISM	47
XII.	RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL	48

## **APPENDIXES**

Appendix A: Revised Design and Monitoring Framework

Appendix B: Project Advisory Committee

Appendix C: PMU and PIU Staffing Cadre

Appendix D: Strategic Action Plan For Sustainable Township Management

Appendix E: Procurement Plan

Appendix F: Terms of Reference and Scope of Work For Consultant Packages

Appendix G: Quarterly Progress Report Template

### **Project Administration Manual Purpose and Process**

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the policies and procedures of the government and Asian Development Bank (ADB). The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Druk Holding and Investments Limited (DHI), executing agency and Construction Development Corporation Limited (CDCL), implementing agency are wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation including compliance by DHI and CDCL of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan and grant negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the loan/grant agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the loan/grant agreement, the provisions of the loan/grant agreements shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval, they will be subsequently incorporated in the PAM.



## I. PROJECT DESCRIPTION

1. Bhutan, which is located entirely within the Himalayan mountain range, is increasingly experiencing water-induced disasters such as landslides, floods, and flash floods. Major cities such as Thimphu, Phuentsholing, and Paro are encroaching on scarce agricultural land and unsafe terrain, including steep hillsides and floodplains. This situation, coupled with rapid urbanization, is making it extremely difficult for Bhutan to achieve its vision of balanced and environmentally sustainable development.

2. An important focus of Bhutan's development strategy is the potential of growth centers in the south near the Indian border to boost export-oriented industrial development.<sup>1</sup> However, the centers are constrained by a lack of adequate and suitable land for development. Phuentsholing has been identified as a regional growth center that can be safely expanded through the construction of flood protection works and planned urbanization. Located on two major trade corridors developed under the South Asia Subregional Economic Cooperation framework, Phuentsholing handles over 80% of Bhutan's trade, and is the country's largest commercial and industrial hub and main trading gateway with India. Phuentsholing is also Bhutan's second most populous city, with 25,000 residents, and is anticipated to grow by 5% per year subject to land availability. Due to housing constraints in Phuentsholing, many Bhutanese people reside on the Indian side of the border in Jaigaon.<sup>2</sup>

3. Land scarcity is a key growth constraint for Phuentsholing, which is physically confined by steep and unstable Himalayan foothills, the Amochhu River, and international borders. The city is significantly exposed to precipitation- and earthquake-triggered landslides, which have a high mortality rate, and has also been significantly impacted by flood damage and riverbank erosion over the past 25 years. Flash floods triggered by monsoon rains are also occurring more frequently due to dense development, the loss of natural ground cover, and climate change.<sup>3</sup> Since 2002, the Government of Bhutan has been working to mitigate Phuentsholing's land constraints and exposure to geophysical and flood hazards by constructing flood and erosion defenses along the left and right banks of the Amochhu River, and expanding the city away from the mountain slopes to areas of flat riparian land suitable for residential, commercial, institutional, and recreational uses.<sup>4</sup>

4. ADB has approved loans amounting to \$47.24 million and grants amounting to \$34.26 million to develop for the Phuentsholing Township Development Project to develop about 66 hectares (ha) (Zone A) of vacant riparian land immediately adjacent to the existing city along the left bank of the Amochhu River, based on the Amochhu Development Master Plan.<sup>5</sup> The project will construct river walls and raise ground levels that will protect Phuentsholing township from floods and riverbank erosion. It will also develop common infrastructure for about 66 ha of new urban land for safe and sustainable expansion of human settlements and commercial activities.

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<sup>1</sup> Government of Bhutan. 2013. *Eleventh Five Year Plan, 2014–2018*. Thimphu.

<sup>2</sup> Government of Bhutan, Ministry of Works and Human Settlements. 2013. *Phuentsholing Structure Plan 2013–2028 (Vol. 01)*. Thimphu. Phuentsholing receives more inward migration from rural areas than any other city in Bhutan.

<sup>3</sup> The most devastating event in recent history was Cyclone Alia, which caused loss of land and infrastructure when it occurred in 2009.

<sup>4</sup> Government of Bhutan. 2004. *Urban Development Plan, 2002–2017: Phuentsholing, Bhutan*. Thimphu.

<sup>5</sup> The first loan and grant was approved on 5 June 2018 and additional financing, comprising loan and grant, was approved on x November 2020. The additional financing was necessary to finance cost overruns and extension of riverbank protection works. Government of Bhutan, DHI. 2017. *Amochhu Development Master Plan*. Thimphu. The master plan is aligned with the Phuentsholing Structure Plan 2013–2028.

It will also support capacity development for improved flood risk management and delivery of urban services.

5. The project is aligned with the following impacts: (i) balanced and sustainable development of human settlements ensured;<sup>6</sup> and (ii) smart growth principles applied in planning and development.<sup>7</sup> The project will have the following outcome: Phuentsholing's urban area protected from floods and expanded with improved amenities and services.<sup>8</sup> The project outputs are:

- (i) **Output 1: Flood and erosion protection measures installed.** The riverbank protection works will protect Phuentsholing from flooding and erosion. Specifically, the project will (i) construct 4.77 kilometers (km) of erosion-resilient river walls to protect against 100-year probable flood, (ii) raise ground levels behind the new walls to reclaim at least 66 ha of flood-protected land for urban development, and (iii) establish and operationalize a flood early warning system and flood management plan in consultation with the community;
- (ii) **Output 2: Municipal infrastructure constructed.** The project will provide serviced plots of land by constructing common urban infrastructure comprising (a) about 10 km of roads with footpaths, landscaping, and streetlights, which are planned in consultation with women; (b) modern drinking water supply and distribution systems, and wastewater collection and treatment systems that service the new township and adjoining areas; (c) a resource recovery system for managing solid waste in both the new and old townships; and (d) power distribution and telecommunication systems throughout the new township. The plots will be leased to residential and commercial investors as prescribed by the Amochhu Development Master Plan, which emphasizes principles of sustainable urban design such as maximum walkability, greenery, and open spaces; and
- (iii) **Output 3: Township management systems installed.** The project will (a) establish asset management systems; (b) build the capacity of township staff to ensure sustainable and effective urban management; and (c) initiate investor promotion activities.

6. The project will develop Zone A of the government's much larger Amochhu Land Development and Township Project (ALDTP), which is divided into five zones: A to E. Zone D represents Kaileshwar Hill and is not included for development. The remaining four zones comprise developing Amochhu River riparian land that will ultimately require about 15 km of new riverbank protection and the installation of about 464 ha of new common urban infrastructure (roads, water supply, waste water management, municipal solid waste management, power and telecommunications). At its completion, ALDTP will support habitation for up to 50,000 people. The allocation of land and riverbank protection for the ALDTP's four development zones are shown in Table 1.

**Table 1: Allocation of Land and Riverbank Protection**

<b>Zones</b>	<b>Area (ha)</b>	<b>Riverbank Protection Length (m)</b>
A	66	4,770
B	94	3,046
C	277	4,872
E	27	3,083
<b>Total</b>	<b>464</b>	<b>15,771</b>

<sup>6</sup> Government of Bhutan. 2013. *Eleventh Five Year Plan, 2014–2018*. Thimphu.

<sup>7</sup> Ministry of Works and Human Settlements. 2013. *Phuentsholing Structure Plan 2013–2028*. Thimphu.

<sup>8</sup> The design and monitoring framework is in Appendix A.



7. Implementation of ALDTP will be phased in relation to the scale and demand for development. This project will finance ALDTP's Zone A and support the preparation of subsequent zones that will be developed in the future under separate financing.

8. The project mainly comprises the following six works packages and six consulting packages as described in Section 3.

9. **CW-01: River training and land reclamation.** This package includes construction of river training, embankment protection, land filling, cross drainage, slope stabilization and river promenade finishing.

10. **CW-02: Common urban infrastructure.** This package includes the construction of roads, footpaths, street lighting, drains, water supply infrastructure, sanitation infrastructure, and solid waste management sorting and transfer station. The package will include an operations and maintenance (O&M) period with an overall O&M period of 5 years.<sup>9</sup> A supervisory control and data acquisition (SCADA) system will be installed at the water production facilities and bulk meters and at the sewage treatment plant, with the option to expand SCADA in the future to increasingly cover more assets linked into city management system. The package also includes landscaping and park development, and maintenance of greenery and the construction of Construction Development Corporation Limited's (CDCL) office building<sup>10</sup> within the new township. The contractor shall provide as-built digital drawings of all new assets. The contractor shall also prepare an O&M manual for the new assets and provide related training to Phuentsholing Thromde staff.

11. **CW-03: Flood early warning system.** This package will install a flow monitoring system on the Amochhu River upstream of Phuentsholing that is integrated into Bhutan's existing flood early warning system.

12. **CW-04: Power transmission infrastructure.** This package includes the installation of the power transmission and distribution network and will be implemented by Bhutan Power Corporation. It will be fully financed by the government.

13. **CW-05: ICT infrastructure.** This package includes the installation of the information and communications technology infrastructure to be implemented by Bhutan Telecom. It will be fully financed by the government.

14. **CW-06 Horticulture.** The package includes the supply of soils and trees for landscaping.

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<sup>9</sup> ADB financing will cover the first year of O&M costs; and the remaining 4 years will be borne by CDCL.

<sup>10</sup> The design of the building shall be energy-efficient and inclusive for women and differently abled people and comply with Bhutan's green design guidelines.

## II. IMPLEMENTATION PLAN

### A. Project Readiness Activities

**Table 2: Project Readiness Activities for the Additional Financing**

	2020								2021				Responsible Agency
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
<b>Indicative Activities</b>													
Advance contracting actions:													CDCL
(i) Procurement of Works Package CW-02:													CDCL
a) Bid advertisement						X							CDCL
b) Bid submission and evaluation							X	X	X	X	X	X	CDCL
c) Award and mobilize												X	CDCL
Loan Negotiations					X								ADB/DHI/MOF
ADB Board approval							X						ADB
Loan/ grant signing								X					ADB/DHI/MOF
Government legal opinion provided									X				RGOB
Government budget inclusion		X											DHI
Loan/ grant effectiveness										X			ADB/ MOF

ADB = Asian Development Bank, CDCL = Construction Development Corporation Limited, DHI = Druk Holding and Investments Limited, MOF = Ministry of Finance, RGOB = Royal Government of Bhutan.

Source: Asian Development Bank Estimates.

## B. Overall Project Implementation Plan

15. The project was approved on 5 June 2018 and was made effective on 26 July 2018, with project implementation period of 7 years. The project is expected to be physically completed by June 2025. Monitoring of the project performance and outcome will be until June 2026, including preparation of the project completion report. The additional financing is expected to be approved in December 2020 but will not change the physical completion of the project.

**Table 3: Overall project implementation plan**

Indicative Activities	2018				2019				2020				2021				2022				2023				2024				2025			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>Output 1: Flood and erosion protection measures installed</b>																																
1.1 Award CW-01 river training and land reclamation contractor by June 2018			x																													
CW-01 Construction works					x	x	x	x	x	x	x	x	x	x																		
CW-01 Defects and maintenance period															x	x	x	x														
1.2 Award CW-03 flood early warning system contract														x																		
CW-03 Construction works															x	x																
CW-03 Defects and maintenance period																	x	x	x	x												
1.3 Operationalize flood management plan																					x											
Preparation of community-based flood management plan (by CS-01 consultant)					x	x	x	x	x	x	x	x	x	x	x	x	x															
1.4 Complete and commission all facilities																						x										
<b>Output 2: Municipal infrastructure constructed</b>																																
2.1 Award works contract for constructing roads, water supply, and sanitation systems														x																		
2.2 Complete and commission all facilities																										x						
2.2.1 Mobilize CW-02 common urban infrastructure contractor														x																		
CW-02 Construction works														x	x	x	x	x	x	x	x	x	x	x	x							
CW-02 Defects and maintenance period																										x	x	x	x			
2.2.2 Mobilize CW-04 power transmission infrastructure contractor																					x											
CW-04 Construction works																						x	x	x	x	x	x					

[illegible]

Indicative Activities	2018				2019				2020				2021				2022				2023				2024				2025			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Contract negotiation and award <b>CW-02 Common urban infrastructure</b>				x																												
Bid document preparation and approval	x	x	x	x	x	x	x	x	x	x																						
Invitation to bid and bid period												x	x																			
Bid evaluation and ADB approval														x																		
Government approval														x																		
Contract negotiation and award <b>CW-03 Flood early warning system</b>															x																	
Bid document preparation and approval												x	x																			
Invitation to bid and bid period														x	x																	
Bid evaluation and ADB approval																x																
Government approval																x																
Contract negotiation and award																	x															
<b>CW-04 Power transmission infrastructure</b>																																
Bid document preparation and approval	x	x																														
Invitation to bid and bid period														x	x																	
Bid evaluation and ADB approval																x																
Government approval																x																
Contract negotiation and award <b>CW-05 ICT infrastructure</b>																	x															
Bid document preparation and approval	x	x																														
Invitation to bid and bid period														x	x																	
Bid evaluation and ADB approval																x																
Government approval																x																
Contract negotiation and award																	x															
<b>CS-01 Project Implementation consultants</b>																																
Recruitment	x	x	x																													
Contract negotiation and award				x																												
Services				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
<b>CS-02 Independent environment monitoring expert</b>																																
Recruitment and award				x																												
Services					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		

Indicative Activities	2018				2019				2020				2021				2022				2023				2024				2025			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
<b>CS-03 Urban management adviser</b>																																
Recruitment and award																		x														
Services																			x	x	x	x	x	x	x	x	x	x				
<b>CS-04 Investment promotion adviser</b>																																
Recruitment and award																				x												
Services																					x	x	x	x	x	x	x	x				
<b>CS-05 Sustainable township management capacity development consultants</b>																																
Recruitment																			x	x												
Contract negotiation and award																					x											
Services																						x	x	x	x	x	x	x				
<b>CS-06 Investment prompter and transition advisory consultants</b>																																
Recruitment																					x	x										
Contract negotiation and award																							x									
Services																								x	x	x	x	x				
Strategic Action Plan Key Tasks (to be added)																																
Management Activities																																
Environment management plan key activities				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				
Communication strategy key activities				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				
Biannual and midterm review				x		x		x		x		x		x		x		x		x		x		x		x		x				
Project completion report																												x				

DMF = design and monitoring framework, CW = civil works, ME = mechanical and electrical, CS = consulting services.

Source: Asian Development Bank.

### III. PROJECT MANAGEMENT ARRANGEMENTS

#### A. Project Implementation Organizations: Roles and Responsibilities

**Table 4: Project Implementation Organizations: Roles and Responsibilities**

<b>Project Implementation Organizations</b>	<b>Management Roles and Responsibilities</b>
Ministry of Finance	<ul style="list-style-type: none"> <li>➤ Manages the advance accounts each for the ADB loan and grant established in RMA of Bhutan.</li> <li>➤ Processes requests from CDCL for release of funds from the advance accounts to the project's subaccounts (replenishment or reimbursement).</li> <li>➤ Through the Department of Macroeconomic Affairs, obtains account statements of advance accounts, reconciles advance accounts with the project subaccounts, and submits withdrawal applications to the ADB.</li> </ul>
Project Advisory Committee	<ul style="list-style-type: none"> <li>➤ Chaired by DHI, Chief Executive Officer and members are shown in Appendix B. It will meet at least biannually, or more regularly as required.</li> <li>➤ Provides policy guidance based on performance reviews of project.</li> <li>➤ Ensures collaboration among central and district level agencies.</li> <li>➤ Monitors the progress and addresses relevant issues for smooth implementation of the project.</li> </ul>
Executing agency: Druk Holding and Investments Ltd	<ul style="list-style-type: none"> <li>➤ Executes the project.</li> <li>➤ Makes timely decisions on all matters relating to project implementation.</li> <li>➤ Takes full responsibility for operation and maintenance of project facilities.</li> <li>➤ Leads interagency coordination.</li> <li>➤ Ensures adequacy of overall project financing and secures annual budget allocations for implementation.</li> <li>➤ Overall responsibility for compliance with loan and grant covenants, environmental safeguards, and facilitates corrective actions as required.</li> <li>➤ Coordinate and ensure that Bhutan Power Corporation and Bhutan Telecom provide the necessary connections for the project, as described below.</li> </ul>
Implementing agency: Construction Development Corporation Ltd	<ul style="list-style-type: none"> <li>➤ Overall responsibility for ensuring the project is implemented according to time, quality and budget.</li> <li>➤ Ensures full staffing and timely mobilization of project management unit and project implementation unit.</li> <li>➤ Ensures minimum staff turnover of project management unit and project implementation unit.</li> <li>➤ Monitors compliance with loan and grant covenants, environmental safeguards, and facilitates corrective actions as required.</li> <li>➤ Opens and manages project subaccounts.</li> <li>➤ Reviewing the withdrawal applications, obtaining project account statements, and submitting them to Department of Macroeconomic Affairs.</li> </ul>
Project Management Unit	<ul style="list-style-type: none"> <li>➤ The PMU will be established by CDCL and accommodated within CDCL offices in Thimphu (See staff schedule in Appendix C)</li> <li>➤ The PMU will be led by a project director who will be responsible for overall implementation management of the project. The project director will serve as the focal contact with ADB.</li> <li>➤ Prepares reports advising the PAC.</li> </ul>

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> <li>➤ Maintains project documents and submits reports (quarterly progress reports and project completion report) in a timely manner.</li> <li>➤ Consolidates accounts and submits draft withdrawal applications to CDCL.</li> <li>➤ Submits all audited project accounts and financial statements pertaining to the project within six months of the end of each fiscal year.</li> <li>➤ The PMU will be responsible for: <ul style="list-style-type: none"> <li>○ Preparing implementation plans, annual budgets, and disbursement projections.</li> <li>○ Overseeing the overall implementation of the project.</li> <li>○ Liaising and corresponding with ADB on all issues relating to the project.</li> <li>○ Coordinating with government agencies to resolve any departmental issues.</li> <li>○ Approving all planning, design and contract documents associated with the project.</li> <li>○ Leading implementation of the project by (i) procuring and evaluating services, works and goods, (ii) obtaining all necessary government approvals and (iii) right-of-way clearances from state departments and private landowners.</li> <li>○ Overall management of the PIC.</li> <li>○ Recruiting and managing the (i) independent environmental monitoring expert, (ii) urban management advisor, (iii) investment promotion advisor, (iv) sustainable township management capacity development, and (v) investor promotion and transaction advisory services consultant services packages.</li> <li>○ Acting as the “Employer” for all civil works packages.</li> <li>○ Overseeing and managing the procurement of services, works and goods by the PIU.</li> <li>○ Monitoring the activities of the PIU and advising as necessary.</li> <li>○ Maintaining project accounts and comprehensive loan financial records and submitting consolidated quarterly reports.</li> <li>○ Establishing and maintaining a PPMES for each package, output and outcome levels.</li> <li>○ Monitoring physical and non-physical investment activities under the project; obtaining necessary data for establishing baselines, maintaining and updating the PPMES.</li> <li>○ Preparing (i) reports to the executing agency for consideration and approval, (ii) periodic progress reports on each investment activities, (iii) disbursement projections, (iv) requesting budgetary allocations for counterpart funds, (v) collecting supporting documents and preparing withdrawal applications, (vi) audit reports, and (vii) reports mandated under the loan, grant and project agreements.</li> <li>○ Monthly reconciliation of the project accounts and provision of supporting documents for withdrawal applications to ADB for liquidation or replenishment of each project account.</li> <li>○ Reviewing, approving and transferring of PIU’s request for payments.</li> <li>○ Approving media information and the project’s communications plan prepared by PIU.</li> </ul> </li> <li>➤ Updating and monitoring of the satisfactory implementation of the EMP, and any correction action plans for additional facilities such as access roads and camps, consistent with safeguards requirements and ADB’s</li> </ul>



Project Implementation Organizations	Management Roles and Responsibilities
	<p>Safeguard Policy Statement (2009), and submitting updated safeguards and monitoring reports for review and disclosure.</p> <ul style="list-style-type: none"> <li>➤ The key personnel within the PMU are: Chief Executive Officer, Director, Dept of Engineering &amp; Construction, Finance General Manager, Project Director, Project Accountant, Urban Planner, Environment Manager and Procurement and Contracts Manager.</li> </ul>
Project Implementation Unit	<ul style="list-style-type: none"> <li>➤ Under the PMU, CDCL will establish a PIU in Phuentsholing near the project area. The PIU will be led by a project manager (See staff schedule in Appendix C).</li> <li>➤ Supervises and manages the project implementation to ensure timely completion of the project within the approved budget.</li> <li>➤ Updates and implements the procurement plan and implements the procurement in accordance with the plan.</li> <li>➤ The PIU will be responsible for: <ul style="list-style-type: none"> <li>○ Preparing, reviewing, and approving services, works and goods packages.</li> <li>○ Supporting PMU with implementation of the project by: <ul style="list-style-type: none"> <li>(i) implementing the Environment Management Plan in compliance with ADB and National Environment Commission policies;</li> <li>(ii) monitoring the implementation of social dimensions of the project including adherence to the labor law and core labor standards; and</li> <li>(iii) managing contracts awarded under the project.</li> </ul> </li> <li>○ Preparing and submitting to the PMU monthly safeguards progress reports, with complaint-grievances status included, and implementation of labor law and core labor standard for the preparation of biannual safeguards monitoring reports.</li> <li>○ acting as focal point, with support from the PMU, for the implementation of grievance and redress mechanism and complaint resolutions.</li> <li>○ Oversee, supervise, and manage the PIC at the project level.</li> <li>○ Preparing work and procurement plans, budgets, monitoring plans, and accounts.</li> <li>○ Submission of request for payments to PMU for prior approval.</li> <li>○ Undertaking day-to-day project and safeguards management.</li> <li>○ Coordination with the field staff of concerned line departments.</li> <li>○ Coordination with Phuentsholing Thromde and any other village or community affected by the project implementation.</li> <li>○ Implementing safeguards actions following the relevant plans.</li> <li>○ Preparing project progress reports and safeguards monitoring reports.</li> </ul> </li> <li>➤ Maintaining project accounts and financial records</li> <li>➤ The key personnel within the PIU are: Project Manager, Deputy Project Manager, Assistant Accountant, Procurement and Contracts Manager, Stakeholder, Community &amp; Public Relations Manager, Environment Officer and Health &amp; Safety Inspector.</li> </ul>
Project Implementation Consultant (CS-01)	<ul style="list-style-type: none"> <li>➤ Review and confirm designs and finalize bid documents of remaining civil works, goods and services contract packages to be awarded</li> <li>➤ Providing overall project management and administration support on reporting, financial management, and monitoring and evaluation</li> <li>➤ Supporting the PMU and PIUs with establishing and maintaining the PPMES</li> <li>➤ Procure, mobilize, manage and supervise all contracts and act as the “Engineer” for the project</li> </ul>

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> <li>➤ Ensuring implementation of the project per the approved plans, designs and cost estimates</li> <li>➤ Undertaking any necessary additional surveys and investigations to support designs and implementation;</li> <li>➤ Prepare detailed terms of reference, and assist PIU to recruit, mobilize, and manage studies and surveys under provisional sum items including the FEWS and BMBMS consultant services;</li> <li>➤ Prepare ADB financing and other necessary documents for possible Phase 2 investments (i.e. Zone C);</li> <li>➤ Provide technical and management advice, as required;</li> <li>➤ Manage and administer the project financing;</li> <li>➤ Prepare routine reporting requirements of ADB;</li> <li>➤ Knowledge transfer to the PIU, township management, and Phuentsholing Thromde.</li> <li>➤ Assist PIU with preparations, logistics and reporting for missions fielded by ADB, as necessary.</li> <li>➤ Report directly to PIU for all matters related to implementation of the project.</li> <li>➤ Support all necessary activities for finalizing activities for the project during the contract period.</li> <li>➤ Preparing due diligence reports (technical, economic, financial, safeguards) and draft ADB Board documents for possible financing of Phase 2.</li> <li>➤ Supporting commissioning and operation of the investments, including preparing management, operation and maintenance manuals.</li> </ul>
Independent Environmental Monitor (CS-02)	<ul style="list-style-type: none"> <li>➤ To independently monitor the implementation of the project's EMP related to the approved EIA in compliance with ADB Safeguard Policy Statement, 2009 and advise PMU and ADB accordingly.</li> </ul>
Urban management advisor (CS-03)	<ul style="list-style-type: none"> <li>➤ The advisor shall prepare a training program for township management staff.</li> <li>➤ prepare terms of reference for the "sustainable township management capacity development" services package to be recruited separately by CDCL.</li> <li>➤ provide advice to DHI and CDCL management on urban management requirements, and review key outputs of the capacity building firm and further develop the "Strategic Action Plan for Sustainable Township Management" (reference Appendix D).</li> </ul>
Investment promotion advisor (CS-04)	<ul style="list-style-type: none"> <li>➤ The advisor shall prepare terms of reference for the "investment promotion and transaction advisory" services package to be recruited separately by CDCL.</li> <li>➤ Coordinate investment promotion activities and the urban management activities.</li> <li>➤ Provide advice to CDCL management on investment promotion issues, and review key outputs of the investment promotion firm.</li> </ul>

Project Implementation Organizations	Management Roles and Responsibilities
Sustainable township management capacity development (CS-05)	<ul style="list-style-type: none"> <li>➤ The consultant shall establish business processes and standard operating procedures for high-quality and inclusive township management.</li> <li>➤ The consultant shall provide classroom and on the job training to township management staff, and exposure to good global practices in city management including use of GIS platforms. A study tour will be organized and facilitated to a relevant city. The township staff should be equipped and prepared to guide the township's development while delivering high-quality, inclusive services and ensuring environmental protection.</li> <li>➤ The consultant shall support integration with existing Phuentsholing Thromde.</li> <li>➤ The consultant will also procure, install and train staff on a computerized accounting and billing system; and procure computer and other office equipment.</li> </ul>
Investor promotion and transaction advisory services (CS-06)	<ul style="list-style-type: none"> <li>➤ Develop criteria for identifying high-quality developers and anchor tenants to be targeted.</li> <li>➤ Prepare detailed marketing plan, including resource requirements, key performance indicators and annual targets.</li> <li>➤ Prepare marketing materials</li> <li>➤ Implement detailed marketing plan (through road shows, digital platforms, and other channels).</li> <li>➤ Prepare investor documents (e.g., permits, applications, clearances, transaction documents, etc.)</li> <li>➤ Support day-to-day operations of the investment promotion office.</li> <li>➤ Build capacity of DHI and CDCL staff for investor promotion.</li> </ul>
ADB	<ul style="list-style-type: none"> <li>➤ Monitor and reviewing overall project implementation.</li> <li>➤ Fields review missions, midterm review mission, and project completion review mission to assess project implementation progress and compliance with loan covenants.</li> <li>➤ Reviews PMU's submissions for procurement of goods, civil works, and services.</li> <li>➤ Timely disbursement of loan and grant funds subject to CDCL's submission of withdrawal applications.</li> </ul>

ADB = Asian Development Bank, BMBMS = biodiversity monitoring and benchmarking survey; CDCL = Construction Development Corporation Limited, DHI = Druk Holding and Investments Limited, EIA = environmental impact assessment, EMP = environment management plan; FEWS = flood early warning system, MOF = Ministry of Finance, PAC = Project Advisory Committee, PIC = project implementation consultant, PIU = project implementation unit, PMU = project management unit, PPMES = project performance monitoring and evaluation system, RMA = Royal Monetary Authority.

Source: Asian Development Bank.

## B. Key Persons Involved in Implementation

### Executing Agency

Druk Holding and Investments Ltd.

Officer's Name: Mr. Chencho Tshering Namgay  
 Position: Director, Department of Investment  
 Telephone: +975 2 331 989  
 Email address: [chenchothnamgay@dhi.bt](mailto:chenchothnamgay@dhi.bt)  
 Office Address: 5th Floor, BoB Corporate Building.  
 Norzin Lam, Thimphu, P.O. Box - 1127  
 Thimphu, Bhutan

### Implementing Agency

Construction Development Corporation Ltd.

Officer's Name: Mr. Tshering Dupchu  
 Position: Project Director  
 Telephone: +975-2-332046  
 Email address: [tshering.dupchu@cdcl.bt](mailto:tshering.dupchu@cdcl.bt)  
 Office Address: Infrastructure Division, Dept. of Engineering & Construction, Construction Development Corporation Limited, Namtog Lam, Khanggulu  
 Above Hotel Riverview. Thimphu 11001. Post Box 573,

### Asian Development Bank

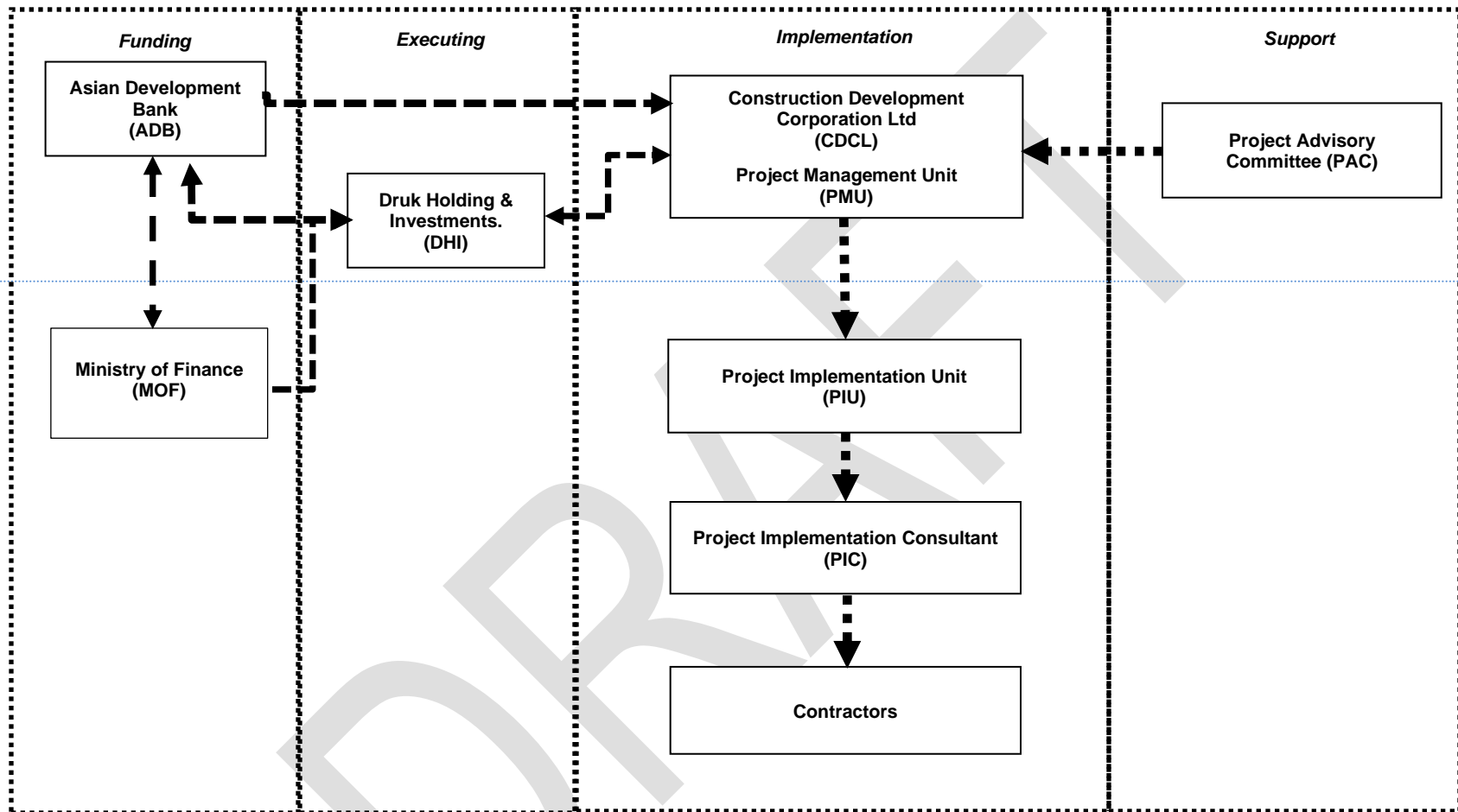
Environment, Natural Resources and Agriculture Division,  
 South Asia Department

Staff Name: Ms. Mio Oka  
 Position: Director, SAER  
 Telephone No.: +63 2 632 4444  
 Email address: [moka@adb.org](mailto:moka@adb.org)

Mission Leader

Staff Name: Ms. Suzanne Marsh  
 Position: Water Resources Specialist  
 Telephone No: +63 2 632 4444  
 Email address: [smarsh@adb.org](mailto:smarsh@adb.org)

### C. Project Organization Structure



#### Legend

■ ■ ■ ► Communication Flow

#### IV. COSTS AND FINANCING

16. The cost of the project is estimated at \$93.00 million, inclusive of taxes and duties, and financing charges during implementation. The ADB grants will be used exclusively to finance civil works. The ADB loans will finance (i) part of the civil works cost, and (ii) the cost of consulting services. The government will (i) provide exemptions of taxes and duties on import of construction materials, plant and machinery, and capital goods forming direct inputs to the project, and (ii) cover financing charges on the ADB loans during implementation. The government will also ensure that DHI provides contributions equivalent to cover (i) remaining taxes and duties, (ii) salaries and running costs of PMU and PIU, (iii) part of the civil works costs, and (iv) training. With the risk of funding shortfall due to the grant front-loading arrangement of ADB's funding sources, the government and DHI has assured ADB that it will provide additional funding for any shortfall of funds or cost overruns to ensure the success of the project.

