

Project Administration Manual

Project Number: 48102-002
October 2022

People's Republic of China: Qinghai Haidong Urban-
Rural Eco Development Project

ABBREVIATIONS

ADB	–	Asian Development Bank
AAOV	–	average annual output value
DMF	–	design and monitoring framework
EIA	–	environmental impact assessment
EMP	–	environmental management plan
FSR	–	feasibility study report
HMG	–	Haidong Municipal Government
LAR	–	land acquisition and resettlement
LIEC	–	loan implementation environment consultant
MTR	–	midterm review
NCB	–	national competitive bidding
NRW	–	nonrevenue water
O&M	–	operation and maintenance
PAM	–	project administration manual
PCR	–	project completion report
PIU	–	project implementation unit
PIO	–	project implementation office
PMO	–	project management office
PPMS	–	project performance monitoring systems
PRC	–	People's Republic of China
QCBS	–	quality- and cost-based selection
SGAP	–	social and gender action plan
SOE	–	statement of expenditure
SPS	–	ADB Safeguard Policy Statement (2009)

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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 Government and Asian Development Bank (ADB) policies and procedures. The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Haidong Municipal Government (HMG), as the executing agency and represented by the Haidong Project Management Office (PMO), and Ping'an Water Affairs Bureau, Ping'an Forestry Resource Bureau; and Ping'an Housing, Planning, and Construction Bureau in Ping'an District; and Ledu Water Affairs Bureau, and Ledu Housing, Planning, and Construction Bureau in Ledu District are the proposed implementing agencies that will be wholly responsible for the implementation of the project, as agreed jointly between the borrower and ADB; and in accordance with government and ADB policies and procedures. ADB staff is responsible to support implementation including compliance by the HMG of their obligations and responsibilities for project implementation in accordance with ADB policies and procedures.

At loan negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the loan and project agreements. Such agreements shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the loan and project agreements, the provisions of the loan and project 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. Qinghai Province, situated mostly on the Qinghai–Tibetan plateau in northwestern PRC, has long been home to a number of ethnic groups due to its location along the old Silk Road.¹ Ethnically diverse and featuring a beautiful and rugged landscape with mountains and pastures, Qinghai is the source of the Mekong, Yangtze, and Yellow rivers, making it a socially and environmentally significant province for the PRC.² Given the fragile terrain, Qinghai is promoting urbanization within a northeastern corridor linking its capital, Xining, to Lanzhou, in Gansu Province. While protecting its natural resources, Qinghai also aims to protect urban areas from natural hazards such as flash flooding, which has increased in cities across the PRC as a result of impermeable paved surfaces, deforestation, poor waterway management, and an overall decrease in natural water collection areas.

2. Haidong, the second-largest city in Qinghai, is located within this corridor, immediately east of Xining. A city of 1.7 million residents (30.0% of Qinghai's total population of 5.7 million), Haidong upgraded to a prefecture-level city in 2013, denoting its importance in regional development. Haidong has two districts—Ping'an and Ledu—and four counties.³ Both districts straddle the Huangshui River, an important tributary of the Yellow River. Strengthening the ecological function of the Huangshui River to protect these critical watersheds is an urgent priority. This involves managing flood risks, reducing soil erosion, improving water quality and availability, increasing climate change resilience, and limiting urban expansion.

3. According to the Haidong master plan, the two districts are expected to add more than half a million residents by 2030.⁴ This will put pressure on an already fragile landscape; Haidong's location in the river valley, surrounded by steep and barren mountains, makes it vulnerable to flash flooding. According to Haidong's historical records, flood events of different levels have occurred every year since 1949, with large-scale floods every 6–7 years. While some flood infrastructure is in place, it is poorly maintained and unevenly distributed across urban and rural areas. Mountainside soil erosion exacerbates flooding risks, increasing the sediment loads and threatening agricultural land downstream.

4. As Haidong continues to grow, public services in urban and rural areas remain inadequate; without upgrades, they will further fail to meet local water supply and solid waste disposal needs. The steep terrain surrounding Haidong has led to the development of small villages in the mountains, including minority villages, which will suffer socially and economically if public service investments remain unbalanced between rural and urban areas.

5. **Strategic fit.** The proposed project is closely aligned with both the PRC government's priorities and the country strategy and operations of the Asian Development Bank (ADB). The PRC's Thirteenth Five-Year Plan, 2016–2020, the National New-type Urbanization Plan (2014), and ADB's PRC country partnership strategy, 2016–2020, support strategic priorities, in the areas of urban and environmental management.⁵ Key thematic areas that coincide with the proposed

¹ Qinghai is home to 54 of the 56 ethnic groups in the PRC. It is also one of the less-developed western regions targeted for accelerated socioeconomic development and poverty reduction by the preferential policies under the National Strategy for Development of the West.

² Haidong—located along the Silk Road near a number of significant Buddhist temples, Qinghai Lake, and the train link to Lhasa—attracts many tourists in summer, which generates significant revenue and local employment.

³ The current population of Ping'an District is 68,100 while the current population of Ledu District is 109,800.

⁴ Government of the PRC, Haidong Municipal Government. 2013. *Master Planning of Haidong Urban Area (2013–2030)*. Haidong.

⁵ Government of the PRC, State Council. 2015. *National Economy and Social Development Thirteenth Five-Year Plan, 2016–2020*. Beijing. Government of the PRC, State Council. 2014. *National New-type Urbanization Plan (2014–*

project include (i) strengthening climate resilience; (ii) promoting sustainable use of land and natural resources; (iii) strengthening water security; and (iv) promoting integrated water resource management, wetland protection, and afforestation.

6. **Lessons and special features.** The project design incorporates lessons from previous ADB-financed projects and studies.⁶ These cover the need for (i) an integrated approach to river rehabilitation, including structural and nature-based measures; (ii) strong leadership and governance in urban and environmental management; and (iii) better coordinated decision-making on integrated water resource management. These lessons are reflected in several innovative and special features: (i) preparatory in-depth provincial, local, and project-specific climate risk and vulnerability assessments (CRVAs) to pinpoint and raise awareness of climate-related risks, and build ecosystem-friendly adaptation measures into the design of various infrastructure components; (ii) reuse of treated urban wastewater for mountainside forest irrigation, which will showcase an integrated approach to managing both water scarcity and soil erosion; (iii) use of nature-based measures for the temporary storage of floodwaters; and (iv) institutional strengthening to support better coordination and project implementation with regard to integrated water resource management.⁷

A. Impacts and Outcome

7. The expected impacts will be enhanced environmental protection, ecological rehabilitation, and climate change adaptation; and improved flood control standards and urban aesthetics along the Huangshui River (footnotes 5–6). The intended outcome will be an improvement in ecological and environmental services in Haidong.

B. Outputs

8. The project will have four outputs: (i) integrated flood plain management infrastructure is provided for Huangshui River; (ii) measures to control soil erosion in Haidong's urban catchment are implemented; (iii) rural–urban water supply and solid waste infrastructure is constructed; and (iv) project management capacity is strengthened.

9. Output 1 will support the stabilization of riverbanks and improve integrated flood risk management, rehabilitate riverine wetlands, increase forest coverage within riparian areas, provide environmental education, and improve recreational opportunities for residents through three components. First, the rehabilitation of existing and the addition of new embankments along the main Huangshui River channel will stabilize the riverbanks, securing both agricultural and urban land. Based on the CRVA, climate-proofing measures were incorporated into the project design; the embankment heights were increased to accommodate the projected average increase in flood flows (8%). Second, the establishment of a riverside greenbelt, including new vegetation and pedestrian paths, will allow for public space and seasonal flood water storage, improving local water absorption and decreasing downstream flood risks.

2020). Beijing. ADB. 2016. *Country Partnership Strategy: Transforming Partnership: People's Republic of China and Asian Development Bank, 2016–2020*. Manila.

⁶ Projects that provided lessons include ADB. 2012. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for the Gansu Urban Infrastructure Development and Wetland Protection Project*. Manila; ADB. 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for the Henan Hebi Qihe River Environmental Improvement and Ecological Conservation Project*. Manila.

⁷ Climate Risk and Vulnerability Assessment (accessible from the list of linked documents in the RRP, Appendix 2).

10. Output 2 will focus on controlling soil erosion to reduce siltation in Huangshui River, pursue dust suppression, and set an urban growth boundary to protect the fragile mountainous landscape adjacent to Ping'an District's urban area. Recognizing the increasing local water scarcity (identified in the CRVA), treated urban wastewater from the existing Ping'an wastewater treatment plant will provide irrigation for the establishment of a mountainside forest. Output 2 will have two components: (i) planting new vegetation to establish a mountainside greenbelt; and (ii) expanding the irrigation network to include approximately 663 hectares of existing mountainside greenbelt using treated wastewater. The irrigation of these afforested areas with reused water has minimal impact on existing water resources while decreasing soil erosion.

11. Output 3 will focus on providing critical urban and rural services; it will contribute to reducing water insecurity for rural and urban areas in Ping'an District, as well as improving solid waste treatment capacity for Ledu District. Output 3 will have three components: (i) building three water treatment plants and new conveyance pipe networks for raw and potable water; and (ii) adding 850,000 cubic meters of capacity to the Ledu landfill and building a leachate treatment facility; and (iii) building a new water treatment plant with the design capacity of 100,000 m³ per day and the associated pipelines, a new subcomponent after midterm review (MTR). Based on the CRVA, climate-proofing measures include providing an alternative supply of drinking water to the Ping'an urban area to reduce the water scarcity risk, and increasing drainage and leachate collection capacity at the landfill site. The provision of basic services to urban and rural areas aims to reduce the rural-urban infrastructure gap.

12. Output 4 will support consulting services, training, and equipment to boost the capacity of the executing and implementing agencies for (i) project implementation and operational management, (ii) financial management, (iii) land operation and maintenance, (iv) river smart management, (v) flood risk management, and (vi) nonrevenue water management. The output will also contribute to institutional strengthening, promote cooperation and decision-making at the river basin level, and develop a water safety plan to mitigate water insecurities in Haidong. A capacity development submodule was also included for climate-resilient urban development planning and regional water resource management.

13. **Innovation and special features.** The project incorporates several innovative and special features, as summarized below:

- (i) Climate risk and vulnerability assessment to raise awareness and identify risks related to climate change in Haidong.
- (ii) Incorporation of climate risk and vulnerability assessment in the design of flood protection infrastructure.
- (iii) Preparation of flood risk maps from 5-year to 100-year return period flood events. The project recommends that during implementation phase, land use policies in the Ping'an and Ledu districts should be updated to reflect the findings of the flood risk maps and restrict development in flood-prone areas.
- (iv) Water balance study and nonrevenue water (NRW) assessment to address potable water security concerns in Ping'an District.
- (v) Use of reclaimed water for mountainside irrigation will showcase an integrated approach to address water supply and soil erosion challenges.
- (vi) Demonstration of water quality and flood attenuation benefits provided by wetlands and riverfront parks.