**Table 5: Project Investment Plan**  
(\$ million)

Item	Ongoing Amount <sup>a</sup>	Additional Financing	Total <sup>b</sup>
<b>A. Base Cost<sup>c</sup></b>			
1. Output 1: Flood and erosion protection measures installed	47.31	2.51	49.82
2. Output 2: Municipal infrastructure constructed	11.90	14.28	26.18
3. Output 3: Township management systems installed	2.74	2.09	4.83
<b>Subtotal (A)</b>	<b>61.95</b>	<b>18.88</b>	<b>80.83</b>
<b>B. Contingencies<sup>d</sup></b>	<b>0.00</b>	<b>10.67</b>	<b>10.67</b>
<b>C. Financing Charges During Implementation<sup>e</sup></b>	<b>1.05</b>	<b>0.45</b>	<b>1.50</b>
<b>Total (A+B+C)</b>	<b>63.00</b>	<b>30.00</b>	<b>93.00</b>

<sup>a</sup> Refers to the original approved amounts for the ongoing project.

<sup>b</sup> Includes taxes and duties of \$0.15 million. Such amount does not represent an excessive share of the project cost. The Government of Bhutan will finance taxes and duties of \$0.15 million in the form of cash contribution. The government will also provide exemption from import duties on civil works and equipment contracts to be financed by the project. The value of this exemption is estimated to be \$3.84 million.

<sup>c</sup> In May 2020 prices.

<sup>d</sup> Physical contingencies computed at 10% for civil works and equipment for the overall project. Price contingencies computed, on average, at 0.3%–1.6% on foreign exchange costs and 3.8%–5.0% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate for the overall project from 2021. Ongoing project contingencies have been reallocated to output 1 and contingencies for the ongoing and yet to be awarded contracts are shown under additional financing.

<sup>e</sup> Includes interest. Interest during construction for the concessional ordinary capital resources loan has been computed at the applicable interest rate during the grace period (1.0% per year).

Source: Asian Development Bank estimates.

17. For the original loan, the government requested (i) a concessional loan in an amount of \$28.74 million from ADB's ordinary capital resources, and (ii) a grant not exceeding \$24.26 million from ADB's Special Funds resources (Asian Development Fund), both to help finance part of the project. The concession loan has a 32-year term, including a grace period of 8 years; an interest rate of 1.0% per year during the grace period and 1.5% per year thereafter; and such other terms and conditions set forth in the draft loan and project agreements. The loan proceeds are provided by the government to DHI as a subsidiary loan. The subsidiary loan has repayment terms of 32 years, including a grace period of 8 years, interest rate at 1% interest per annum during the grace period, and 2.55% thereafter. The grant is provided as grant to DHI.

18. For the additional financing (i) a concessional loan in an amount of \$18.50 million from ADB's ordinary capital resources, and (ii) a grant not exceeding \$10.00 million from ADB's Special

Funds resources (Asian Development Fund), both to help finance part of the project. The concession loan will have a 32-year term, including a grace period of 8 years; an interest rate of 1.0% per year during the grace period and 1.5% per year thereafter; and such other terms and conditions set forth in the draft loan and project agreements. The loan proceeds will be provided by the government to DHI as a subsidiary loan. The subsidiary loan will have repayment terms of 32 years, including a grace period of 8 years, interest rate at 1% interest per annum during the grace period, and 2.55% thereafter. The grant will be provided as grant to DHI.

19. The summary financing plan is in Table 6. ADB will finance the expenditures in relation to civil works and consulting services.

**Table 6: Financing Plan**

Source	Ongoing <sup>a</sup>		Additional Financing		Total	
	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)
Asian Development bank	53.00	84.1	28.50	95.0	81.5	87.6
OCR (concessional loan) <sup>b</sup>	28.74	45.6	18.50	61.7	47.24	50.8
Special Funds resources (ADF grant) <sup>c</sup>	24.26	38.5	10.00	33.3	34.26	36.8
Government of Bhutan	10.00	15.9	1.50	5.0	11.50	12.4
<b>Total</b>	<b>63.00</b>	<b>100.00</b>	<b>30.00</b>	<b>100.0</b>	<b>93.00</b>	<b>100.0</b>

ADF = Asian Development Fund, OCR = ordinary capital resources.

<sup>a</sup> Refers to the original approved amounts for the ongoing project.

<sup>b</sup> ADF 12 disaster risk reduction fund finances of \$6.07 million equivalent of the ongoing project concessional loan and \$10.00 million of the additional financing concessional loan.

<sup>c</sup> ADF 12 disaster risk reduction fund finances of \$6.07 million of the ongoing project grant and \$10.00 million of the additional financing grant.

Source: Asian Development Bank estimates.

## A. Cost Estimates Preparation and Revisions

20. Cost estimates were revised for the overall project and prepared by ADB in consultation with DHI and CDCL. Cost estimates for civil works and equipment were based on estimates prepared by CDCL, which were in turn based on the Bhutan Schedule of Rates for 2020. During implementation, the PIU will be responsible for updating cost estimates, subject to approval by the PMU. Revisions to planned withdrawal allocations will require prior approval from ADB.

## B. Key Assumptions

21. The following key assumptions underpin the cost estimates and financing plan:

- (i) Exchange rate: Nu75.66 = \$1.00 (as of 22 May 2020).
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as shown in Table 7.

**Table 7: Escalation Rates for Price Contingency Calculation**

Item	2016	2017	2018	2019	2020	2021 and after
Foreign rate of price inflation	1.5%	1.4%	1.5%	1.5%	1.5%	1.6%
Domestic rate of price inflation	4.0%	5.0%	5.0%	5.0%	3.8%	4.0%

Sources: Asian Development Bank staff estimates.

**C. Detailed Cost Estimates by Expenditure Category****Table 8. Cost Estimates by Expenditure Category**

Item	Amount (\$ million)		Total Cost	% of Total Base Cost
	Foreign Exchange	Local Currency		
<b>A. Investment Costs</b>				
1. Civil works <sup>a</sup>	13.39	53.58	69.97	82.8%
2. Equipment	1.44	0.36	1.80	2.2%
3. Consulting services	5.61	2.72	8.33	10.3%
<b>Subtotal (A)</b>	<b>20.44</b>	<b>56.66</b>	<b>77.10</b>	<b>95.4%</b>
<b>B. Recurrent Costs</b>				
1. PMU and PIU expenditures	0.00	2.33	2.33	2.9%
2. Training	0.00	0.21	0.21	0.3%
3. Operation and maintenance	0.00	1.20	1.20	1.5%
<b>Subtotal (B)</b>	<b>0.00</b>	<b>3.74</b>	<b>3.74</b>	<b>4.6%</b>
<b>Total Base Cost</b>	<b>20.44</b>	<b>60.40</b>	<b>80.84</b>	<b>100.0%</b>
<b>C. Contingencies</b>				
1. Physical	1.45	5.27	6.72	8.1%
2. Price	0.53	3.41	3.94	4.9%
<b>Subtotal (C)</b>	<b>1.98</b>	<b>8.68</b>	<b>10.66</b>	<b>13.2%</b>
<b>D. Financing Charges During Implementation</b>	<b>1.50</b>	<b>0.00</b>	<b>1.50</b>	<b>1.9%</b>
<b>Total Project Cost (A+B+C+D) <sup>b</sup></b>	<b>23.92</b>	<b>69.08</b>	<b>93.00</b>	<b>115.0%</b>

<sup>a</sup> The government will exempt the cost of the civil works packages from customs duties, sales and service taxes.

<sup>b</sup> The estimated value of these exemptions is \$3.84 million and this amount is not reflected in the cost tables.

Source: Asian Development Bank estimates.



## D. Allocation and Withdrawal of Loan and Grant Proceeds

22. The use of the grant proceeds over the use of the loan proceeds for civil works. Loan proceeds from the ongoing loan and additional financing will be used in parallel.

**Table 9: Allocation and Withdrawal ADB Loan Proceeds**

<b>Allocation and Withdrawal of ADB Loan Proceeds for Loan 3668<sup>a</sup></b>				
<b>No</b>	<b>Item</b>	<b>Current Amount Allocated for ADB Financing (\$)</b>		<b>Percentage and Basis for Withdrawal from the Loan Account</b>
		<b>Category</b>	<b>%</b>	
1	Civil Works	21,320,000	65	percent of total expenditure claimed <sup>b</sup>
2	Consulting services	7,420,000	89	percent of total expenditure claimed
3	Unallocated	-		
	<b>Total</b>	<b>28,740,000</b>		

<sup>a</sup> Disaster Risk Reduction Fund will finance \$6.07 million equivalent of the ADB concessional OCR loan (COL).

<sup>b</sup> Exclusive of taxes and duties within the territory of the Borrower. The government will exempt the cost of the civil works packages from customs duties and sales taxes. The total estimated value of these exemptions for both the ongoing project is \$2.43 million and this amount is not reflected in the cost tables. Financing allocated to this item under the Original ADB Grant Agreement and the First Additional Financing Grant Agreement will be utilized first, and following its full utilization, disbursements under this Category may be undertaken.

<b>Allocation and Withdrawal of ADB Loan Proceeds for the Additional Financing<sup>a</sup></b>				
<b>No</b>	<b>Item</b>	<b>Additional financing Amount<sup>c</sup> Allocated for ADB Financing (\$)</b>		<b>Percentage and Basis for Withdrawal from the Loan Account</b>
		<b>Category</b>	<b>%</b>	
1	Civil Works	9,890,000	30	percent of total expenditure claimed <sup>b</sup>
2	Consulting services	770,000	9	percent of total expenditure claimed
3	Goods/Equipment	1,800,000	100	percent of total expenditure claimed <sup>b</sup>
4	Unallocated	6,040,000		
	<b>Total</b>	<b>18,500,000</b>		

<sup>a</sup> Disaster Risk Reduction Fund will finance \$10.00 million equivalent of the ADB concessional OCR loan (COL).

<sup>b</sup> Exclusive of taxes and duties within the territory of the Borrower. The government will exempt the cost of the civil works and equipment packages from customs duties and sales taxes. The total estimated value of these exemptions for the additional financing is \$1.41 million and this amount is not reflected in the cost tables. Financing allocated to this item under the Original Grant Agreement and the First Additional Financing Grant Agreement will be utilized first, and following its full utilization, disbursements under this Category may be undertaken.

**Table 10: Allocation and Withdrawal ADB Grant Proceeds**

<b>Allocation and Withdrawal of ADB Grant Proceeds for the Grant 0573 <sup>a</sup></b>				
<b>No</b>	<b>Item Category</b>	<b>Total Amount Allocated for ADB Financing (\$)</b>	<b>%</b>	<b>Percentage and Basis for Withdrawal from the Grant Account</b>
1	Civil Works	24,260,000	100	percent of total expenditure claimed <sup>b</sup>
	<b>Total</b>	<b>24,260,000</b>		

<sup>a</sup> Disaster Risk Reduction Fund will finance \$6.07 million of the ADF grant.

<sup>b</sup> Exclusive of taxes and duties within the territory of the Recipient. The government will exempt the cost of the civil works packages from customs duties and sales taxes. The total estimated value of these exemptions for the ongoing loan and grant is \$2.43 million and this amount is not reflected in the cost tables. Proceeds of this category are to be fully utilized prior to disbursement of the corresponding category under the Additional Financing Grant and the Regular Terms Loan Agreement

<b>Allocation and Withdrawal of ADB Grant Proceeds for the Additional Financing <sup>a</sup></b>				
<b>No</b>	<b>Item Category</b>	<b>Total Amount Allocated for ADB Financing (\$)</b>	<b>%</b>	<b>Percentage and Basis for Withdrawal from the Grant Account</b>
1	Civil Works	10,000,000	100	percent of total expenditure claimed <sup>b</sup>
	<b>Total</b>	<b>10,000,000</b>		

<sup>a</sup> Disaster Risk Reduction Fund will finance \$10.00 million of the ADF grant.

<sup>b</sup> Exclusive of taxes and duties within the territory of the Recipient. The government will exempt the cost of the civil works packages from customs duties and sales taxes. The total estimated value of these exemptions for the additional financing is \$1.41 million and this amount is not reflected in the cost tables. Financing allocated to this item under the original Grant Agreement will be utilized first and following its full utilization disbursement under this Category may be undertaken.

## E. Detailed Cost Estimates by Financier (\$ million)

**Table 11: Costs by Financier**

Item	Total	ADB Loan 3668 <sup>a</sup>		ADB additional financing loan <sup>b</sup>		ADB Grant 0573 <sup>c</sup>		ADB additional financing grant <sup>d</sup>		Costs	Government <sup>e</sup>		
	Amount	Amount	%	Amount	%	Amount	%	Amount	%		Taxes and Duties	Total	%
<b>A Investment Costs</b>													
1. Civil works <sup>f</sup>	66.97	21.32	32%	9.89	15%	24.26	36%	6.38	10%	5.12	0.00	5.12	8%
2. Equipment	1.80	0.00	0%	1.80	100%	0.00	0%	0.00	0%	0.00	0.00	0.00	0%
3. Consulting services	8.33	7.42	89%	0.77	9%	0.00	0%	0.00	0%	0.00	0.14	0.14	2%
<b>Subtotal (A)</b>	<b>77.10</b>	<b>28.74</b>	<b>37%</b>	<b>12.46</b>	<b>16%</b>	<b>24.26</b>	<b>31%</b>	<b>6.38</b>	<b>8%</b>	<b>5.12</b>	<b>0.14</b>	<b>5.26</b>	<b>7%</b>
<b>B Recurrent Costs</b>													
1. PMU and PIU expenditures	2.33	0.00	0%	0.00	0%	0.00	0%	0.00	0%	2.33	0.00	2.33	100%
2. Training <sup>g</sup>	0.21	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.21	0.00	0.21	100%
3. Operation and maintenance	1.20	0.00	0%	0.00	0%	0.00	0%	0.00	0%	1.20	0.00	1.20	100%
<b>Subtotal (B)</b>	<b>3.74</b>	<b>0.00</b>	<b>0%</b>	<b>0.00</b>	<b>0%</b>	<b>0.00</b>	<b>0%</b>	<b>0.00</b>	<b>0%</b>	<b>3.74</b>	<b>0.00</b>	<b>3.74</b>	<b>100%</b>
<b>Total Base Cost</b>	<b>80.84</b>	<b>28.74</b>	<b>35%</b>	<b>12.58</b>	<b>15%</b>	<b>24.26</b>	<b>30%</b>	<b>6.38</b>	<b>8%</b>	<b>8.86</b>	<b>0.14</b>	<b>9.00</b>	<b>11%</b>
<b>C Contingencies</b>													
1. Physical	6.72	0.00	0%	3.20	48%	0.00	0%	3.06	46%	0.46	0.00	0.48	7%
2. Price	3.94	0.00	0%	2.84	72%	0.00	0%	0.56	14%	0.54	0.00	0.54	19%
<b>Subtotal (C)</b>	<b>10.66</b>	<b>0.00</b>	<b>0%</b>	<b>6.04</b>	<b>57%</b>	<b>0.00</b>	<b>0%</b>	<b>3.62</b>	<b>34%</b>	<b>1.00</b>	<b>0.00</b>	<b>1.02</b>	<b>11%</b>
<b>D Financing Charges During Implementation</b>	<b>1.50</b>	<b>0.00</b>	<b>0%</b>	<b>0.00</b>	<b>0%</b>	<b>0.00</b>	<b>0%</b>	<b>0.00</b>	<b>0%</b>	<b>1.50</b>	<b>0.00</b>	<b>1.50</b>	<b>100%</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>93.00</b>	<b>28.74</b>	<b>31%</b>	<b>18.5</b>	<b>20%</b>	<b>24.26</b>	<b>26%</b>	<b>10.0</b>	<b>11%</b>	<b>10.0</b>	<b>0.00</b>	<b>11.50</b>	<b>12%</b>

<sup>a</sup> Disaster Risk Reduction (DRR) fund will finance \$6.07 million equivalent of the ongoing ADB concessional OCR loan (COL)

<sup>b</sup> DRR fund will finance \$10.00 million equivalent of the additional financing ADB concessional OCR loans (COL).

<sup>c</sup> DRR fund will finance \$6.07 million of the ongoing ADB grant. The use of the grant proceeds will be prioritized over the use of the loan proceeds.

<sup>d</sup> DRR fund will finance \$10.00 million of the additional financing. The use of the grant proceeds will be prioritized over the use of the loan proceeds.

<sup>e</sup> The government will exempt the cost of the civil works packages from customs duties, sales and service taxes. The total estimated value of these exemptions for both loan and grant is \$3.84 million and this amount is not reflected in the cost tables. Audit costs is included in as part of the government cost.

<sup>f</sup> DRR fund will finance civil works

<sup>g</sup> Training will comprise attending courses on contract management, construction supervision, ADB recruitment and procurement procedures, ADB disbursement procedures, among other topics.

Note: Grant 0573 will be front loaded, followed by the additional financing grant, then loan proceeds.

Source: Asian Development Bank estimates.

## F. Detailed Cost Estimates by Component

**Table 12: Detailed Cost Estimates by Outputs**

Item	Cost	1. Flood and erosion protection measures installed		2. Municipal infrastructure constructed		3. Township management systems installed	
		\$million	%	\$million	%	\$million	%
<b>A. Investment Costs</b>							
1. Civil works <sup>a</sup>	66.97	44.14	65.9	22.65	33.8	0.18	0.3
2. Equipment	1.80	0.00	0.00	0.00	0.00	1.80	100.0
3. Consulting services	8.33	5.68	68.2	0.00	0.0	2.65	31.8
<b>Subtotal (A)</b>	<b>77.10</b>	<b>49.82</b>	<b>64.6</b>	<b>22.65</b>	<b>29.4</b>	<b>4.63</b>	<b>6.0</b>
<b>B. Recurrent Costs</b>							
1. PMU and PIU expenditures	2.33	0.00	0.0	2.33	100.0	0.00	0.0
2. Training	0.21	0.00	0.0	0.00	0.0	0.21	100.0
3. Operation and maintenance	1.20	0.00	0.0	1.20	100.0	0.00	0.0
<b>Subtotal (B)</b>	<b>3.74</b>	<b>0.00</b>	<b>0.0</b>	<b>3.53</b>	<b>94.4</b>	<b>0.21</b>	<b>5.6</b>
<b>Total Base Cost</b>	<b>80.84</b>	<b>49.82</b>	<b>61.6</b>	<b>26.18</b>	<b>32.4</b>	<b>4.84</b>	<b>6.0</b>
<b>C. Contingencies</b>							
1. Physical	6.72	4.41	65.6	2.11	31.4	0.2	3.0
2. Price	3.94	1.13	28.9	2.42	61.4	0.38	9.6
<b>Subtotal (C)</b>	<b>10.66</b>	<b>5.54</b>	<b>52.1</b>	<b>4.53</b>	<b>42.5</b>	<b>0.58</b>	<b>5.4</b>
<b>D. Financing Charges During Implementation</b>	<b>1.50</b>	<b>0.80</b>	<b>61.3</b>	<b>0.49</b>	<b>32.7</b>	<b>0.09</b>	<b>6.0</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>93.00</b>	<b>56.16</b>	<b>60.5</b>	<b>31.2</b>	<b>33.5</b>	<b>5.51</b>	<b>5.9</b>

<sup>a</sup> The government will exempt the cost of the civil works packages from customs duties, sales and service taxes. The estimated value of these exemptions is \$3.84 million and this amount is not reflected in the cost tables.

Source: Asian Development Bank estimates.

## G. Detailed Cost Estimates by Year

**Table 13: Detailed Cost Estimates by Year**

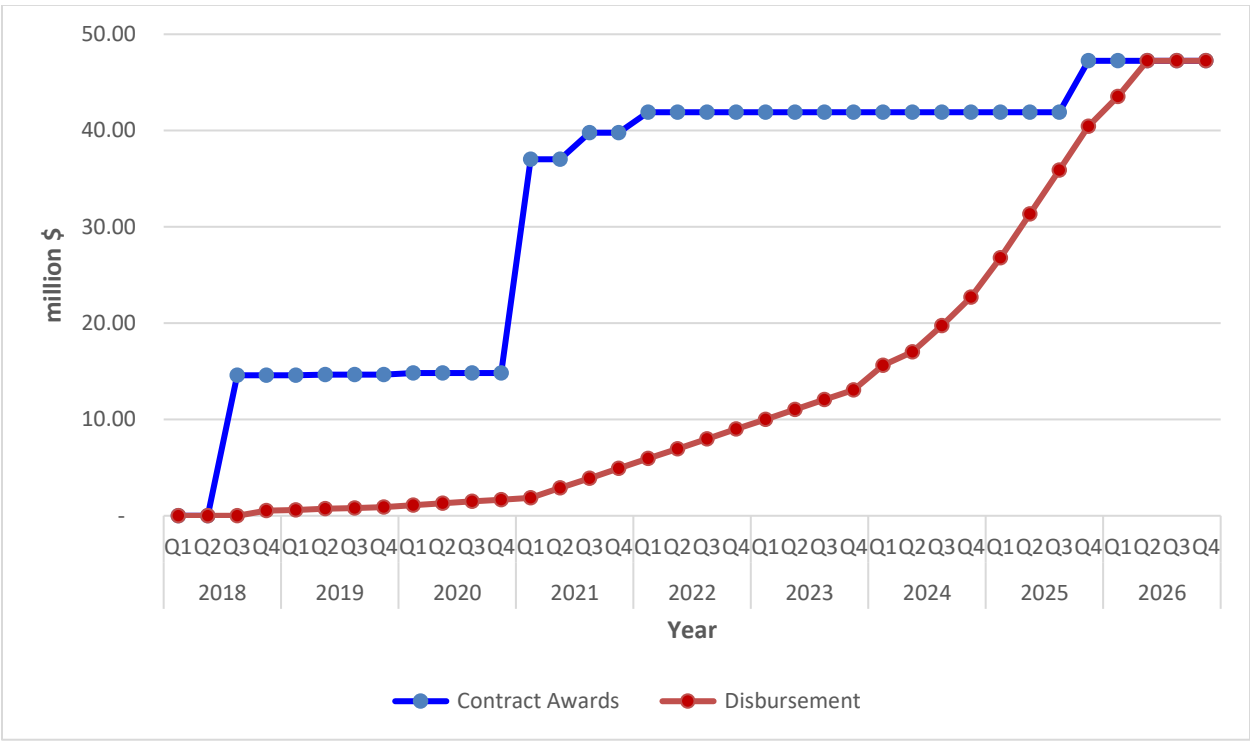
Item	(\$ million)								
	Total	2018	2019	2020	2021	2022	2023	2024	2025
<b>A. Investment Costs</b>									
1. Civil works <sup>a</sup>	66.97	1.77	13.08	8.77	17.99	14.28	8.24	1.98	0.86
2. Equipment	1.80	0.00	0.00	0.00	0.00	0.00	0.00	1.80	0.00
3. Consulting services	8.33	0.58	1.23	1.23	1.21	1.39	2.03	0.66	0.00
<b>Subtotal (A)</b>	<b>77.10</b>	<b>2.35</b>	<b>14.31</b>	<b>10.00</b>	<b>19.20</b>	<b>15.67</b>	<b>10.27</b>	<b>4.44</b>	<b>0.86</b>
<b>B. Recurrent Costs</b>									
1. PMU and PIU expenditures	2.33	0.37	0.37	0.34	0.33	0.32	0.30	0.30	0.00
2. Training	0.21	0.00	0.05	0.04	0.04	0.04	0.04	0.00	0.00
3. Operation and maintenance	1.20	0.19	0.19	0.17	0.17	0.16	0.16	0.16	0.00
<b>Subtotal (B)</b>	<b>3.74</b>	<b>0.56</b>	<b>0.61</b>	<b>0.55</b>	<b>0.54</b>	<b>0.52</b>	<b>0.50</b>	<b>0.46</b>	<b>0.00</b>
<b>Total Base Cost</b>	<b>80.84</b>	<b>2.91</b>	<b>14.92</b>	<b>10.55</b>	<b>19.74</b>	<b>16.19</b>	<b>10.77</b>	<b>4.9</b>	<b>0.86</b>
<b>C. Contingencies</b>									
1. Physical	6.72	0.18	1.31	0.88	1.78	1.4	0.80	0.37	0.00
2. Price	3.94	0.00	0.00	0.00	0.73	1.22	1.20	0.63	0.16
<b>Subtotal (C)</b>	<b>10.66</b>	<b>0.18</b>	<b>1.31</b>	<b>0.88</b>	<b>2.51</b>	<b>2.62</b>	<b>2.00</b>	<b>1.00</b>	<b>0.16</b>
<b>D. Financing Charges During Implementation</b>	<b>1.50</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.12</b>	<b>0.23</b>	<b>0.40</b>	<b>0.44</b>	<b>0.23</b>
<b>Subtotal (D)</b>	<b>1.50</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.12</b>	<b>0.23</b>	<b>0.40</b>	<b>0.44</b>	<b>0.23</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>93.00</b>	<b>3.1</b>	<b>16.25</b>	<b>11.48</b>	<b>22.37</b>	<b>19.04</b>	<b>13.17</b>	<b>6.34</b>	<b>1.25</b>
%Total Project Cost	100%	3.3%	17.5%	12.3%	24.1%	20.5%	14.2%	6.8%	1.3%

<sup>a</sup> The government will exempt the cost of the civil works packages from customs duties, sales and service taxes. The estimated value of these exemptions is \$3.84 million and this amount is not reflected in the cost tables.

Source: Asian Development Bank estimates.

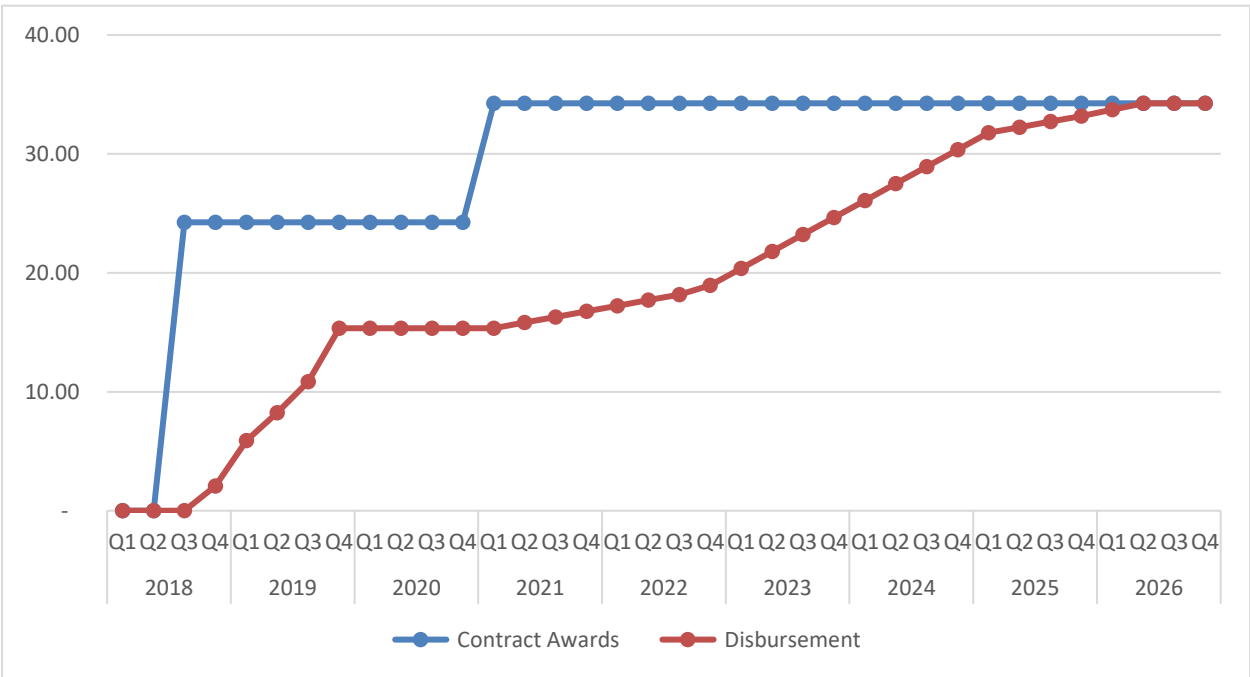
H. Contract and Disbursement S-Curve

ADB Loan



Source: Asian Development Bank estimates.

ADB Grant



Source: Asian Development Bank estimates.

**D. Contract and Disbursement S-Curve, ADB Grant**

**Table 14: Loan 3668: Contract Awards and Disbursements (\$ million)**

Year	Contract Awards (\$ million)					Disbursements (\$ million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2018	0.00	0.00	14.59	0.00	14.59	0.00	0.00	0.00	0.52	0.52
2019	0.00	0.07	0.00	0.00	0.07	0.07	0.16	0.05	0.10	0.38
2020	0.16	0.00	0.00	0.00	0.16	0.21	0.18	0.20	0.18	0.77
2021	13.92	0.00	0.00	0.00	13.92	0.19	0.19	0.19	0.19	0.76
2022	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.19	0.76
2023	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.18	0.18	0.74
2024	0.00	0.00	0.00	0.00	0.00	1.37	0.18	1.52	1.78	4.85
2025	0.00	0.00	0.00	0.00	0.00	2.88	3.42	3.43	3.43	13.16
2026	0.00	0.00	0.00	0.00	0.00	3.09	3.71	0.00	0.00	6.80
	Total Contract Awards				28.74	Total Disbursements				28.74

**Table 15: Additional Financing (Loan): Contract Awards and Disbursements (\$ million)**

Year	Contract Awards (\$ million)					Disbursements (\$ million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2021	8.28	0.00	2.75	0.00	11.03	0.00	0.83	0.83	0.83	2.49
2022	2.14	0.00	0.00	0.00	2.14	0.83	0.83	0.83	0.83	3.32
2023	0.00	0.00	0.00	0.00	0.00	0.83	0.83	0.83	0.83	3.32
2024	0.00	0.00	0.00	0.00	0.00	1.20	1.20	1.20	1.20	4.80
2025	0.00	0.00	0.00	5.33	5.33	1.20	1.12	1.12	1.13	4.57
2026	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Contract Awards				18.50	Total Disbursements				18.50

**Table 16: Grant 0573: Contract Awards and Disbursements (\$ million)**

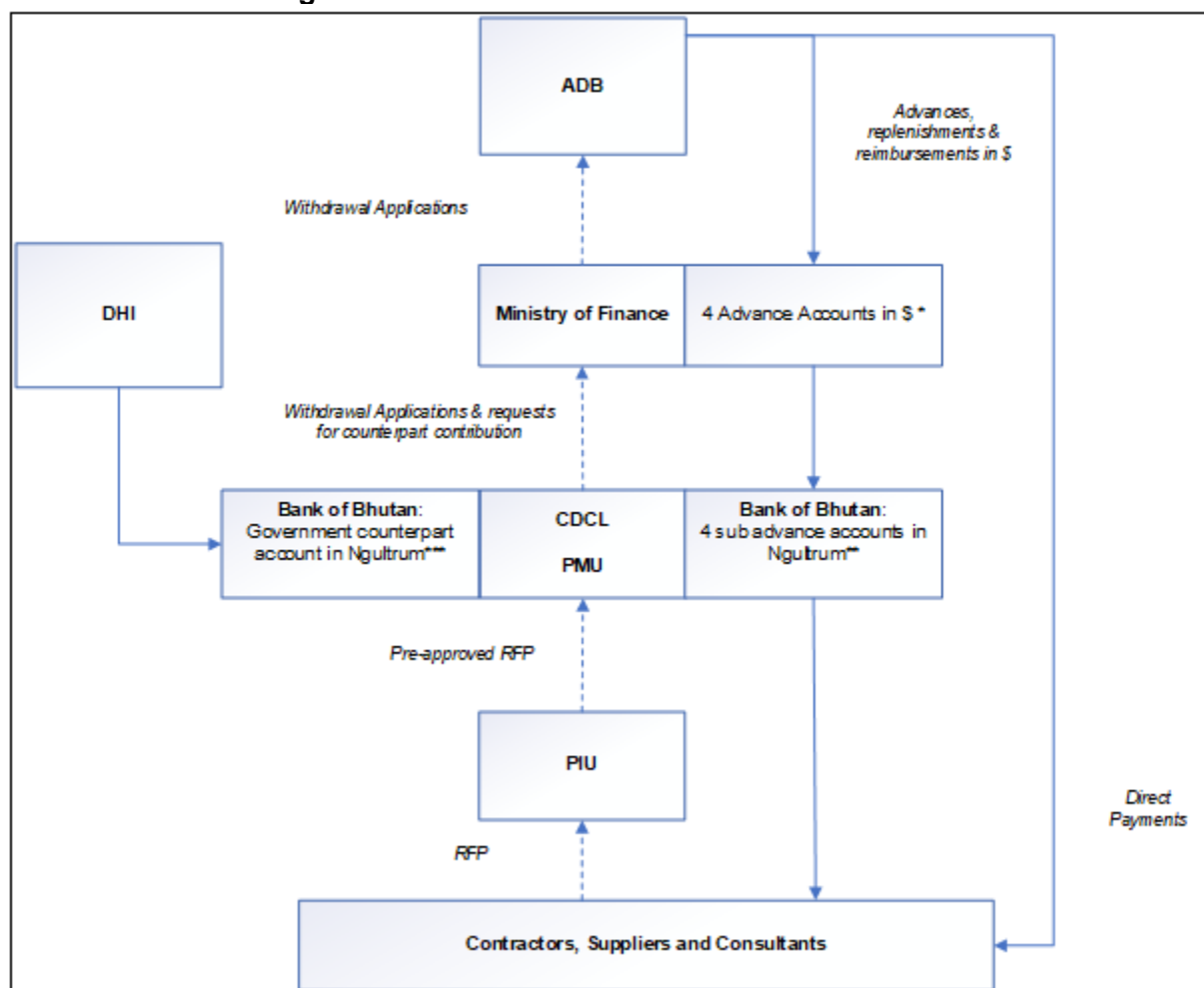
Year	Contract Awards (\$ million)					Disbursements (\$ million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2018	0.00	0.00	24.26	0.00	24.26	0.00	0.00	0.00	2.07	2.07
2019	0.00	0.00	0.00	0.00	0.00	3.83	2.33	2.62	4.50	13.28
2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.31
2023	0.00	0.00	0.00	0.00	0.00	0.95	0.96	0.96	0.95	3.82
2024	0.00	0.00	0.00	0.00	0.00	0.95	0.96	0.96	0.95	3.82
2025	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.00	0.96
	Total Contract Awards				24.26	Total Disbursements				24.26

**Table 17: Additional Financing (Grant): Contract Awards and Disbursements (\$ million)**

Year	Contract Awards (\$ million)					Disbursements (\$ million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2021	10.00	0.00	0.00	0.00	10.00	0.00	0.47	0.47	0.47	1.41
2022	0.00	0.00	0.00	0.00	0.00	0.47	0.47	0.47	0.47	1.88
2023	0.00	0.00	0.00	0.00	0.00	0.47	0.47	0.47	0.47	1.88
2024	0.00	0.00	0.00	0.00	0.00	0.47	0.47	0.47	0.47	1.88
2025	0.00	0.00	0.00	0.00	0.00	0.47	0.47	0.47	0.47	1.88
2026						0.53	0.54			1.07
	Total Contract Awards				10.00	Total Disbursements				10.00

Source: Asian Development Bank estimates.

## I. Fund Flow Diagram



Fund Flow = solid line

Document Flow = Dotted line

RFP: Request for Payments

\* Four foreign exchange accounts in Royal Monetary Authority (one \$ account for the ADB grant proceeds, one \$ account for ADB loan proceeds, one \$ account for the ADB additional grant proceeds, one \$ account for ADB additional loan proceeds)

\*\* Four Ngultrum sub-advance accounts in Bank of Bhutan (one account for the ADB grant proceeds, one account for ADB loan proceeds, one account for the ADB additional grant proceeds, one account for ADB additional loan proceeds)

\*\*\* One Ngultrum project account for counterpart fund contributions from DHI

Source: Asian Development Bank.



## V. FINANCIAL MANAGEMENT

### A. Financial Management Assessment

23. A financial management assessment (FMA) has been conducted for CDCL, for the original project and revised for the additional financing, in accordance with ADB's Guidelines.<sup>11</sup> The purpose of the FMA is to ensure that adequate financial management arrangements are in place for the proposed project. The FMA considered the capacity of CDCL including funds flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements. The FMA found that CDCL has adequate financial management capacity to (i) record the required financial transactions, (ii) provide reliable annual financial statements and audit reports in a timely manner, (iii) safeguard the financial assets and (iv) manage the advance accounts SOE procedure up to a threshold of \$100,000 in accordance with ADB disbursement handbook.

24. The assessed pre-mitigation financial management risk is *moderate* because of following: (i) complex financing structure with five sources of financing, (ii) there is scope for improving the quality of financial reporting under the ongoing project, and (iii) the audited project financial statements (APFS) under the ongoing project were submitted with a significant delay. Main risk mitigation actions include: (i) providing training in ADB's financial reporting and audit requirements as well as disbursement procedures and systems, (ii) including comprehensive financial information in the quarterly progress reports (QPR), (iii) including the project in the audit plan of CDCL's internal audit function, and (iv) ensuring the audit of the project financial statements is concluded in a timely fashion. The key financial management risks and mitigation actions identified are shown in Table 18.

**Table 18: Financial Management, Internal Control and Risk Assessment and Risk Management Plan**

<b>Risk</b>	<b>Risk Assessment and Risk Description</b>	<b>Mitigation Measures or Action Plans</b>
1. Country-specific risks	<b>M</b> Generally robust PFM systems in place. There is scope for improving the capacity of the Royal Audit Authority to provide timely audit reports and to strengthen the effectiveness of internal audits.	Not applicable.
2. Entity-specific Risks	<b>M</b> DHI is the executing agency for the project and CDCL, the implementing agency	Not applicable.

<sup>11</sup> ADB. 2009. [Financial due diligence methodology note](#). Manila

<b>Risk</b>	<b>Risk Assessment and Risk Description</b>	<b>Mitigation Measures or Action Plans</b>
3. Project-specific Risks	<b>M</b> -The scope of the additional financing is the same as in the ongoing project. Under the PMU, CDCL has established a PIU in Phuentsholing near the project area	No project specific mitigation actions.
<b>Overall Inherent Risk</b>	<b>M</b>	
<b>Control Risk</b>		
1. Implementing Entity	<b>M</b> -CDCL is implementing the ADB funded project. A PMU and PIU have been established under the ongoing project	ADB to provide training to CDCL internal auditor, financial managers, accountants. Other Specific mitigation actions listed below.
2. Fund Flow	<b>M</b> -Several sources of financing including 2 ADB loans and 2 grants -Potential delays in reconciliation of project account with advance accounts, resulting in delayed preparation of withdrawal applications and receipt of funds. To date disbursement targets have been met.	-Separate Advance and sub advance accounts to be maintained for each ADB financing source. -CPD and L/GFIS to be used on a weekly basis to track WAs and to ensure books of accounts and ADB disbursement records reconcile. -All withdrawal applications will be prepared by the CDCL and all supporting documentation will be kept centrally. -DHI and CDCL will ensure with MOF the provision of sufficient budget for the counterpart fund and ensure release of the replenishment of funds received from ADB. -Royal Government of Bhutan to request Department of Public Accounts to reconcile project sub-accounts with advance accounts at Royal Monetary Authority.
3. Staffing	<b>M</b> -training to be imparted to the newly recruited staff.	-The capacity of the CDCL to be strengthened through continuous training on the ADB FM and disbursement policies procedures and disbursement systems. Project should keep the trained staff till end of the project.
4. Accounting Policies and Procedures	<b>M</b> -Proper well documented policies and procedures and scope for improvement in the implementation of PEFA recommendations.	-Existing BAS policies and procedures are followed. The compliance status of project loan covenants will be reported and assessed through the quarterly progress reports and verified by ADB review missions.
5. Internal Audit	<b>M</b> -The function may lack capacity to conduct internal audits on a quarterly basis.	-include PTDP in the internal audit work plan on quarterly basis during project implementation. Internal auditors to be included in the training provided to the PMU.

<b>Risk</b>	<b>Risk Assessment and Risk Description</b>	<b>Mitigation Measures or Action Plans</b>
6. External Audit	<b>M</b> -The APFS may be submitted with a delay. Timely completion of the external audit and submission of the audit report. -Auditors issued Qualified opinion on the AEFS due to inconsistencies in the use of accounting standards.	-The PFS to be completed within 2 months after the end of fiscal year. Implementing agency, PMU to coordinate with RAA to ensure the APFS is completed on time and submitted to ADB within 6 months after the end of the fiscal year. -Audit qualifications reported as part of the entity audit need to be addressed.
7. Reporting and Monitoring	<b>M</b> -The QPR format has been established as part of the ongoing project. -PFS does not include variance analysis. an	-PMU to issue quarterly financial reports within 45 days after the reporting period in a format agreed with ADB, including physical vs financial progress and disbursement reports. -The PFS to be improved to include a statement of budgeted vs actual expenditures and analysis of significant deviations.
8. Information Systems	<b>M</b> No specific risk identified (CDCL uses a computerized accounting information system, the output of which is adjusted manually for producing tax reports and inputs for consolidated financial statements at holding level).	-Continuous use of ADB disbursement systems CPD and L/GFIS.
<b>Overall Control Risk</b>		<b>M</b>
<b>Overall FM risk</b>		<b>M</b>

H – High, S-substantial, M – Moderate, L – Low.

ADB = Asian Development Bank, AEFS = Audited Entity Financial Statements, AF = additional financing, CDCL = Construction Development Corporation Limited, CPD= Client Portal for Disbursements, DHI = Druk Holding and Investments Limited, FM = financial management, L/GFIS= Loan and Grant Financial Information System, MOF = Ministry of Finance, PEFA = Public Expenditure Financial Accountability, PFM = Public Financial Management, PFS = Project Financial Statement, PIU = project implementation unit, PMU = project management unit, PTDP = Phuentsholing Township Development Project, QPR=Quarterly Project Report, RAA = Royal Audit Authority, WA = withdrawal application.

Source: Asian Development Bank.

25. DHI and CDCL have agreed to implement an action plan as key measures to address the risks. The financial management action plan is provided in Table 19.

**Table 19: Proposed Action Plan to Address Financial Management Issues**

<b>Key risks and Agreed action</b>	<b>Responsibility</b>	<b>Timeframe</b>
1. All project records and supporting documentation filed centrally, backed up regularly and made available for auditors and ADB for inspection staff, as necessary.	CDCL	Throughout the life of the project.
2. Training in ADB's financial management and disbursement policies, procedures, and systems to be provided for project staff and internal audit staff.	ADB and CDCL	Continuous throughout project implementation.

Key risks and Agreed action	Responsibility	Timeframe
3. Ensure timely release of Counterpart Fund by the DHI.	CDCL	Throughout the life of the project.
4. Proactive use ADB's LFIS as well as national systems to track withdrawal applications and reconcile ABD and project records under each financing source. Follow up on any discrepancies.	CDCL	Monthly.
5. Include the project in audit plan of the internal audit function and implement audit recommendations on a timely manner.	CDCL	Continuous throughout the project implementation.
6. Develop an action plan to resolve the qualifications raised by the entity auditor in the audit reports for FY 2018	CDCL	By effectiveness of the additional financing.
7. Include comprehensive financial management information in the quarterly financial reports to be submitted to ADB.	PMU/CDCL	Within 45 days after the end of each quarter.
8. Prepare consolidated PFS within 2 months after the end of the FY and Improve the quality of the PFS by including a statement of Budgeted vs actual with any significant deviations explained in the notes.	CDCL	Annually within 2 months after the end of the FY.
9. Engage with RAA to ensure the audit is completed on time and the consolidated APFS is submitted to ADB within the deadline specified in the legal agreements.	CDCL	Within 6 months after the end of the FY.

ADB = Asian Development Bank, APFS = Annual Project Financial Statement, CDCL = Construction Development Corporation Limited, DHI = Druk Holding and Investments Limited, DMEA = Department of Macroeconomic Affairs, FY = fiscal year, LFIS = Loan Financial Information System, MOF = Ministry of Finance, PFS = Project Financial Statement, PMU = project management unit, RAA = Royal Audit Authority.  
Source: ADB, based on discussions with CDCL (2016).

## B. Disbursement

### 1. Disbursement Arrangements for ADB Funds

26. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time),<sup>12</sup> and detailed arrangements agreed upon between the government and ADB. Online training for project staff on disbursement policies and procedures is available.<sup>13</sup> Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

27. ADB's disbursement procedures (direct payment, reimbursement, and/or advance fund procedure) will be used for withdrawal of project funds:

- (i) Direct payment procedure will be used for foreign currency payments to contractors, suppliers and consultants;
- (ii) Reimbursement will be used for any eligible payments pre-financed by the government, including all expenditures financed under retroactive financing; and,
- (iii) Advance fund (liquidation or replenishment) procedures will be mainly utilized for payments to suppliers, contractors when government pre-financing is not feasible.

<sup>12</sup> The handbook is available electronically from the ADB website (<http://www.adb.org/documents/loan-disbursement-handbook>).

<sup>13</sup> Disbursement eLearning. [http://wpqr4.adb.org/disbursement\\_elearning](http://wpqr4.adb.org/disbursement_elearning)

28. **Channeling of loan and grant proceeds.** The ADB loan, ADB grant, ADB additional loan and ADB additional grant would be channeled to the government in US Dollar, and the government will on-lend the loan and pass on the grant to DHI. The subsidiary loan will have a 32-year term, including an 8-year grace period. The subsidiary loan will have an interest rate at 1% during the grace period and 2.55% thereafter. The subsidiary loan will be provided in Ngultrum and the government will bear the exchange rate risk. DHI would provide funds from the ADB loan and grant, and from DHI equity, to CDCL for the overall project.

29. The CDCL through its PMU will be responsible for (i) preparing disbursement projections, (ii) requesting budgetary allocations for counterpart funds, (iii) collecting all supporting documents, and (iv) preparing and sending withdrawal applications to ADB.

30. **Advance fund procedure.** Separate advance accounts will be established under DMEA (MOF) and maintained by the Royal Monetary Authority (RMA) for each funding source (one account for the ADB loan, one account for the ADB grant, one account for the ADB additional financing loan and one account for the ADB additional financing grant). The currency of the advance accounts is the US dollar. The advance accounts are to be used exclusively for ADB's share of eligible expenditures. The advance funds will then be transferred to four project sub-accounts maintained by CDCL at the Bank of Bhutan (one account for loan proceeds, one for grant proceeds, one account for additional financing loan proceeds, and one account for additional financing grant proceeds). The RMA will establish the advance accounts in the name of the Department of Macroeconomic Affairs (DMEA), and DMEA will be accountable and responsible for proper use of advances to the advance accounts including advances to the project's sub-advance accounts. The project sub-advance accounts will be for the exclusive use of the project and receive and funds from ADB and the government through DMEA, following Bhutan's country system. DMEA will advise the Department of Public Account for the release of funds to the respective sub-accounts. CDCL through its PMU will be responsible for monthly reconciliation of the sub-advance account and provision of supporting documents for withdrawal applications to ADB for liquidation or replenishment of each sub-advance account. DMEA is responsible for the reconciliation of the advance accounts with the sub-advance accounts before submitting withdrawal applications to ADB.

31. The total outstanding advance to each advance account should not exceed the estimate of ADB's share of expenditures to be paid through the advance account for the forthcoming 6 months. CDCL may request initial and additional advances to the advance accounts based on an estimate of expenditure sheet setting out the estimated expenditures to be financed through the account for the forthcoming 6 months. Supporting documents should be submitted to ADB or retained by the borrower in accordance with ADB's Loan Disbursement Handbook (2017, as amended from time to time) when liquidating or replenishing the advance account. CDCL shall ensure that every liquidation and replenishment of each project sub-account is supported by sufficient documentation in accordance with ADB's Loan Disbursement Handbook.

32. **Statement of expenditure (SOE) procedure.**<sup>14</sup> The SOE procedure may be used for reimbursement of eligible expenditures. The ceiling of the SOE procedure is the equivalent of \$100,000 per individual payment. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent aud. Reimbursement and liquidation of individual

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<sup>14</sup> SOE forms are available in Appendix 7B and 7D of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time)

payments in excess of the SOE ceiling should be supported by full documentation when submitting the withdrawal application to ADB.

33. Before the submission of the first withdrawal application, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the government, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is stipulated in the *Loan Disbursement Handbook* (2017, as amended from time to time). Individual payments below such amount should be paid (i) by CDCL and subsequently claimed to ADB through reimbursement, or (ii) through the advance fund procedure unless otherwise accepted by ADB. The borrower should ensure sufficient category and contract balances before requesting disbursements. Use of ADB's Client Portal for Disbursements (CPD)<sup>15</sup> system is mandatory for submission of withdrawal applications to ADB.

## 2. Disbursement Arrangements for Counterpart Fund

34. Government counterpart funds will be provided to the PMU and PIU under CDCL, from DHI and kept in separate project account designated for government counterpart funding. The government counterpart account will be maintained in the bank of Bhutan and dedicated for the CDCL PMU and PIU. CDCL will through its PMU prepare the disbursement projections and transmit to the government, to earmark the required funds for budgeting purposes.

35. CDCL will submit to ADB annual contract awards and disbursement projections before the start of each calendar year using the ADB's standard templates. CDCL is responsible for (i) requesting budgetary allocations for counterpart funds; (ii) collecting supporting documents for the project; and (iii) preparing and sending withdrawal applications to ADB.

36. **Financial Management Staff Capacity.** In order to ensure sufficient knowledge in ADB's financial management requirements, including procedures and related systems, CDCL through its PMU must ensure that each financial staff assigned to the project undertake the following actions within the first three months working with the project:

- (i) Become aware of the ADB and national anticorruption policy and whistleblowing mechanisms;
- (ii) Master loan/grant agreement including the loan covenants and the relevant sections of the project administration manual (PAM), as well as the ADB loan disbursement handbook; and
- (iii) Obtain user/reader rights (as required) to ADB's systems including: the CPD and the Loans and Grants Financial Information System (LFIS and GFIS).

37. In addition, the CDCL through its PMU should on a yearly basis liaise with ADB to take advantage of other financial management resources and training events organized by ADB.<sup>16</sup>

## C. Accounting

38. **Accounting and Financial Reporting.** CDCL will maintain separate books and records by funding source for all expenditures incurred under the project following cash basis of

<sup>15</sup> The CPD (<https://cpd.adb.org>) facilitates online submission of withdrawal application to ADB, resulting in faster disbursement. The forms to be completed by the Borrower are available online at <https://www.adb.org/documents/client-portal-disbursements-guide>.

<sup>16</sup> ADB e-learning courses include: ADB Disbursement eLearning course and Cash Basis IPSAS for ADB Project Financial Reporting.

accounting. CDCL will prepare project financial statements in accordance with the government's accounting laws and regulations which are consistent with international accounting principles and practices. Accordingly, the expected disclosures in the project financial statements include at least the following:

- (i) Statement of cash receipts (by financing source: ADB loan, ADB grant, ADB additional loan, ADB additional grant and government) and payments (by expenditure category) for the current reporting period, past reporting period, and cumulative to date.
- (ii) Statement of advance sub-account.
- (iii) Statement of disbursement, disclosing all funds claimed from ADB loan, ADB grant, ADB additional loan and ADB additional grant by disbursement method, total expenditure claimed for the current reporting period, past reporting period, and cumulative to date.
- (iv) Disbursement claimed under SOE procedure for the reporting period.
- (v) Statement of Budgeted vs. actual expenditures. Any significant variances must be duly explained.
- (vi) Notes to the Financial Statements disclosing the used accounting standards and policies and other relevant information and explanations. The notes of the financial statements should include a detailed list of all withdrawal applications submitted to, and the amounts paid by ADB as follows: (a) withdrawal application number, (b) the amount claimed and currency, (c) time period in which expenditures were incurred, d) date submitted, (e) disbursement method and f) the amount disbursed by ADB.

39. The expenditure categories and outputs used in the financial reports will be aligned with the expenditure categories of the PAM.

#### **D. Auditing and Public Disclosure**

40. In order to provide timely information on the project's financial progress and the status of financial management, CDCL through its PMU will ensure that the detailed financial information is included in the QPR to be submitted to ADB within 45 days after the end of the quarter (Appendix G). The consolidated financial information in the QPR will include at least the following financial information:<sup>17</sup>

- (i) Cumulative contract awards financed by the ADB loan, and counterpart funds (commitment of funds to date), and comparison with time-bound projections (targets – for ADB financing compare the actual contract awards with the contract award curve included in the PAM). Any significant variances between planned and actual contract awards are to be explained.
- (ii) Cumulative disbursements from the ADB loan, and counterpart funds (expenditure to date), and comparison with time-bound projections (targets – for the ADB financing compare the actual disbursement with the disbursement projections as per the S curve included in the PAM). Any significant variances between planned and actual disbursements are to be explained.
- (iii) Re-estimated costs to completion, need for reallocation within ADB loan categories, and whether an overall project cost overrun is likely.
- (iv) Reconciliation of project records and ADB disbursement records (LFIS/GFIS) for the financial year to date and cumulative from project inception to end of the reporting period. Any discrepancies and outline follow-up actions required are to be explained.

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<sup>17</sup> Quarterly Project Report template is attached to the PAM.

- (v) Variance analysis including budget vs actual expenditures and physical vs financial progress, with significant deviations explained.
- (vi) Summary of the status of financial covenants (if any) as outlined in the loan and project agreement.
- (vii) Summary of the status of financial management in the project including: a) any problems in the existing financial management arrangements and /or flow of funds and b) any significant changes occurred during the reporting period (e.g., financial management staff turnover, implementation of new financial systems, emerging financial management related risks, etc.).
- (viii) Summary of the status of: (a) the financial management action plan outlined in the PAM, (b) recommendations and actions raised by ADB as part of the APFS and audited entity financial statements (AEFS) review (if any) and (c) financial management related recommendations agreed during ADB review missions (if any).
- (ix) Status of past audit observations (resolved/ pending).

41. **Variance analysis.** CDCL through its PMU will conduct variance analysis on a regular basis and examine the differences between budgeted vs. actual expenditures as well as financial vs. physical progress. The variance analysis will pay particular attention to:

- (i) significant deviations from the budgeted engineer's estimate;
- (ii) significant deviations between financial and physical progress;
- (iii) significant delays on (planned vs. reported) physical and/or financial progress; and
- (iv) inconsistent and/or delayed progress reporting.

42. Any significant variances, delays or deviations etc. shall be promptly followed-up on and explained in the financial reports, project financial statements (PFS) and QPR, as applicable.

43. **Periodic reconciliations:** To ensure the correctness and completeness of the project's disbursement records, CDCL through its PMU shall conduct quarterly reconciliations of the project accounts, and ADB's disbursement data available in the LFIS and GFIS. Any discrepancies and/or reconciliation items will be promptly followed up on to ensure these are resolved in a prompt manner.

44. **Internal auditing.** To strengthen the internal control framework, the internal audit function of CDCL shall include project activities within their audit scope, over the project implementation period. The internal auditor will provide a report to the CDCL's audit committee within 45 day after the end of the reporting period. The audit committee will consider key issues pointed out by the auditors and ensure timely resolution of observations by project management. The status of the internal audit recommendations related to the project (if any) will be regularly monitored by CDCL through its PMU and included in the QPR.

45. **External Auditing and Public Disclosure.** CDCL will cause the consolidated project financial statements comprising of the original financing and the additional financing to be audited in accordance with International Standards on Auditing, by an independent auditor acceptable to ADB. CDCL will submit the audited project financial statements together with the auditor's opinion which will be presented in the English language to ADB within 6 months from the end of each fiscal year (i.e., by 30 June of each year).<sup>18</sup>

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<sup>18</sup> The Submission of APFS will follow the fiscal year of CDCL which ends 31 December.



46. The audit report will include three separate auditor's opinions, on the following: (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the proceeds of the loan and grant were used only for the purpose(s) of the project; and (iii) whether the borrower or executing agency was in compliance with the financial covenants contained in the legal agreements (where applicable). The audit report must also be accompanied by a management letter containing audit observations and recommendations for improvements in internal control and other matters coming to the attention of the auditor during the audit examination. The management letter should also include management's response to the audit observations. From the second year onward, the management letter must also include a follow-up on previous years audit observations. In case the auditor does not issue a management letter, the auditor must issue a written confirmation that no internal control issues were identified as part of the audit.

47. Moreover, the AEFS of DHI and CDCL, together with the auditor's report, will be submitted in English to ADB within 1 month after approval by their relevant authorities.

48. The government, DHI and CDCL have been made aware of ADB's policy on delayed submission of APFS, and the requirements for the statements being of satisfactory and acceptable quality.<sup>19</sup> If the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed, then ADB reserves the right to require an additional auditor, as mutually agreed with the borrower, to complete the audit in a satisfactory and timely manner. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

49. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor. Public disclosure of the APFS, including the auditor's opinion on the project financial statements, will be guided by ADB's Access to Information Policy 2018.<sup>20</sup> After the review, ADB will disclose the APFS and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.

50. **Financial closure of ADB loans and grants.** In order to close the loan and grant accounts in a timely manner and to comply with ADBs requirements, CDCL will ensure that the following measures are undertaken:

- (i) All ADB financed expenditures are incurred before or by the loan/grant closing date.

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<sup>19</sup> Following is ADB's policy on delayed submission of audited project financial statements:

- (i) When audited project financial statements are *not received by the due date*, ADB will write to the executing agency advising that (i) the audit documents are overdue; and (ii) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements *have not been received within 6 months after the due date*, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest/advance accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (i) inform the executing agency of ADB's actions; and (ii) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements *have not been received within 12 months after the due date*, ADB may suspend the loan.

<sup>20</sup> ADB. 2018. [Access to Information Policy](#). Manila.

- (ii) All withdrawal applications including liquidations of the advance account are submitted to ADB preferably by the loan/grant closing date but in no case later the end of the winding up period; that is, within four months after the end of the loan closing date.
- (iii) Any unutilized advances are refunded to ADB within 2 months after the end of the winding up period.
- (iv) The final PFS are prepared in a timely manner. The final PFS is to include a reconciliation of the project account and the ADB disbursement records for the fiscal year and cumulatively from inception. Any differences must be disclosed and explained.
- (v) All past external audit observations have been duly addressed.
- (vi) The final project financial statements are audited by independent auditors as agreed with ADB, and the APFS and management letter are submitted to ADB as soon as possible after the loan closing date. The Final APFS must include all expenditures incurred up to the loan closing date as well as up to the final withdrawal application.
- (vii) All projects financial records are filed in an orderly manner, backed up electronically and stored in a secure location for a for at least 1 year following receipt by ADB of the final audited project financial statements or 2 years after the loan closing date, whichever is later.

## **VI. PROCUREMENT AND CONSULTING SERVICES**

### **A. Advance Contracting and Retroactive Financing**

51. All advance contracting and retroactive financing will be undertaken in conformity with *ADB Procurement Guidelines (2015, as amended from time to time)* and *ADB's Guidelines on the Use of Consultants (2013, as amended from time to time)*. The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. The borrower, DHI and CDCL have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

52. **Advance contracting.** Under the ongoing project, the works and services packages that were financed by the project through advance contracting were (i) civil works CW-01 (River training, cross drainage and land reclamation), and (ii) consulting services CS-01 (Project Implementation Consultant). Eligible PMU and PIU setting up expenses (office equipment, vehicles, and personnel) may also be part of advance contracting and retroactive financing. Table 20 indicates the schedule of procurement for CW-02, including status for each activity.

53. **Retroactive financing.** **Retroactive** financing is allowed for reimbursement of eligible expenses against civil works and consulting services up to a maximum amount equivalent to 20% of the total ADB loan and grant, incurred before loan effectiveness, but not more than 12 months before the signing of the loan agreement.

**Table 20: Procurement Activities**

<b>Activity</b>	<b>Responsible</b>	<b>Due date</b>	<b>Comment</b>
<b>CW-02 (Common Urban Infrastructure) Schedule</b>			
ADB approval of bid documents	ADB	23 Oct 20	
Invitation for Bids issuance	CDCL	24 Oct 20	
Receipt of bids (bidding time)	CDCL	08 Dec 20	
TBER preparation and submission to ADB	CDCL	07 Jan 21	
ADB review and approval	ADB	21 Jan 21	
FBER preparation and submission to ADB	CDCL	20 Feb 21	
ADB review and approval	ADB	01 Mar 21	
Contract Signing	CDCL	15 Mar 21	
Submission of signed contract agreement to ADB	CDCL	16 Mar 21	
CW-02 Start date	CDCL	15 Apr 21	

ADB = Asian Development Bank, CDCL = Construction Development Corporation Limited, CS = consulting services, CW = civil works, FBER = Financial Bid Evaluation Report, RFP = request for proposal, TBER = Technical Bid Evaluation Report.

## **B. Procurement of Goods, Works, and Consulting Services**

54. All procurement and recruitment of consultants to be financed by the ADB loan and grant will be carried out in accordance with the *ADB Procurement Guidelines (2015, as amended from time to time)* and *ADB's Guidelines on the Use of Consultants (2013, as amended from time to time)*.

55. International competitive bidding (ICB) procedures will be used for civil works contracts estimated to cost \$3 million or more, and goods contracts valued at \$1 million or higher. Shopping will be used for procurement of works and goods worth less than \$100,000. Threshold for national competitive bidding (NCB) shall be below that of ICB. Works by government-owned entities (for activities which are not suitable for competitive bidding) shall be done through force account method with government funding. Small service contracts (works considered non-competitive in nature i.e., excavation of small channels, earth shifting, turfing, tree planting and other misc. works in the project area) may be directly contracted as per ADB guidelines for community participation in procurement for works, with a limit of \$20,000 per package.

## **C. Procurement Plan**

56. The procurement plan for the project indicating threshold and review procedures, goods, works, and consulting service contract packages and national competitive bidding guidelines is in Appendix E. The procurement plan, as approved by ADB, describes all procurement of goods and works to be undertaken by the project. ADB will review documents and submissions related to procurement at all major milestones prior to proceeding with the procurement process. PMU will be supported by an ADB staff consultant procurement specialist and PIC in bid document preparation and evaluation. This will be supplemented by regular training on procurement for the PMU staff.

## **D. Consultant's Terms of Reference**

57. All consultants will be recruited according to *ADB's Guidelines on the Use of Consultants (2013, as amended from time to time)*. An estimated 350 person-months (186 person-months, international; 164 person-months, national)<sup>21</sup> of consulting services are required to facilitate project management and implementation. Three consulting firms will be engaged using the quality- and cost-based selection method with a standard quality–cost ratio of 90:10. Individual consultants will be engaged using the individual consultant selection method. The outline terms of reference for: (i) independent environmental monitoring expert; (ii) urban management advisor; (iii) investment promotion advisor; (iv) sustainable township management capacity development; and (v) investor promotion and transaction advisory services are provided in Appendix F-1 to F-5 respectively.

## **VII. SAFEGUARDS**

58. The safeguard category for the ongoing project is *A* for environment and *C* for involuntary resettlement and indigenous peoples. Resettlement and indigenous peoples' plans are not required. The safeguard category for the additional financing is *C* for environment, involuntary resettlement, and indigenous peoples as the additional financing will be used to bridge cost overruns and financing gaps within the existing project scale and scope. The same loan covenants will be retained in the loan agreement to ensure compliance with safeguards requirements for the original project.

### **A. Environment**

59. The environmental management plan (EMP) contained in the environmental impact assessment (EIA) report of the ongoing project is the strategic document to provide direction for the preparation and implementation of the environmental mitigation measures. The EMP has been developed following basic environmental management principles and it outlines the main environmental impacts of the ongoing project, proposed mitigations measures, and the proposed design mitigations to ensure inclusion in the bidding documents, standard construction mitigation measures, monitoring, and a proposed institutional arrangement for further implementation of environmental management during the construction phase. It also details the implementation arrangements and the roles and responsibilities of each of the main stakeholders. It discusses the proposed mitigation and monitoring matrix showing how the contractor should mitigate the identified impacts and reduce risks. The mitigation and management principles set out in the EMP provide advice and guidance to the contractors when preparing subproject site-specific contractor's environmental management plan (CEMP), which will be implemented in accordance with the relevant provisions of the contract.

### **B. Institutional roles and responsibilities**

60. The key stakeholders in the implementation of environmental safeguards are as follows:
- (i) the proponent and implementing agency - the Construction Development Corporation Limited;
  - (ii) the National Environment Commission of Bhutan;
  - (iii) DHI as the project's executing agency;

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<sup>21</sup> PIC=124 international and 95 national; environmental monitor=8 international; urban management advisor=3 international; investment promotion advisor=3 international; Sustainable Township Management Capacity Development=31 international and 25 national; and Investor Promotion and Transaction Advisory Consultant= 17 international and 44 national person-months.

- (iv) the project management unit;
- (v) the project implementation unit;
- (vi) Phuentsholing municipality and the affected village communities in the projects area of influence;
- (vii) the Contractor(s);
- (viii) independent environmental monitoring expert; and
- (ix) Asian Development Bank.

61. **National Environment Commission (NEC):** For the overall project, environmental assessment document is the EIA prepared in compliance with the Environmental Assessment Act (2000) and regulations. This legislation establishes procedures for assessing the potential impacts of plans, policies, programs, and projects and give approvals through an environmental clearance with terms and conditions attached, which lasts for a period of 5 years. NEC is the national body primarily responsible for monitoring the impact of project development on the environment and oversee the EIA and EMP implementation by a project. NEC is responsible for administering the Act and to review the EIA and decide whether an environmental clearance can be issued and renewed. NEC is also legally responsible for monitoring the implementation of the EIA and EMP of the ongoing project. The environmental clearance for the project was granted on 1 September 2017 until 30 August 2022. The renewal of the environmental clearance must be processed at least 3 months prior to its expiry.

62. **Project Management Unit.** The Project Director, PMU will be supported by an environment manager (PMU) and PIU environment officer. They will oversee implementation of environmental safeguards work under the ongoing project and additional financing. They will also: (i) ensure compliance to ADB's Safeguard Policy Statement, 2009 (SPS) and the Environmental Assessment Act (2000); (ii) before expiry of the initial EIA after 5 years, review and revise (if necessary) the EIA and undertake necessary actions as required, to obtain NEC and ADB continued approval; (iii) liaise with the relevant authorities to obtain all required clearances and environmental permits in a timely manner prior to construction; (iv) approve the contractor's EMP; (iv) monitor and provide guidance on the contractor's EMP implementation and (vi) maintain the grievance redress mechanism (GRM) to receive and facilitate resolution of the affected people's concerns and grievances regarding the ongoing project and additional financing's environmental performance.