Table 1: Project Outputs and Subcomponents

Name	Description	Estimated Cost (CNY million)^a
Output 1: Integrated Flood Plain Management Infrastructure for Huangshui River Provided		
1.1 Huangshui river channel, Ping'an segment	Embankment and blockage removal in Huangshui river channel, Ping'an segment: The length of embankment is 15.710 km, including: (i) 11.368 km for the main stream, (ii) 4.342 km for the tributary; (iii) 8 receding culverts, (iv) 103,000 river barriers, and (v) 14.35 km for the flood control road.	112.96
1.2 Huangshui river channel, Ledu urban area segment	Embankment and blockage removal in Huangshui river channel, Ledu urban area segment. 15 km embankment on both sides of the Huangshui river channel (7.5 km on each side) from Haidong avenue No. 1 bridge to the Shuimoying bridge.	Cancelled and the loan savings to be reallocated
1.3 Huangshui river channel, Ledu rural area segment	Embankment and blockage removal in Huangshui river channel, Ledu rural area segment. The length of embankment is 41.979 km, flood control road 32.985km, 60 receding culverts, 2 water diversions, 7 culverts, including. Upstream: The length of embankment is 17.903 km, flood control road 13.268 km, 10 receding culverts. Downstream: The length of embankment is 24.068km, flood control roads 19.717km, 50 backwater culverts, 2 water diversions, culverts and 7 bridges.	205.52
1.4 Ping'an district, Huangshui river riverside greenbelt	Construction of Ping'an district, Huangshui river riverside greenbelt, includes: (i) 2018 Ping'an District key projects, and (ii) Huangshui River basin environmental comprehensive improvement (along the riverfront road) greening project, total greening area is 125.67 mu (8.4 ha)	4.31 Completed by NBF, will still remain in the project scope
1.5 Yizhou ecological wetland park	West side from the intersection of Lan-Xi highway and Huangshui river near Baima temple, and east side to intersection of Lan-Xi highway and Huangshui river near Xidao, upgrade of the wetland area with total area of 20 ha (with planned total areas of 86 ha).	Cancelled and the loan savings to be reallocated
1.6 Huangshui River Hehuang New District Segment New District	Construction of 7.41 km flood control embankment, cliff body restoration of 35.83 ha hm ² , and soil restoration of 20.81 ha hm ² , and green ecological conservation of 33.14 ha hm ² .	424.38 Newly Added
Output 2: Measures to Control Soil Erosion in Haidong's Urban Catchment Implemented		
2.1 Ping'an district mountain edge greenbelt	Construction of Ping'an district mountain edge greenbelt, includes: (i) Haidong Nanbei Mountain greening project Caojiabao airport perimeter Greening reforestation project (Jianshan area) (greening area of 13174 mu), and (ii) 2019 Huangshui River two shore ecological repair Landscape greening project (greening area 345 mu), The total greening area is 13519 mu.(901.3 ha)	58.40 Completed by NBF, will still remain in the project scope
2.2 Ping'an wastewater treatment plant	Expansion of pipeline network from Ping'an wastewater treatment plant for South mountain landscaping water irrigation system with total reclamation capacity of 9,500 m3 per day (m3/day), including three pump stations, 76.4 km of	45.70

Name	Description	Estimated Cost (CNY million) ^a
water reclamation phase II	pipes and 15 water storage tanks.	
Output 3: Rural Water Supply and Urban Solid Waste Infrastructure Constructed		
3.1 Wenzukou reservoir and Fatai reservoir water supply	Construction of Fatai reservoir water treatment plant (1,500 m3/day), Wenzukou reservoir water treatment plant (1,500 m3/day), Sanhe Township water treatment plant (20,000 m3/day), raw water conveyance pipelines, and distribution pipelines.raw water conveyance pipelines, and distribution pipelines.	125.46
3.2 Ledu sanitary landfill expansion	Construction of the phase 3 and phase 4 of the landfill, with capacity 850,000 m3.	29.47
3.3 Yangjia WTP& Pipeline	Construction of water intake, transformation and distribution pipelines with a design scale of 150,000 cubic meters per day, water plants with a design capacity with 100,000 cubic meters per day, laying pipelines and related building ancillary.	732.95 Newly Added
Output 4: Project Management Capacity Strengthened		
4.1 Capacity building and institutional strengthening	Consulting service, training, and equipment upgrade aimed at strengthening the executing agency and implementing agencies' capacity in project implementation and operational management to ensure smooth project implementation and sustainability in future operation.	18.50

^a The budget is indicative and includes only direct costs (excludes interest during construction, resettlement, etc.).
Source: Asian Development Bank estimates.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Indicative Activities	2016												2017												Responsible Unit
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
Procurement agent recruited																									HMG and/or PMO
Advance contracting actions																									Executing agency and/or implementing agencies
Retroactive financing actions																									Executing agency and/or implementing agencies
Submission and approval of FCUP and PEOP																									NDRC
Approval of FSRs																									PDRC
Establishment of project implementation arrangements																									Executing agency and/or implementing agencies
ADB management review																									ADB
Loan negotiations																									ADB, MOF, HPG, HMG
ADB's Board approval																									ADB
Loan signing																									MOF, HMG, PFD
Government legal opinion provided																									NDRC
Government budget inclusion																									HMG
Loan effectiveness																									ADB, MOF

ADB = Asian Development Bank, FCUP = foreign capital utilization plan, FSR = feasibility study report, HMG= Haidong Municipal Government, HPG = Haidong Provincial Government, MOF = Ministry of Finance, MRM = management review meeting, NDRC = National Development and Reform Commission, PDRC = Provincial Development and Reform Commission, PEOP = project evaluation opinion report, PFD = Provincial Finance Department, PMO = project management office.

Source: Asian Development Bank estimates.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations—Roles and Responsibilities

Table 3: Project Implementation Organization

Project Implementation Organizations	Management Roles and Responsibilities
Haidong municipal government	<ul style="list-style-type: none"> (i) Responsible for overall implementation of the project. (ii) Provide overall policy guidance, facilitate inter-agency coordination, and resolve any institutional problems that may affect the project implementation. (iii) Supervise the implementing agencies. (iv) Facilitate disbursement. (v) Facilitate audit of project accounts. (vi) Responsible for providing counterpart funds.
Qinghai provincial finance department	<ul style="list-style-type: none"> (i) Provide overall project guidance and coordination. (ii) Establish and manage the project imprest account. (iii) Submit withdrawal applications to ADB. (iv) Manage and supervise loan repayment.
Haidong city finance bureau, Haidong project management office	<ul style="list-style-type: none"> (i) Provide oversight and daily management of the project preparation and implementation. (ii) Ensure coordination across sectors. (iii) Responsible for overall guidance, coordination, supervision, and management for implementation of the project, including recruitment of project consultants. (iv) Review withdrawal applications prepared by the implementing agencies and facilitate submission to ADB through HMG. (v) Update procurement plan. (vi) Provide ADB with (a) quarterly progress reports, (b) semiannual EMPs, (c) annual audit reports, and (d) project completion report. (vii) Coordinate training and capacity development activities. (viii) Maintain separate accounting records for the project, and prepare project financial statements and have them audited. (ix) Carry out project performance and compliance monitoring. (x) Disclose project-related information and documents in accordance with ADB guidelines. (xi) Coordinate between implementing agencies and Haidong city finance bureau for financial transactions and payment.
Ping'an water affairs bureau (underneath Ping'an District Government) (implementing agency 1)	<ul style="list-style-type: none"> (i) Responsible for implementing Huangshui river channel, Ping'an segment subproject. (ii) Responsible for implementing Wenzhukou reservoir and Fatai reservoir water supply subproject. (iii) Prepare withdrawal applications for relevant project expenses. (iv) Participate in training and capacity development activities. (v) Maintain separate accounting records for the project.
Ping'an forestry resource bureau, (underneath Ping'an District Government) (implementing agency 2)	<ul style="list-style-type: none"> (i) Responsible for implementing Ping'an district Huangshui river riverside greenbelt subproject. (ii) Responsible for implementing Ping'an district mountain edge greenbelt subproject. (iii) Prepare withdrawal applications for relevant project expenses. (iv) Participate in training and capacity development activities.

Project Implementation Organizations	Management Roles and Responsibilities
	(v) Maintain separate accounting records for the project.
Ping'an housing, planning, and construction bureau (underneath Ping'an District Government) (implementing agency 3)	(i) Responsible for implementing Ping'an WWTP water reclamation phase II subproject. (ii) Prepare withdrawal applications for relevant project expenses. (iii) Participate in training and capacity development activities. (iv) Maintain separate accounting records for the project.
Ledu housing, planning, and construction bureau (underneath Ledu District Government) (implementing agency 4)	(i) Responsible for implementing Ledu sanitary landfill expansion subproject. (ii) Prepare withdrawal applications for relevant project expenses. (iii) Participate in training and capacity development activities. (iv) Maintain separate accounting records for the project.
Ledu water affairs bureau (underneath Ledu District Government) (implementing agency 5)	(i) Responsible for implementing Huangshui river channel, Ledu rural area segment subproject. (ii) Prepare withdrawal applications for relevant project expenses. (iii) Participate in training and capacity development activities. (iv) Maintain separate accounting records for the project.
Qinghai Haidong Huangshui River New District Management Committee (implementing agency 6)	(i) Responsible for implementing Huangshi River Hehuang New District segment subproject; Cliff Soil Reinforcement and Restoration subproject; River Terrace Water and Soil Conservation subproject; and Wetland Ecological Conservation subproject. (ii) Prepare withdrawal applications for relevant project expenses. (iii) Participate in training and capacity development activities. (iv) Maintain separate accounting records for the project.
Haidong Water Affair Group Co., Ltd. (implementing agency 7)	(i) Responsible for Water Intake & Raw Water Pipeline subproject; Yangjia Water Supply Civil Work and Equipment Supply and Installation subproject; and Water supply distribution system subproject. (ii) Prepare withdrawal applications for relevant project expenses. (iii) Participate in training and capacity development activities. (iv) Maintain separate accounting records for the project.
ADB	(i) Provide the HMG and implementing agencies with guidance to ensure smooth project implementation and achieve the desired development impacts and their sustainability (ii) Conduct regular loan review, a midterm review, and project completion review missions (iii) Review and approve procurement actions (iv) Approve withdrawal applications and disburse loan proceeds

ADB = Asian Development Bank, EMP = environmental management plan, HMG = Haidong Municipal Government, WWTP = wastewater treatment plant.

Source: Asian Development Bank.