63. **Project Implementation Unit.** The environment officer in the PIU, assisted by the environmental specialist on the PIC team, will oversee implementation of environmental safeguards work under the overall project, including the following activities: (i) facilitate and confirm overall compliance with Government of Bhutan rules, and assist in obtaining all required clearances and environmental permits in a timely manner prior to construction; (ii) monitor CEMP implementation by the contractors during construction including all mitigation measures and environmental monitoring of parameters (air and water quality, noise, etc.) and taking corrective actions where necessary; (iii) address and record grievances through the GRM in a timely manner, and taking quick corrective actions where necessary; (iv) ensure that all required environmental study (e.g. biodiversity studies on aquatic ecosystem and elephant social behavior) are professionally and comprehensively carried out; (v) ensure that all environmental quality monitoring required for the project are comprehensively done; (vi) prepare a corrective action plan or new environmental assessment and EMP to assess the potential impacts when unanticipated environmental impacts become apparent during project implementation; (vii) conduct public consultation with affected people and beneficiaries and (viii) review monthly environmental monitoring reports (EMRs) submitted by contractor and consultants, and prepare and submit

semi-annual EMRs to ADB on behalf of the PMU. All semi-annual monitoring reports submitted to ADB will be disclosed on ADB's website, as per ADB safeguards and communication policies.

64. **Project Implementation Consultant.** The PIC will support PIU in design review, construction supervision and monitoring and evaluation. The role of the PIC safeguards team is to oversee overall implementation of the CEMP, and ongoing ambient monitoring of the contractor at the monitoring stations. It will also advise the overall project engineer on addressing environmental and social management issues.

65. **Contractors.** Contractors play a critical role in implementing environmental safeguards including the following activities:

- (i) prepare and obtain approval of the CEMP, based on the EIA/EMP and outline CEMP prepared during detailed designs and comply with the SPS and the EMP. This will be done during the mobilization phase after contract award. The PIC's environmental specialist will approve the CEMP on behalf of PIU before any construction work commences;
- (ii) carry out all environmental mitigation measures in the approved CEMP during construction including regular testing and monitoring of environmental parameters outlined;
- (iii) address public grievances by taking quick corrective actions and reporting status of grievances and redress to PIU/PMU;
- (iv) undertake its own monitoring of project related impacts and prepare an environmental section of the monthly report to CDCL environment team and PIC;
- (v) the contractor is responsible for implementing all environmental, health and safety actions included in the CEMP and relevant clauses in the bidding documents; and
- (vi) the contractor is required to assign an Environmental Safety Officer whose responsibilities will include:
  - (a) Coordinating with the PIC during preparation and approval of the CEMP.
  - (b) Ensuring that the contractor engages a suitable expert as a resource person or organization to undertake STIs/ HIV/ AIDS and coronavirus disease (COVID-19) briefings and awareness raising amongst the contractor's employees and neighboring communities with follow-up upon request.
  - (c) Coordinating with PIU and PIC in respect of community consultation.
  - (d) Participating in monitoring and coordinating with PIC and PIU to ensure that environmental management activities are reported as required.
  - (e) Ensuring that the contractor does not commence construction activities until requisite approvals have been received from NEC and/or other Government permitting agencies such as the Department of Mining responsible for quarries.
  - (f) Coordinate and communicate with the PIC and PIU as required, to facilitate consultation with the affected villages, various stakeholders, and ensuring smooth implementation of the subproject.

66. Provision will be made for the costs of environmental management and monitoring plans including preparation of the CEMP.

67. **Phuentsholing Thromde and Village Communities:** The Thromde and Village leaders and organizations will assist in arranging meetings, facilitating consultation and providing information about affected communities and environmental impacts of construction. Documentation of issues that arise is an integral part of the internal monitoring report prepared

by the Contractor. If issues arise during construction, the local communities can provide input and advice to the Contractor's Environmental Safety Officer or use the GRM directly for issues and grievances which have not been satisfactorily resolved.

68. **Independent Environmental Monitoring Expert:** An expert on environmental monitoring will provide technical support to PIU, PIC, PMU and ADB during project implementation and document the progress of the EMP. The expert will ensure (i) the implementation of the CEMP and EMP are compliant to SPS and Environmental Clearance from the NEC and (ii) timely submission of the EMR. The expert will assist the PIC and PIU and report to the PMU and ADB.

69. **Asian Development Bank.** ADB's safeguard due diligence emphasizes planning, environmental and social impact assessments, and safeguard documentation. Through such due diligence and review, ADB will confirm (i) that all key potential social and environmental impacts and risks of a project are identified; (ii) that effective measures to avoid, minimize, mitigate, or compensate for the adverse impacts are incorporated into the CEMP; (iii) that the PMU and PIU understands SPS principles and requirements and has the necessary commitment and capacity to manage the risks adequately; (iv) that, as required, the role of contractor is appropriately defined in the CEMP; and (v) that consultations with affected people are conducted in accordance with ADB's requirements; and provide monitoring and supervision.

### **C. Grievance Redress Mechanism**

70. The project is required to have a GRM for affected people to submit complaints or objections and for the project to resolve such grievances. A two-tier GRM has been adopted for the ongoing project and additional financing. The first tier is in the field at the PIU-level led by PIU Project Manager. The second level/tier GRM is led by the PMU.

71. The first level of the GRM is established at the PIU office, with the PIC's Safeguard and Communication Specialist as the secretary. The 1st Tier Grievance Redress Committee (GRC) consists of the PIU Project Manager as the chairman, with the following as members: (i) PIU Deputy Project Manager, (ii) Environment Officer of PIU, (iii) PIC Team Leader, (iv) PIC Safeguard and Communications Specialist (Secretary), (v) representative of local leader, (vi) representative from District office, (vii) representative from reputable community based organization, and (viii) members on call basis based on the nature of grievance representing relevant section of Dzongkhag/Dungkhag office, and (ix) contractor. There are four locations for where complaints or grievances may be received: (i) PIU office, (ii) contractor's office, (iii) local leader office, and (iv) Thromde office, and (v) 1 GRM first level secretariat at the PIU office.

72. The public has several mechanisms for lodging a complaint: (i) GRM dedicated office address and PIU phone number, (ii) grievance register kept at the PIU office, (iii) grievance drop box in the PIU office and contractor's office, (iv) email address and phone number of local leader office representative, and (v) phone number of the Thromde office. The secretariat will actively check grievances received and record submitted grievance, complainant's name, date, concerns/ grievance type. Only complaints related to the project will be accepted and no anonymous complaints will be entertained. The secretariat will call a regular quarterly meeting to invite all members and conduct special meetings if any grievance is received. The secretariat will be responsible for reviewing the grievance, identifying potential solutions, and calling the meetings with concerned party(ies). Meetings to resolve a grievance should involve the person who submitted the grievance. At the first level, the duration to resolve the grievance is maximum of 14 days. If the first GRM level could not resolve the grievance it will go to second level/tier GRM.

73. The broad outline of the first tier GRM and flow of information is given below:

- (i) The PIC safeguard and communications specialist will communicate any grievance to the PIU. The GRC will check the grievance redress boxes regularly.
- (ii) Each complaint will be issued a reference number. The PIU Environment Officer will issue an acknowledgment receipt to the aggrieved person and provide details on the process to follow.
- (iii) The GRC will work with the aggrieved person to resolve the complaint. On settlement, the PIU environment officer will verify that the complaint is addressed (through consultation with the affected parties) and issue a letter to the aggrieved person citing the findings of the GRM investigation and any action taken with regard to the complaint.
- (iv) The GRC must communicate the decision on the grievance to the aggrieved person within a maximum of 14 calendar days with appropriate action taken for resolution of the issue.
- (v) All grievances will be documented and indexed. The meeting proceedings and actions against each of the grievance will be documented by the PIC Safeguard and Communications Specialist.
- (vi) If the grievance requires a policy decision, the case will be forwarded to the PMU Level GRM for further resolution within 14 calendar days.

74. The second level/tier GRM is led by the PMU Project Director with the following members: (i) PMU Urban Planner, (ii) PIU Project Manager, (iii) PIU Environment Officer, (iv) central government department, and (v) reputable community-based organization. The total duration to resolve the grievance at this level will not be more than 30 days after PIU received the grievance. Depending on the severity of the case, an additional time may be agreed with the complainant to resolve the grievances. The meeting to resolve a grievance will be held with the people who submitted the grievance.

75. The broad outline of the second-tier mechanism and flow of information is as follows:

- (i) The PIC Safeguard and Communication Specialist will communicate to the PMU Project Director on any grievance not resolved in the PIU level within 5 calendar days;
- (ii) The PMU Project Director will work with the PIU, contractor and aggrieved person to resolve the complaint. On settlement of the complaint, the PIU Environment Officer will verify that the complaint is addressed and issue a letter to the aggrieved person stating the findings of the GRM investigation and action taken;
- (iii) The decision on the grievance must be communicated to the aggrieved person by the PIU within a maximum of 30 calendar days from the date the complaint is received. Depending on the severity of the case, an additional time (mutually agreed between the two parties), may be granted to resolve the grievances; and
- (iv) All grievances must be documented and indexed. The meeting proceedings and actions against each of the grievance will be documented by the PIU Environment Officer.

76. All complaints lodged with the GRC will be recorded and reported to ADB in the biannual safeguard report. Details of the aggrieved person's name, nature of complaint, status of complaint, and outcome will be included within the safeguard report. ADB's Independent Environmental Specialist will undertake routine inspections of the GRM to ensure that the GRM is functioning.

77. All costs involved in resolving the complaints (meetings, consultations, communication and reporting/information dissemination) will be borne by the PIU through provisional sum.



78. The GRM is not replacing the court system, so complainants can still bring the complaint/grievance to the court while the Project GRC is handling the complaint. Complaints may also be referred through the ADB accountability mechanism (para. 101).

#### **D. Health and safety**

79. The project will be required to provide workers with a safe and healthy working environment, considering inherent risks, any hazards in the work areas, including physical, chemical, biological, and radiological hazards. The SPS also requires that the PMU and PIU, through the implementing agency, will take steps to prevent accidents, injury, and disease (i.e., HIV/AIDS, COVID-19 and similar pandemics) arising from, associated with, or occurring during the course of work. ADB will monitor that the PMU and PIU to ensure that the project adheres to government health and safety requirements and employs international good practices, as reflected in internationally recognized standards such as the World Bank Group's Environmental Health and Safety Guidelines and World Health Organizations against COVID-19.

#### **E. Prohibited investment activities**

80. Pursuant to the SPS, ADB funds may not be applied to the activities described in the ADB Prohibited Investment Activities List set forth in Appendix 5 of the SPS.<sup>22</sup>

### **VIII. GENDER AND SOCIAL DIMENSIONS**

81. A summary poverty reduction and social strategy has been prepared. The PMU/PIU shall (i) identify women and women organizations as well as activists and other organizations involved in the preparation, development, and implementation of the FEWS; and (ii) ensure that these individuals and groups are invited to all stakeholders' consultation meetings, trainings, and community discussions (disaggregation of data to be recorded in QPRs). The PMU/PIU should also ensure that measures have been taken to raise public awareness of the risks of sexually transmitted infections (incl. HIV) and other, COVID-19, drug and human trafficking, including providing protection for construction workers through testing and treatment, if necessary. Public awareness activities will be reported in the QPR. Contracts and bidding documents should include clauses designed to ensure that all civil works contractors comply with applicable labor laws, do not employ child labor, encourage the employment of the poor, particularly women, and do not offer different wages to men and women (i.e., equal pay for equal work). Dialogue and communication (both written and verbal) with stakeholders will be carried out in a specific and culturally sensitive manner and in local languages, and continue to conduct public consultations throughout project implementation to ensure that stakeholders including affected people are aware of the progress project achievement and requirements. The QPR will also include a record of women participation in all consultation meetings, with disaggregation for meetings related to preparing and implementing the FEWS and FMP.

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<sup>22</sup> Page 76, ADB Safeguard Policy Statement (2009)

## IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

### A. Project Design and Monitoring Framework

82. The design and monitoring framework (DMF) of the project is in Appendix A.

### B. Monitoring

83. Both government and ADB have their own monitoring responsibilities. The extent of monitoring activities, including their scope and periodicity, will be commensurate with the project's risks and impacts. Governments, through the implementing agency, are required to implement safeguard measures and relevant safeguard plans, as provided in the legal agreements, and to submit periodic monitoring reports on their implementation performance. Monitoring and supervising of social and environmental safeguards is integrated into the project performance management system (PPMS).

84. **Project performance monitoring.** Within 12 months of loan effectiveness, the PMU will establish a PPMS using the targets, indicators, assumptions, and risks in the DMF. The PPMS will take into account the important monitoring parameters in addition to those included in the DMF. The baseline data corresponding to indicators and targets set out in the DMF and PPMS will be determined from the detailed design reports. Disaggregated baseline data for output and outcome indicators gathered will be updated and reported quarterly through the quarterly progress reports and after each ADB review mission. These quarterly reports will provide information necessary to update ADB's project performance reporting system. Results of a comprehensive completion survey will be included in the project completion report.

85. **Compliance monitoring.** The PMU will monitor and ensure the compliance of loan covenants—policy, legal, financial, economic, environmental, and others. All non-compliance issues, if any, will be updated in quarterly progress reports together with remedial actions. Each ADB review mission (at least two times a year) will also monitor the status of compliance with loan assurances and raise the non-compliance issues with DHI and agree on remedial actions.

86. **Safeguards monitoring.** The supervision, quality control and enforcement of contract provisions is the responsibility of the PMU/PIU Environment Team and the PIC (Engineer to the Contract). The responsibility for preparation and implementation of the CEMP is with the Contractor PIU and PIC.

87. The PIC and PIU will supervise the contractor in preparation and implementation of ambient environmental quality monitoring using the same or a sample of the location of the monitoring sites used for the collection of baseline data in the EIA.

88. On behalf of the NEC, PIC and PIU will also provide quality assurance and random auditing, in order to ensure that the agreed procedures are in place and being operated in a satisfactory manner and in accordance with the national environmental regulations and specific contract provisions. If possible, personnel from the NEC will arrange to carry out these audits jointly at an agreed schedule.

89. The outcomes of the monitoring will be included in the overall safeguards monitoring progress reports to be submitted to NEC. These will also be consolidated and submitted to ADB for disclosure on a semi-annual basis.

90. For internal project related impact monitoring, a daily and/or weekly monitoring checklist will be required from the Contractor, which will be incorporated in a monthly report. Any issues relating to routine compliance and reporting of any incidents or complaints that have occurred and the progress of their resolution will also be included in the monthly reports.

91. The CEMP for each package will detail the contents of the monthly environmental report which at a minimum will include:

- (i) Routine non-compliances;
- (ii) Checklists for monitoring of all sub plans of the CEMP;
- (iii) Reporting status for implementation of each CEMP component/activity and each level of non-compliance and proposed contract enforcement;
- (iv) Incident and complaint classification with required reporting timeframes and status of resolution; and
- (v) Reporting of the results of regular community update / progress meetings including use of local labor (gender disaggregated).

92. The monitoring reports will be prepared by the PIC safeguards specialists and PIU, with inputs from the contractors, where relevant. The status of safeguard implementation, issues, grievances received and resolved, and corrective actions are to be clearly reported to ADB. The PMU will submit semi-annual EMRs to ADB, within 45 days from the end of the reporting period, which will be disclosed on ADB's website. The independent environmental monitoring expert will review the monitoring report prior to submission to ADB. The status of safeguards implementation will also be discussed at each ADB review mission and with necessary issues and agreed actions recorded in aide memoires. ADB will also monitor the project externally with an independent environmental monitoring expert on a periodic basis until a project completion report is issued.

93. **Gender and social dimensions monitoring.** The PIU will ensure that women through their local community organizations are invited to the public consultations to provide inputs to take into account the needs of women especially in designing and planning of public facilities such as street lighting, public toilet, and recreation areas. Women from project areas should also participate in all training and outreach activities on HIV/AIDS and other sexually transmitted diseases, COVID-19 and also on hygiene training as part of water supply development and sanitation facilities. The PIU will conduct public awareness program on the opportunities for communities to work in the project, and will also urge the recruitment of women to work in the project if the required skills are met, and equal pay will be enforced. The bidding documents provide clauses designed to ensure that all civil works contractors comply with applicable labor laws; do not employ child labor or forced labor; encourage the employment of the poor, particularly women, with equal pay for equal work.

## C. Evaluation

94. The DHI and ADB will jointly review the project at least twice a year. This includes (i) the performance of the PMU, PIU, consultants and contractors; (ii) physical progress of the project, effectiveness of safeguards; (iii) compliance with loan assurances; and (iv) assessment of operational sustainability in technical and financial terms, including land leasing and utility tariff determination. In addition to the regular loan reviews, the DHI and ADB will undertake a comprehensive midterm review in the third year of project implementation to identify problems and constraints encountered and suggest measures to address them. Specific items to be reviewed will include: (i) appropriateness of scope, design, implementation arrangements, and schedule of activities; (ii) assessment of implementation progress against project indicators;

(iii) capacity development of CDCL for ensuring sustainability; (iv) compliance with safeguard measures; (v) extent to which the activities to provide some gender benefits have been undertaken; (vi) lessons learned, good practices, and corrective actions; and (vii) changes recommended. Within 6 months of physical completion of the PMU will submit a project completion report to ADB.<sup>23</sup>

## **D. Reporting**

95. CDCL, the implementing agency, will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for the next 12 months; (iii) environmental monitoring reports, which cover report on progress in implementing environmental management plan, monitoring environmental quality, and reporting any activities related with effort to address environmental concerns of the project, in semi-annual basis, starting after 6 months of loan effectiveness, and (iv) a project completion report

96. within 6 months of physical completion of the project. To ensure that projects will continue to be both viable and sustainable, project accounts and the executing agency audited financial statement together with the associated auditor's report should be adequately reviewed.

## **E. Stakeholder Communication Strategy**

97. The PIU, supported by the PIC, will manage communications during implementation of the overall project and preparation of Phase 2 investments (to be confirmed but likely Zone C of ALDTP). Main activities, amongst other will be to:

- (i) Develop, implement and manage an effective public relations plan for promoting the benefits of the overall project and disseminating information to associated project stakeholders, general public and non-government organizations (NGOs) on how well social and environmental aspects are taken care of and what benefits are attributed to the poor community;
- (ii) Proactively organizing public relations events as required;
- (iii) Developing and maintaining a project website to disseminate information and implementation progress, and also provide a feedback and communication system for stakeholders and general public; and
- (iv) Preparing a photographic and video diary of the construction works throughout the entire duration of the overall project to show construction activities, progress, and interviews with DHI, PIU, PIC, contractors, government and Thromde staff, and stakeholders. It will be prepared to a high professional standard.

98. Details of the stakeholder communications strategy, including information disclosure and responsible parties, the key message to stakeholders and primary audience with frequency are provided in Table 21.

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<sup>23</sup> The guidelines for evaluation of public sector operations is available at: <https://www.adb.org/documents/guidelines-preparing-performance-evaluation-reports-public-sector-operations>.

**Table 21: Stakeholder Communication Strategy**

<b>Project information to be communicated</b>	<b>Means of Communication</b>	<b>Responsible Agency</b>	<b>Audience(s)</b>	<b>Frequency</b>
Report and Recommendation of the President	ADB Website (linked documents)	ADB	ADB, DHI, CSOs, beneficiaries and Govt of Bhutan	Once
Procurement and bidding documents.	Invitations for bids published on the DHI and CDCL websites and in the newspapers. Information for pre-bid meetings to be published likewise.	PMU	Contractors and local suppliers of goods and services	During the procurement period
Construction	The selected construction company(s) will ensure that the construction areas will have signage boards with their contact information	PIU	ADB, DHI, CDCL, Stakeholders	During the construction period
Progress status during construction works and construction issues	Signage boards on site	PIU	General Public	Over the construction period
Project performance reports	ADB and DHI Websites	ADB and DHI	Beneficiaries, stakeholders and Govt of Bhutan,	Quarterly reports
Safeguards monitoring (Environment and social monitoring reports)	ADB websites	ADB and CDCL	ADB, DHI, CSOs, beneficiaries and Govt of Bhutan	Semi-annual reports
Project Completion Report	ADB Website	ADB and CDCL	ADB, DHI	After Project

ADB = Asian Development Bank, CDCL = Construction Development Corporation Ltd, CSO = Civil Society Organization, DHI = Druk Holding and Investment Ltd.

## **X. ANTICORRUPTION POLICY**

99. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the overall project.<sup>24</sup> All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants, and other service providers. Individuals and/or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the overall project.<sup>25</sup>

100. To support these efforts, relevant provisions are included in the loan and grant agreements and the bidding documents for the project.

## **XI. ACCOUNTABILITY MECHANISM**

101. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an

<sup>24</sup> Anticorruption Policy: <https://www.adb.org/documents/integrity-principles-and-guidelines>

<sup>25</sup> ADB's Integrity Office web site: <https://www.adb.org/site/integrity/main>

independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.<sup>26</sup>

## **XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL**

102. All revisions and/or updates during implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in the PAM, including revision to contract awards and disbursement S-Curves.

**Table 22: Record of Changes to the PAM**

<b>Date</b>	<b>Revision</b>
July 2020	Updated PAM to include additional financing; <ul style="list-style-type: none"> <li>• Para 5, 17, 18, 20-21, 24-26, 28, 59, 60</li> <li>• Table 2, 3, 5-17</li> <li>• Section C. Project structure to better clarify the communication flow</li> <li>• Section 8 on contract awards and disbursements and S-Curves to reflect additional financing</li> <li>• Appendix A, D, E, G</li> </ul>

<sup>26</sup> Accountability Mechanism. <https://www.adb.org/site/accountability-mechanism/main>

### Appendix A: Revised Design and Monitoring Framework

Impacts the Project is Aligned with ongoing project			
(i) Balanced and sustainable development of human settlements ensured (Eleventh Five Year Plan, 2014–2018) <sup>a</sup>			
(ii) Smart growth principles applied in planning and development (Phuentsholing Structure Plan 2013–2028) <sup>b</sup>			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanism	Risks and Critical Assumptions
<b>Outcome</b> Phuentsholing's urban area protected from floods and expanded with improved amenities and services	By 2026: a. Phuentsholing and reclaimed land protected from 100-year flood events in the Amochhu River (2018 baseline: Phuentsholing is protected from mean annual floods) (OP 3.2.1)  b. At least 10% of fully serviced plots tendered for development (2018 baseline: not applicable)	a. Hydrology report at project completion  b. Annual reports of Druk Holding and Investments Limited, and the Construction Development Corporation Limited	Risk: Lower than expected demand for leasable land that may be exacerbated by the impacts of coronavirus disease (COVID-19).
<b>Outputs</b> 1. Flood and erosion protection measures installed	By 2025: 1a. <del>4km</del> 4.77 km of climate- and erosion-resilient river walls constructed to protect against 100-year probable flood (2018 baseline: 0) (OP 3.2, OP 3.2.5)  1b. At least 66 ha of land reclaimed (2018 baseline: 0) (OP 3.2, OP 3.2.1)  1c. A flood early warning system and community-based flood management plan established and operational (2018 baseline: not applicable) (OP 3.2.4)	1a–c. Annual project progress reports	Risk: Disasters triggered by natural hazards, pandemics and extreme weather conditions lead to implementation delays.
2. Municipal infrastructure constructed	2a. 10 km of roads with footpaths, landscaping, and streetlights planned with at least 30% female participation <u>during project consultation</u> (2018 baseline: 0) (OP 4.1, OP 4.1.2)  2b. Water treatment plant with a capacity of 4 MLD constructed (2018 baseline: none) (OP 4.1, OP 4.1.2)	2a–i. Annual project progress reports	

	<p>2c. 12 km of new primary and secondary water mains constructed (2018 baseline: 0)</p> <p>2d. 9 km of new sewer mains and 9 km of new storm drains constructed (2018 baseline: 0) (OP 4.1, OP 4.1.2)</p> <p>2e. A sewerage treatment plant with a capacity of 3 MLD constructed (2018 baseline: 0) (OP 4.1, OP 4.1.2)</p> <p>2f. A resource recovery system for solid waste management installed (2018 baseline: 0) (OP 4.1, OP 4.1.2)</p> <p>2g. A 630 KVA grid substation constructed (2018 baseline: 0) (OP 4.1, OP 4.1.2)</p> <p>2h. 16 circuit-km of 415-volt power distribution lines installed (2018 baseline: 0) (OP 4.1, OP 4.1.2)</p> <p>2i. 11 circuit-km of telecommunication transmission cables installed (2018 baseline: 0) (OP 4.1, OP 4.1.2)</p>		
3. Township management systems installed	<p>3a. At least 80% of township management staff reported improved knowledge of modern urban management (2018 baseline: not applicable) (OP 6.1.1)</p> <p>3b. An asset management system established with 100% of project infrastructure and facilities geocoded in a database (2018 baseline: not applicable) (OP 4.1, OP 4.2.1)</p> <p>3c. At least 10 potential investors attended investor outreach campaigns (2018 baseline: not applicable) (OP 6.1.2)</p>	3a–c. Annual project progress reports	



### Key Activities with Milestones

#### 1. Flood and erosion protection measures installed

- 1.1 Award works contract for constructing river walls and land reclamation by June 2018 (completed)
- 1.2 Operationalize flood early warning system (ongoing project March 2020, changed September 2021)
- 1.3 Operationalize flood management plan (ongoing project December 2021, changed December 2022)
- 1.4 Complete and commission all facilities (ongoing project June 2022, changed June 2023)

#### 2. Municipal infrastructure constructed

- 2.1 Award works contract for constructing roads, water supply, and sanitation systems (ongoing project June 2021, changed April 2021)
- 2.2 Complete and commission all facilities (June 2024, unchanged)
- 2.3 Procure operation and maintenance equipment (March 2025, unchanged)
- 2.4 Complete first year of 5-year operation contract (June 2025, unchanged)

#### 3. Township management systems installed

- 3.1 Recruit urban management advisor (March 2022, unchanged)
- 3.2 Recruit investment promotion advisor (September 2022, unchanged)
- 3.3 Recruit sustainable township management capacity development consultant (December 2022, unchanged)
- 3.4 Initiate activities to build the capacity of township management staff (January 2023, unchanged)
- 3.5 Recruit investor promotion and transaction advisory services consultant (June 2023, unchanged)
- 3.6 Initiate investor promotion activities (July 2023, unchanged)
- 3.7 Establish geographic information system database for built infrastructure (September 2024, unchanged)

### Project Management Activities

Mobilize project implementation consultant (completed)

The Asian Development Bank undertakes biannual review missions

### Inputs

Asian Development Bank

Concessional OCR Loan: ~~\$28.74~~ 47.24 million (\$18.50 million additional)

ADF Grant: ~~\$234.26~~ million (\$10.00 million additional)

Government: ~~\$40.00~~ 11.50 million (\$1.50 million additional)

ha = hectare, km = kilometer, kVA = kilovolt-ampere, MLD = million liters per day, OP=operational priority.

<sup>a</sup> Government of Bhutan. 2013. *Eleventh Five Year Plan, 2014–2018*. Thimphu.

<sup>b</sup> Government of Bhutan, Ministry of Works and Human Settlements. 2013. *Phuentsholing Structure Plan 2013–2028 (Vol. 01)*. Thimphu.

### Contribution to Strategy 2030 Operational Priorities

Note: The expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2 of the Report and Recommendation of the President).

Source: Asian Development Bank.

**Appendix B: Project Advisory Committee**

Ref.	Designation / Organization
1	CEO, DHI as chair
2	DHI Investment Director
3	Executive Secretary or Chief Urban Planner from Phuentsholing Thromde
4	Chief Urban Planner, Ministry of Works & Human Settlement
5	Chief level, Department of Hydrology, Ministry of Economic Affairs
6	Chief level, Ministry of Finance
7	CEO, CDCL
8	Project Director, CDCL as member secretary
9	Other specific invitees as required

## Appendix C: PMU and PIU Staffing Cadre

### Project Management Unit

Ref	Position	Type
1	Chief Executive Officer <sup>a</sup>	Part time
2	Director, Dept of Engineering & Construction <sup>a</sup>	Part time
3	Finance General Manager <sup>a</sup>	Part time
4	Project Director <sup>a</sup>	Full time
5	Project Accountant <sup>a</sup>	Full time
6	Urban Planner	Part time
7	Environment Manager <sup>a</sup>	Part time
8	Procurement and Contracts Manager <sup>a</sup>	Part time
9	Civil Engineer	Part time
10	Legal Officer	Part time
11	Human Resources Manager	Part time

### Project Implementation Unit

Ref	Position	Type	To be deployed from
1	Project Manager <sup>a</sup>	Full time	Project start
2	Deputy Project Manager <sup>a</sup>	Full time	Project start
3	Assistant Accountant <sup>a</sup>	Full time	Project start
4	Site Logistics and Services Manager	Full time	Project start
5	Document Control Manager	Full time	Project start
6	Document Control Assistant	Full time	Project start
7	Procurement and Contracts Manager <sup>a</sup>	Full time	Project start
8	Stakeholder, Community & Public Relations Manager <sup>a</sup>	Full time	Project start
9	Environment Officer <sup>a</sup>	Full time	Project start
10	Health & Safety Inspector <sup>a</sup>	Full time	Project start
11	Materials/ Geotechnical Engineer	Full time	Project start
12	Civil Engineer	Full time	Project start
13	Civil Works Inspector (1)	Full time	Project start
14	Civil Works Inspector (2)	Full time	Project start
15	Senior Survey (1)	Full time	Project start
16	Surveyor (1)	Full time	Project start
17	Surveyor (2)	Full time	Project start
18	Assistant Surveyor/CAD/GIS (1)	Full time	Project start
19	Assistant Surveyor/CAD/GIS (2)	Full time	Project start
20	Concrete Engineer	Full time	Project start
21	Mechanical Engineer	Part time	CW02 award
22	Electrical Engineer	Part time	CW02 award

<sup>a</sup>Key Personnel

### Appendix D: Strategic Action Plan for Sustainable Township Management

1. **Overview.** One of the fundamental aspects of the project is to ensure high-quality municipal services in the new township to secure return on investment. It is envisaged that the developer, CDCL, will be responsible for operations and maintenance (O&M) of the township's infrastructure through a Special Development Authority ('the Authority'), and be the main service provider.<sup>1</sup> However, CDCL shall have agreements with the Phuentsholing Thromde to specify roles and responsibilities, sharing of any facilities or services, and revenue sharing arrangements.
2. The Authority shall function as an autonomous body appointed by the government. Among other things, it will be responsible for ensuring compliance with the planning regulations and procedural regulations. After preliminary review, the Authority would forward developer's applications to the Phuentsholing Thromde to ensure adherence to Common Building Regulations related to structural safety, seismic safety, fire safety, and consistency with Bhutanese architecture guidelines, Bhutan's Green building guidelines etc. The Authority would operate under special development control regulations, which are likely to differ from existing regulations largely in terms of setbacks and height controls, for example.<sup>2</sup>
3. **Implementation and monitoring.** The proposed arrangement of a Development Authority and special planning area is new to Bhutan. There is still several policy, legal, financial, institutional and human resources issues to be resolved to clarify the institutional framework for the township's management. The roadmap below was agreed in principle with the government and will need to be updated from time to time. Its implementation and reporting on progress will be included as a loan covenant. ADB review missions shall monitor the implementation of the roadmap closely. The Roadmap includes timelines, responsibilities and sources of funding, where required, to support the achievement of each action.

**Table 1: Roadmap**

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
<b>Legal and Policy</b>					
1	<b>Due diligence.</b> Complete legal due diligence of the proposed institutional options and recommend legal and/or policy changes required for operationalization of the separate Development Authority and special planning area; help to ensure common understanding on details of the institutional	Jul 2017 – Oct 2020	ADB/CDCL/DH I	Legal Expert mobilized through ADB RETA no. 9050	

<sup>1</sup> Package CW-02: *Common Urban Infrastructure* includes O&M of urban infrastructure by the private sector for 5 years.

<sup>2</sup> The development control regulations for the Amochhu Land Development and Township Project are in draft form and have not yet been approved.