Table 4: Implementation Arrangement

No.	Component	Description	Implementing Agencies
Output 1: Integrated Flood Plain Management Infrastructure for Huangshui River Provided			
1.1	Huangshui river channel, Ping'an segment	Embankment and blockage removal in Huangshui river channel, Ping'an segment	Ping'an water affairs bureau (underneath

No.	Component	Description	Implementing Agencies
			Ping'an District Government)
1.2	Huangshui river channel, Ledu urban area segment	Embankment and blockage removal in Huangshui River channel, Ledu urban area segment	Cancelled and the loan savings to be reallocated.
1.3	Huangshui river channel, Ledu rural area segment	Embankment and blockage removal in Huangshui river channel, Ledu rural area segment.	Ledu water affairs bureau (underneath Ledu District Government)
1.4	Ping'an district Huangshui river riverside greenbelt	Construction of Ping'an district Huangshui river riverside greenbelt	Completed by NBF
1.5	Yizhou ecological wetland park	Upgrade of the ecological wetland park	Cancelled and the loan savings to be reallocated.
1.6	Huangshui River Hehuang New District Segment New District	Construction of 7.41 km flood control embankment, cliff body restoration of 35.83 ha hm ² , and soil restoration of 20.81 ha hm ² , and green ecological conservation of 33.14 ha hm ² .	Qinghai Haidong Huangshui River New District Management Committee
Output 2: Measures to Control Soil Erosion in Haidong's Urban Catchment Implemented			
2.1	Ping'an district mountain edge greenbelt	Construction of Ping'an district mountain edge greenbelt	Completed by NBF
2.2	Ping'an wastewater treatment plant water reclamation phase II	Secondary and tertiary pumping stations and pipeline network for south mountain landscaping water irrigation system	Ping'an housing, planning, and construction bureau (underneath Ping'an District Government)
Output 3: Rural Water Supply and Urban Solid Waste Infrastructure Constructed			
3.1	Wenzhukou reservoir and Fatai reservoir water supply	Construction of Fatai reservoir WTP (1,500 m ³ /day), Wenzhukou reservoir WTP (1,500 m ³ /day), Sanhe township WTP (20,000 m ³ /day), raw water conveyance pipelines, and distribution pipelines.	Ping'an water affairs bureau (underneath Ping'an District Government)
3.2	Ledu sanitary landfill expansion	Construction of cell 3 and cell 4 of the landfill, with 850,000 m ³ capacity	Ledu housing, planning, and construction bureau (underneath Ledu District Government)
3.3	Yangjia WTP and Pipeline	Construction of water intake, transformation and distribution pipelines with a design scale of 150,000 cubic meters per day, water plants with a design capacity with 100,000 cubic meters per day, laying pipelines and related building ancillary facilities	Haidong Water Affair Group Co., Ltd.
Output 4: Project Management Capacity Strengthened			
4.1	Capacity building and institutional strengthening of the executing agency and/or implementing agencies.	Institutional strengthening for effective functioning of executing agency and implementing agency	Haidong Project Management Office

m³ = cubic meter, PMO = project management office, WTP = water treatment plant.

Source: Asian Development Bank.

B. Key Persons Involved in Implementation

Table 5: Key Persons in Project Leadership

Executing Agency

Haidong Municipal Government	Officer's Name: Li Qingchuan Position: Vice mayor Telephone: +86(0)972 8686789 Email address: xsb2237@163.com Office Address: No.208 Ping'an Avenue, Ping'an District, Haidong City, Qinghai Province, China 810699
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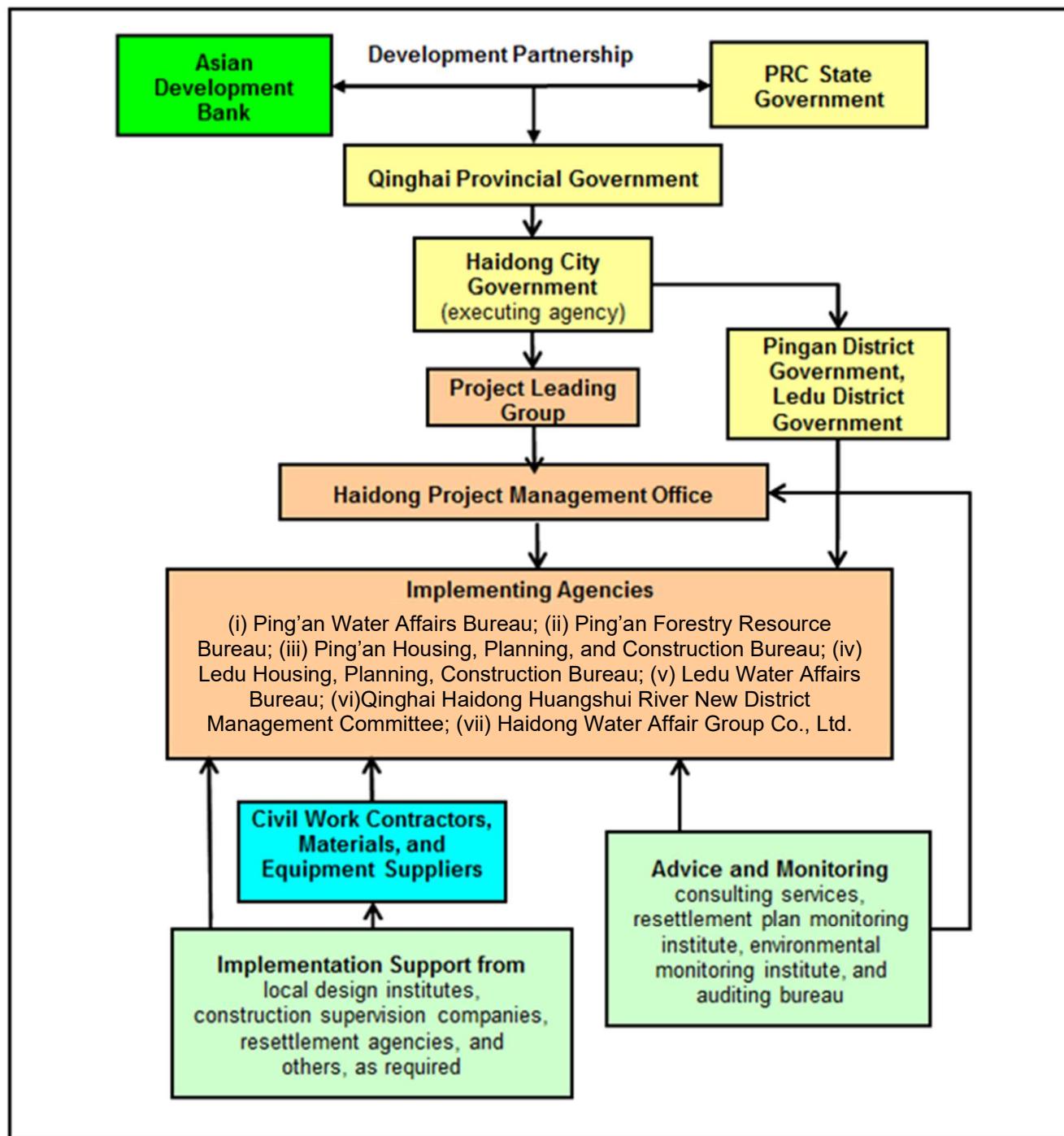
Asian Development Bank

Urban and Social Sectors Division (EASS)	Staff Name: Ms. Yolanda Fernandez Lommen Position: Country Director Tel.: +86 10 8573 0909 Fax: +86 10 8573 0808 E-mail: yfernandez@adb.org
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Mission Leader

Staff Name: Liu Xinjian Position: Senior Project Officer (Energy) Telephone No.: +86 10 8573 0831 Email address: xinjianliu@adb.org
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C. Project Organization Structure



PRC = People's Republic of China.

IV. COSTS AND FINANCING

15. The PRC government has requested a loan of \$150 million from ADB's ordinary capital resources to help finance the project. The loan will have a 26-year term, including a grace period of 5 years, a straight-line repayment option, an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, and a commitment charge of 0.15% per year. The interest during construction to be capitalized in the loan, and such other terms and conditions to be set forth in the loan and project agreements. The average loan maturity is 15.75 years and the maturity premium payable to ADB is 0.10% per annum. ADB's Controller's Department will provide the final confirmation and issue the loan repayment schedule at loan negotiations. Financial charges during implementation will be capitalized.

16. The project closed date is originally 30 September 2022, the project closing date is extended by two years until 30 September 2024.

17. The ADB loan will finance 48.8% of the project cost, including civil works, equipment, installation, and capacity strengthening after mid-term adjustment. The borrower of the loan is the PRC government and will make the loan available, through the Qinghai Provincial Government (QPG), to Haidong Municipal Government (HMG) on the same terms and conditions as those of the ADB loan. HMG will assume the foreign exchange and interest variation risks of the ADB loan. The PRC government, QPG, and HMG have assured ADB that counterpart funding will be provided in a timely manner, and any additional counterpart funding required for any shortfall of funds or cost overruns will be provided. The Qinghai Provincial Finance Department (QPF) will open an imprest account, and Haidong Municipal Finance Bureau will open its own dedicated account and project account in the commercial bank respectively to manage it in line with the requirements in the Loan Agreement.

A. Cost Estimates Preparation and Revisions

18. **Preparation.** The cost estimates were prepared based on the feasibility study in accordance with ADB's Guidelines on Preparing and Presenting Cost Estimates for Projects and Programs Financed by ADB.⁸

19. **Revisions.** The cost estimates may be updated prior to approval and during the implementation of the project.

B. Assumptions

20. The following assumptions underpin the cost estimates:
- (i) exchange rate at CNY 6.5 = \$1.0 (as of November 2021); and
 - (ii) price contingencies based on expected inflation over the implementation period.

Table 6: Escalation Rates for Price Contingency Calculation
(%)

Item	2016	2017	2018	2019	2020	2021	2022
Foreign rate of price inflation	1.5	1.4	1.5	1.5	1.5	1.4	1.4
Domestic rate of price inflation	2.0	2.2	2.3	2.3	2.3	2.5	2.5

Source: Asian Development Bank estimates.

⁸ ADB. 2014. *Preparing and Presenting Cost Estimates for Projects and Programs Financed by the Asian Development Bank*. Manila.

C. Investment and Financing Plan

Table 7: Project Investment Plan
(\$ million)

Item	Appraisal Amount ^a	MTR Amount ^a
A. Base Cost^b		
1. Integrated flood plain management infrastructure for Huangshui River provided	142.8	114.9
2. Measures to control soil erosion in Haidong's urban catchment implemented	35.3	16.3
3. Rural-urban water supply and solid waste infrastructure constructed	26.3	152.9
4. Project management capacity strengthened	3.0	2.8
Subtotal (A)	207.4	286.9
B. Contingencies^c	21.8	15.2
C. Financing Charges During Implementation^d	5.1	5.0
Total (A+B+C)	234.3	307.1

^a Includes taxes and duties of \$7.5 million to be financed from government resources or Asian Development Bank loan resources. The amount of taxes and duties to be financed by ADB is based on the principles that (i) the amount will be within the reasonable threshold identified during the country partnership strategy preparation process, (ii) the amount of taxes and duties financed by the ADB loan does not represent an excessive share of the project, (iii) the taxes and duties apply only to ADB-financed expenditures, and (iv) the financing of taxes and duties is material and relevant to the success of the project.

^b In mid-2021 prices.

^c Physical contingencies computed at 2.6% for civil works, field research and development, training, surveys, and studies. Price contingencies computed at 1.5% per year on foreign exchange costs and 2.5% per year on local currency costs during 2016–2024.

^d Includes interest and commitment charges. Interest during construction for ADB loan has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.5% and 0.1% maturity premium. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount.

Source: Asian Development Bank estimates.

Table 8: Financing Plan
(\$ million)

Source	At appraisal		At MTR	
	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)
Asian Development Bank				
Ordinary capital resources (loan)	150.0	64.0	150.0	48.8
Haidong Municipal Government	84.3	36.0	157.1	51.2
Total	234.3	100.0	307.1	100.0

Source: Asian Development Bank estimates.