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
	arrangement; review implications of the Special Planning Act, which is currently under development				
1.1	<b>Review legal advisor report</b> Review the findings of the Legal Advisor report completed in 2017 and produce a report/matrix identifying key decisions required and by who. This includes identifying critical policy, regulatory and project decisions required.	Dec-20	DHI with support from CDCL		n.a.
1.2	<b>Produce draft outline of key government decisions required based on the legal advice.</b> This will feed into the terms of reference for the Project Advisory Committee and for the TORs of the urban management consultant. DHI to transition to lead on issues of policy or regulatory change needed.	Dec-20	DHI with support from CDCL		n.a.
2	<b>Legal or policy framework.</b> Initiate approval for necessary policies or regulations - e.g. development control regulations. Note: Development control regulations are approved by the National Consultative Committee for Human Settlements (NCCHS), which is chaired by Minister, Ministry of Works and Human Settlement (MOWHS).	Mar 2021–Mar 2022			

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
2.1	Review and re-submit the design control regulations	Mar-21	DHI with support from CDCL	Urban management consultant	through Phuentsholing Thromde to Ministry of Works and Human Settlement
2.2	Secure MOWHS approval of design control regulations	Mar-22	DHI with support from CDCL	Urban management consultant	Ministry of Works and Human Settlement
2.3	Prepare a term of reference and workplan for the project advisory committee on SAP activities	Dec-20	DHI with support from CDCL		DHI
2.4	Hold project advisory committee meeting to discuss SAP activities	Mar-21	DHI with support from CDCL	PMU and Urban Management Consultant	
2.5	Finalize Urban Management Consultant TORs and advertise in CMS.	Feb 21	DHI with support from CDCL	to consult Thromde and MOWHS	CDCL and DHI
2.6	Recruit Urban Management Consultant	May-21	DHI with support from CDCL		CDCL and DHI
2.7	Finalize Investment Promotion Advisor TORs and advertise in CMS.	June-21	DHI with support from CDCL		CDCL and DHI
2.8	Recruit Investment Promotion Advisor	Dec-21	DHI with support from CDCL		CDCL and DHI
2.9	<p><b>Inception report for the detailed township development plan completed</b></p> <p>Urban Management Consultant to produce an inception report to identify critical issues and approach. It should also identify the appropriate operating structure for township management. This report will need to be agreed to by all stakeholders (DHI, Thrombe and MOWHS). Investment promotion advisor to provide advice on how township management can optimize</p>	Dec-21	DHI with support from CDCL	Urban Management Advisor with support from Investment Promotion Advisor	Project Advisory Committee

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
	project value while supporting affordable housing and ensure O&M and attract investors.				
2.10	<b>Township management plan completed</b>  Urban Management Consultant with inputs from other consultants (Project Implementation Consultants, Investment promotion advisor etc.), CDCL, DHI and other stakeholder to prepare a township management plan covering proposed institutional structure for township development and management, strategic planning policy issues, township operations, regulatory issues and HR resources capacity building plan for all township management stakeholders. As a minimum it should include items # 3-13 of this SAP. Should clearly identify critical approvals required and next steps for each stakeholder. Including agreed roles and responsibilities for all.	Mar-22	DHI with support from CDCL	Urban Management Consultant with inputs from other consultants and CDCL/DHI and other stakeholders	Project Advisory Committee
2.11	Township management plan approved by DHI.	May-22			
2.12	Township management plan is presented to the project advisory committee and agreed to by all stakeholders.	Jun-22	DHI with support from CDCL	Urban Management Consultant and Investment Promotion Advisor	Project Advisory Committee
2.13	Obtain government approval for any regulatory and policy changes for township management plan.	Jun 2022	DHI with support from CDCL	Urban Management Consultant	Various stakeholders will need to undertake the activities agreed however DHI to monitor progress as part of Project Advisory Committee reporting

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
2.14	Obtain government approval for regulatory and policy changes for township management plan (	Mar 2022-Mar2023	DHI with support from CDCL	Urban Management Consultant	
	<b>Institutional</b>				
3	<b>Roles and responsibilities.</b> Define and agree on all relevant agencies' roles and responsibilities for all aspects of township management and services delivery; and identify opportunities for outsourcing and sharing facilities/services. (e.g. for water supply, sanitation, solid waste management, public spaces, emergency services, tax collection, enforcement of bylaws, city services (e.g. issuing identification cards), and others	Sept 2022–Mar 2023	CDCL/DHI/Phuentsholing Thromde/MOWHS	Government consultant to provide recommendations	
3.1	<b>Obtain approval for proposed institutional structure to allow for hiring of staff.</b>  Approval must allow for the advertising of positions for township management. This should also include appropriate allocation for building and facilities to operate from (this could be the building funded as part of CW-02)	Sept 2022–Mar 2023	DHI with support from CDCL	Urban Management Consultant	DHI or MOWHS?
4	<b>Financial flows.</b> Clarify all revenue collection, revenue-sharing arrangements/amounts and financial flows between CDCL and Phuentsholing (i.e. from fees, land tax, property tax, building permit fee, etc.). Determine mechanism and process for periodic review of financial related agreements.	Sept 2021–Mar 2022	CDCL/DHI/Phuentsholing Thromde/MOWHS	Government consultant to provide recommendations Stakeholders to finalize through consultation meetings	



No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
4.1	Prepare an implementation plan for all revenue collection and sharing mechanisms as outlined in the detailed township management plan.	Mar-22	DHI with support from CDCL	Urban Management Advisor with support from Investment Promotion Advisor	Project advisory committee
4.2	Finalize arrangement and future review mechanisms as outlined in the township management plan.	Mar-22	DHI with support from CDCL	Urban Management Advisor with support from Investment Promotion Advisor	Project advisory committee
5	<b>Agreements.</b> Draft and sign MOU or appropriate agreement(s) between CDCL and Phuentsholing Thromde to clarify and confirm delineation of roles and responsibilities for township management and financial aspects; and seek endorsement from MOWHS.	Mar 2023 – Jun 2023	CDCL/DHI/Phuentsholing Thromde/MOWHS		
5.1	Draft MOUs finalized covering roles and responsibilities and financial arrangements.	Mar-23	DHI with support from CDCL	Urban Management Advisor	DHI with various - need to identify
5.2	All MOUs signed	Jun 23	DHI with support from CDCL	MOWHS	DHI with various - need to identify
6	<b>Operational systems.</b> Develop detailed plan to establish the required city management systems in the new township (e.g. computerized billing and accounting system, integrated property tax system, house numbering system, GIS, customer service center, etc.) <b>Finalize detailed terms of reference for contract package</b>	Jan 2022– Dec 2023	CDCL/DHI	Individual loan consultant recruited by CDCL	

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
	<b>CS-05: Sustainable township management capacity development.</b>				
6.1	Finalize the TORs for Sustainable Township Management Consultants and advertise in CMS	Jan 22	DHI with support from CDCL	Urban Management Advisor	They should come on board a bit earlier to feed into the finalization of the township management plan as they will undertake the capacity development. Will limit disputes between two different contractors.
6.2	Recruit Sustainable Township Management Consultants	June-22	CDCL and DHI	Urban Management Advisor	
6.3	<b>Complete detailed capacity building plan and have it approved by the project advisory committee.</b>  Sustainable Township Management Consultant to complete report on detailed capacity building plan (including detailed training modules, field visits and implementation plan). Should explicitly address the needs of all stakeholders involved in township management and not just the township management authority. Should also ensure training of trainers' module program is developed for sustainability of the HR capacity of the township management. To be done with input from the urban management consultant.	Sept-22	DHI with support from CDCL	Sustainable Township Management Consultant with inputs from Urban Management Advisor	DHI and CDCL to oversee. Should be signed off by the project advisory committee as capacity development will cover all stakeholders.

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
6.4	Implement capacity building training program	Sept 2022– Dec 2023	DHI to oversee with support from CDCL	Sustainable Township Management Consultant with inputs/review from Urban Management Advisor	DHI to oversee
7	<b>Determine service standards.</b> CDCL to develop service standards it aims to achieve and maintain from 2027 onwards; the modalities to achieve these (e.g. service contracts, outsourcing, etc.); and monitoring mechanisms.	Sept 2021 – Dec 2021	CDCL/DHI	CDCL internal budget with support/recommendations from CS-05 consultants	
7.1	Develop draft service standards	Sept-21	CDCL and DHI	Urban Management Advisor with support of Investment Promotion Advisor and Project Implementation Consultants	CDCL/DHI
7.2	Final draft service standards included as part of the township management plan	Sept-21	CDCL and DHI	Urban Management Advisor with support of Investment Promotion Advisor and Project Implementation Consultants	CDCL/DHI

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
7.3	Draft service standard approved	Dec-21	CDCL and DHI	Urban Management Advisor with support of Investment Promotion Advisor and Project Implementation Consultants	CDCL/DHI
8	<b>Financial Sustainability.</b> Establishing volumetric water tariffs (including sewerage surcharge) and sustainable tariffs for other services (solid waste, power, and telecoms) targeting full cost recovery within 10 years of construction. This will include frameworks/ legal agreements for phased incremental tariff increases required for full cost recovery and achievement of near 100% tariff collection rates.	Sept 2021 –Mar 2022	CDCL/DHI/Phuentsholing Thromde	CDCL internal budget with support/recommendations from CS-03 Consultant	
8.1	Develop draft of tariff framework and mechanisms for all township services targeting full recovery within 10 years.	Sept-21	CDCL and DHI	Urban Management Advisor with support of Investment Promotion Advisor and Project Implementation Consultants	Project advisory committee (CDCL/DHI/Phuentsholing Thromde)
8.2	Include final draft tariff framework and mechanisms as part of the township management plan	Dec-21	CDCL and DHI	Urban Management Advisor with support of Investment Promotion Advisor and Project Implementation Consultants	Project advisory committee (CDCL/DHI/Phuentsholing Thromde)

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
8.3	Draft tariff framework and mechanisms approved	Dec-21	CDCL and DHI	Urban Management Advisor with support of Investment Promotion Advisor and Project Implementation Consultants	Project advisory committee (CDCL/DHI/Phuentsholing Thromde)
8.4	Draft legal agreements prepared	Mar-22	CDCL and DHI	??	Project advisory committee (CDCL/DHI/Phuentsholing Thromde)
8.5	Legal agreements finalized/approved with DHI/Township operator	Mar-22	CDCL and DHI		Project advisory committee (CDCL/DHI/Phuentsholing Thromde)
8.6	Legal agreements signed with respective service operators	tbd	CDCL and DHI		Project advisory committee (CDCL/DHI/Phuentsholing Thromde)
<b>Human Resources</b>					
9	<b>Determine township management staffing requirements and finalize recruitment plan for the first 5 years of township operations (i.e. 2022-2026)</b>	Sept 2021–Mar 2022	Project advisory committee (CDCL/DHI/Phuentsholing Thromde)	Individual Loan consultant	
9.1	<b>Staffing arrangements/requirements for township management authority and HR plan for first five years drafted and included as part of the township management plan.</b>  This should form part of the work of the urban management consultant and signed off as part of the township management	Sept-21	Urban Management Consultant with inputs from other consultants and CDCL/DHI	Urban Management Advisor with inputs from the Sustainable Township Management Capacity Development	Project Advisory Committee

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
	plan agreed with the project advisory committee.			consultants and other consultants	
9.2	Start recruitment of township management staff [assume 6 months]	Mar-22	CDCL/DHI	Urban Management Consultant	CDCL
<b>10</b>	<b>Finalize recruitment of township management core staff</b>	Sept-22	Project advisory committee (CDCL/DHI/Ph uentsholing Thromde)		
10.1	Complete recruitment of township management staff.	Dec-22	CDCL/DHI	Urban Management Consultant	
<b>11</b>	<b>Develop detailed capacity building plan for township management and Phuentsholing Thromde and commence implementation</b>	Mar-22	CDCL	CS-05	

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
11.1	<p><b>Complete detailed capacity building plan for all township management stakeholders.</b></p> <p>Sustainable Township Management Consultant to complete report on detailed capacity building plan (including detailed training modules, field visits and implementation plan). Should explicitly address the needs of all stakeholders involved in township management as detailed in the township management plan and not only the township management authority. Should also ensure training of trainers' module program is developed for sustainability of the HR capacity of the township management. To be done with input from the urban management consultant.</p>	Mar-22	DHI with support from CDCL	Sustainable Township Management Capacity Development consultants with support from Urban Management Advisor	All stakeholders retain absolute decision-making responsibility over their own staffing however capacity building will require involvement of all stakeholders, the capacity building plan will need to propose an integrated training plan for all.
12	<b>Determine Phuentsholing Thromde staffing requirements to be effective in supporting the new township, and cope with increased volume of visitors expected</b>	Mar-22	Phuentsholing Thromde	CS-05	
12.1	<b>Determine additional staffing requirements for Phuentsholing Thromde and include as part of the township management plan.</b> To be agreed through the project advisory committee.	Mar-22	DHI to support Phuentsholing Thromde	Urban Management Consultant with support from Sustainable Township Management consultants	Phuentsholing Thromde
13	<b>Determine Phuentsholing Thromde staffing requirements to be effective in supporting the new township, and cope with increased volume of visitors expected</b>	Dec 2021–Jun 2022	Phuentsholing Thromde	CS-03	

No.	Action/activity	Timeline	Responsible Authority	Support	Approval Authority
13.1	Start recruitment of Phuentsholing Thromde additional staff	Oct-22	DHI to support Phuentsholing Thromde	Urban Management Consultant with support from Sustainable Township Management consultants	Phuentsholing Thromde
13.2	Complete recruitment of Phuentsholing Thromde additional staff	Dec-22	DHI to support Phuentsholing Thromde	Urban Management Consultant with support from Sustainable Township Management consultants	Phuentsholing Thromde
<b>Investment promotion activities</b>					
<b>14</b>	<b>Prepare and implement investment promotion and transaction advisory services for the Phuentsholing Township Development</b>	2023	DHI/CDCL		
14.1	Finalize Investment promotion and transaction advisory services	2022	DHI with support from CDCL	Investment promotion advisor	DHI/CDCL
14.2	Recruit Investment promotion and transaction advisory services		DHI with support from CDCL	Investment promotion advisor	DHI/CDCL
14.3	Complete inception report on investment promotion transaction advisory services		DHI with support from CDCL	Investment promotion advisor	DHI/CDCL
14.4	Complete investment targeting criteria and marketing plan.		DHI with support from CDCL	Investment promotion advisor	DHI/CDCL

ADB = Asian Development Bank, CDCL = Construction Development Corporation Limited, CMS = Consultant Management System, CS = consultancy services, DHI = Druk Holding and Investment Ltd. GIS = geographic information systems, MOU = memorandum of understanding, MOWHS = Ministry of Works and Human Settlements, NCCHS = National Consultative Committee for Human Settlements, O&M = operations and maintenance, PTDP = Phuentsholing Township Development Project, RETA = regional technical assistance, SAP = Strategic Action Plan, TOR = terms of reference



- <sup>a</sup> The project effectivity date was 26 July 2018 – as required by the loan covenants the approval and implementation of these SAP activities are to be completed by 26 July 2021
- <sup>b</sup> The document should include elements that are key to the project, sustainability/green buildings, affordable/social housing mechanisms, consideration of how packaging of leasing will occur to developers, clear planning approval processes, common infrastructure O&M.

## Appendix E: Procurement Plan

### Basic Data

<b>Project Name:</b> Phuentsholing Township Development Project	
<b>Project Number:</b> 50165-002	<b>Approval Number:</b> 3668/0573
<b>Country:</b> Bhutan	<b>Executing Agency:</b> Druk Holding and Investments Limited
<b>Project Procurement Risk:</b> Medium	<b>Implementing Agency:</b> Construction Development Corporation Limited
<b>Project Financing Amount:</b> US\$ 93,000,000 <b>ADB Financing:</b> US\$ 81,500,000 <b>Cofinancing (ADB Administered):</b> <b>Non-ADB Financing:</b> US\$ 11,500,000	<b>Project Closing Date:</b> 31 December 2025
<b>Date of First Procurement Plan:</b> 5 June 2018	<b>Date of this Procurement Plan:</b> 29 September 2020
<b>Advance Contracting:</b> Yes	<b>e-GP:</b> No

### A. Methods, Thresholds, Review and 18-Month Procurement Plan

#### 1. Procurement and Consulting Methods and Thresholds

Except as the Asian Development Bank (ADB) may otherwise agree, the following process thresholds shall apply to procurement of goods and works.

Procurement of Goods and Works		
Method	Threshold	Comments
International Competitive Bidding for Goods	US\$ 1,000,000 and Above	
National Competitive Bidding for Goods	Between US\$ 100,001 and US\$ 999,999	The first NCB is subject to prior review, thereafter post review.
Shopping for Goods	Up to US\$ 100,000	
International Competitive Bidding for Works	US\$ 3,000,000 and Above	
National Competitive Bidding for Works	Between US\$ 100,001 and US\$ 2,999,999	The first NCB is subject to prior review, thereafter post review.
Shopping for Works	Up to US\$ 100,000	
Community Participation in Procurement for Works	Up to US\$ 20,000	Small service contracts may be directly contracted. Works considered non-competitive in nature (i.e., excavation of small channels, earth shifting, turfing, tree planting and other misc. works in adjoining areas).

Consulting Services	
Method	Comments
Quality- and Cost-Based Selection for Consulting Firm	
Individual Consultant Selection for Individual Consultant	

## 2. Goods and Works Contracts Estimated to Cost \$1 Million or More

The following table lists goods and works contracts for which the procurement activity is either ongoing or expected to commence within the next 18 months.

Package Number	General Description	Estimated Value	Procurement Method	Review (Prior/Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
CW-02	Common urban infrastructure	20,800,000.00	ICB	Prior	1S2E	Q4 / 2020	Prequalification of Bidders: N  Domestic Preference Applicable: N  Advance Contracting: N  Bidding Document: Large Works

## 3. Consulting Services Contracts Estimated to Cost \$100,000 or More

The following table lists consulting services contracts for which the recruitment activity is either ongoing or expected to commence within the next 18 months.

Package Number	General Description	Estimated Value	Recruitment Method	Review (Prior/Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
None							

## 4. Goods and Works Contracts Estimated to Cost Less than \$1 Million and Consulting Services Contracts Less than \$100,000 (Smaller Value Contracts)

The following table lists smaller-value goods, works and consulting services contracts for which the activity is either ongoing or expected to commence within the next 18 months.

Goods and Works								
Package Number	General Description	Estimated Value	Number of Contracts	Procurement Method	Review (Prior/Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
CW-03	Flood warning system	200,000.00	1	ICB	Prior	1S1E	Q1 / 2021	Prequalification of Bidders: N  Domestic Preference Applicable: N  Bidding Document: Goods

Consulting Services								
Package Number	General Description	Estimated Value	Number of Contracts	Recruitment Method	Review (Prior/Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
None								

## B. Indicative List of Packages Required Under the Project

The following table provides an indicative list of goods, works and consulting services contracts over the life of the project, other than those mentioned in previous sections (i.e., those expected beyond the current period).

Goods and Works							
Package Number	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Review (Prior/Post)	Bidding Procedure	Comments
CW-02B	Horticulture Works	670,000	1	NCB	Prior	1S1E	
PG-01	O&M Equipment	2,183,000	1	ICB	Prior	1S1E	

Consulting Services							
Package Number	General Description	Estimated Value (\$)	Number of Contracts	Recruitment Method	Review (Prior/Post)	Type of Proposal	Comments
CS-03	Urban management advisor	100,000.00	1	ICS	Prior		Assignment: International  Expertise: urban management
CS-04	Investment promotion advisor	100,000.00	1	ICS	Prior		Assignment: National Expertise: investment promotion
CS-05	Sustainable township management capacity development	1,300,000.00	1	QCBS	Prior	FTP	Assignment: International Quality-Cost Ratio: 90:10 Comments: Ratio is as agreed at fact-finding
CS-06	Investor promotion and transaction advisory services	1,100,000.00	1	QCBS	Prior	FTP	Assignment: International Quality-Cost Ratio: 90:10 Comments: Ratio is as agreed at fact-finding

## C. List of Awarded and On-going, and Completed Contracts

The following tables list the awarded and on-going contracts and completed contracts.

### 1. Awarded and Ongoing Contracts

Goods and Works							
Package Number	General Description	Estimated Value	Awarded Contract Value	Procurement Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments
CW-01	River training and land reclamation	36,000,000.00	45,156,406.37	ICB	Q2 / 2017	21-MAY-18	Amount exceeding estimate will be charged to additional financing.

Consulting Services							
Package Number	General Description	Estimated Value	Awarded Contract	Recruitment Method	Advertisement Date	Date of ADB Approval of	Comments

			<b>Value</b>		(quarter/year)	<b>Contract Award</b>	
CS-01	Project implementation consultant	5,710,000.00	5,065,597.31	QCBS	Q4 / 2016	15-SEP-17	
CS-02	Independent environmental monitoring expert	250,000.00	78,640.63	ICS	Q3 / 2018	04-APR-19	

**Appendix F : Terms of Reference and Scope of Work for Consultant Packages**

**CS-01: Project Implementation Consultant**

**CS-02: Independent environmental monitoring expert**

**CS-03: Urban management advisor**

**CS-04: Investment promotion advisor**

**CS-05: Sustainable township management capacity development**

**CS-06: Investor promotion and transaction advisory services**



## **Appendix F-1: Project Implementation Consultant (CS-01)**

### **Terms of Reference**

#### **Amochhu Land Development & Township Project (Phase 1) Project Implementation Consultant**

### **Contents**

	<b>Page</b>
I. BACKGROUND	1
A. Project Purpose	1
B. Project Phasing	1
C. ALDTP Phase 1 Investment	2
D. ALDTP Phase 2 Investments	3
E. Implementation Arrangements	3
II. OBJECTIVE OF CONSULTING SERVICES	3
III. SCOPE OF SERVICES	4
A. Task 1: Project Management	4
B. Task 2: Contract Management and Construction Supervision	6
C. Task 3: Management of Environmental and Social Impacts	8
D. Task 4: Financial Management and Monitoring	9
E. Task 5: Commissioning, Operation and Defects Liability	9
IV. CONSULTANT TEAM AND QUALIFICATIONS	10
A. Team Composition	10
B. Key Staff Qualifications	11
C. Non-Key Staff Qualifications, Indicative Tasks and Inputs	19
D. Support Staff and Logistical Arrangements	23
E. Procurement of Additional Studies, Equipment and Training	24
V. REPORTING REQUIREMENTS AND TIME SCHEDULE FOR DELIVERABLES	24
VI. CLIENT'S INPUT AND COUNTERPART PERSONNEL	32
VII. AVAILABLE DATA FOR PROPOSAL PREPARATION	32
VIII. SPECIFIC REQUESTS FOR PROPOSAL INFORMATION	32

### **Attachments**

Attachment 1: Indicative Works For Phase 1	34
Attachment 2: Biodiversity Monitoring And Bench Marking Study (BMBMS)	35
Attachment 3: Flood Management Consultancy	36



## I. BACKGROUND

### A. Project Purpose

1. These terms of reference (TOR) outline the scope of works, deliverables and work program for the Program Implementation Consultant (PIC). The PIC will be responsible for assisting Construction Development Corporation Limited (CDCL), a subsidiary company of Druk Holding and Investment Ltd. (DHI) which is a Royal Government of Bhutan owned company, with implementing the Amochhu Land Development and Township Project (ALDTP) (the “Project”).

2. Bhutan's annual urban population growth rate from 2000 to 2010 was 5.7%, the highest in South Asia. This rapid growth has created severe pressure on existing facilities leading to problems of water shortages and under capacity sanitation and waste disposal facilities. The Government is addressing these problems with urban development programs, particularly in Thimphu and Phuentsholing. However rural-urban migration continues causing encroachment onto either valuable irrigated agricultural land or unstable steep terrain. In Phuentsholing, recent expansion has encroached onto the unsafe riverbanks of the Amochhu River which threatens the city from floods and erosion. The government desires that future urban growth happens in a planned manner, and it be concentrated in proximity to established economic centers to have the highest potential for providing employment and economic growth opportunities.

3. Phuentsholing is the country's largest commercial and industrial hub and main trading gateway with India. The city is also located on two trading corridors that have been developed under the framework of the South Asia Sub-regional Economic Cooperation. The Government has a vision to develop Phuentsholing to be an economically vibrant, ecologically sustainable, and energy efficient center that will support economic diversification, employment creation, and income generation. There is strong demand for an expansion of Phuentsholing with the new township because of the continuous high rate of rural-urban migration. Due to the limited space for housing, about 5,600 Bhutanese live nearby in Indian territory and commute daily across the border to work in Phuentsholing.

4. The proposed ALDTP will develop 464 hectares (ha) of riparian land near Phuentsholing Thromde (Municipality) located along both sides the Amochhu River on Bhutan's south-western border with India. The project will provide protection from floods and erosion and construct smart urban infrastructure to allow phased urban expansion. A modern township will be developed on sustainable principles of equity, livability, and competitiveness, and it will be integrated into the fabric of the existing municipality and preserve Bhutan's unique architectural heritage. The project will also protect the existing and new town from floods and riverbank erosion which currently threatens lives and livelihoods and disrupts connectivity with nearby communities.

5. The new township development also provides space for public services such as health facilities and schools, and commercial businesses. This will contribute to expansion of the country's services sector and diversify the economy from heavy reliance on hydropower.

### B. Project Phasing

6. The ALDTP is divided into five Zones; A to E. Zone D represents Kaileshwar Hill and is not included in the project for development. The remaining 4 zones comprise of land development on Amochhu riparian land will require about 15 kilometer (km) of riverbank protection with new common urban infrastructure (roads, 2 bridges each of 340 meter (m) span, water supply, waste water management, municipal solid waste management, power and telecommunications) to

support habitation for up to 50,000 people. The allocation of land and riverbank protection for the project's four development zones is:

Zones	Area (ha)	Riverbank Protection Length (m)
A	66	3,974
B	94	3,046
C	277	4,872
E	27	3,083
<b>Total</b>	<b>464</b>	<b>14,975</b>

7. Implementation of the project will be phased in relation to the scale and demand for the development. Phase 1 will develop Zone A while subsequent phases will develop the remaining zones. Phase 1 will also support sustainable township management capacity development, investor promotion and transaction advisory services. Phase 1 is financed with the support of the Asian Development Bank (ADB), subject to ADB's Board approval.

### C. ALDTP Phase 1 Investment

8. Phase 1 investment will comprise packages for civil works, goods, and consulting services for the 66 ha Zone A. It will also integrate urban infrastructure services with a local planning area (LAP) of the existing town. The main construction activities tentatively comprise of four main civil works packages.

- (i) Civil work contract CW-01: construction duration October 2017–June 2020 (33 months) plus 365 days defects period. River training, embankment protection, land filling, cross drainage and slope stabilization.
- (ii) Detailed engineering designs for construction of this package are near completion, tender documents have been prepared, and the international competitive bidding (ICB) tendering process is due to commence.
- (iii) Civil work contract CW-02: Construction duration October 2019–September 2022 (36 months) plus 365 days defects period. Common urban infrastructure including Zone A road network, bulk water supply and distribution, wastewater collection and treatment, stormwater drainage, and solid waste management, and related facilities and systems, including township management office building, infrastructure mapping, and SCADA for water supply and sewerage. Detailed engineering designs for construction of this ICB 'Build and Operate' package with tender documents are near completion.
- (iv) Civil work contracts CW-03 and CW-04: duration October 2020–January 2022 (15 months) Power and telecom services executed through force accounts and implemented by the respective agencies directly coordinated by the PIU. Detailed engineering designs for these are near completion.

9. Other main packages included in Phase 1 are: (i) this consulting package for PIC; (ii) individual consulting services for (a) an individual environment safeguard monitor; (b) an urban management advisor; and (c) investment promotion advisor; (iii) consulting service packages for (a) sustainable township management capacity development and (b) investor promotion and transaction advisory services. Indicative information is in **Attachment 1** showing the extent of the proposed civil work contracts. **Attachment 3** provides Indicative Scope of Work for other Project Support Consultants.

## **D. ALDTP Phase 2 Investments**

10. Phase 2 investments will comprise at least the development of Zone C with common urban infrastructure services which will comprise packages for civil works, goods, and consulting services. CDCL is currently preparing the master plan and detailed designs for construction. Implementation of Phase 2 will be subsequent to Phase 1 subject to government and ADB approvals.

## **E. Implementation Arrangements**

11. The executing agency of the project will be Druk Holding and Investments Limited (DHI), a government owned enterprise. The implementing agency will be the Construction Development Corporation Limited (CDCL), a subsidiary of DHI specializing in urban and infrastructure development.

CDCL will establish a Project Management Unit (PMU) at Thimphu and a project implementation unit (PIU) in Phuentsholing for the sole purpose of implementing the Project. The PIU will be headed by a Project Manager and appropriately staffed. The PIC will report to the Project Manager and support PIU.

12. The PIC will assist the PIU and its other advisory sections comprising: (i) a committee that will comprise inter-department or government staff who will review designs and documents, and advise as necessary; (ii) an environment safeguards and social Monitoring and Evaluation Section (SMES) that will monitor, evaluate and report on required safeguard and social activities; (iii) an Accounts and Finance Section (AFS) that will be responsible for effective accounts and financial management; (iv) a Communications Section who will lead communication activities; and (v) a Procurement Section that will be responsible for obtaining approvals and issuing bid documents, managing bidding processes and bid evaluation until package award, and contract management including contract variations playing the role of the “Employer” during implementation. The PIC will furnish PIU and its advisory sections with the relevant project-related information. On the advice of the PIU, the PIC will correct, revise, update, and improve its services and outputs comprise this consulting assignment.

## **II. OBJECTIVE OF CONSULTING SERVICES**

13. The PIC will support the PIU for 60 months and the contract will be signed for the same period. Time extensions to PIC contract are possible depending on civil works implementation performance and with prior approval by the executing agency and ADB. The PIC will be responsible for assisting the PIU to: (i) review and confirm designs and finalize bid documents of remaining contract packages to be awarded under Phase 1; (ii) procure, mobilize, manage and supervise all contracts and act as the “Engineer” for Phase 1; (iii) prepare detailed terms of reference, and assist PIU to recruit, mobilize, and manage studies and surveys under provisional sum items, (iv) prepare ADB financing and other necessary documents for Phase 2 investments; (v) provide technical and management advice, as required; (vi) manage and administer the project financing; (vii) prepare routine reporting requirements of ADB; and (viii) knowledge transfer to the PIU, township management, and Phuentsholing Thromde. The PIC will also assist PIU with preparations, logistics and reporting for missions fielded by ADB, as necessary. While the PIC will be financed from Phase 1, it will also support all necessary activities for finalizing activities for ALDTP Phase 2 during the contract period.

### III. SCOPE OF SERVICES

14. The PIC has a number of main tasks which are explained in the following paragraphs.

#### A. Task 1: Project Management

15. The PIC will work under the PIU to ensure the effective and timely delivery of the project outputs to the highest standard. The PIC will assist with the overall project coordination and management through the relevant agencies at national, regional and local levels. The PIC will maintain liaison with DHI through PIU, and with ADB. Other main activities related to project management will include, but not be limited to:

16. Project Administration:

- (i) Working with PIU to identify project management needs, planning, strategies, and schedules for execution.
- (ii) The design and establishment of a project performance management evaluation system (PPMES) that will allow PIU to (a) monitor and evaluate implementation of the project; (b) identify performance constraints; and (c) formulate and implement practical measures to address shortcomings. Frequent performance evaluations will be carried out based on assessment of the project. It should include secure financial management and accounting reporting and be accessible to the PIU and ADB.
- (iii) Preparing a Quality Assurance Plan (QAP) that will assist the PIC and PIU with overall quality assurance. Essential elements of quality assurance for the investment program shall be controlled by the Engineer to ensure quality products are provided in a cost-efficient and timely manner. It will encompass all aspects of the investment program, including control of contractors and sub-contractors, in-process inspections, receiving inspections, production and special process controls, functional testing, control of nonconformities, drawing control, corrective actions, configuration controls, quality assurance records, audits, shipping inspections, and other quality specifications and requirements to meet the needs of the Project. Contractors' quality assurance operations shall be subject to the Engineer's verification at any time.
- (iv) Preparing briefing materials on progress and issues and providing general support to the PAC to effectively guide the Project's implementation.
- (v) Maintaining regular communications with all stakeholders to ensure implementation of the Project (Phase 1) and planning for Phase 2 investments so that it follows a participative and integrated planning and management approach.
- (vi) Ensuring the actual implementation schedule reflects the design of the Project and intended implementation schedule. Note that, the Government's objective is to expedite completion of the ALDTP. The PIC shall identify the critical paths of Project activities; critical activities include the planning, tendering, award and implementation timing and sequence of packages; consider opportunities for expediting the implementation schedule and recommend improvements wherever possible.
- (vii) Preparing a Risk Management Plan (RMP) in coordination with the PIU and Contractors. The RMP will consider: (a) risk identification: determining risks that may affect the Project, and documenting the characteristics of each; (b) risk quantification: evaluating risks and risk interactions to assess the range of possible outcomes; (c) risk response: defining enhancement steps for opportunities and responses to threats; and (d) risk response control: responding to changes in risk

over the course of the Project. RMP will assist with proactively identifying potential risks and opportunities and advising and assisting the PIU to take timely actions to enhance project performance and mitigate any adverse constraints.