D. Detailed Cost Estimates by Expenditure Category at appraisal

Item	CNY million			\$ million			% of Total Base Cost
	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost	
A. Investment Costs							
1. Civil works	206.3	825.3	1,031.6	31.7	127.0	158.7	67.7
2. Equipment	22.7	15.2	37.9	3.5	2.3	5.8	2.5
3. Engineering installation	1.7	6.6	8.3	0.3	1.0	1.3	0.6
4. Design, monitoring, and evaluation	28.1	112.5	140.6	4.3	17.3	21.6	9.2
5. Land acquisition and resettlement	0.0	110.4	110.4	0.0	17.0	17.0	7.3
6. Project management capacity strengthened	3.9	15.6	19.5	0.6	2.4	3.0	1.3
Subtotal A	262.7	1,085.6	1,348.3	40.4	167.0	207.4	88.5
B. Contingencies							
1. Physical	14.2	53.2	67.4	2.2	8.2	10.4	4.4
2. Price	15.7	58.6	74.3	2.4	9.0	11.4	4.9
Subtotal B	29.9	111.8	141.7	4.6	17.2	21.8	9.3
C. Financing Charges During Implementation	32.8	0.0	32.8	5.1	0.0	5.1	2.2
Total Project Cost (A+B+C)	323.1	1,199.7	1,522.8	49.7	184.6	234.3	100.0

Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

E. Detailed Cost Estimates by Expenditure Category at MTR

Item	CNY million			\$ million			% of Total Base Cost
	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost	
A. Investment Costs							
1. Civil works	304.2	1218.7	1522.9	46.8	187.5	234.3	76.3
2. Equipment	2.5	1.7	4.2	0.4	0.3	0.6	0.2
3. Engineering installation	0.0	0.0	0.0	0.0	0.0	0	0.0
4. Design, monitoring, and evaluation	54.2	218.1	272.3	8.3	33.5	41.9	13.6
5. Land acquisition and resettlement	0.0	46.9	46.9	0.0	7.2	7.2	2.3
6. Project management capacity strengthened	3.7	14.8	18.5	0.6	2.3	2.8	0.9
Subtotal A	364.6	1500.1	1864.8	56.1	230.8	286.9	93.4
B. Contingencies							
1. Physical	9.2	34.3	43.6	1.4	5.3	6.7	2.2
2. Price	11.6	43.7	55.3	1.8	6.7	8.5	2.8
Subtotal B	20.9	78.0	98.9	3.2	12.0	15.2	5.0
C. Financing Charges During Implementation	32.7	0.0	32.7	5.0	0.0	5.0	1.6
Total Project Cost (A+B+C)	418.2	1578.1	1996.4	64.3	242.8	307.1	100.0

Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

F. Allocation and Withdrawal of Loan Proceeds

Category	ADB Financing Basis at appraisal		ADB Financing Basis at MTR	
	Total Amount Allocated (\$)	Percentage and Basis for Withdrawal from the Loan Account (%)	Total Amount Allocated (\$)	Percentage and Basis for Withdrawal from the Loan Account (%)
Item				
1. Works and engineering installation	136,100,000	85.1 of total expenditure claimed	141,468,000	100.0 of total expenditure claimed
2. Equipment	5,800,000	100.00 of total expenditure claimed	649,000	100.00 of total expenditure claimed
3. Project management capacity strengthened	3,000,000	100.00 of total expenditure claimed	2,847,000	100.00 of total expenditure claimed
4. Interest and commitment charges	5,100,000	100.00 of amount due	5,036,000	100.00 of amount due
Total	150,000,000		150,000,000	

^a Includes taxes and duties of \$7.5 million.

Source: Asian Development Bank estimates.

G. Detailed Cost Estimates by Financier at appraisal

Item	Total Costs	ADB Loan		Haidong Municipal Government	
		Amount (\$ million)	% Cost Category	Amount (\$ million)	% Cost Category
A. Investment Costs					
1. Works and engineering installation	160.0	136.1	85.1	23.9	14.9
2. Equipment	5.8	5.8	100.0	0.0	0.0
3. Design, monitoring, and evaluation	21.6	0.0	0.0	21.6	100.0
4. Land acquisition and resettlement	17.0	0.0	0.0	17.0	100.0
5. Project management capacity strengthened	3.0	3.0	100.0	0.0	0.0
Subtotal A	207.4	144.9	69.9	62.5	30.1
B. Contingencies	21.8	0.0	0.0	21.8	100.0
C. Financing Charges During Implementation	5.1	5.1	100.0	0.0	0.0
Total Project Cost (A+B+C)	234.3	150.0	64.0	84.3	36.0

H. Detailed Cost Estimates by Financier at MTR

Item	Total Costs	ADB Loan		Haidong Municipal Government	
		Amount (\$ million)	% Cost Category	Amount (\$ million)	% Cost Category
A. Investment Costs					
1. Works and engineering installation	234.3	141.5	60.4	92.8	39.6
2. Equipment	0.6	0.6	100.0	0.0	0.0
3. Design, monitoring, and evaluation	41.9	0.0	0.0	41.9	100.0
4. Land acquisition and resettlement	7.2	0.0	0.0	7.2	100.0
5. Project management capacity strengthened	2.8	2.8	100.0	0.0	0.0
Subtotal A	286.9	145.0	50.5	141.9	49.5
B. Contingencies	15.2	0.0	0.0	15.2	100.0
C. Financing Charges During Implementation	5.0	5.0	100.0	0.0	0.0
Total Project Cost (A+B+C)	307.1	150.0	48.8	157.1	51.2

I. Detailed Cost Estimates by Outputs and/or Components at appraisal

Item	Total Amount (\$ million)	Integrated Flood Plain Management Infrastructure for Huangshui River Provided		Measures to Control Soil Erosion in Haidong's Urban Catchment are Implemented		Rural Water Supply and Urban Solid Waste Infrastructure Constructed		Project Management Capacity Strengthened	
		Amount (\$ million)	% Cost Category	Amount (\$ million)	% Cost Category	Amount (\$ million)	% Cost Category	Amount (\$ million)	% Cost Category
A. Investment Costs									
1. Civil works	158.7	112.6	71.0	28.4	17.9	17.7	11.2	0.0	0.0
2. Equipment	5.8	0.0	0.0	2.4	42.1	3.4	57.9	0.0	0.0
3. Engineering installation	1.3	0.0	0.0	0.6	46.4	0.7	53.6	0.0	0.0
4. Design, monitoring, and evaluation	21.6	13.8	63.9	3.7	17.2	4.1	18.9	0.0	0.0
5. Land acquisition and resettlement	17.0	16.3	96.2	0.2	1.0	0.5	2.8	0.0	0.0
6. Project management capacity strengthened	3.0	0.0	1.0	0.0	0.0	0.0	0.0	3.0	100.0
Subtotal A	207.4	142.7	68.8	35.3	17.0	26.4	12.7	3.0	1.5
B. Contingencies									
1. Physical	10.4	7.2	68.8	1.8	17.0	1.3	12.7	0.1	1.5
2. Price	11.4	8.0	70.1	2.1	18.8	1.1	9.8	0.2	1.3
Subtotal B	21.8	15.2	69.5	3.9	17.9	2.4	11.2	0.3	1.4
C. Financing Charges during Implementation	5.1	3.5	68.9	0.9	17.7	0.5	10.7	0.2	2.7
Total Project Cost (A+B+C)	234.3	161.4	68.9	40.1	17.1	29.3	12.5	3.5	1.5

Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

J. Detailed Cost Estimates by Outputs and/or Components at MTR

Item	Total Amount (\$ million)	Integrated Flood Plain Management Infrastructure for Huangshui River Provided		Measures to Control Soil Erosion in Haidong's Urban Catchment are Implemented		Rural Water Supply and Urban Solid Waste Infrastructure Constructed		Project Management Capacity Strengthened	
		Amount (\$ million)	% Cost Category	Amount (\$ million)	% Cost Category	Amount (\$ million)	% Cost Category	Amount (\$ million)	% Cost Category
A. Investment Costs									
1. Civil works	234.3	97.5	41.6	15.2	6.5	121.7	51.9	0.0	0.0
2. Equipment	0.6	0.0	0.0	0.0	0.0	0.6	100.0	0.0	0.0
3. Engineering installation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4. Design, monitoring, and evaluation	41.9	10.2	24.4	1.1	2.6	30.6	73.0	0.0	0.0
5. Land acquisition and resettlement	7.2	7.2	100.0	0.0	0.0	0.0	0.0	0.0	0.0
6. Project management capacity strengthened	2.8	0.0	0.0	0.0	0.0	0.0	0.0	2.8	100.0
Subtotal A	286.9	114.9	40.0	16.3	5.7	152.9	53.3	2.8	1.0
B. Contingencies									
1. Physical	6.7	3.2	47.8	0.0	0.0	3.5	52.2	0.0	0.0
2. Price	8.5	2.1	24.7	0.0	0.0	6.4	75.3	0.0	0.0
Subtotal B	15.2	5.3	34.8	0.0	0.0	9.9	65.2	0.0	0.0
C. Financing Charges during Implementation	5.0	3.5	68.9	0.9	17.7	0.5	10.7	0.1	2.7
Total Project Cost (A+B+C)	307.1	123.6	143.8	17.1	5.6	163.4	53.2	3.0	1.0

Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

K. Detailed Cost Estimates by Year at appraisal

Items	2017		2018		2019		2020		Total
	\$ million	%	\$ million	%	\$ million	%	\$ million	%	\$ million
A. Investment Cost									
1. Integrated flood plain management infrastructure for Huangshui river provided	8.4	5.9	46.8	32.8	54.8	38.3	32.8	23.0	142.8
2. Measures to control soil erosion in Haidong's urban catchment are implemented	0.8	2.4	7.3	20.6	17.1	48.5	10.1	28.5	35.3
3. Rural water supply and urban solid waste infrastructure constructed	2.3	8.9	17.1	64.8	6.9	26.3	0.0	0.0	26.3
4. Project management capacity strengthened	0.6	20.0	0.9	30.0	0.9	30.0	0.6	20.0	3.0
Subtotal A	12.1	5.9	72.1	34.8	79.7	38.4	43.5	20.9	207.4
B. Contingency									
1. Physical contingency	0.6	5.9	3.6	34.8	4.0	38.4	2.2	20.9	10.4
2. Price contingency	0.2	2.0	2.9	24.7	4.8	42.0	3.5	31.3	11.4
Subtotal B	0.8	3.8	6.5	29.5	8.8	40.3	5.7	26.4	21.8
C. Financing Charges During Implementation	0.3	4.4	0.6	12.9	1.8	35.6	2.4	47.1	5.1
Total Cost (A+B+C)	13.2	5.7	79.2	33.8	90.3	38.5	51.6	22.0	234.3

Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

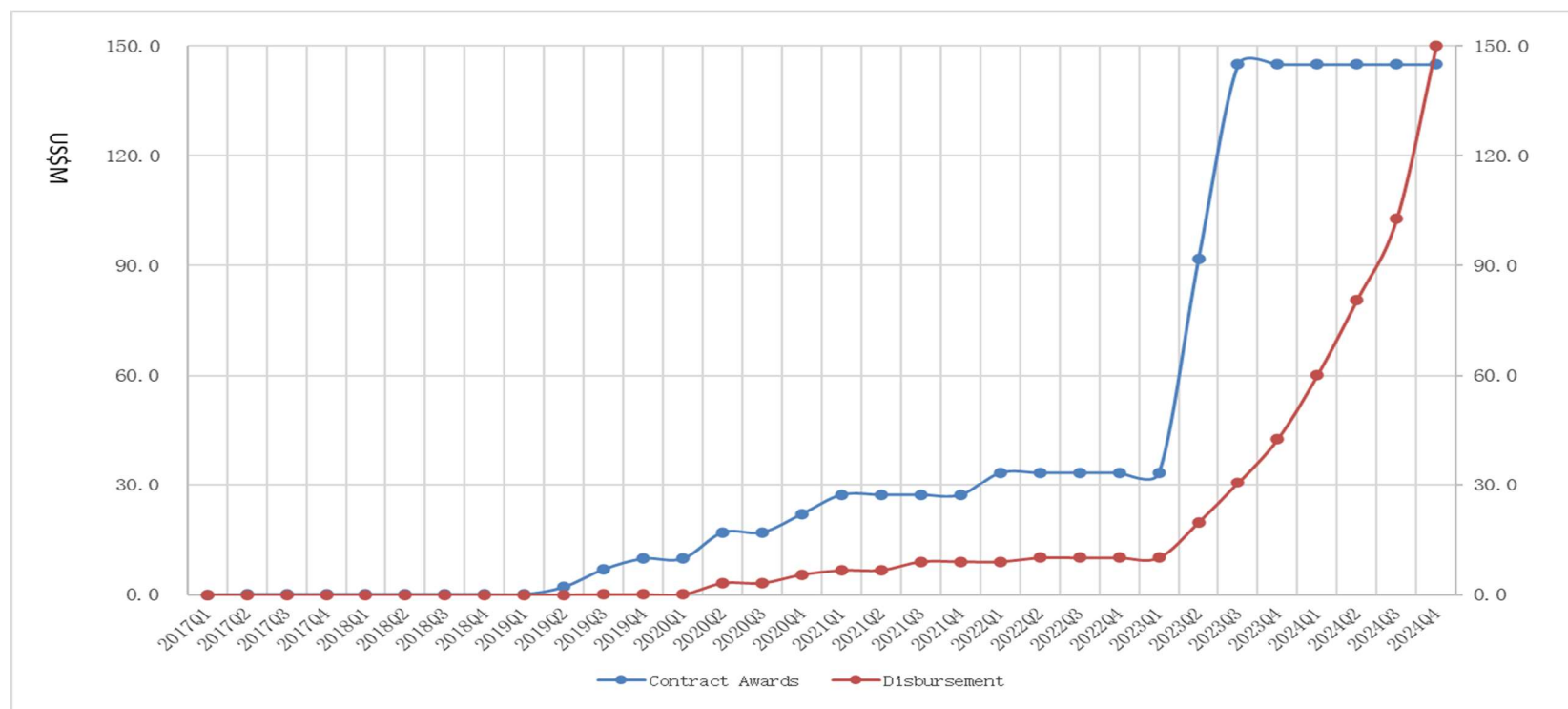
L. Detailed Cost Estimates by Year at MTR

Item	2017		2018		2019		2020		2021		2022		2023		2024		Total
	\$ m.	%	\$ m.	%	\$ m.	%	\$ m.	%	\$ m.	%	\$ m.	%	\$ m.	%	\$ m.	%	\$ million
A. Investment Cost																	
1. Integrated flood plain management infrastructure for Huangshui river provided	0.0	0.0	0.0	0.0	3.7	3.2	8.7	7.6	9.4	8.2	49.9	43.4	9.4	8.2	33.8	29.4	114.9
2. Measures to control soil erosion in Haidong's urban catchment are implemented	0.0	0.0	0.0	0.0	3.7	22.8	4.4	27.1	2.8	17.2	5.4	32.9	0.0	0.0	0.0	0.0	16.3
3. Rural water supply and urban solid waste infrastructure constructed	0.0	0.0	0.0	0.0	3.6	2.4	7.4	4.8	6.5	4.3	57.3	37.5	7.3	4.8	70.8	46.3	152.9
4. Project management capacity strengthened	0.1	3.5	0.1	3.5	0.4	14.1	0.4	14.1	0.4	14.1	0.3	10.5	0.3	10.5	0.9	29.9	2.8
Subtotal A	0.1	0.0	0.1	0.0	11.4	4.0	20.9	7.3	19.1	6.7	112.9	39.3	17.1	5.9	105.4	36.7	286.9
B. Contingency																	
1. Physical contingency	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	40.3	0.0	0.0	4.0	59.7	6.7
2. Price contingency	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	45.8	0.0	0.0	4.6	54.2	8.5
Subtotal B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	43.4	0.0	0.0	8.6	56.6	15.2
C. Financing Charges During Implementation	0.1	2.0	0.1	2.0	0.8	15.9	0.8	15.9	0.8	15.9	1.2	23.8	0.8	16.0	0.4	8.5	5.0
Total Cost (A+B+C)	0.2	0.1	0.2	0.1	12.2	4.0	21.7	7.1	19.9	6.5	120.7	39.3	17.9	5.8	114.4	37.3	307.1

Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

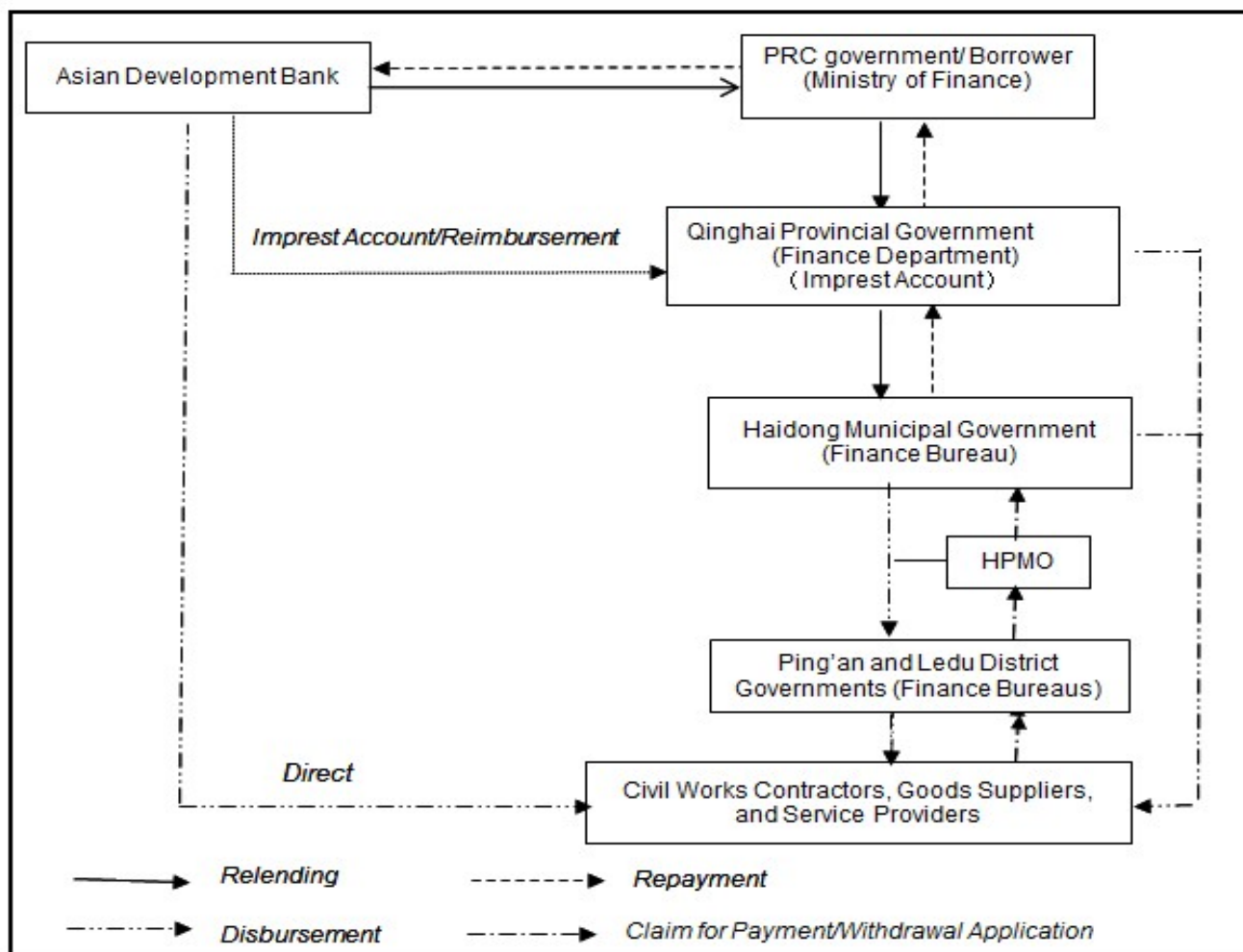
M. Contract Awards and Disbursement S-Curve



Year	Contract Awards					Disbursement				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2017	-	0.1	-	-	0.1	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-
2019	-	2.0	4.8	2.9	9.7	-	-	0.1	-	0.1
2020	-	7.2	-	5.0	12.2	-	3.1	-	2.3	5.4
2021	5.2	-	-	-	5.2	1.2	-	2.3	-	3.5
2022	6.2	-	-	-	6.2	-	1.1	-	-	1.1
2023	-	58.5	53.0	-	111.6	-	9.6	10.9	12.1	32.6
2024	-	-	-	-	-	17.4	20.6	22.1	47.2	107.3
Total					145.00					150.00

Source: Asian Development Bank estimates.

N. Fund Flow Diagram



HPMO = Haidong project management office, PRC = People's Republic of China.

Source: Asian Development Bank.

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

21. The financial management assessment was conducted in accordance with ADB's Guidelines for the Financial Management and Analysis of Projects (2005), Financial Due Diligence: a Methodology Note, and Technical Guidance Note: Financial Management Assessment.⁹ According to the implementation arrangement, Haidong Municipal Government (HMG) is the executing agency with the overall responsibility of planning and implementation of the project and its project management office (PMO) is set in the Haidong Water Affairs Bureau. There are seven implementing agencies, including (i) Ping'an Water Affairs Bureau; (ii) Ping'an Forestry Resource Bureau; (iii) Ping'an Housing, Planning, and Construction Bureau; (iv) Ledu Housing, Planning, Construction Bureau; (v) Ledu Water Affairs Bureau; (vi) Qinghai Haidong

⁹ ADB. 2005. *Financial Management and Analysis of Projects*. Manila; ADB. 2009. *Financial Due Diligence: A Methodology Note*. Manila; and ADB. 2015. *Financial Management Technical Guidance Note*. Manila.

Huangshui River New District Management Committee; and (vii) Haidong Water Affair Group Co., Ltd. to implement the four project components. The assessment covered funds-flow arrangements, staffing, accounting and financial reporting systems, internal and external auditing arrangements, and financial information systems. The instrument used for the assessment is ADB's standard financial management assessment questionnaire with considering country partnership strategy.