- (viii) Advising and assisting the PIU on establishing and maintaining the most appropriate and effective organizational, fiscal, implementation and management arrangements to ensure successful project implementation.
- (ix) Advising and assisting the PIU and ADB in the efficient coordination of the various packages. Ensure that the PIU is adequately assisted by its services such that all project activities and particularly construction contracts are implemented in a timely and cost-effective manner while maintaining the highest standards.
- (x) Assisting and advising the PIU to enhance human resources management to provide capacity development.
- (xi) Assisting with general project administration, performance and monitoring, and preparation of project reports.
- (xii) Assisting PIU and ADB prepare the project and loan documents for Phase 2 including reviewing the detailed design for Phase 2 and advising on improvements.
- (xiii) Ensuring timely mobilization and fielding of PIC staff, and when necessary, quick replacement of staff following PIU and ADB requirements.
- (xiv) Finalizing the Request of Proposal (including terms of reference) for other project support consultants and supporting the PIU by providing guidance, reviewing their outputs, and recommending improvements, whenever necessary.
- (xv) Assisting the PIU to recruit/tender and evaluate contracts.
- (xvi) Assisting the PIU with planning and implementing any other activity related to design, construction and commissioning the investments, for example and not limited to: (a) review of planning and establishment of contractor camps with access, utilities etc.; (b) supervising and ensuring compliance of health and safety requirements; and (c) supervising and ensuring compliance of environmental safeguards and social measures, etc.
- (xvii) Preparing a Project Completion Report (PCR) for Phase 1 in a manner satisfactory to the PIU and ADB, including major project events, performance of Contractors, operation of Phase 1, actual and price inflated (to completion year) project cost (foreign and local costs separately) by implementation year, and labor employed by skilled/unskilled and foreign/local categories in person-years. The PCR should follow prescribed ADB format and cover, among other items: (a) the relative successes (problems) in the implementation of each package; (b) an assessment of the impact of the project on the economy and social aspects of the beneficiary areas; (c) "as-built" drawings; and (d) detailed description of all the works by items of technical and non-technical matters.
- (xviii) Updating ALDTP investment program documents as required.
- (xix) Supporting visiting missions from ADB or others.
- (xx) Support the PIC with preparing bid documents for Phase 2 and advice on improvements as necessary.

17. **Communications.** The PIC will support PIU with managing communications during implementation of the Project Phase 1 and preparation of Phase 2. Main activities, amongst other will be:

- (i) Assisting and advising PIU to develop and manage an effective public relations plan and to implement such developed plan, Support the PIU with communication activities as necessary.
- (ii) Promoting the benefits of the Project and disseminating information to associated project stakeholders, general public and non-government organizations (NGOs)

- on how well social and environmental aspects are taken care of and what benefits are attributed to the poor community.
- (iii) Proactively organizing public relations events as required.
- (iv) Assisting PIU with developing and maintaining a Project website to disseminate information and implementation progress, and provide a feedback and communication system for stakeholders and general public.
- (v) Preparing a photographic and video diary of the construction works throughout the entire duration of the Project. This should show construction activities, progress, and interviews with DHI, PIU, PIC, contractors, government and Thromde staff, and stakeholders. It will be prepared to a high professional standard.

## **B. Task 2: Contract Management and Construction Supervision**

18. The PIC will assist PIU with overall contract management and administration, construction supervision, and quality control. This includes assisting and advising the PIU with smooth execution of all works under the Project for its timely and successful completion without having cost overruns. This applies to supervising all goods, works, surveys, field studies, investigations, training, and consulting services packages under the Project. The PIC shall be responsible for documenting all the design drawings, reports, as-built drawings,<sup>29</sup> and construction monitoring and quality certificates. The PIC shall develop an appropriate documentation plan for this purpose. Based on the documentation plan, the PIC shall also carry out the actual documentation and filing of the design drawings, reports, any events, as-built drawings, and quality monitoring certificates.

19. The PIC shall act in the capacity of “the Engineer” and represent the Client in the construction contracts. Accordingly, the PIC shall have full responsibility and authority for the professional quality and sufficiency of the supervision with respect to progress, quality of materials and work, measurements of quantities, costs, and legal aspects related to the contract. As “the Engineer”, the PIC will ensure timely progress of the works, initiate laboratory as well as in-situ tests as necessary, enforce specified materials, workmanship requirements and construction methods, and control the overall quality of construction. This includes the assessment of programs, materials, labor, construction methods, and monitoring compliance with specified construction methods. The PIC will carry out acceptance tests of equipment in the factory (if necessary) and on-site, including installation and commissioning. It also comprises supervision of contractors’ programs, rates of progress, performance testing, compliance with specifications and drawings, and health, safety, and environmental requirements. In case of anticipated cost overruns, the PIC shall immediately inform the client and suggest mitigation measures wherever possible. Supervision shall be carried out on all sites where works are underway. Prior approval of the Employer is to be obtained by the PIC for taking any action under a civil works contract designating the Consultant as “Engineer”, for which action, pursuant to such civil works contract, the written approval of the Client as “Employer” is required. Other specific activities will include, but are not limited to:

- (i) Establishing a data transfer system for all documents and drawings, including geo-referenced data.
- (ii) Assisting the PIU with preparation of procurement documents, bid evaluation and contract negotiations, as necessary, and in accordance with ADB Guidelines.
- (iii) Undertaking day-to-day construction supervision and monitoring, collection and checking of documentation, quality control, application of quality assurance

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<sup>29</sup> To be supplied by the contractors. This must be included within the scope of the employer’s requirements for each tender document.

- procedures, checking the adequacy of contractor's designs, drawings, and method statements, and preparation of progress and other reports.
- (iv) Carrying out regular inspections, including sample testing where required, of all materials and workmanship to ensure compliance with the design specifications.
  - (v) Surveying each of the constructed components to evaluate physical and financial progress of each item.
  - (vi) Maintaining a photographic and written record of all construction activities and progress.
  - (vii) Approving design of concrete mixes performed by contractor for concrete works as per technical specifications.
  - (viii) Conducting site investigations of construction materials and geotechnical investigations including laboratory testing and analyze investigation results.
  - (ix) Monitoring the construction works and laboratories for quality assurance.
  - (x) Ensuring that works are being implemented as per the contract specifications.
  - (xi) Providing sound and timely advice to resolve problems that arise during construction.
  - (xii) Holding regular site meetings with PIU and Contractors and preparing minutes of such meetings (based on agreed standardized format), and proactively managing the execution of agreed actions.
  - (xiii) Instructing the Contractors to submit corrective measures or revised programs, as necessary, to keep pace with the anticipated progress and construction standards and inform the PIU on measures adopted.
  - (xiv) Providing designs services for works during construction in order to completely and efficiently respond to meet changing site and ground conditions as construction work progresses. Issuance of instructions and additional or modified drawings and specifications to the Contractors which may be necessary for the execution of the works and remedying of any defects and inform the PIU accordingly.
  - (xv) Issuing interim payment certificates after final measurements for consideration to PIU.
  - (xvi) Examining contractor's claims on justification and quantities; deciding on claims that fall within the authority of the Engineer; making recommendations for the claims to be considered by the PIU.
  - (xvii) Examining the need for contract variations; deciding on contract variations with the delegated authority of the Engineer, and for all other variations make recommendations to the PIU.
  - (xviii) Monitoring compliance of environmental management plans (EMPs) by the contractors. This will include: (a) monitoring the Contractor performance on meeting provisions of tender documents and approved EMP; (b) monitoring the effectiveness of the mitigation measures; and (c) instructing the Contractors on needed actions and corrective measures to comply with the EMP;
  - (xix) Monitoring compliance of health and safety plans for all activities related to implementation of the Project.
  - (xx) Monitoring the preparation and timely submission of as-built drawings as well as final reports by contractors.
  - (xxi) Preparing partial, substantial, and final completion certificates for consideration by the PIU.
  - (xxii) Preparing regular progress reports highlighting the current progress, problems encountered, tests conducted, corrective measures adopted and estimate of likely completion time.

**C. Task 3: Management of Environmental and Social Impacts**

- (i) Ensure that all recommendations from the environmental impact assessment (EIA) report are incorporated in the design and civil work specifications prepared for implementation under the Project.
- (ii) Review of all Bidding documents issued by PIU to ensure that all ADB safeguard requirements and the conditions of EIA report approval by the National Environment Commission (NEC) are met.
- (iii) Ensure that the Contractor mobilizes their senior environmental and social safety officers within two weeks of the mobilization of the Contractors' Chief Construction officer so that there is adequate time to prepare the contractors' environmental management plan (CEMP) and safety security and health plan (SSHP).
- (iv) Ensure that all contractors' contract documents include requirements to manage and monitor impacts associated with construction works and other works to support the contractors' activities.
- (v) Agree with the contractors on the responsibilities for routine monitoring at agreed locations between the PIU responsibility outside the designated contractors' area and those within the Contractors' area and clarify where responsibility may be unclear.
- (vi) Ensure that both PIU and the Contractor carry out baseline monitoring of agreed variables at the agreed locations during the mobilization period.
- (vii) Review and recommend additional mitigating measures to PIU for approval of the CEMP and SSHP prepared by contractors to ensure that all contractors prepare comprehensive plans to address all environmental and social impacts associated with construction works and other works to support the contractors' activities. The CEMP and SSHP should not only address obligations to implement mitigation measures by the main contractor but should include the obligation of all sub-contractors. The CEMP and SSHP should also include monitoring requirements in relation to performance and the provision of required monitoring data that should be done by the contractors and their sub-contractors.
- (viii) Supervision by the Supervising engineer guided by the environmental and social specialists to ensure quality control of monthly progress reports and enforce penalty provisions for persistent non-conformance.
- (ix) Supervise the implementation of CEMP and SSHP and ensure claims on costs for implementing the CEMP and SSHP are well documented and recorded in the Project GIS.
- (x) Conduct site visits to monitor implementation of the CEMP and SSHP and recommend contractor on updating CEMPs and SSHPs based on changing field conditions and accordingly inform relevant agencies and field staff.
- (xi) Prepare biannual monitoring report to be submitted by PIU to ADB. The report should be based on: (a) contractor's monthly report; (b) site monitoring on implementation of recommendation from EIA report on both social and environmental impacts related with the project; and (c) findings from routine consultation. The monitoring report should also provide recommendations to improve and strengthen the CEMP and SSHP.
- (xii) Lead problem solving in close coordination with other PIC team members, PIU or Contractors on any incident, grievance, or complaint due to civil works and other activities related with civil works.
- (xiii) In case of an incident involving unexpected environmental impact, prepare remedial actions in close coordination with contractors, and prepare necessary



reports that will be submitted by PIU to DHI, relevant government agencies and ADB.

- (xiv) Conduct routine public consultations throughout the project implementation: (a) to inform public on potential environmental impacts and social impacts (e.g. health related with pollution, HIV, human trafficking, forced labor), the planned mitigation measures as well as mitigation measures that have taken place; (b) to gather public concerns and discuss how to effectively address their concerns; and (c) to encourage participation of women in operation and maintenance activities of completed works.
- (xv) Supervision of the Biodiversity Monitoring and Bench Marking Study (BMBMS). The baseline study of flora & fauna of the entire project site has been completed. Only the baseline data of elephant migration within Zone C has to be collected. Indicative scope of work is shown in Attachment 2.
- (xvi) Assist PIU in establishing and operating a central Grievance Redress Mechanism within the PIU to respond to stakeholder enquiries, supervising implementation of a Communications and Community Relations Plan, and in managing incidents and grievances reported by the community.
- (xvii) Supervise and monitor the implementation of gender action plan (GAP), if any, as well as prepare routine report on implementation of the GAP.
- (xviii) Conducting on-the-job training for PIU staff on improving integration of social and gender mainstreaming features into future project design and implementation of infrastructure and operation and maintenance aspects of sites and services.
- (xix) Providing on-the-job or on-site advice and training to contractors where necessary (such as when there are changes in personnel of contractors or when CEMP or SSHP is not being followed properly) to ensure proper implementation of the overall EMP.

#### **D. Task 4: Financial Management and Monitoring**

- (i) Establishing and maintaining appropriate fiscal management and monitoring systems and assist PIU in fiscal management and monitoring project expenditures and disbursements.
- (ii) Assisting PMU in maintaining the project accounts with all ledgers and control systems.
- (iii) Supporting the PMU staff on ADB disbursement and reporting procedures.
- (iv) Helping PMU in preparation of annual budget, accounting, and audit reports.
- (v) Generating different account reports and financial statements.
- (vi) Assisting PMU in ensuring smooth fund flows from ADB and the government.
- (vii) Supporting the PMU in obtaining reimbursements from ADB.
- (viii) Providing inputs to the quarterly and annual progress reports to be submitted to ADB.
- (ix) Submitting inputs to the project completion report as per ADB's format.

#### **E. Task 5: Commissioning, Operation and Defects Liability**

20. The PIC will assist PIU with commissioning and operation phases. It will involve building capacity within CDCL to manage the project facilities. Commissioning covers initial operation to identify and rectify any construction faults prior to the contractor's official handover of completed systems to CDCL. Commissioning will be progressive over the final year of individual contract implementation. The PIC, with the contractor/ supplier, will identify specific facilities needed, expertise and staffing requirements, and prepare detailed management, operation and

maintenance (MOM) procedures, including those relating to minimizing social and environmental impacts of all infrastructure developed under the Project. The MOM procedures should be developed in consultation with all stakeholders.

21. During the defect liability period for each package, the PIC will carry out the following functions: (i) monitoring the functional as well as structural performance of the investments and report to the PIU; (ii) preparation of the inventory of the defects/damages rectification/repair works, if any, to be done by the Contractors as per the provisions of their contracts; (iii) evaluation of the design, drawings and construction methodology for rectification/repair works proposed by the Contractors and make recommendations to the PIU; (iv) supervision and checking of the quality of the defect/damage rectification/repair works; and (v) assisting the PIU with contract management and finance related issues related to the individual works contracts.

#### **IV. CONSULTANT TEAM AND QUALIFICATIONS**

##### **A. Team Composition**

22. The Project Implementation Consultant (PIC) will be contracted over a period of 60 months from October 2017 to September 2022. Recruitment will be undertaken in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).<sup>30</sup> Firms will be recruited using quality-and cost-based selection (QBCS) method with a 90:10 quality-to-cost ratio. This ratio is justified as the priorities for the PIC are high-quality outputs including supervising the construction of specialized river training and urban infrastructure investments in challenging environment. A full technical proposal is required.

23. The PIC shall have extensive experience with planning, designing, and supervising the construction of large-scale civil engineering works comprising river training and land reclamation as well as common urban infrastructure. The PIC shall also have extensive experience in preparing contract documents, supervising construction works, and administering contracts under the International Federation of Consulting Engineers (FIDIC) Conditions of Contract for Construction for Building and Engineering Works designed by the Employer.<sup>31</sup>

24. The PIC will be engaged under a time-based contract. The engagement and time period for the key and non-key experts will have to approved by the PIU/PMU prior to their engagement. Payment will be made upon submission of Monthly Progress Reports by the PIC that will include detailed time-sheets for the individual specialists and summary of activities undertaken; the content of the Monthly Progress Reports will be agreed during the inception period of the assignment.<sup>32</sup>

25. The required inputs for international key experts will be 124.0 person-months, for national key experts will be 95.0 person-months. The international non-key experts will be indicatively 23.5 person-months. The majority of the non-key experts are to support CW-02/CW-03/CW-04 common urban infrastructure package implementation which will be procured later in the Project. The cost of non-key experts must be included in the financial proposal. However, their curriculum vitae are not required in the technical proposal since they will not form part of the technical evaluation. Curriculum vitae for non-key experts will be evaluated during contract negotiations

<sup>30</sup> Available at: <http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf>.

<sup>31</sup> Multilateral Development Bank Harmonized Edition, June 2010

<sup>32</sup> Site access & works might be affected during the monsoon period (July –September)

with the highest-ranked firm and they will be accepted on a pass or fail basis.<sup>33</sup> Table 1 provides a list of key and non-key specialists required to undertake all four tasks of the PIC's scope of work.

**Table 1: PIC Professional Staffing (Indicative Person months)**

CVRef:	Position	Inputs International	Inputs National
	<b><i>Key Staff</i></b>		
1	Chief Resident Engineer / Team Leader	34.0	-
2	Senior Civil Engineer/ Deputy Team Leader	40.0	-
3	Material Engineer/ Engineering Geologist	25.0	-
4	Contract Specialist	04.0	-
5	Environmental Specialist	10.0	-
6	Financial Management Specialist	6.0	-
7	Hydrology/Sediment Specialist	5.0	-
8	Quality Control/ Construction Manager	-	40.0
9	Geotechnical Engineer	-	40.0
10	Safeguards and Communications Specialist	-	15.0
	sub-total	<b>124.0</b>	<b>95.0</b>
	<b><i>Non-Key Staff</i></b>		
11	Geotechnical Engineer	7.0	-
12	Structural Engineer	4.0	-
13	Roads Engineer	3.5	-
14	Water Supply/ Sewerage/Hydraulics Engineer	2.5	-
15	Water Treatment Process Specialist	2.0	-
16	Solid Waste Management Specialist	2.0	-
17	Electro-Mechanical Engineer	2.5	-
	sub-total	<b>23.5</b>	-
	Grand Total person months	<b>145.0</b>	<b>95.0</b>

## **B. Key Staff Qualifications**

26. **CV-1: Chief Resident Engineer (CRE)/Team Leader - International, 34 person-months** ): The expert must be an experienced civil engineer, preferably with a Master's degree and 20 years of work experience out of which about 10 years should be related to project management of large construction projects similar to the Project that include multiple concurrent works activities and construction of river training works, land development and urban infrastructure including bulk water supply and distribution, wastewater collection and treatment, stormwater drainage, power distribution and roads. The expert should have demonstrated experience of leading implementation teams and working in complex projects in similar geographical and topographical settings. The expert should be competent in contract management, quality assurance and quality control, safety, compliance with safeguards, etc. pertaining to construction of similar projects. The expert will have excellent verbal and written communication skills in English. The expert will also have prior experience of leading similar

<sup>33</sup> Non-key experts should be budgeted under the remuneration section of the financial proposal.

projects in countries with similar geographic conditions. The expert will be responsible for leading and contributing to all tasks and for undertaking the following activities, among others:

- (i) Having overall responsibility for the timely delivery and quality of all outputs, including those listed in Table 4, in formats that are acceptable to PIU and ADB.
- (ii) Managing the relationships with the PIU, ADB, and all other stakeholders.
- (iii) Setting-up an effective organizational structure for the PIC. Preparing and implementing all administrative systems and procedures needed to ensure the effective contract management and construction supervision of the contract works in accordance with the scope of works with acceptable international standards.
- (iv) Being responsible for overall direction of the PIC team, coordination of inputs, and management of individual specialists.
- (v) Being responsible for the overall management of the engineering team and their activities. Providing expert advice as required. Review and ensure outputs are complete, well prepared using consistent formats, and their content is prepared to the highest standard.
- (vi) Carrying out a comprehensive review of the detailed designs done to-date and draw attention to changes which may have become necessary since their preparation.
- (vii) Advising on construction and contracting methods, and performing a comparative analysis of options, benefits, risks, mobilization, and implementation schedules.
- (viii) Assisting the PIU to prepare invitation for tender; preparing bid evaluation criteria, initially evaluating and providing advice to the PIU on alternative proposals, and elaborating on recommendations with a ranking of all contractors concluding with a suggestion of the technically and economically qualified bidder.
- (ix) Identifying important technical and managerial issues which affect progress, safety, quality, and compliance with safeguards.
- (x) Reviewing the construction schedule and recommending actions to avoid delays.
- (xi) Reviewing mobilization of the Contractor's resources (experience of the personnel, equipment, machines, quality and quantity of materials, funds, etc.) and recommending additional resources to be mobilized.
- (xii) Guiding, coordinating and supporting Project activities and providing overall guidance and direction and ensure that the PIC works in harmony with other ongoing and planned projects.
- (xiii) Advising the PIU in coordinating the planning, management, monitoring and reporting of all Project activities including supporting the development and implementation of progress monitoring systems.
- (xiv) Advising the PIU in planning and coordinating inputs.
- (xv) Planning and coordinating design reviews and other requirements for subsequent phases of ALDTP in accordance with ADB's requirements. These should all be based on relevant international and regional experiences and best practices.
- (xvi) Supporting PIU with packaging contracts and finalizing tender documents.
- (xvii) Coordinating with and assisting PIU on any relevant Project activity.
- (xviii) Supporting visiting missions from ADB and co-financiers.
- (xix) Supporting PIU with preparing periodic financing requests for the Project.
- (xx) Being responsible for the preparing the loan documents for Phase 2 of the project (project, loan, and bid documents), including reviewing the detailed designs for Phase 2 and advising on improvements by using PIC expert inputs appropriately.

**27. CV-2: Senior Civil Engineer/Deputy Team Leader – International, 40 person-months:**

The expert must be an experienced civil engineer with a Bachelor's degree, preferably with a Master's degree and 15 years of work experience out of which about 8 years should be related to

construction management of large construction projects that include multiple concurrent works activities and construction of river training works, land development and urban infrastructure. The expert should have demonstrated proficient qualities on similar sized implementation projects for international agencies, such as ADB, and worked on complex projects in similar geographical and topographical settings and using similar construction methods. The expert should be competent in quality assurance and quality control, safety, compliance with safeguards, pertaining to construction of similar projects. The expert must have knowledge of project management software such as PRIMAVERA (or similar) as well as excellent verbal and written communication skills in English. They will be responsible for, among other activities:

- (i) Supporting the chief resident engineer and construction manager as required and coordinating with the PIU and key stakeholders.
- (ii) Reviewing the civil work detailed design aspects including of the temporary works, river training works, earthworks, cross drainage structures, roads, water distribution, sewerage, stormwater drainage, etc.
- (iii) Examining the preparedness of the contractors for project construction works and suggest ways to expedite the activities with quality.
- (iv) Undertaking daily construction supervision and monitoring of quality control.
- (v) Checking of materials for quality and quantity and ensure they meet specifications.
- (vi) Supporting the Contracts Specialist with examining contractor claims and providing advice to the PIU as necessary.
- (vii) Examining the need for contract variations.
- (viii) Supporting the PIU in monitoring compliance with environment management plans.
- (ix) Monitoring preparation of as-built drawings.
- (x) Supervising and monitoring contractors.
- (xi) Assist with testing and commissioning.
- (xii) On the job training of PIU staff.
- (xiii) Assisting and advising PIU to develop and manage an effective public relations plan and to implement such developed plan, Support the PIU with communication activities, as necessary.
- (xiv) Promoting the benefits of the Project and disseminating information to associated project stakeholders, general public and non-government organizations (NGOs) on how well social and environmental aspects are taken care of and what benefits are attributed to the poor community.
- (xv) Proactively organizing public relations events as required.
- (xvi) Assisting PIU with developing and maintaining a Project website to disseminate information and implementation progress, and also provide a feedback and communication system for stakeholders and general public.
- (xvii) Preparing a photographic and video diary of the construction works throughout the entire duration of the Project. This should show construction activities, progress, and interviews with DHI, PIU, PIC, contractors, government and Thromde staff, and stakeholders. It will be prepared to a high professional standard.

**28. CV-3: Material Engineer/Engineering Geologist– International, 25 person-months:**

The expert will preferably have a Master's degree in engineering geology or equivalent and 15 years of work experience in design and construction of earthworks, heavy civil construction, and other similar civil structures related to this project. Experience shall include planning, implementing and analyzing the results of geotechnical sampling/drilling/testing investigations for earthworks, drainage and slope stability projects. They will be familiar with sourcing and testing materials from borrow areas. Preferably, the international expert will have experience of working in countries with similar geographic conditions. The expert shall have excellent verbal and written

communication skills in English. The expert will be responsible for planning any additional investigations for Phase 2, supervision of their execution and evaluation of the findings. As such, the expert will lead and execute all the activities related to geology. The expert will be responsible for, among other activities:

- (i) Managing and control of the in-situ investigations.
- (ii) Logging of drill holes and trenches to international best practice standards.
- (iii) Inspecting, photographing and ensuring proper storage of drilled cores.
- (iv) Selecting drilled core samples to undergo laboratory testing.
- (v) Supervising in-situ testing.
- (vi) Evaluating and commenting on the results of laboratory and in-situ tests.
- (vii) Deciding when the required maximum drilling depth has been reached.
- (viii) Mapping rock outcrops with tectonic logging of discontinuity planes.
- (ix) Evaluating all findings and establishing geological sections for each structure with the results of tectonic logging and permeability testing.
- (x) Carrying out geological and geotechnical mapping and analysis.
- (xi) Incorporating the results of geophysical exploration (if any) into the geological sections.
- (xii) Drawing conclusions and writing a final report about the geotechnical conditions.
- (xiii) Evaluating and commenting on Contractor's tender documents with respect to geotechnical aspects, i.e. foundation levels, dewatering, quality and quantity of construction materials, slope stability etc.
- (xiv) Assisting the Geotechnical Engineer(s) in the design review for permanent works and review of Contractor's temporary support proposals.
- (xv) Recording rock and soil conditions as the work progresses.
- (xvi) Monitoring all instrumentation and testing activities, as required.
- (xvii) Regularly review the geological and geotechnical conditions at the sites.
- (xviii) Supporting the preparation of Phase 2 investments by advising on the results of the borehole investigations, in-situ and laboratory tests, for the planned works.

29. **CV-4: Contracts Specialist – International, 4 person-months:** The expert to have a degree in Civil Engineering and additional procurement qualification or equivalent with preferably 8 years of experience on similar development projects. The expert will be responsible for advising on procurement under ADB/ Royal Government of Bhutan's procurement Act and regulations and procurement guidelines. Expected to have in depth knowledge and understanding of technical, commercial and legal aspects of procurement in development projects. Specialized knowledge of and significant experience in substantive areas/aspects of procurement advantageous. Experience with procurement processes for externally-financed projects, mainly those funded by ADB or World Bank in preparing bid documents, evaluation of bids desirable. Skills in communicating with authorities and other stakeholders and demonstrated capabilities in report writing needed. The expert's main activities include, but are not limited to:

- (i) Assisting the PIU with procurement of Phase 1 contracts,
- (ii) Preparing detailed procurement plan for Phase 2 incorporating the procurement requirements for all necessary goods, works, consulting services packages, etc.,
- (iii) Advising on procurement strategies in accordance with the government's and ADB's Procurement Guidelines (2013, as amended from time to time),
- (iv) Assisting PIU to prepare necessary Phase 2 procurement and bid documents,
- (v) Assisting PIU with advance procurement where necessary. This applies to packages under Phase 2 should it proceed during the time of this consulting package,
- (vi) Preparing standard criteria and checklists for evaluation of the tenders and assist PIU in preparation of the bid evaluation reports,

- (vii) Supporting PIU with all procurement activities for national competitive bidding (NCB), international competitive bidding (ICB), shopping for goods and works, use of force accounts, and selection of consultants according to the ADB's guidelines and government regulations,
- (viii) Assisting PIU with contract negotiations, preparation of contracts and contract awards,
- (ix) Supporting specific actions for integrity, ease of fund flow, and transparency,
- (x) Examining consultant and contractor claims and support the construction supervision specialists, and PIU with determination of need for contract variations, etc.,
- (xi) Preparing and delivering on-the-job training related to procurement, and contracts,
- (xii) Provide inputs for standardizing components of monthly reports related to procurement and contract awards, contract management and performance of each contract package,
- (xiii) Providing advice as required helping resolve contractual matters, and
- (xiv) Supporting preparation of Phase 2 by: (a) updating the Procurement Capacity Assessment of CDCL and national contractors; (b) preparing the procurement plans for the Phase 2 investments; and (c) advising on procurement arrangements and formats of the bid documents, taking into consideration lessons learned during implementation of Phase 1.

30. **CV-5: Environmental Specialist – International, 10 person-months:** The specialist will preferably have a Master's degree in environmental sciences, environmental engineering, or similar and 10 years of experience undertaking similar assignments, preferably in countries with similar geographic conditions, financed by ADB or other multilateral agencies. The specialist will have skills in communicating with authorities and other stakeholders and demonstrated capabilities in report writing. The specific tasks of the specialist will be, among other activities:

- (i) Review the EIA, SIA and EMP and the conditions of Approval of NEC.
- (ii) Closely liaise and coordinate with PIU's environmental manager and NEC personnel to ensure that roles and responsibilities are clear and documented.
- (iii) Review bidding documents prepared for each contractor in Zone A and ensure that all safeguards requirements from the EIA and NEC approval are included.
- (iv) Ensure that each contractor has suitably experienced personnel in the key environmental safeguards positions.
- (v) Ensure that these personnel are mobilized within one month of Contract Award.
- (vi) Supervise and approve the preparation of each main contractor's EMP in Zone A and in close coordination with the National Safeguards specialist supervise and approve SSHP of each contractor before any construction work commences.
- (vii) In consultation with each contractor in Zone A prepare an agreement on baseline monitoring locations and responsibility for collection and input to the Project GIS.
- (viii) Supervise the implementation of each CEMP and SSHP to ensure that contractors submit monthly report on implementation of CEMP and SSHP to the PIU.
- (ix) Check and clear contractor's claims for all costs to address environmental impacts.
- (x) Prepare semi-annual reports on overall implementation of EMP to be submitted to ADB by the executing agency.
- (xi) Prepare a detailed TOR for the proposed baseline study and monitoring BMBMS of flora and fauna ecosystems in ALDTP Zone C.
- (xii) Supervise the implementation of the baseline study in Zone C.
- (xiii) Ensure that all "critical" and/or "natural habitat" (defined in ADB Safeguards Policy Statement, 2009) are identified and using the results of the study prepare a Zone

- C Environmental Management Plan and any necessary review of the EIA for further approval by NEC.
- (xiv) In case unexpected impacts occur during construction time, work closely with other PIU team and contractors to prepare remedial measures to manage those impacts.
- (xv) Make recommendations to improve or correct environmental management and monitoring for all other zones and other project components such as management of solid waste,
- (xvi) Work closely with other PIU team members to ensure that all outputs under task 3 are delivered.

31. **CV-6: Financial Management Specialist – International, 6 person-months:** The expert must be an experienced financial management specialist/accountant with at least a Master's degree and about 15 years of work experience, out of which about 10 years of experience in managing projects of similar nature preferably ADB-financed projects. The specialist will support the PMU Financial Officer during project start-up to set up the accounts and manage finances for the project meeting ADB's requirements. The specialist will train the PMU staff on ADB procedures and reporting requirements. Tasks will also include, but not be limited to:

- (i) Assisting PMU in maintaining the project accounts with all ledgers and control systems.
- (ii) Supporting the PMU staff on ADB disbursement and reporting procedures.
- (iii) Helping PMU in preparation of annual budget, accounting and audit reports.
- (iv) Generating different account reports and financial statements.
- (v) Assisting PMU in ensuring smooth fund flows from ADB and the government.
- (vi) Supporting the PMU in obtaining reimbursements from ADB.
- (vii) Providing inputs to the quarterly and annual progress reports to be submitted to ADB.
- (viii) Submitting inputs to the project completion report as per ADB's format

32. **CV-7: Hydrology/Sediment Specialist – International, 5 person-months:** The expert must be an experienced civil engineer, preferably with a Master's degree and 15 years of work experience out of which about 10 years should be related to water resources and river engineering. The expert should have demonstrated experience of design and implementation and working in complex projects in similar geographical and topographical settings. The expert should be competent in planning, analysis, design and incorporating climate change impacts into their analyses and designs. The expert must have excellent verbal and written communication skills in English. The expert will be responsible for contributing to all tasks related to hydrology and sediment and for undertaking the following activities, among others:

- (i) Review the flood estimates, climate change analyses and impact mitigation measures.
- (ii) Review the sediment studies and river morphology studies undertaken in support of the detailed designs.
- (iii) Review the planned flood warning systems and recommend improvements as necessary for implementation.
- (iv) Support the other PIC design experts with reviewing, and if warranted improving, detailed designs for the river training works, cross drainage structures and other hydraulic structures.
- (v) Finalize the TOR and assist with preparing bid documents for the support consultants to undertake the flood management plan and flood early warning system.
- (vi) Supporting preparation of MOM manuals



33. **CV-8: Quality Control/ Construction Manager–National, 40 person-months:** The expert must be an experienced civil engineer with a Bachelor's degree, preferably with a Master's degree and 15 years of work experience out of which about 10 years should be related to construction management of large construction projects that include multiple concurrent works activities and construction of river training works, land development and urban infrastructure. The expert should have demonstrated experience of leading implementation teams and working on complex projects in similar geographical and topographical settings. The expert would be competent in contract management, safety, compliance with safeguards, risk management, project controlling, claim management, etc., pertaining to construction of similar projects. The expert must have extensive knowledge of data processing and project management information systems (MIS) and software like PRIMAVERA (or similar) as well as excellent verbal and written communication skills in English. Reporting to the CRE, the expert will have overall responsibility for supervising and monitoring construction activities and leadership of the construction supervision team and contractors. The expert will be responsible for, among other activities:

- (i) Undertaking daily construction supervision with quality assurance and quality control monitoring and control on site.
- (ii) Checking of materials for quality and quantity and ensure they meet specifications.
- (iii) Identifying the important technical and managerial issues in construction of the works which are affecting the progress, safety, quality and compliance with safeguards.
- (iv) Examining the preparedness of the contractor for the project construction works and suggest ways to expedite the activities with quality.
- (v) Reviewing the mobilization of the contractor's resources (personnel, equipment, machines, materials, funds, etc.) and recommending additional resources to be mobilized to complete the works according to the implementation schedules and to the required specifications.
- (vi) Responsible for the operation of the project management information system (MIS).
- (vii) Assisting with preparation of interim payment certificates.
- (viii) Supporting the Procurement and Contracts Specialist with examining contractor claims and providing advice to the PIU as necessary.
- (ix) Examining the needs for contract variations.
- (x) Supporting the PIU in monitoring compliance with environment management plans.
- (xi) Monitoring preparation of as-built drawings.
- (xii) Assisting with preparation of partial, substantial and final completion certificates.
- (xiii) Supervising and monitoring of the contractors.
- (xiv) Having regular meetings with the Contractor, the Engineer and the PIU to operationalize all recommendations in an efficient and effective manner.