22. The assessment identified the main financial management risks are: (i) implementation risk—lack of familiarity with ADB disbursement procedures and requirements which could delay project implementation; (ii) compliance risk—lack of familiarity with ADB financial management requirements, particularly on accounting, reporting, and auditing, which may delay project reporting and derail identification of issues on the use of loan proceeds; and (iii) financing risk—delays in provision of or inadequate counterpart funding, which could delay project implementation. The overall financial management risk rating of the project before considering mitigating measures is Moderate to substantial. The identified financial management risks will be closely monitored during project implementation. The financial management action plan is as follows:

Table 9: Financial Management Action Plan

Action	Responsibility	Timing
1. Training on ADB disbursement procedures and requirements.	executing agency, PMO, PFB, ADB	1 month before first disbursement
2. Training on ADB financial management requirements, including accounting and auditing, foreign exchange, and interest rate risk management.	executing agency, PMO, PFB, ADB, Qinghai Audit Office	3 months before effectiveness
3. Recruitment of experienced consultants and skilled accountants to enhance the operational capacities.	executing agency, PMO, implementing agencies	3 months after effectiveness
4. Development of financial management manuals.	executing agency, PMO, PFB, HMG, finance bureaus, implementing	Before loan effectiveness
5. Close monitoring to timely identify potential issues in counterpart funding.	executing agency, PMO, implementing agencies, finance department bureaus, ADB	At least once a year during project implementation
6. Discussion on possible interventions to review tariff structure and identify strategy for tariff reforms.	executing agency, PMO, implementing agencies, ADB	First year of project implementation

ADB = Asian Development Bank, HMG = Haidong Municipal Government, PMO = project management office, PFB = provincial finance bureau.

Source: Asian Development Bank.

B. Disbursement

23. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time), and detailed arrangements agreed upon between the government and ADB. Online training for project staff on disbursement policies and procedures is available at: http://wpqr4.adb.org/disbursement_elearning. Project staff is encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

24. **Imprest fund procedure.** To facilitate project implementation through timely release of loan proceeds, QPFD will establish an imprest account promptly after loan effectiveness at a commercial bank acceptable to ADB. The imprest account is to be used exclusively for the ADB's share of eligible expenditures. The currency of the imprest account will be US dollar. QPFD, who established the imprest account in its name, is accountable and responsible for proper use of

advances to the imprest account. The total outstanding advance to the imprest account should not exceed the estimate of ADB's share of expenditures to be paid through the imprest account for the forthcoming 6 months. QPFD may request for initial and additional advances to the imprest account 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 QPFD in accordance with the handbook when liquidating or replenishing the imprest account.

25. **Statement of expenditure procedure.** The statement of expenditure (SOE) procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the imprest account.¹⁰ The ceiling of the SOE procedure is the equivalent of US\$100,000 per individual payment. Supporting documents and records for the expenditures claimed under the 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 audit. Reimbursement and liquidation of individual payments in excess of the SOE ceiling should be supported by full documentation when submitting the withdrawal application to ADB.

26. The minimum value per withdrawal application is set in accordance with the handbook. Individual payments below this amount should be paid by the HMG and/or district governments and subsequently claimed from ADB (i) through reimbursement; or (ii) from the imprest account, unless otherwise accepted by ADB.

C. Accounting

27. The HMG will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project using the Accounting Methods for Projects Financed by the World Bank (reference No. 2000 [13]).¹¹ The HMG will prepare consolidated project financial statements in accordance with the government's accounting laws and regulations, which are consistent with international accounting principles and practices.

D. Auditing

28. HMG will cause the detailed consolidated project financial statements to be audited in accordance with national auditing standards by an independent auditor acceptable to ADB. The audited project financial statements together with the auditors' opinion will be submitted in the English language to ADB within 6 months of the end of the fiscal year by the HMG.

29. The annual audit report for the project accounts will include an audit management letter and audit opinions which cover (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting framework; (ii) whether loan and grant proceeds were used only for the purposes of the project or not; (iii) the level of compliance for financial covenants contained in the legal agreements for the project; (iv) use of the imprest fund procedure; and (v) the use of the SOE procedure certifying to the eligibility of those expenditures claimed under SOE procedures, and proper use of the SOE and imprest procedures in accordance with the handbook and the project documents.

¹⁰ SOE forms are available in Appendix 9B and 9C of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

¹¹ Accounting regulations issued by the Ministry of Finance for all foreign aid-funded projects.

30. 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.

31. The HMG and the implementing agencies have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements. ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. 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.

32. Public disclosure of the project financial statements, including the audit report on the project financial statements, will be guided by ADB's Public Communications Policy 2011. After review, ADB will disclose the project financial statements for the project and the opinion of the auditors on the financial statements within 14 days upon ADB's acceptance by posting them on ADB's website. The Audit Management Letter will not be disclosed.

VI. PROCUREMENT AND CONSULTING SERVICES

33. A project procurement risk assessment was conducted for the project, in accordance with the Guide on Assessing Procurement Risks and Determining Project Procurement Classification (ADB 2014). Overall project procurement risk is moderate.

34. The main weaknesses identified are that the PMO are understaffed with insufficient experienced personnel to conduct all procurements and consultant recruitments for the project; and there are some inconsistencies between ADB and HMG's procurement practices.

35. These risks are being and will be mitigated as (i) the PMO has committed to fulfill ADB's requirements for all procurements and consultant recruitments for the project, (ii) capacity development was/is being/will be conducted by ADB, procurement consultants and a procurement agency, and (iii) supports for procurements and consultant recruitments will be provided by procurement consultants, and a procurement agency.

A. Advance Contracting and Retroactive Financing

36. All advance contracting and retroactive financing should be undertaken in conformity to ADB's Procurement Guidelines (2015, as amended from time to time),¹² and ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).¹³ The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB's approval. The borrower, HMG, and the implementing agencies have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

37. Advance contracting applies to the consulting services contract for the initial project implementation support, external resettlement and social monitor, and project implementation and institutional strengthening support.

¹² Procurement Guidelines: <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf>

¹³ Consulting Guidelines: <http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf>

38. **Retroactive financing.** HMG was advised that retroactive financing may only apply up to the equivalent of 20% of the total ADB loan, to cover eligible expenditures incurred for works, goods, and consulting services procured through advance contracting before loan effectiveness, but not more than 12 months before the signing of the loan agreement. Retroactive financing applies to the consulting services contracts for the initial project implementation support.

B. Procurement of Goods, Works, and Consulting Services

39. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Guidelines (2015, as amended from time to time) and the Procurement Reform–10 Point Action Plan and associated reforms. The relevant sections of ADB's Anticorruption Policy (1998, as amended to date) will be included in procurement documents and contracts.

1. National Competitive Bidding Procedures

40. Before the start of any procurement, ADB and the government will review the public procurement laws of the central and provincial governments to ensure consistency with ADB's Procurement Guidelines (2015, as amended from time to time). National competitive bidding (NCB) will be used for civil works contracts estimated to cost from \$100,000 to below \$40 million and for goods contracts from \$100,000 to below \$3 million. CNY may be used for the purpose of bidding and payment. NCB contracts with estimated cost of \$500,000 or more for goods and \$1 million or more for works will also be advertised in Business Opportunities of ADB's website.

41. The first draft English language of the procurement documents (bidding documents, and draft contract) should be submitted for ADB approval regardless of the estimated contract amount. The first NCB contracts and those higher than \$10 million are subject to prior review.

42. Procurement for goods and works contracts with value less than \$10 million are subject to post review. Documents must be recorded and submitted for post review no later than 1 month after they are completed or issued.

2. Shopping

43. The shopping procurement method will be allowed for contracts valued below \$100,000 equivalent for civil works and goods, respectively. The relevant sections of ADB's Anticorruption Policy (1998, as amended to date) will be included in procurement documents and contracts.

3. Consulting Services

44. Project management consulting services and capacity development services will be recruited according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).¹⁴ The PMO will be responsible for engaging consultants for relevant services. An estimated 217 person-months (30 international and 187 national) of consulting services are required for (i) project implementation and institutional strengthening support; (ii) external resettlement and social monitoring; (iii) initial project implementation support; (iv) climate-resilient water resources management planning support; and (v) support on river smart management. The consulting firm will be engaged using the quality- and cost-based selection (QCBS) method with a standard quality: cost ratio of 80:20 using full technical proposal procedure, consultant's

¹⁴ Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation>

qualifications selection method (CQS), and individual consultant selection method (ICS) methods.¹⁵

C. Procurement Plan

45. A procurement plan indicating procurement or selection methods, estimated costs of contracts, thresholds and review procedures for goods, works, and consulting service contract packages is prepared and summarized below. The procurement plan shall be executed in the manner in which it has been approved by ADB. The procurement plan shall be updated annually or as needed throughout the duration of the project. The contract packages are categorized into three categories including Goods, Works, and Consulting Services. The Works contracts are mainly in the areas of water supply, water reclamation, landfill, river rehabilitation, wetland and afforestation, which are common in China and in Qinghai Province. Some of the equipment and materials are included in the works contracts to reduce contract interfaces and minimize the contract management risks, based on the nature of the equipment and materials and their interaction with relevant works. Others equipment and materials that are independent of the civil works are listed as Goods contracts. The technical assistance and studies designed to strengthen the capacity of the PMO and implementing agencies during implementation and O&M of the project are packaged into consulting service contracts.

Table 10: Basic Data

Project Name: Qinghai Haidong Urban-Rural Eco Development Project			
Project Number: 48102-002		Approval Number: 3443	
Country: China, People's Republic of		Executing Agency: Haidong Municipal Government	
Project Procurement Risk: Moderate		Implementing Agency: Ledu Housing, Planning, & Construction Bureau, Ledu Water Affairs Bureau, Ping'an Forestry Resource Bureau, Ping'an Housing, Planning and Construction Bureau, Ping'an Water Affairs Bureau Qinghai Haidong Huangshui River New District Management Committee Haidong Water Affairs Group Co., Ltd.	
Project Financing Amount: US\$ 307,100,000 ADB Financing: US\$ 150,000,000 Cofinancing (ADB Administered): Non-ADB Financing: US\$ 157,100,000		Project Closing Date: 30 September 2024	
Date of First Procurement Plan: 19 October 2016		Date of this Procurement Plan: 13 September 2022	
Advance Contracting: No	Related to COVID-19 response efforts: No	Use of e-procurement (e-GP): No	

1. Methods, Thresholds, Review, and 18-Month Procurement Plan

a) Procurement and Consulting Methods and Thresholds

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

Table 11: Procurement of Goods and Works

Method	Threshold	Comments
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¹⁵ TOR guidelines available at: <http://www.adb.org/sites/default/files/institutionaldocument/31340/csom.pdf>

NCB for goods	Between \$100,000 and \$2,999,999	First NCB contract and those higher than \$10,000,000 are subject to prior review, contracts below \$10,000,000 are subject to post review.
Shopping for goods	Up to \$99,999	First contract subject to prior review, thereafter post review.
NCB for works	Between \$100,000 and \$39,999,999	First NCB contract and those higher than \$10,000,000 are subject to prior review, contracts below \$10,000,000 are subject to post review.
Shopping for works	Up to \$99,000	First contract subject to prior review, thereafter post review.

NCB: national competitive bidding.

Table 12: Consulting Services

Method	Comments
Consultant's qualification selection for consulting firm	STP
Quality- and cost-based selection for consulting firm	Quality and cost ratio: 80:20, FTP
Individual consultants selection for individual consultant	

FTP = full technical proposal, STP = simplified technical proposal.

b) Goods and Works Contracts Estimated to Cost \$1 Million or More

47. 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.