34. **CV-9: Geotechnical Engineer–National, 40 person-months:** The expert must be an experienced civil engineer / engineering geologist with a Bachelor's degree, preferably with a Master's degree and 12 years of work experience out of which about 8 years should be related to geotechnical engineering of large construction projects including river training works, land development and urban infrastructure. The expert should have demonstrated experience of implementation and working in complex projects in similar geographical and topographical settings. The expert should be competent in design and construction of similar projects. The expert must have excellent verbal and written communication skills in English. The expert must also be familiar with the various types of construction materials, their parameters, occurrence and exploitability as well as their treatment on the site, mode of compaction and monitoring of their

behavior before and after impounding. The expert will be responsible for all geotechnical tasks and for undertaking the following activities, among others:

- (i) Supporting the Construction Manager, Materials Engineer / Engineering Geologist and Senior Civil Engineer, as necessary.
- (ii) Reviewing the available detailed designs, stability and seismic hazard analyses, and comment on the various types of construction materials including concrete mixes. If necessary, undertake additional stability analyses and improve the design for technical and/or financial reasons.
- (iii) Working with the Material Engineer / Engineering Geologist, establish the need for foundation treatment measures and the availability of suitable local construction materials and review the appropriate material parameters to be applied in the analysis and design of the works.
- (iv) Establishing a mass balance for construction materials to be exploited from borrow areas or quarries with regard to the quantities required for construction. Search for sufficient materials for each type and make sure that at least 150% of the required material is exploitable. Supervise laboratory and in-situ compaction tests for both concrete mixes and fill materials and determine the density at optimum water content for each fill material.
- (v) Ensure that the Contractor provides adequate quantities of material for construction.
- (vi) Review details including the foundation treatments, embankment design and zoning, seepage control measures, etc.
- (vii) Checking the Contractor's equipment, machines and personnel and recommend additional resources as needed.
- (viii) Checking the Contractor's screening plant on proper grain size gradations and high efficiency, as well as sufficient storage facilities.
- (ix) Ensuring that the Contractor keeps the fill material at optimum moisture content before and during filling and compacting.
- (x) Checking the obtained densities after compaction in regular intervals and guiding the Contractor to correct their process, if the specified criteria are not obtained.
- (xi) Monitoring preparation of as-built drawings.

**35. CV-10: Safeguards and Communications Specialist–National, 15 person-months:**

The Safeguards and Communications Specialist will work in close coordination with the PIU and the PIC to ensure that ALDTP civil works comply with ADB's Safeguard Policy Statement 2009, and other ADB's policy on social aspects such as gender, labor relations, public participation and public grievances. The consultant must have demonstrated experience of working with municipalities and other government officials. The Specialist will support the PIU in providing the necessary expert advice in all matters relating to social development, gender and communications issues. The specialist should preferably have a Master's degree in relevant field with 10years of experience undertaking similar assignments, preferably financed by the ADB or other multilateral agencies. The main activities of the specialist will include but not be limited to the following:

- (i) Review bidding documents prepared for each contractor and ensure that all safeguards requirements, if any, from SIA are included.
- (ii) Ensure that each contractor has suitably experienced personnel in the key social and gender position.
- (iii) Prepare and implement an overall Communications and Consultation Plan (CCP) for Zone A which includes sub plans on community relations, labor and employment and project induced in-migration (PIIM) also referred to as Influx.

- (iv) In close consultation with each contractor in Zone A prepare an agreement on social monitoring locations and responsibility for collection and input to the Project GIS.
- (v) Prepare and implement a Social Monitoring Plan for Zone A in close consultation with the contractors and their sub-contractors and ensure all on-going results are documented in the Project GIS.
- (vi) Ensure roles and responsibilities for collection of social monitoring data is agreed between PIU and each contractor and their sub contractors.
- (vii) Assist supervise the preparation and implementation of a Security Safety and Health Plan (SSHP) which includes a sub plan on Construction Camp Management by the main Contractors.
- (viii) Monitor, report and advice on social issues, including relevant gender components, HIV/AIDS, human trafficking and core labor standards and equal payment for equal work provisions in the civil works contracts.
- (ix) Work closely with international specialist to assist him/her in undertaking field monitoring on implementation of CEMP and SSHP and provide inputs on the preparation of semi-annual report for implementing EMP.
- (x) Prepare semi-annual social and monitoring reports for review and approval by PIU for submission to ADB for disclosure.
- (xi) Ensure compliance with social impact mitigation requirements of civil works contracts and providing information to PIU on those processes in the monthly progress reports.
- (xii) Lead the implementation of Grievance Redress Mechanism for the project by developing systematic recording claim, organizing meeting to resolve grievances
- (xiii) Organize and coordinate gender awareness training for the PIU.
- (xiv) Coordinate with PIU to conduct awareness programs amongst key stakeholders.
- (xv) Assisting and advising PIU to develop and manage an effective public relations plan and to implement such developed plan, Support the PIU with communication activities as necessary.
- (xvi) Promoting the benefits of the Project and disseminating information to associated project stakeholders, general public and non-government organizations (NGOs) on how well social and environmental aspects are taken care of and what benefits are attributed to the poor community.
- (xvii) Assisting in organizing public relations events as required.
- (xviii) Assisting PIU with developing and maintaining a Project website to disseminate information and implementation progress, and also provide a feedback and communication system for stakeholders and general public; and
- (xix) Assisting in preparing a photographic and video diary of the construction works throughout the entire duration of the Project. This should show construction activities, progress, and interviews with DHI, PIU, PIC, contractors, government and Thromde staff, and stakeholders.

### **C. Non-Key Staff Qualifications, Indicative Tasks and Inputs**

36. **CV-11: Geotechnical Engineer – International, 7 person-months:** The expert must be an experienced civil engineer, preferably with a Master's degree and 15 years of work experience out of which about 10 years should be related to geotechnical engineering of large construction projects including river training works, land development and urban infrastructure. The expert should have demonstrated experience of implementation and working in complex projects in similar geographical and topographical settings. The expert should be competent in design and construction of similar projects. The expert must have excellent verbal and written communication

skills in English. The expert must also be familiar with the various types of construction materials, their parameters, occurrence, and exploitability as well as their treatment on the site, mode of compaction and monitoring of their behavior before and after impounding. The expert will be responsible for all geotechnical tasks and for undertaking the following activities, among others:

- (i) Supporting the Geotechnical Engineer (National), as necessary.
- (ii) Reviewing the available detailed designs, stability and seismic hazard analyses, and comment on the various types of construction materials. If necessary, undertake additional stability analyses and improve the design for technical and/or financial reasons.
- (iii) Working with the Material Engineer / Engineering Geologist, establish the need for foundation treatment measures and the availability of suitable local construction materials and review the appropriate material parameters to be applied in the analysis and design of the works.
- (iv) Training of PIU staff.

37. **CV-12: Structural Engineer– International, 4 person-months:** The expert must be an experienced structural engineer, preferably with a Master's degree and 15 years of work experience out of which about 10 years should be related to design and construction of retaining walls, revetments, culverts, hydraulic and road structures in similar geographical and topographical settings. The expert must have excellent verbal and written communication skills in English. The activities, will include, but are not limited to:

- (i) Reviewing and advising on, and undertaking if necessary, stability calculations for all structures to be constructed under the project in Phase 1 and planned in Phase 2. Indicative structures include, concrete diaphragm walls, drainage culverts, elevated water retaining structures, river crossing road bridges (phase 2).
- (ii) With the other engineers for the river training works and cross drainage works finding the most economical solution for each structure.
- (iii) Reviewing and advising on, and detailing if necessary, the reinforcement of all the structures, as necessary.
- (iv) Supporting as necessary the Engineering Geologist and the Geotechnical and other engineers and specialists for reviewing the works.
- (v) Providing periodic representation during the construction of the river training works, cross drainage, and other major civil and urban infrastructure structures.
- (vi) Checking the Contractor's fabrication and shop drawings, including structural design, as and when needed.
- (vii) Reviewing modifications to the structural design as a result of changes in ground and other conditions.
- (viii) Regularly reviewing the structural engineering aspects of the works and report accordingly.
- (ix) Reviewing and reporting on any contractor-initiated proposals for modification of the structural designs.

38. **CV-13: Roads Engineer – International, 3.5 person-months:** The Roads Engineer will preferably have a degree in Civil Engineering with additional qualifications in project management or equivalent, will preferably have 10 years of international experience in roads construction, and will be fluent in English. Shall have demonstrated experience of working in implementation teams and working on complex projects in similar geographical settings. The expert should be competent in contract management, construction, quality assurance and quality control, safety compliance etc. pertaining to roads construction and related structures. The expert will work closely with other team members in PIC/PIU. The main tasks of the specialist will include:

- (i) To support the project in all aspects of road construction work of the project.

- (ii) Take full responsibility for the effective quality and safety systems.
- (iii) Ensuring roads construction program is implemented according to project schedule.
- (iv) Contributing to training and capacity building of PIU staff.
- (v) Take full responsibility for coordination and integrated action between field units, other consultants, various government institutions, project beneficiaries, Phuentsholing Thromde, PIU and provide clear directions and decisions on all aspects of roads construction.
- (vi) Examining and commenting on contractor claims.
- (vii) Be responsible for roads construction component reports preparation.

39. **CV-14: Water Supply/ Sewerage/ Hydraulics Engineer – International, 2.5 person-months:** The expert must be an experienced civil engineer, preferably with a Master's degree and 15 years of work experience of which about 10 years should be related to water supply, drainage and sewerage systems and hydraulic structures. A practical knowledge of SCADA would be an advantage. The expert should have demonstrated experience of design and implementation and working in complex projects in similar geographical and topographical settings. The expert to be competent in planning, design, safety, and compliance with safeguards pertaining to construction of similar projects. The expert must have excellent verbal and written communication skills in English. The expert's responsibilities include contributing to all tasks related to hydraulics and for undertaking the following activities, among others:

- (i) Review the hydraulic analyses for water supply, drainage and sewerage undertaken in support of the detailed designs.
- (ii) Support the other PIC design experts with reviewing, and if warranted improving, detailed designs for all hydraulic structures systems (i.e. water supply, drainage, sewerage) to ensure they convey the required design flows, pass the design sediment loads, are low maintenance, and are safe. This applies to the river training works, cross drainage and flow control structures and related urban infrastructure.
- (iii) Support the PIC with finalizing bid documents for Phase 2.
- (iv) Assist with testing and commissioning; if necessary.
- (v) Supporting preparation of MOM manuals.

40. **CV-15: Water Treatment Process Specialist– International, 2 person-months:** The expert must be an experienced engineer, preferably with master's degree in civil, environmental or public health engineering. Shall preferably have 10 years of experience in the detailed engineering design of water supply and wastewater treatment processes and management including the use of SCADA. Experience with large multilateral funded projects such as ADB projects is desirable. Have demonstrated ability to work within a multi-disciplinary consulting team and others project stakeholders; to review designs for quality and efficiency and suggest means by which errors can be rectified and designs improved. The expert's responsibilities will include, but not be limited to, the following, at each stage of project implementation, ensure all designs and construction is of quality acceptable to PIU.

- (i) Reviewing and finalizing all engineering designs and cost estimates and other relevant tasks related to both raw water and wastewater treatment processes.
- (ii) Review and provide proposals to improve engineering design and tender documents.
- (iii) Procurement: Tender documents should be checked to confirm that technical specifications are complete and correct.
- (iv) Design and Construction Supervision: Ensure all designs and construction are of quality acceptable to PIU.

- (v) Carry out design checks to ensure the quality of outputs by contractors for each stage.
- (vi) Prepare practical tests to assess operation staff in operating water supply and wastewater treatment systems. Suggest training focus areas and needs to PIU.

41. **CV-16: Solid Waste Management Specialist – International, 2 person-months:** The expert shall preferably have master's degree in urban environmental management or public health engineering and 8 years of experience in solid waste management projects. Have demonstrated ability to work within a multi-disciplinary consulting team with counterparts and others project stakeholders. Experience with large multilateral funded projects such as ADB projects is desirable. Skills in communicating with authorities and other stakeholders and demonstrated capabilities in report writing. The expert's responsibilities will include, but not be limited to, the following:

- (i) Reviewing and ensuring all plans, engineering designs and cost estimates related to solid waste management are adequate.
- (ii) Technical supervision of the implementation of waste treatment facilities (aerobic and anaerobic digestion plant) and final disposal sites (sanitary landfill site) including leachate treatment.
- (iii) Preparing a solid waste management strategy and implementation plan.
- (iv) Preparation of solid waste management technical guidelines and operational manuals for the 3R's (Reduce, Recycle and Re-use) and the entire collection and disposal cycle.

42. **CV-17: Electro-Mechanical Engineer – International, 2.5 person-months:** The expert must be an experienced electro-mechanical engineer, preferably with a Master's degree and 10 years of work experience, out of which about 7 years should be related to electro-mechanical aspects of urban infrastructure. The expert should have demonstrated experience of working in implementation teams and working on complex projects in similar geographical settings. The expert should be competent in planning, design, tendering, contract management, quality assurance and quality control, safety compliance etc. pertaining to construction of similar projects. The expert must have excellent verbal and written communication skills in English. The expert will be responsible leading and contributing to all tasks related to electro-mechanical engineering and for undertaking the following activities, among others:

- (i) Reviewing the detailed designs for mechanical aspects of the urban infrastructure including water supply and sewage pumps, pumping stations, sludge dewatering, and raw water and wastewater treatment process equipment.
- (ii) Reviewing the detailed designs for electrical aspects of the urban infrastructure including substations, distribution infrastructure, site lighting, SCADA control systems and communications.
- (iii) Reviewing the existing power transmission/distribution systems within the vicinity of the ALDTP and advising on optimum connection points, and what new infrastructure will be required.
- (iv) Review the bidding documents for the electro-mechanical aspects under the project.
- (v) Carrying out acceptance tests with the manufacturer(s).
- (vi) Assist with testing and commissioning.
- (vii) Supporting preparation of MOM manuals for all electro-mechanical items installed or that are associated with the project.

## D. Support Staff and Logistical Arrangements

43. The PIC shall provide the administrative and support staff needed to carry out their services. An adequate number of suitably skilled office support staff will be required to meet the needs of the Phuentsholing field office, and all associated logistics of the consulting assignment. Suggested positions, qualifications, and number of office support staff in each position are shown in **Table 2**. However, the positions and actual numbers shall be at the discretion of the PIC who will cost them accordingly as out-of-pocket, fixed-rate expenses in their financial proposal. The PIC is not required to submit CVs for office support staff as part of their technical proposal since they will not be evaluated as part of the expert team.

**Table 2: Indicative Technical and Office Support Staff**

Position	Indicative No.	Qualification/Experience	Activities
<u>Office Support</u>			
Office Manager	1	Preferably, 10 years of good office management experience preferably with an international company for international development projects	Office management, team logistics, support for field trips, preparation of workshops,
Accountant	1	Degree in accounting, or equivalent with 5 years bookkeeping experience. Preferably will have similar experience working on ADB projects.	Maintaining project financial statements and submission of invoices and payment requests to the PIU according to government and ADB's standards.
Assistant Office Manager / Secretary	1	Good English and national languages and computing skills (with appropriate certificate)	Office support, computer data entry, preparing letters, organizing printing.
Computer Operators/ CAD/ MIS/ GIS	3	Good English and national languages, computing skills (with appropriate certificate)	Support technical staff with maintaining MIS/ GIS and project web site.
Office Assistant / Messenger / Guard	2	Good English and national languages and previous experience	Maintaining the office, carrying messages, and other minor tasks.
Drivers	2	Good English, and national languages, driver's license, with 10 years of driving experience, an advantage	Driving within the project area and between Phuentsholing and Thimphu.

44. Other out-of-pocket expenses the PIC will be responsible to include: (i) all other necessary facilities and logistic support for its staff including living accommodation and per diems; (ii) international and national travel, and miscellaneous transportation; (iii) day-to-day office communications, utilities and other miscellaneous costs which may be required for carrying out the services as per the requirement of the Contract; and (iv) printing, publishing and transmittal of all reports and deliverables (excluding specific communication outputs related to Task 4, which shall be funded under provisional items).

## E. Procurement of Additional Studies, Equipment and Training

45. Consultants for additional studies will be recruited in accordance with ADB's Guidelines on the Use of Consultants (August 2013, as amended from time to time). Goods and works for ADB-financed contracts will be procured in accordance with ADB's Procurement Guidelines (August 2013, as amended from time to time). Provisional sums have been included in the consultancy agreement for procurement of various requirements that will support the project. The PIC will be responsible for preparing the exact implementation arrangements, TORs, specifications, and detailed cost estimates of the procurement which will be approved by the Project Manager before initiating procurement. Procurement procedures will follow ADB's Procurement Guidelines. The tentative scopes of provisional items are summarized in **Table 3**.

**Table 3: Indicative Provisional Items**

Item	Description
Vehicles	Up to 2 vehicles shall be purchased for national transport needs between project office, construction sites, and for meetings in Thimphu, including O & M (running & Maintenance) of the vehicles. The vehicle should be 4WD, engine capacity of 2,500–3,000 cc
Surveys and Studies	Supporting surveys and specific studies including topographic surveys, geotechnical investigations, laboratory tests, and socioeconomic surveys. Tentatively this includes: a) a Biodiversity Monitoring and Benchmarking Survey (Attachment 2) and (b) preparation of a Flood Management Plan (Attachment 3)
Office Equipment	Procurement of office equipment including computers, software, printers, photocopiers, furniture, GPS power inverter, etc. for field office using the shopping procurement method. <sup>34</sup>
Meetings, workshops and training	For routine meetings, workshops and training sessions convened by the PIC or PIU.
Communication Materials	Publishing of communication materials and media including the video diary of the investment program and development and hosting of the website.

## V. REPORTING REQUIREMENTS AND TIME SCHEDULE FOR DELIVERABLES

46. Unless otherwise agreed, all deliverables are to be submitted as drafts for review and comment by the PIU and ADB, and thereafter amended and submitted as final versions. Other occasional deliverables maybe required from time to time on an informal basis. PIC assist PIU to maintain an electronic safe backup of all contract related documentation and submit one electronic version of every report listed in **Table 4**.

<sup>34</sup> All PIC key and non-key experts are responsible for providing their own computers or be supplied by the PIC firm. This provisional item is only for providing computers for the office support staff and providing general office IT equipment.



**Table 4: List of Main Deliverables and Indicative Number of Reports**

No.	Item	Description	Due Time a	Number of copies for PIU	Number of copies for ADB b
<b>Task 1 – Program Management</b>					
1.1	Inception Report	The inception report will: (i) confirm, elaborate on, and adjust as necessary the consultant's approach, methodology and work plan based on information received during the inception phase; (ii) provide a detailed plan of the consultant's activities and confirmation and adjustment to the tasks of each expert with further elaboration as required; (iii) provide a detailed implementation plan for the project's activities; (iv) discuss any issues identified during the inception phase; (v) outline the planned implementation of the provisional items with scopes and costs; (vi) the contents of the PPMES and the MIS; and(vii) phase 2 loan documents	1st month	4	2
1.2	TOR and RFP for BMBMS and FMP/FEWS Consultants	Prepare the TOR for the BMBMS and FMP/FEWS support consultants prepare "request for proposal" documents necessary to meet ADB requirements.	3rd month	2	2
1.3	MEM, QAP and RMP	The monitoring and evaluation manual (MEM) will set out how the Project will be monitored and evaluated. This supports preparation of the PPMES. It includes the QAP and RMP and will be updated routinely as necessary.	4th month, updated routinely	4	2
1.4	MIS	The MIS will detail how all information related to the Project will be structured, managed, and secured. It will include a secure filing system for printed material and a secure and backed up server for electronic material. It will be accessible from the PIU and client's project offices. The MIS will also include the public website for the ALDTP.	6th month	4	2
1.5	PPMES	Design of the PPMES appropriate for the project. The content of the PPMES should be discussed in the inception report and agreed with the PIU and ADB prior to developing the system. The system should be flexible to allow routine changes as necessary and it should be accessible from the PIU and client's project offices. A	6th month	4	2

No.	Item	Description	Due Time a	Number of copies for PIU	Number of copies for ADB b
		manual will be prepared that shows users how to update and use the system.			
1.6	Mid-term Report (the number of versions of this report will depend on how many mid-term review missions are fielded by ADB)	<p>Scheduled approximately halfway through the consultancy period and should be produced prior to the ADB mid-term mission (note that the number and schedule of missions may vary). The contents would include, but not be limited to:</p> <ul style="list-style-type: none"> <li>(i) summary of the progress including issues, confirmation elaboration and/adjustments to the consultants program;</li> <li>(ii) progress against the financing and the DMF;</li> <li>(iii) updated detailed implementation plan;</li> <li>(iv) status of loan covenants;</li> <li>(v) updated PAM; and</li> <li>(vi) summary and discussion of all specialist aspects of the project including construction, capacity building, social grievances and environmental safeguards, together with conclusions and any recommendations for adjustment.</li> </ul> <p>The content of the report will be agreed with the PIU and ADB prior to its preparation.</p>	25th month, however timing and number to be agreed with PIU and ADB	4	2
1.7	Final Report	The Final Report will be submitted one month after issue of the Performance Certificate for the last civil works contract. The Final Report will present a summary of all aspects of project implementation and comparison with the expectations of the financing (or as subsequently adjusted) and of the DMF. The report will summarize and discuss the results of specialist aspects of the project including construction, capacity building, social grievances and environmental safeguards, together with conclusions, recommendations and lessons learned for future projects. The content of the report will be agreed with the PIU and ADB prior to its preparation.	60th month	4	2
1.8	Monthly Reports	Concise mainly tabular report with 4-page maximum summarizing monthly progress of the project, implementation status and highlighting any critical issues that require client or ADB support with resolving. On agreement with the PIU and ADB, these may be submitted electronically only.	Monthly, by the 7th day of each following month	4	2

No.	Item	Description	Due Time a	Number of copies for PIU	Number of copies for ADB b
1.9	Quarterly Reports	Concise reports giving more details of the project and key issues. For every year, the first two reports will be incremental reports detailing activities, progress and issues during the previous trimester, and planned activities for the next trimester. These reports must present all the findings related to procurement and to monitoring requirements identified in the DMF, including progress on delivering the outputs. The reports will also summarize the results of relevant data collected. The fourth report (which will become the Annual Report) will be cumulative for the full year period. The Quarterly Report is to include that month's Monthly Report (no separate monthly report).	Quarterly, by the 15th day of the following month	4	2
1.10	Briefing Reports	Special briefing reports as requested by the PIU and/or ADB.	As required	4	2
1.11	Special Reports	The PIC will prepare and submit any other report related to the Project as requested by the PIU and ADB.	As required	4	2
1.12	PCR	The contents of the report shall be as agreed between the PIU, PIC and ADB. It will focus on the individual contracts and generally it will follow standard ADB format.	Last month of loan/grant closure for the project	2	2
1.13	Phase 2 loan documents	Prepare Phase 2 loan documents and bid documents	50th month	4	2
<b>Communications</b>					
1.14	Updated Communications Strategy and Plan	Reviewing, improving and routinely updating the Project's communications strategy and plan.	3rd month, annual revisions every year	4	2
1.15	Media publications	As requested by the PIU and ADB. This applies to all forms of media. Drafts must be reviewed and approved by the PIU and ADB prior to release.	As necessary	4	2
1.16	Website	Professional and user-friendly website where all project reports, information, photos and video links are available to users. Website to be routinely updated as required.	Operational by 6th month	-	-
1.17	Video presentation	Maintain a video diary of the implementation of the Project. Annually, prepare an edited highlight of physical progress snippets and capacity building initiatives (workshop, training, consultation, communication etc.) of	Annually	4	2

No.	Item	Description	Due Time a	Number of copies for PIU	Number of copies for ADB b
		approximately 1-hour duration with footage of construction activities and interviews with stakeholders, as necessary. The production will be prepared to the highest professional standards.			
<b>Task 2 – Contract Management and Construction Supervision</b>					
2.1	Construction Supervision Manual	The Manual will outline the PIC's approach to contract management and construction supervision. The format and contents of the Manual will be discussed and agreed with the PIU and ADB however in general it will show the management and reporting structure, team organizations, logistical arrangements, report and certificate templates, etc. It will be updated from time-to-time to suit the needs of the Project program.	2nd month	4	2
2.2	Health and Safety Manual	The Health and Safety Manual will include guidelines, requirements, procedures and protocols, etc. that will guide and support safe practices on all construction sites, camps, offices and transport routes. It will be agreed by all Contractors and updated every year.	3rd month		
2.3	Shift Reports	To be prepared for each contract by the senior civil engineer. It shall include, among others, relevant information as deemed necessary, the weather conditions, crews and equipment working, works executed and tentative quantities, resource allocation, compliance with approved procedures, and any special or unusual occurrences experienced in each shift.	Per Shift	4	-
2.4	Weekly Reports	To be prepared for each contract by the senior civil engineer. It shall summarize the shift reports highlighting progress during the week, resource allocation, problems or hindrances, any specific problems encountered, action taken, and any other matter deemed necessary.	Weekly	4	-
2.5	Monthly Progress Reports	The monthly report shall be prepared by the Chief Resident Engineer, within one week of the end of the report period. It shall provide, among other items: (i) progress during the month on a quantitative and cost basis with appropriate graphical presentations comparing progress with program and giving reasons for any	Monthly	4	2

No.	Item	Description	Due Time a	Number of copies for PIU	Number of copies for ADB b
		discrepancies with proposed remedial measures; (ii) cumulative expenditure record and estimated quantity at completion of each BOQ item, variation order and claim for the construction and equipment contracts; (iii) record of variation orders issued and being prepared; (iv) claims received, under consideration and settled; (v) comments on the quality of the month's work; (vi) a record of climatic conditions, and if appropriate, river flow conditions; (vii) any other matters which are deemed necessary by the PIU, PIC and contractors; and (viii) details of non-conformance works, recommendations and actions taken for rectifications.			
2.6	Annual Progress Reports	Highlighting the main features of the construction activities and other activities under consulting services contracts, in the previous fiscal year. The PIC shall prepare and submit the annual report within fifteen days of the end of the Fiscal Year.	Annually	4	2
2.7	Health and Safety Reports	Specifically report every health and safety incident (including near misses), provide recommendations for improvements, and document responses of project management (Contractors, PIU and PIC) to control and contain them.	Monthly	4	-
2.8	Claim Reports	For every claim, individual claim reports will include an analysis of the claim, the Engineer's recommendation as to whether the claim should be accepted, partly accepted, or rejected and the Contractor's entitlement under the contract.	Every claim	4	-
2.9	Technical Review Reports	The PIC will prepare and submit review reports on design reports submitted by Contractors, such as for the design and assembly of the diaphragm wall design and construction method and other electro-mechanical equipment, etc. The review report shall be submitted within the period mutually agreed between the PIU and PIC.	As required	4	2

No.	Item	Description	Due Time a	Number of copies for PIU	Number of copies for ADB b
2.10	MOM manuals	For each project contract, a MOM manual will be prepared that includes information from the contractors and suppliers. It will contain sections describing, among others which will be agreed with the PIU: (i) the operation of the common infrastructure systems to ensure the desired services are provided as planned and designed; (ii) the operation of the system in the event of anomalies (floods, droughts, power failures, etc.); (iii) routine and infrequent system maintenance; (iv) system trouble shooting; and (v) required O&M staffing and annual expenditures.	48th month	4	2
2.11	Tender Documents	To be reviewed or prepared for all outstanding works and goods packages under the Project following PIU and ADB procurement requirements and formats.	As required to meet the implementation schedule	4	2
2.12	Special Reports	The PIC will prepare and submit any other report related to contract management and construction supervision as requested by the PIU and ADB.	As required	4	2
<b>Task 3: Management of Environmental and Social Impacts</b>					
3.1	Environmental Monitoring Reports	Requirements are described in the EMP document. Generally, the reports are to: (i) capture any environmental safeguards issues and their resolution; (ii) the compliance by contractors of EMPs (CEMP) are to be reported; and (iii) a summary of environmental parameters monitoring to be presented.	Submit semi-annual monitoring reports as per guidance provided in the EMP	4	2
3.2	Social, Gender and Grievance Monitoring and Evaluation Reports	Generally, the reports will discuss the quality and progress of gender action plan implementation, and any issues and remedies suggested to be presented. Status of any grievances including physical progress and financial expenditure to be stated.	Initially submit reports every 3 months for first year and then every 6 months thereafter	4	2
<b>Task 4: Financial Management and Monitoring</b>					
4.1	Financial Management & Monitoring Reports	Providing inputs to the quarterly and annual progress reports to be submitted to ADB.	Quarterly, by the 15th day of the following month	4	2

No.	Item	Description	Due Time a	Number of copies for PIU	Number of copies for ADB b
<b>Task 4 - Commissioning and Operation</b>					
4.1	Contract Completion Reports	This shall be prepared at the end of each works / goods contract. The report shall incorporate as-built records and drawings, details of construction methodology, concrete quality, hydrological, sedimentation, geological, and geotechnical condition, etc. The report will also include: a record of changes of design criteria or of design with reasons, records of labor used, and progress records for different types of works. The contents of the report shall be as per the standard for this type of the contract and as agreed between the PIU and PIC.	Completion of each works contract	4	2
4.2	Certificates	These will include the Statement of Completion Certificates, Taking Over Certificates, and Performance Certificates.	As required	4	2
4.3	Final Reports	The Final Report will be submitted one month after the issue of the Performance Certificate for each civil works contract. The report will contain details of remedial works carried out by the Contractors to rectify defects found during the Defects Liability Period. The report will also contain a summary of Final Statements.	Completion of each works contract's Defects Liability Period	4	2

ADB = Asian Development Bank, BOQ = bill of quantities, DMF = design and monitoring framework, EIA = environmental impact assessment, EMP = environmental management plan, PAM = project administration manual, MEM = Monitoring and Evaluation Manual, MIS = Management Information System, MOM = management, operation and maintenance, O&M = operation and maintenance, PCR = project completion report, PFR = periodic financing request, PIU = project implementation unit, PIC = project implementation consultant, PPMES = Project Performance Monitoring and Evaluation System, QAP = Quality Assurance Plan, RFP = request for proposal, RMP = risk management plan, TOR = terms of reference

a The due date applies to submission of draft versions for those reports which require both draft and final versions.

b For the ADB reports, one copy is to be delivered to the ADB Bhutan Resident Mission and one copy sent to ADB Headquarters in Manila.

## **VI. CLIENT'S INPUT AND COUNTERPART PERSONNEL**

47. The PIU shall provide the PIC with all documents, drawings, maps and other contract related documents that are available and at the disposal of the Project. All the requirements needed to carry out the consulting services, unless otherwise mentioned in these TOR, shall be the responsibility of the PIC. While no client staff will be deployed to work under PIC at Phuentsholing, adequate PIU counterpart staff will be in place to work with PIC. A complete list of PIU positions will be available to short-listed firms. All the equipment, vehicles, goods and materials procured under the consulting services contract are the property of the Project and shall be returned to the client after the completion of the services in good working condition. Basic furnished working office spaces will be provided by the PIU in Phuentsholing office. The PIC shall take responsibility for office maintenance, vehicle maintenance, consumables and upkeep. The PIC will be responsible for providing appropriate living accommodation for the PIC staff.

## **VII. AVAILABLE DATA FOR PROPOSAL PREPARATION**

48. The client and ADB have prepared documents and drawings to support the preparation of this Project. Shortlisted firms may review the reports and all available information, at the client's office in Thimphu with prior appointment. Similarly, shortlisted firms may also download copies of available digital reports and documents of the project which are accessible through CDCL website. Further details on the available reports and download website will be provided to the shortlisted firms.

## **VIII. SPECIFIC REQUESTS FOR PROPOSAL INFORMATION**

49. In addition to the information required by the Request for Proposal, and any other relevant information the firm wishes to submit, the proposals for the PIC should also ideally provide the following information:

- (i) The lead firm's experience with: (a) supervising multiple construction packages being implemented concurrently; (b) managing multidisciplinary teams; (c) assisting the executing agencies with implementing environmental and social measures, ensuring safeguard policies/ requirements of the government and ADB are met; and (d) having overall responsibility for project implementation management.
- (ii) The firms' experience with supervising the construction of large-scale civil works contracts (i.e. larger than \$20 million in capital budget) as the 'Engineer' under FIDIC contracts. The works preferably to have included: (a) river training works and associated embankment wall construction; (b) land reclamation and slope stabilization; and (c) construction of common integrated urban infrastructure. If the lead firm does not have experience in any types of works then there could be a joint venture agreement with the suitably experienced partner firm.
- (iii) The firms' experience in undertaking ADB project preparatory technical assistance projects (or similar) in the water resources and/or urban development sectors. This applies particularly for planned river training and/or urban development projects. This includes preparing and supervising site investigations, surveys and studies, and preparing ADB's or other multilateral development bank loan documents.
- (iv) The lead firm's experience of undertaking similar projects with river training and/or urban development components in Bhutan or in similar geographic region should be highlighted. However, for the lead and joint-venture partner firms, similar experience in other developing countries (including Africa and Americas) should



also be highlighted, along with any other experience relevant to the nature of the proposed investment plan in developed countries.

- (v) Practical recommendations for expediting the overall implementation schedule for the Project.
- (vi) Submission of CVs in Tech-6 of the technical proposal: please ensure they are presented in the same order as the positions listed in Table 1.