Table 13: Goods and Works in the Next 18 Months

Package Number	General Description	Estimated Value	Procurement Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
HD-IF-W8	Huangshi River Hehuang New District Segment: Dyke Part	20,883,353.85	NCB	Prior	1S1E	Q4 / 2022	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Small Works Covid-19 Response? No
HD-IF-W9	Huangshi River Hehuang New District Segment: Cliff Soil Reinforcement and Restoration	15,928,046.15	NCB	Prior	1S1E	Q4 / 2022	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Small Works Covid-19 Response? No
HD-IF-W10	Huangshi River Hehuang New District Segment: River Terrace Water and Soil Conservation	8,896,153.85	NCB	Post	1S1E	Q4 / 2022	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Small Works Covid-19 Response? No
HD-IF-W11	Huangshi River Hehuang New District Segment: Wetland Ecological Conservation	10,301,600.00	NCB	Prior	1S1E	Q4 / 2022	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Small Works Covid-19 Response? No
HD-RUI-W5	Yangjia Water Supply: Water Intake & Raw Water Pipeline	8,720,000.00	NCB	Post	1S1E	Q1 / 2023	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Small Works Covid-19 Response? No
HD-RUI-W6	Yangjia Water Supply: Yangjia WTP - Civil Work, Equipment Supply and Installation	36,840,000.00	NCB	Prior	1S1E	Q1 / 2023	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Small Works Covid-19 Response? No
HD-RUI-W7	Yangjia Water Supply: Water supply distribution Pipelines (North Bank)	14,800,000.00	NCB	Prior	1S1E	Q1 / 2023	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Small Works Covid-19 Response? No
HD-RUI-W8	Yangjia Water Supply: Water supply distribution Pipelines (South Bank)	31,260,000.00	NCB	Prior	1S1E	Q1 / 2023	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Small Works Covid-19 Response? No

NCB = national competitive bidding.

c) Consulting Services Contracts Estimated to Cost \$100,000 or More

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

Table 14: Consulting Services in the Next 18 Months

Package Number	General Description	Estimated Value	Recruitment Method	Review (Prior/Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
HD-CB-CS4	Climate-resilient water resources management planning support	225,000.00	CQS	Prior	Q3 / 2022	STP	Assignment: International Covid-19 Response? No
HD-CB-CS5	Support on River Smart Management	204,000.00	CQS	Prior	Q4 / 2022	STP	Assignment: International Covid-19 Response? No

CQS = consultant's qualification selection, STP = simplified technical proposal.

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

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

Table 15: Smaller-value Goods and Works

Goods and Works								
Package Number	General Description	Estimated Value	Number of Contracts	Procurement Method	Review (Prior/Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
None								

Table 16: Smaller-value Consulting Services

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								

2. Indicative List of Packages Required Under the Project

50. 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).

Table 17: Goods and Works

Package Number	General Description	Estimated Value	Number of Contracts	Procurement Method	Review (Prior/Post)	Bidding Procedure	Comments
None							

Table 18: Consulting Services

Package Number	General Description	Estimated Value	Number of Contracts	Recruitment Method	Review (Prior/ Post)	Type of Proposal	Comments
None							

3. List of Awarded and On-going, and Completed Contracts

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

Table 19: Goods and Works

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
HD-IF-W4	Huangshi River Ledu Rural Segment (Upstream)	12,703,000.00	7,774,563.79	NCB	Q3 / 2021	10-DEC-21	PCSS 0015
HD-IF-W1	Huangshui River Ping'an Segment	14,410,000.00	9,117,082.40	NCB	Q2 / 2020	22-MAR-21	PCSS 0012
HD-RUI-W4	Landfill Expansion	7,586,000.00	3,187,633.65	NCB	Q3 / 2019	09-OCT-19	PCSS 0008
HD-RUI-W2	Sanhe Town WTP and Highland Reservoir	4,560,000.00	3,821,727.65	NCB	Q2 / 2020	05-FEB-21	PCSS 0011
HD-RUI-W3	Water Conveyance Pipelines	8,960,000.00	6,066,116.67	NCB	Q2 / 2020	09-JUL-21	PCSS 0013
HD-SE-W3	Water Reclamation- Pipeline	7,922,000.00	3,890,631.65	NCB	Q2 / 2019	24-JUL-19	PCSS 0007
HD-SE-W2	Water Reclamation-pumping station	4,193,000.00	1,342,487.48	NCB	Q1 / 2019	09-MAY-19	PCSS 0006
HD-RUI-W1	Wenzukuo WTP and Fatai WTP	1,840,000.00	1,459,033.95	NCB	Q2 / 2020	05-FEB-21	PCSS 0010
HD-SW-G1	Landfill O&M Equipment	610,000.00	625,704.06	NCB	Q2 / 2020	06-JAN-21	PCSS 0009
HD-SW-G2	Standby Power Supply and HVAC System	20,000.00	19,889.75	SHOPPING	Q3 / 2021	25-NOV-21	PCSS 0014

NCB = national competitive bidding

Table 20: Consulting Services

Consulting Services							
Package Number	General Description	Estimated Value	Awarded Contract Value	Recruitment Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments
HD-CB-CS1	Project implementation and institutional strengthening support	1,900,000.00	1,890,125.00	QCBS	Q1 / 2018	15-NOV-18	PCSS 0004
HD-CB-CS2	External resettlement and social monitoring	145,000.00	149,144.00	CQS	Q2 / 2018	16-APR-19	PCSS 0005
HD-CB-CS3-1	Initial project implementation support (Position 1: Project management and procurement specialist)	50,000.00	50,000.00	ICS	Q4 / 2016	09-FEB-17	PCSS 0001
HD-CB-CS3-2	Initial project implementation support (Position 2: Safeguards specialist)	46,000.00	45,180.00	ICS	Q4 / 2016	07-APR-17	PCSS 0002

Consulting Services							
Package Number	General Description	Estimated Value	Awarded Contract Value	Recruitment Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments
HD-CB-CS3-3	Initial project implementation support (Position 3: financial management specialist)	19,000.00	17,906.00	ICS	Q1 / 2017	12-APR-17	PCSS 0003

CQS = Consultant's Qualification Selection for Consulting Firm, ICS = Individual Consultant Selection, QCBS = Quality- and Cost-Based Selection.

4. Non-ADB Financing

52. The following table lists goods, works and consulting services contracts over the life of the project, financed by Non-ADB sources.

Goods and Works					
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method		Comments
Huangshi River Ledu Rural Segment (Downstream)	14,890,000.00	6	National Procedure	OCB	Covid-19 Response? No Completed
Ping'an district, Huangshui river riverside greenbelt	660,000.00	1	National Procedure	OCB	Covid-19 Response? No Completed
Ping'an district mountain edge greenbelt	8,985,000.00	22	National Procedure	OCB	Covid-19 Response? No Completed

Consulting Services				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Recruitment Method	Comments
None				

5. National Competitive Bidding

a) Regulation and Reference Documents

53. The procedures to be followed for national competitive bidding shall be those set forth in *The Government Procurement Law of People's Republic of China* approved on 29 June 2002 and *Law of the People's Republic of China on Bid Invitation and Bidding of the People's Republic of China* promulgated on August 30, 1999 with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of the *ADB Procurement Guidelines*.

b) Procurement Procedures

(i) Competitive Bidding Procedure (Procurement Law Art. 26 and Law on Bidding Art. 10)

54. Public tendering is the acceptable method of government procurement, and public invitation is the accepted bid invitation mode.

(ii) Eligibility

55. The eligibility of bidders shall be as defined under section I of the Procurement Guidelines; accordingly, no bidder or potential bidder should be declared ineligible for reasons other than those provided in section I of the Guidelines, as amended from time to time.

(iii) Advertising

56. All invitations to prequalify or to bid shall be advertised in the national press (China Daily Newspaper) or a free and open access website (www.chinabidding.com). Such advertisement shall be made in sufficient time for prospective bidders to obtain prequalification or bidding documents and prepare and submit their responses. In any event, a minimum preparation period of twenty-eight (28) days shall be given. The preparation period shall count (a) from the date of advertisement, or (b) when the documents are available for issue, whichever date is later. The advertisement and the prequalification and bidding documents shall specify the deadline for such submission.

(iv) Bidding Period

57. The minimum bidding period is 28 days prior to the deadline for the submission of bids.

(v) Participation by Government-Owned Enterprises

58. Government owned enterprises in the Borrower's country may be permitted to bid if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law and (iii) are not a dependent agency of the borrower and/or executing agency.

(vi) Rebidding

59. Re-bidding shall not be allowed solely because the number of bids is less than three (3).

6. Bidding Documents

(vii) Qualification requirements

60. Qualification requirements of bidders and the method of evaluating the qualification of each bidder shall be specified in detail in the bidding documents, and in the prequalification documents if the bidding is preceded by a prequalification process.

(viii) Bid Submission and Opening

61. Bidders shall be allowed to submit bids by mail or by hand.

62. All bids shall be opened in public; all bidders shall be afforded an opportunity to be present (either in person or through their representatives) at the time of bid opening, but bidders shall not be required to be present at the bid opening.

(ix) Bid Evaluation and Award

63. No bid may be rejected solely on the basis that the bid price falls outside any standard contract estimate, or margin or bracket of average bids established by the Borrower and/or executing agency.

64. Each contract shall be awarded to the lowest evaluated responsive bidder, that is, the bidder who meets the appropriate standards of capability and resources and whose bid has been determined (a) to be substantially responsive to the bidding documents and (b) to offer the lowest evaluated cost. The winning bidder shall not be required, as a condition of award, to undertake responsibilities for work not stipulated in the bidding documents or otherwise to modify the bid as originally submitted.

(x) ADB Policy Clauses

65. Each contract financed with the proceeds of the Loan shall provide that the suppliers and contractors shall permit ADB, at its request, to inspect their accounts and records relating to the performance of the contract and to have said accounts and records audited by auditors appointed by ADB.

66. A provision shall be included in all bidding documents for NCB works and goods contracts financed by ADB stating that the Borrower shall reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question.

67. A provision shall be included in all bidding documents for NCB works and goods contracts financed by ADB stating that ADB will declare a firm or individual ineligible, either indefinitely or for a stated period, to be awarded a contract financed by ADB, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices or any integrity violation in competing for, or in executing, ADB-financed contract.