## Attachment 1: Indicative works for Phase 1

### Contract CW-01: River Training and Embankment Protection Components

Description	Quantities (approximate)
<u>River Training, Bank Protection &amp; Embankment</u>	
Diaphragm wall with dead man anchor	18,300 m <sup>2</sup>
Diaphragm wall with anchor slab	16,300 m <sup>2</sup>
Cast in situ wall above diaphragm wall, up to lower promenade level	9,150 m <sup>2</sup>
Cutting/filling for uniform bed level and embankment filling	683,100 m <sup>3</sup>
Placement of boulders at diaphragm wall level	31,800 m <sup>3</sup>
Stone in wire crates	34,000 m <sup>3</sup>
Reinforced concrete retaining wall	1,900 m
<u>Land Reclamation and Promenade Finishing</u>	
Filling to achieve proposed bed level and embankment levels	2,440,000 m <sup>3</sup>
Precast concrete below stone in wire crates	2,500 m <sup>3</sup>
Finishing works on lower promenade level	31,800 m <sup>2</sup>
Finishing on stone pitching	10,500 m <sup>2</sup>
Finishing on upper promenade level with concrete slab	19,900 m <sup>2</sup>
Railing on upper promenade level	4,000 m
<u>Others</u>	
Cross drainage – 8 No. culverts (total length)	1650m
Cross drainage – 4 No. open channels (total length)	700 m
Slope stabilization	1500 m

### Contract CW-02: Common Urban Infrastructure Components

Description	Indicative Quantity
Water supply (3Nos. 300mm Dia. bore wells)	3 No.
Water treatment plant (3.1 MLD)	1 No.
Water supply distribution (80-200mm dia.)	12 km.
Sewerage (150-400mm dia.)	9 km.
Sewage treatment plant (3.0 MLD)	1 No.
Roads	10km.
Surface Water Drainage (450-900mm dia.)	9 km.
Solid Waste Management (Equipment, segregation, composting & landfill site)	complete system

### Contract CW-03& 04: Power supply and Telecommunications

Description	Indicative Quantity
HT and LT transformers, transmission mains and street lighting	system
The optical fibre network in DWC pipe conduits with feeder pillars	system

## **Attachment 2: Biodiversity Monitoring and Bench Marking Study (BMBMS)**

### **A. Background**

1. A draft EIA has been prepared by the project preparation consultants which identifies the Zone C area as being within 1km of the Jaldapara National Park across the adjacent border with India. It is described as having an extensive range of flora and fauna such as Elephant, Indian Leopard, Rhino and many others. The land use inventory also shows extensive areas of similar and suitable habitat for such animals (more than 850 Ha of riverine grassland) within the proposed Zone C. There has been one rapid assessment of one week conducted for the preparation of the draft EIA. There has also been very limited monitoring of water quality within the Zone C area. The area of zone C and Zone D exhibits characteristics of what the ADB describes as “natural habitat” - Land and water areas where the biological communities are formed largely by native plant and animal species, and where human activity has not essentially modified the area’s primary ecological functions.

2. Given there is adequate time before Zone C is developed and the lack of information supplied in the draft EIA for this area, a baseline biodiversity will be conducted by a specialist Local Biodiversity consultant reporting to the PIC.

### **B. Issues**

3. The issues subject to further investigation include:
- (i) Current elephant distribution and behavior.
  - (ii) Current distribution of other fauna species that may be affected by the development such as the Indian Leopard, the Indian Rhino and Barking Deer.
  - (iii) The current distribution of suitable habitat in the study area and especially Zone C which would support such species.
  - (iv) Current distribution and behavior of human activities.

### **C. Activities**

- (i) Identify and agree with PIU the baseline biodiversity study boundary which recognizes relevant ecological relationships.
- (ii) Identify and agree with PIU on a 3-year study design over two seasons per year.
- (iii) With PIU oversight conduct the necessary Government liaison for the various protocols required to carry out the study.
- (iv) Implement the surveys in close coordination with the PIU.
- (v) Prepare interim reports on each field visit.
- (vi) Ensure that all “critical” and/or “natural habitat” (defined in ADB’s Safeguard Policy Statement, 2009) are identified.

### **D. Outputs**

- (i) Prepare a final Report summarizing the results of the 3-year study.
  - (ii) Using the results of the study and in close cooperation with the PIC make recommendations concerning a Zone C Environmental Management Plan to be prepared by the PIC and any necessary review of the Master Plan for further approval by the NEC.
  - (iii) Make recommendations for the preparation of Zone C on overall environmental safeguards, monitoring and management requirements.
4. All data observations to be stored in the project GIS database.

### Attachment 3: Flood Management Consultancy

#### Position titles: Flood Warning Specialist, Flood Management Specialist, Hydrologist/Hydraulic Engineer

#### A. Background

1. ADB plans to support the Amochhu Land Development and Township Project (ALDTP) in Bhutan, aiming to develop 464 hectares of riparian land adjacent to the Amochhu River near the city of Phuentsholing on Bhutan's southwestern border with India. The project will provide protection to the new township from floods and erosion and construct smart urban infrastructure to allow phased urban expansion. The project will also protect the existing town of Phuentsholing from floods and riverbank erosion associated with the Amochhu,<sup>35</sup> which currently threatens lives and livelihoods and disrupts connectivity with nearby communities.

2. The ALDTP flood and bank protection works<sup>36</sup> are designed to protect the new development from an Amochhu flood with an annual exceedance probability of 1% in any one year (referred to as the 1 in 100 year flood). Nonetheless, flooding of the new and existing towns by the Amochhu will still be possible, with resulting risk to life and property, due to floods that are greater than the design event and/or due to inadequate in-river maintenance. In recognition of the residual risks, a Flood Early Warning System (FEWS) and a Flood Management Plan (FMP) are included as part of the ALDTP.

3. A Flood Warning Specialist, Flood Management Specialist and Hydrologist/Hydraulic Engineer are required to provide advisory services to CDCL on establishing the FEWS and FMP.

#### B. Outline of the Concept

4. The FEWS and FMP will broadly comprise the following components:

- (i) Rainfall and water level sensors at selected locations.
- (ii) Data loggers for the rainfall and water level data.
- (iii) Satellite based transmission of the rainfall and water level data.
- (iv) Reception of the satellite transmissions at the DHMS control center in Thimphu.
- (v) A computer-based system to monitor the status of the rainfall and water levels, with a range of alert levels.
- (vi) A flood forecasting model to be utilized when a trigger alert level is raised.
- (vii) Reception of the data, alert levels and flood forecasting results at Thromde operations center in Phuentsholing.
- (viii) A procedure for warning dissemination via various media.
- (ix) Procedures for action by the emergency services and the public.

5. Development of the FEWS and FMP will require close coordination with the Department of Disaster Management (DDM), Department of Hydromet Services (DHMS) and Phuentsholing Thromde, amongst others. DDM has an overview role as set out in the Disaster Management Act

<sup>35</sup>Phuentsholing is exposed to flood risk from a number of sources. There is existing fluvial flood risk due to the Amochhu itself, the Amochhu left bank tributaries (referred to as 'cross drainage') which drain across the Amochhu LAP, as well as the Omchhu which passes through the town, and pluvial flooding (local rainfall-runoff that exceeds the capacity of the local stormwater system). The annual exceedance probabilities and consequences of each flood source are different. The ALDTP flood protection works will mitigate Amochhu-related flood risks in the existing town, provided certain conditions are met. No works are included in the ALDTP to mitigate the risks associated with the Omchhu or pluvial flooding.

<sup>36</sup>The cross-drainage works will be designed to have the same standard of flood protection, including a freeboard of 1m.

of Bhutan 2013. DHMS currently provides flood warning services for other locations in Bhutan and will need to be closely involved throughout specification, installation and commissioning of the FEWS. Phuentsholing Thromde will be integral to the FMP execution and will host the operations center in Phuentsholing.

6. FEWS equipment (supply and install) will be procured by CDCL through an international competitive bidding process in accordance with ADB procedures as a goods package (ME-01). CDCL will retain ownership of the field, communications, and control center equipment. DHMS will enter into a services contract with CDCL to operate and maintain the FEWS.

7. All data from the field equipment will be sent in quasi real-time to DHMS's office in Thimphu where the flood forecasting will be carried out. All data from the control center will be sent in quasi real-time to a dedicated room (the operations center) in Phuentsholing. The operations center will be used to direct responses of the various agencies and stakeholders, in accordance with the FMP.

### C. Activities

8. The activities, will include, but are not limited to:
- (i) review available information related to ALDTP, DDM, DHMS, and Phuentsholing Thromde, including site visits and meetings
  - (ii) undertake a needs assessment of the FEWS and FMP. This should include a GIS-based geospatial risk assessment of the project area and Phuentsholing, culminating in preparation of flood hazard maps,<sup>37</sup> highlighting existing and future<sup>38</sup> levels of exposure<sup>39</sup> and vulnerability.<sup>40</sup>
  - (iii) plan, design and specify the FEWS equipment<sup>41</sup> in close consultation with DHMS, taking account of the risk mapping/assessment
  - (iv) assist the PIU with procurement of the goods package (ME-ZA-01) including tender evaluation
  - (v) assist the PIU with supervision of installation and commissioning for the field equipment, communications equipment, and the equipment for the control center and operations center
  - (vi) plan, develop, calibrate and operationalize a flood forecasting model in close consultation with DHMS
  - (vii) prepare a combined FMP<sup>42</sup> for ALDTP and Phuentsholing in close consultation with DDM, DHMS and Phuentsholing Thromde. The FMP should include prevention and recovery along with preparedness and response.
  - (viii) undertake readiness training and testing of the FEWS and FMP in close consultation with DDM, DHMS and Phuentsholing Thromde, and prepare a Completion Report.

<sup>37</sup>Flood data for the Amochhu should utilise the 2D hydraulic model developed for CDCL by HCP. Flood data for the Omchhu will require hydrological and hydraulic modelling carried out as part of this task.

<sup>38</sup>Including population growth and climate change projections.

<sup>39</sup>Proximity to the river/source, water velocity, flood elevation. Highlight critical infrastructure and other public assets.

<sup>40</sup>Condition of housing and informal settlements, for example. The poor, children, elderly and disabled.

<sup>41</sup>Includes field equipment, communications between the field installation and the control centre, control centre, communications between control centre and operations centre, as well as the operations centre and the authorities and the public.

<sup>42</sup>The Flood Management Plan will form part of the Emergency Management Plan currently being considered for implementation by DDM and the Thromde. The EMP will cover other hazards such as earthquakes, landslides, fires etc.

**D. Outputs**

- (i) Needs Assessment Report
- (ii) Specifications for FEWS
- (iii) Tender Evaluation Report
- (iv) Flood forecasting model
- (v) Flood Management Plan
- (vi) Completion Report

9. The experts would work intermittently from Q3 2018 to Q3 2019.

**E. Qualifications**

10. The Flood Warning Specialist must be an experienced hydrologist or civil/hydraulic engineer, preferably with a Master's degree, with a minimum of 15 years of work experience out of which about 7 years should be related to design and installation of flood warning systems. The specialist must have excellent verbal and written communication skills in English.

11. The Flood Management Specialist must be an experienced civil engineer, preferably with a master's degree, with a minimum of 15 years of work experience out of which about 7 years should be related to development of flood management plans for municipal areas. The specialist must have excellent verbal and written communication skills in English.

12. The Hydrologist/Hydraulic Engineer must be an experienced hydrologist or civil/hydraulic engineer, with a minimum of 8 years of work experience out of which about 4 years should be related to flood studies for municipal areas. The specialist must have a good standard of verbal and written communication skills in English and be capable of working with GIS data and models.

## **Appendix F-2: Independent Environmental Monitoring Expert (CS-02)** **Individual (international, 8 person-months)**

### **A. Objective of the consultancy**

1. The objective of the consultancy is to monitor the implementation of the project's environmental management plan (EMP) related to the approved Environmental Impact Assessment (EIA) in compliance with ADB's Safeguard Policy Statement, 2009 and the NEPA (2007). The specialist will report to the Project Management Unit (PMU) and ADB.

### **B. Scope of work**

- (i) The main tasks and responsibilities will be to review the Environmental Impact Assessment (EIA) and Project Environmental Management Plan (EMP) as well as the contractors' environmental management plan (CEMP) to understand the environmental issues associated with the project area. Consult with Project Implementation Consultant (PIC) to identify if there are any changes in the project sites of baseline environmental condition, if changes are made review and assess the outcome and advise updating the EMP.
- (ii) Make sure that the EMP of contractor is in line with Project EMP.
- (iii) Verify that the public awareness campaign on EMP implementation is carried out among residents near construction sites, and that all complaints are promptly resolved in accordance with EMP policy.
- (iv) Advise PIC in coordinating the GRM and coordination consultation with local stakeholders, define corrective actions for updating the environmental monitoring report as needed.
- (v) Review bidding documents and contractor materials to make sure that all environmental obligations are implemented in accordance with the EMP.
- (vi) Provide support to PIU in assessing and documenting EMP on monthly basis and preparing environment audit list.
- (vii) Review monthly EMP implementation report of contractor and its compliance with reality.
- (viii) Submit the EMP progress report to PMU and ADB bi-annually which should include project implementation, monitoring result, challenges, and measures to be proposed or taken, and action plan until next monitoring.
- (ix) Conduct and implement environmental auditing and include measures to be taken.
- (x) Assist PMU before expiry of the initial EIA after 5 years, to review and revise (if necessary) to obtain NEC continued approval.

### **C. Qualifications**

2. The expert shall preferably have a university degree in environmental engineering or similar field. He/she will have 10 years of work experience with state, public or private organizations in environmental safeguards and public consultations. It would be advantageous if he/she is familiar with Bhutan regulations and procedures and ADB policies on environmental impact assessment, environmental management, and public consultation.

3. The Advisor would work intermittently from Q1 2018 to Q1 2024.

**Appendix F-3: Urban Management Advisor (CS-03)**  
**Individual (international, 3 person-months)**

**A. Objective of the consultancy**

1. The objective of the consultancy is to provide advisory services to CDCL on establishing a comprehensive and effective township management system. This will cover human resources, financial management, public relations (including consultations, particularly with women and vulnerable groups), O&M of infrastructure, environmental protection, ICT, GIS, civic services (e.g., permits, records and licenses), social services (e.g. targeted assistance and community participation), planning (e.g. inspections and enforcement of regulations) and public safety.

**B. Scope of work**

2. The advisor shall prepare an outline training program for township management staff and Phuentsholing Thromde staff, prepare terms of reference for the capacity building firm to be recruited separately by CDCL, provide advice to CDCL management on urban management requirements including institutionalizing public participation,<sup>43</sup> and review key outputs of the capacity building firm.

**C. Qualifications**

3. The advisor shall have at least 15 years of experience in city and/or utility management, as well as urban planning base with experience in government housing/land development organizations supporting sustainable and affordable urban developments. Demonstrated experience on human resources and financial management and GIS is required. Experience in Asia is preferred.

4. The Advisor would work intermittently from Q1 2021 to Q1 2024 and coordinate with the investment promotion advisor.

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<sup>43</sup> This will include undertaking participation with women and vulnerable groups.



**Appendix F-4: Investment Promotion Advisor (CS-04)**  
**Individual (international, 3 person-months)**

**A. Objective of the consultancy**

1. The objective of the consultancy is to provide advisory services to CDCL on investment promotion strategy and implementation.

**B. Scope of work**

2. The advisor shall prepare terms of reference for the investment promotion firm, provide advice to CDCL management on investment promotion issues, and review key outputs of the investment promotion firm to be recruited separately by CDCL.

**C. Qualifications**

3. The advisor shall have at least 15 years of experience in real estate, and at least 5 years' experience on marketing, investment promotion of greenfield developments and sustainable/affordable developments. Experience in Asia is preferred.

4. The Advisor would work intermittently from Q4 2021 to Q3 2024.

## Appendix F-5: Sustainable Township Management Capacity Development (CS-05)

### A. Objective of the consultancy

1. The objective of the consultancy is to support the future CDCL Development Authority to establish a comprehensive and effective township management system in line with the agreed roadmap for sustainable township management. The support will cover human resources, financial management, GIS training public relations (including consultations, particularly with women and vulnerable groups), O&M of infrastructure, environmental protection, information technology systems, civic services (e.g., permits, records and licenses), social services (e.g., targeted assistance and community participation), planning (e.g., strategic urban planning, review of development controls, inspections and enforcement of applications and regulations), public safety and contract management (e.g., for outsourcing). The consultancy will also build capacity of Phuentsholing Thromde staff in key areas that support the township, such as strategic urban planning, review of building applications and development controls, and solid waste management.

### B. Scope of work

2. The consultant shall establish business processes and standard operating procedures for high-quality and inclusive township management that ensures environmental protection and supports diversity of housing including affordable housing. The consultant shall provide classroom and on the job training to township management and Thromde staff, and exposure to good global practices in city management. A study tour will be organized and facilitated to a relevant city. The consultant will also procure, install and train staff on a computerized accounting and billing system; and procure computer and other office equipment.

### C. Experts

Position	Inputs (person-months)
Team Leader/City Management Expert (international)	5
Human resources specialist (international)	3
Governance expert (international)	3
Municipal finance expert (international)	3
Financial management expert (national)	6
Town planning expert (international)	3
Deputy Team Leader / Town planning expert (national)	6
Urban infrastructure/O&M expert (international)	3
Asset management expert (international)	3
Communications expert (international)	1
ICT expert (national)	3
Urban environmental expert (international)	1
Unallocated (international)	6
Unallocated (national)	10
Non-key experts	48

3. Total inputs required are 56 person-months (31 international person-months; 25 national person-months). The assignment would be implemented from Q1 2022–Q1 2023.

## Appendix F-6: Investor Promotion and Transaction Advisory Consultant (CS-06)

### A. Background

1. As described in the Integrated Detailed Project Report, the financial feasibility of the project heavily relies on the ability of the project owner to generate sufficient demand for land. This is especially important for development of Zone C, which will provide 60% of the total land area to be supplied by the project. To help ensure sufficient demand for land, it is essential to (i) implement policy reforms aimed at improving the attractiveness of the project to potential investors, and (ii) actively market the project.

### B. Objective of the Consultancy

2. The objective is to provide advisory, implementation and transaction services to CDCL on investor promotion to attract a critical mass of developers, including high-quality developers and anchor tenants that are ready to invest. It is expected that the services will help to maximize lease rates and up-take, and overall profile and success of the land development initiative.

### C. Scope of work

3. To achieve the objective the Consultant will:
- (i) Develop criteria for identifying high-quality developers and anchor tenants to be targeted (including but not limited to past experience in developing similar projects, financial capacity, and ability to generate employment).
  - (ii) Prepare detailed marketing plan, including resource requirements, key performance indicators and annual targets.
  - (iii) Prepare marketing materials.
  - (iv) Implement detailed marketing plan (through roadshows, digital platforms, and other channels).
  - (v) Prepare investor documents (e.g., permits, applications, clearances, transaction documents, etc.).
  - (vi) Support day-to-day operations of the investment promotion office.
  - (vii) Build capacity of CDCL staff for investor promotion.

### D. Experts

Position	Inputs (person-months)
Team Leader/ Investment Promotion Expert - international	4
Financial Expert – international	2
Marketing Expert (Real Estate) – international	3
Marketing Expert(s)– national	24
Lawyer - international	1
Lawyer - national	6
Unallocated - international	6
Unallocated - national	15
Non-key staff (e.g., customer service representatives, office assistants, etc..)	48

4. Total inputs of key experts required are 61 person-months (17 international person-months; 44 national person-months). The assignment would be implemented from Q1 2022–Q2 2024.

**Appendix G: Quarterly Progress Report Template**

**Loan: xx**  
**Quarterly Progress Report**  
**(January–March 20xxx)**

**Executing and Implementing Agency**

# Contents

Chapter 1	Project at A Glance
Chapter 2	Status of the Executing Agency and Consultant(s) Staffing
Chapter 3	Status of Input(s) (Procurement and Consultant Recruitment)
Chapter 4	Progress on Project Output(s)
Chapter 5	Status of Last Action Plan <i>(Previous ADB Review Mission/TPRM / last Progress Report)</i>
Chapter 6	States of Major Loan Covenants
Chapter 7	Key Implementation Challenges and Proposed Actions
Chapter 8	Financial Management
Attachment 1: Status of Ongoing Contract Packages Attachment 2: Status Consultants Staffing Attachment 3: Consultants' Performance Evaluation Report Attachment 4: Detailed reconciliation (by Withdrawal application) of project records and ADB disbursement records (LFIS/GFIS) for the fiscal year to date and cumulative Attachment 5: Status of Financial Management action plan (completed/ongoing) Attachment 6: Status of past audit observations (resolved/ pending)	

## CHAPTER 1 PROJECT AT A GLANCE

Brief project description to be filled by project team (one-time entry; to be update only in case of change)

### 1. LOAN MILESTONE

Milestone	Approval	Signing	Effective	Orig. Closing	Rev. Closing
Dates					
Extensions (Nos)				Time Remaining	

### 2. LOAN UTILIZATION STATUS (\$MILLION)

Cat.	Description	Allocation	Contracts	Unutilized loan balance	Disbursed	Undisb. Contract balance	Overall Undisbursed
		(a)	(b)	(c) =(a-b)	(d)	(e)=(b-d)	(f)=(a-d)

### 3. POTENTIAL LOAN SAVINGS (IF ANY) AND LIKELY CANCELLATION DATE.

### 4. STATUS OF COUNTERPART FUNDS (\$ MILLION)

Required Counterpart Expenditure by the Executing Agency	Budgeted by State Govt. in Current Financial Year	Actual Amount Released	Shortfall /Excess
1.Non-reimbursables Activities fully funded by the executing agency (LA/R&R etc)			
2. Reimbursable (from loan)			

### 5. STATUS OF CONTRACT AWARDS AND DISBURSEMENTS (\$ MILLION) IN CY XXXX

Indicator	Quarter	I	II	III	IV	Total
Contract Award	Target					
	Achieved					
	Balance					
Disbursement	Target					
	Achieved					
	Balance					

[Targets – for the ADB financing compare the actual disbursement with the disbursement projections as per the S curve included in the PAM), Include an analysis of significant variances between planned and actual disbursements; and]

### 6. STATUS OF PROJECT REPORTS TO BE SUBMITTED TO ADB

Type of Reports	Frequency	Due Date	Status
Environmental Monitoring Report			
Social Monitoring Report			
Audited Project Accounts			
Gender Action Monitoring Report			

## CHAPTER 2 STAFFING

### A. STATUS OF PMU/PIU STAFFING

1 a	Is the Project Director (PD) currently posted?	Yes/ No	Nature of PD posting	Part Time/Full Time
1 b	Current PD is posted since when?	xx		
2 a	No. of PMU staff as agreed with ADB or as per Org Structure in PAM/FAM/RRP.	xx	Actual no. of PMU staff in place at present.	
			Full Time	
			Additional Charge	
2 b	Details of PMU Positions which are currently vacant.	-		
3 a	Are PIUs required to be established in the Project?	Yes/ No	Are PIUs fully staffed	
3 b	No. of PIUs required as agreed with ADB in Org Structure in PAM/FAM/RRP	11	Actual no. of PIUs	

### B. MOBILIZATION STATUS OF CONSULTANT'S STAFFING (KEY EXPERT POSITIONS) AND THEIR PERFORMANCE

(Please provide your overall feedback in narrative statement e.g. key issues overall performance etc. and attach staffing status and Consultant's Performance Evaluation Report (PER): Attachment 2 & 3)

### CHAPTER 3 STATUS OF PROCUREMENT & CONTRACT MANAGEMENT

#### A. Status of Contracts Awarded

<b>Cost Category under which Procurement is carried out</b>	<b>ADB Financing</b>	<b>Cumulative Contract Awards</b>	<b>Uncontracted Loan Balance</b>	<b>Cumulative Disbursements</b>
Civil Works	\$..... million	\$..... million (xx Pkgs awarded)	\$..... million	\$..... million
Equipment	\$..... million	\$..... million (xx Pkgs awarded)	\$..... million	\$..... million
Consultants	\$..... million	\$..... million (xx Pkgs awarded)	\$..... million	\$..... million
<b>Total</b>	<b>\$..... million</b>	<b>\$..... million</b>	<b>\$..... million</b>	<b>\$..... million</b>

(Please attach Contract Monitoring Sheet indicating status of each of the awarded contracts in Attachment 1)

#### B. Status of Remaining Procurement

<b>S N</b>	<b>Component</b>	<b>Remaining Contract Packages</b>			
		<b><i>No of pkgs with cost</i></b>	<b><i>Brief Scope</i></b>	<b><i>Current Stage</i></b>	<b><i>Target Date of Award</i></b>
1	Civil Works	xx (\$... million)	km of road rehabilitation/ house service connections in xx towns	- IFB to be issued - Under Tech Evaluation - Under Fin. Evaluation - Under Contract Negotiation - Under Contract Signing	MM/YYYY
2	Equipment	xx (\$...million)			MM/YYYY
3	Consultants	xx (\$...million)			MM/YYYY
	<b>Total xx Packages</b>	<b>\$xx million</b>			<b>(Target date of the latest procurement)</b>



**CHAPTER 4**  
**PROGRESS ON PROJECT OUTPUTS (AS IN DMF)**

Output	Monitoring Indicators/Targets	Progress		Remarks
		Last Quarter	Current Quarter	

*Detailed status of ongoing contracts is in Attachment 1.*

**CHAPTER 5**  
**STATUS OF ACTION PLAN**

(Please include issues previously discussed during previous  
*ADB Review Missions/TPRM/Progress Report* and their compliance/status)

<b>SN</b>	<b>Issues/ Action Plan</b>	<b>Responsibility</b>	<b>Time Frame</b>	<b>Status</b>

**CHAPTER 6**  
**COMPLIANCE WITH MAJOR COVENANTS**

<b>S.N.</b>	<b>Covenants</b>	<b>Compliance (Y/N) *</b>	<b>Remarks</b>
1			
2			
3			
4			
5			
6			

***\*In case of any exceptions, deviations, non-adherence identified, please provide details as an “Annexure” to the Quarterly Project Report highlighting the shortcomings and proposed time-bound corrective action plans to achieve compliance.***

**CHAPTER 7**  
**(KEY IMPLEMENTATION ISSUES/ CHALLENGES**  
**AFFECTING PROJECT PROGRESS AND PROPOSED ACTIONS)**

<b>S.N.</b>	<b>MAJOR ISSUES*</b>	<b>Actions</b>	<b>Responsibility</b>	<b>Time Frame</b>
<b>1</b>	<b>Planning Issues.</b> (Change in design/scope/implementation arrangement/cost overrun/staffing.....)			
<b>2</b>	<b>Contract and Construction Issues.</b> Mobilization of Contractor(s)/ Issuance of Good for construction drawings/ Utility Sifting /Handing over site/ variations order etc. /Pending Payments			
<b>3.</b>	<b>Safeguard issues during Construction</b> (Land acquisition / Resettlement /tree cutting/ to the contractor(s))			
<b>4.</b>	<b>Other Issues.</b>			

*\*In case issue identified, please provide details e.g. details of change in design/ implementation arrangements, pending safeguards actions, encumbrance free sites to be handed over to the contractor (numbers/kilometer) with targeted date by which the same could be handed over to the contractor; If all Drawings/Design are not issued/approved, name of such Drawings/Design and targeted date by which the same could be handed over to the contractor; Decision pending with employer and consultants (such decision could be approval of, variations, extra item rate, etc.)*

## **CHAPTER 8**

### **(FINANCIAL MANAGEMENT AND RECONCILIATION WITH ADB DISBURSMENT RECORDS)**

#### **A. Reconciliation of Project records and ADB's disbursement records.**

1. [Include here a summary reconciliation of project records and ADB disbursement records (LFIS) for the reporting period and cumulative from project inception to end of the reporting period.
2. Explain reasons for discrepancies and outline follow-up actions required (if any). Attach a detailed reconciliation by withdrawal application as per Attachment 4.

#### **B. Status of the project's Financial management arrangements**

3. Here include the following:
  - (i) Describe any problems in the existing financial management arrangements and /or flow of funds and any significant changes occurred during the reporting period (e.g., financial management staff turnover, implementation of new financial systems, emerging financial management related risks etc..).
  - (ii) Summarize the status of each agreed action in the financial management action plan outlined in the PAM. Attach a detailed log as per Attachment 5].
  - (iii) Outline the status of recommendations and immediate actions provided by ADB as part of the APFS/AEFS review (if any) and financial management related recommendations agreed during ADB review missions (if any).
  - (iv) Summarize the status of Status of past audit observations (if any). Attach a detailed log as per Attachment 6.

**Attachments:**

Attachment 4. Detailed reconciliation (by Withdrawal application) of project records and ADB disbursement records (LFIS/GFIS) for the fiscal year to date and cumulative.										
WA details			Per project records/APFS (Amount recorded in the project Financial statements as reimbursement, direct payment, etc..)				Per ABD disbursement records LFIS/GFIS (actual Paid)			
Withdrawal application No (WA)	Disbursement method (reimbursement, direct payment, etc..)	Time period covered in the WA	Date	In local currency (as recorded in project records/ financial statements)	exchange rate	USD equivalent (A)	Value date	In USD (B)	Difference (A-B)	Reason for difference (i.e. timing forex. Pending rejected)
1		1-31.3.2020	XX			XX		XX		
2			XX			XX		XX		
3			XX			XX		XX		
etc..										
<b>Total in Fiscal year to date</b>			XX			XX		XX		
<b>Total Cumulative to date</b>			XX			XX		XX		

Attachment 5: Status of Financial Management Action Plan					
Key Risk	Risk Mitigating Activity	Timeline	Responsible Entity	Current status (implemented/Pending)	Remarks (including planned actions and timeline in case of noncompliance)

Attachment 6: Status of external audit observations – Cumulative from inception to end of reporting period						
Recommendation/audit observation	external audit recommendation	Date of the recommendation	Planned action to address the recommendation	Responsibility	Current Status of the planned action (pending/resolved)	Remarks



[illegible]

Total Payments				
Total Project Cost				

\*any significant variances are to be explained in the notes

Project Director:  
[Signature]

Finance Manager:  
[signature]

### 3. Statement of Disbursement By Financing Source for the year ended DD/MM/YYYY

Statement of Disbursement	Note	Current Year	Prior Year	Cumulative Project to Date
<b>ADB grant - Funds claimed during the year</b>	7.1			
Reimbursement <sup>3</sup>				
Imprest Fund <sup>3</sup>				
Direct Payment				
<b>Subtotal</b>				
<b>ADB Loan - Funds claimed during the year</b>	7.2			
Reimbursement <sup>3</sup>				
Imprest Fund <sup>3</sup>				
Direct Payment				
<b>Subtotal</b>				
<b>ADB additional Loan - Funds claimed during the year</b>	7.3			
Reimbursement <sup>3</sup>				
Imprest Fund <sup>3</sup>				
Direct Payment				
<b>Subtotal</b>				
<b>ADB additional Grant Funds claimed during the year</b>	7.4			
Reimbursement <sup>3</sup>				
Imprest Fund <sup>3</sup>				
Direct Payment				
<b>Subtotal</b>				

\*list of WAs/claims submitted to be disclosed in the notes

Project Director: [Signature]

Finance Manager:  
[signature]

**4. Statement of Imprest/Advance account for the year/period ended  
DD/MM/YYYY (for each advance account separately)**

Account details: XXXX			
	Notes	Current Year	Prior Year
Balance brought forward from previous period			
Add: Advance <sup>1</sup> Replenishment received during the year/period <sup>1</sup> Interest Earned			
Subtotal (A)			
Deduct: Payments made during the year/period Replenishment /Liquidation <sup>1</sup> Expenditure yet to be claimed  Amount refunded during the year/period			
Closing Balance (B)			
As per bank statement (copy attached)			

Project Director: [Signature]

Finance Manager: [signature]

## **NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED [YEAR END DATE]**

### **1. Project Information**

#### **1.1 Key highlights:**

*Project title*

*Funded by:*

*Management:*

*Executing Agency*

*Implementing agencies*

*Start Date:*

*Closing date:*

*Project Duration:*

*Funding Sources/modality/amount*

#### **1.2 Impact and Outcome**

### **2. Summary of Significant Accounting policies.**

*2.1 Basis of preparation*

*2.2. Cash Basis of accounting*

*2.3. Recognition of Receipts and payments*

*2.4. Third party payments*

*2.5. Presentation currency*

*2.6 Foreign Currency Translation*

*2.7. Changes in Accounting policies*

*2.8 Reporting period*

*2.9 Comparatives*

### **3. Funds received**

*3.1 -3.4 Funds received from ADB /List of WAs by financing source*

*3.5 Funds received from the Government*

*3.6. funds received from Other*

*etc..*

### **4. Payments**

*List of Payments from the advance account/sub-advance account.*

*List of third-party payments/direct payments.*

### **5. Variances**

*List and explain any significant variances between budget and actual expenditures*

### **6. Opening and closing balances**

*List details of the opening balances*

*List details of the closing balances*

**7. Disbursements/Withdrawal Applications**

*Include detailed list of WAs claimed from ADB with the following breakdown : i) funding source (ADB loan, ADB grant, ADB additional loan, ADB additional grant), ii) WA number, iii) time period in which expenditures were incurred iv) the amount claimed and currency, v) date submitted, vi) disbursement method, vii) the amount disbursed by ADB and viii) used exchange rate.*

**8. Special notes for the FY**

*Disclose a break down Interest Expenses/ Financial Charges incurred as part of the project for the current year, past year and cumulatively.*