D. Consultant's Terms of Reference

1. Package CS1—Project Implementation and Institutional Strengthening Support

68. Project implementation and institutional strengthening consulting service of estimated 26 person-months of international and 128 person-months of national consultants will be engaged by QCBS method with a standard quality: cost ratio of 80:20 with full technical proposal procedure. The consultants will assist PMO in:

a. Project Management Support during Project Implementation

- (i) setting up institutional framework, operational procedure, document control, design supervision, and contract management systems for the project and work plan to guide and facilitate the project implementation. This should utilize and adapt as necessary the arrangements set up for the earlier ADB projects in Hunan province;
- (ii) establishing a project performance management system (PPMS) in accordance with ADB requirements, including establishing baseline and operation mechanism for data collection, analysis and reporting;
- (iii) developing comprehensive project implementation plans and procedures for monitoring and controlling overall project activities;
- (iv) conducting technical review and providing expert comments on detailed engineering design in accordance with the design codes and standards;
- (v) reviewing designs, drawings, and the bidding documents, including the identification of potential technical problems and suggesting means of resolving these, and incorporation of environmental mitigation measures where appropriate;
- (vi) ensuring that bidding documents include for contractors to provide equipment operation and maintenance manuals in Chinese and that training in equipment and maintenance is adequately provided for;
- (vii) technical, financial and procedural review of bid evaluation, and contract negotiations;
- (viii) conducting routine site visits and providing technical inputs to construction planning, supervision and monitoring for quality control of the project construction;
- (ix) conducting contract management, including monitoring construction progress, preparing semiannual progress reports, reviewing the contractors' claims for payments, coordinating project implementation among contractors and various stakeholders, and coordinating daily operational tasks;
- (x) conducting technical review for construction supervision and management, including (a) approval of construction methods; (b) ensuring work is undertaken according to the intent of contract specifications; (c) control over construction quality; (d) adherence to contract work programs and recovery of slippage; (e) site health and safety procedures as per environment management plan, EMDP, and social and gender action plan (SGAP); (f) record keeping systems to protect client interests in event of claims; and (g) claims assessment and determination;
- (xi) providing expert inputs, review and justification for contract variation and preparing necessary documentations in accordance with the government and ADB requirements, if necessary;
- (xii) providing expert inputs on asset commissioning and handover, including a review of documentation provided by the contractors and that they have fully discharged their training obligations;

- (xiii) establishing an efficient and effective financial management system for the project implementation in accordance with ADB policy and procedural requirements and implementing such financial management system;
- (xiv) assessing financial management and (a) reviewing current accounting and administrative capacities of the project operation units for the built facilities, (b) verifying if internal control system is employed, (c) checking current internal audit, external or government audit, and (d) recommending any changes as appropriate;
- (xv) assessing the financial performance of the project operation units for the past five years and evaluating its financial capacity regarding cost recovery, borrowing capacity, debt servicing, tariff collection, accounts receivable, and subsidies, as appropriate;
- (xvi) identifying areas for improvement and training needed with respect to the quality of financial statements, disclosure, and notes to the financial statements, and developing templates for the annual financial statements;
- (xvii) reviewing disbursement applications and supporting documents;
- (xviii) collecting all necessary information, editing, drafting, and submitting the reports required under loan and project covenants on a timely manner;
- (xix) assisting the executing agency and implementing agencies in reviewing and updating the EMP, resettlement plan, and the social and gender action plan; and conducting internal monitoring of the implementation of the EMP, resettlement plan, EMDP, and SGAP on a semiannual basis;
- (xx) providing expert opinions to ensure effectiveness of the project components' environmental mitigation measures and enhancement package implementation;
- (xxi) collecting periodic information for PPMS updating;
- (xxii) preparing necessary information for ADB's loan administration missions including loan review, loan midterm review, and loan completion missions;
- (xxiii) updating project financial status, project cost tables, financing plan and financial and economic analysis, and safeguard implementation;
- (xxiv) organizing and providing semiannual training on effective project financial management, procurement, disbursement, safeguards, and anticorruption measures;
- (xxv) organizing and providing semiannual training on the skills necessary for construction supervision, project management, and implementation of social and environmental safeguards for ADB requirements;
- (xxvi) undertaking annual tariff reviews for wastewater tariff and assessing the impact and affordability for the poor of the tariff increase;
- (xxvii) assisting the executing agency and implementing agencies in consulting with the stakeholders concerned, in particular, the poor and ensuring the poor's participation in the public hearing process for tariff increase in accordance with the government's policies and regulations;
- (xxviii) providing (a) training on prevention and control of communicable diseases, including HIV and community disturbance to contractors, and (b) drug and human trafficking awareness campaigns to the local communities;
- (xxix) advising and training contractors and supervising companies on ADB policy and procedural requirements to ensure their full compliance;
- (xxx) sampling and monitoring of environmental data related to the project, and contracting out the official environmental monitoring service to an accredited environmental monitoring station;
- (xxxi) making recommendations to resolve any issues or problems on implementing the EMP, resettlement plan, and the social and gender action plan;
- (xxxii) developing and submitting the semiannual progress reports, including internal

social, resettlement reports (semiannually), and environmental monitoring reports (annually), to ADB with quality acceptable to ADB; and
 (xxxiii) preparing a project completion report within three months of project completion.

b. Study Tours

69. The consultant will assist the PMO to arrange a series of study tours to strengthen the institutional capacity of PMO and executing agency and/or implementing agencies. The indicative objectives are as below. However the details can be adjusted during implementation based on actual needs and implementation progress.

- (i) Overseas study (1 time), select similar region in Europe or North America to study the experience of integrated flood management and early warning system.
- (ii) Overseas study (1 time), select similar region in Asia to study integrated urban ecological planning and management.
- (iii) Domestic study (1 time); select similar cities to learn integrated flood management.
- (iv) Domestic study (1 time); select similar cities to learn wetland development and management.
- (v) Domestic study (1 time), select similar cities to learn landfill O&M.
- (vi) Domestic study (1 time); select similar cities to learn nonrevenue water control in water distribution system.

c. Special Tasks

- (i) The consultant will assist the Ping'an Water Affairs Bureau to develop a water safety plan following an internationally accepted methodology.¹⁶
- (ii) The consultant will assist the Ping'an Water Affairs Bureau and the operational management team of the reservoirs and water treatment plants in this project to develop an operational protocol so as to ensure the water delivery to the Ping'an town will not affect the water rights of the rural residents, farmland and forest irrigation, and ecology in the Qijiachuan catchment.
- (iii) Assisting Ledu Housing, Planning, and Construction Bureau in developing the landfill standard operational procedure, and provide training to relevant personnel in the bureau and the O&M entity.
- (iv) Assisting HMG in development solid waste management strategy and the reuse, reduce, recycle (3R) strategy.
- (v) Developing a practical 3R promotion program, selecting a pilot community, preparing necessary promotion materials and conducting 1 year of pilot of the 3R program.
- (vi) Summarizing experience gained and lesson learned to develop into a knowledge product document for dissemination.

2. Package CS2—External Resettlement and Social Monitoring

70. An external resettlement and social monitoring agency will be engaged intermittently for the entire duration of project implementation. The consultant firm/institute with estimated total

¹⁶ J. Bartram et al. 2009. *Water Safety Plan Manual: Step-by-Step Risk Management for Drinking-water Suppliers*. Geneva.

input of 12 person-months of national consultants will be engaged by CQS method. The external resettlement monitor will assist PMO in:

- (i) conducting baseline survey of affected persons and regular monitoring to ensure implementation of the EMDP, resettlement plan, and SGAP in compliance with ADB's safeguard and social and gender development policies;
- (ii) evaluating income restoration and post-resettlement conditions of the affected persons and host communities;
- (iii) paying special attention to vulnerable groups, including ethnic minorities, women and the poor, to assess whether they have participated and improved their standard of living;
- (iv) specifically, monitoring and evaluation will focus on the following aspects of the affected persons' situation and the resettlement process: (a) economic situation prior to and after acquisition or leasing of land or attachments; (b) timely disbursement of funds; (c) rehabilitation of the vulnerable groups; and (d) measures taken to restore affected production and livelihoods of the affected persons;
- (v) making recommendations to resolve any issues or problems on implementation of resettlement plan, and providing advice to the PMO and relevant implementing agency; and
- (vi) submitting English and Chinese external resettlement and social monitoring reports (separate for resettlement and social) to HMG and ADB with quality acceptable to ADB every 6 months during implementation of the resettlement plan and EMDP.¹⁷

3. Bundle CS3—Initial Project Implementation Support (Packages CS3.1, CS3.2, and CS3.3)

71. One individual consultant of an estimated 5 person-months for national project procurement and management, one individual consultant of an estimated 5 person-months of national safeguards (social and resettlement), and one individual national consultant of an estimated 2 person-months for financial management will be engaged through ICS for initial project implementation support. The consultants will assist the PMO in:

- (i) establishing initial project management system including internal procedures of routine data filling and information exchange for procurement, disbursement, financial management including internal auditing, and required reporting on project progress and safeguards;
- (ii) recruiting consulting services for the project implementation and institutional strengthening support (package 1), through QCBS method in accordance with ADB guidelines and procedural requirements;
- (iii) recruiting consulting services for the external social and resettlement monitoring (package 2), through CQS methods in accordance with ADB guidelines and procedural requirements;
- (iv) procuring goods and works for the project's infrastructural components under advance contracting in accordance with ADB guidelines and procedural requirements;
- (v) assisting the executing agency and implementing agency in updating and finalizing the resettlement plan for ADB approval prior to award of civil works contracts;
- (vi) assisting the implementing agencies to implement the EMDP and SGAP, or update

¹⁷ For resettlement, annual evaluation reports will be prepared and submitted for 2 years after completion of land acquisition and rehabilitation activities.

- if necessary;
- (vii) ensure the communications strategy, grievance redress system, information disclosure system are established and functioning and that external monitoring agencies for safeguards are engaged before start of physical works;
- (viii) collecting necessary information for reporting requirement of ADB including, semiannual implementation progress report, and project administration manual (PAM) update for inception mission;
- (ix) establishing a financial management manual for PMO; and
- (x) providing training on project management, procurement, disbursement, financial management, and social safeguards policy and procedures.

4. Package CS4—Climate-resilient Water Resources Management Planning Support

72. One consulting firm with estimated level of 4 international person-months and 15 national person-months will be engaged through CQS. Experts in urban climate change adaptation and water resources management will, amongst others, help the HMG review and climate-proof the Haidong City Master Plan (2013–2030), and help initiate the establishment of a provincial-level Huangshui River coordination body (under the leadership of provincial Department of Water Resources with representatives from Haidong and Xining) to address Huangshui water resources management issues at watershed level. The successful firm will have prior experience and demonstrated expertise in facilitating the setting up river-basin water allocation and management bodies, and in advising municipal planning authorities on how to review and revise urban development planning procedures to increase climate resilience. The consulting firm will:

- (i) Review in detail relevant documents pertaining to the assignment, including but not limited to: Integrated Water Management Plan for the Huangshui River Basin (IWMPHRB 2014); Haidong City Master Plan (2013–2030) and its water resources management plan; Qinghai provincial regulation for tackling climate change (2008); Yellow River Integrated Water Resource Management Plan by the Yellow River Commission; as well as the Climate Risk and Vulnerability Assessment conducted for the project.
- (ii) Review institutional responsibilities, mandate and capacities of the Leading Group in HMG for implementing the Provincial Strictest Water Resource Management System.¹⁸ Identify limitations of the Leading Group at coordinating all water resource management related issues across the city, and recommend institutional strengthening measures.
- (iii) Help HMG to review its Haidong City Master Plan 2013–2030, and identify possible improvement to the linked water resource management plan in view of the significant water allocation for irrigation development that may result in water stress.
- (iv) Help develop guidelines to standardize the planning and approval of water-related projects and programs within Haidong Municipality, covering agriculture, forestry, industry, and domestic use.
- (v) Assess feasibility to introduce water allocation by catchment/tributary to replace the current water allocation by administrative/political boundaries. Initial trials may be conducted in Ping'an and Ledu districts.

¹⁸ The group is led by the Deputy Mayor responsible for water resources with leaders from Bureaus of Water Resources, Development and Reform Commission, Industry and New Technologies, Finance, Land Resources, Urban Planning and Construction, Agriculture, Audit, Statistics, and Environmental Protection and Urban Management.

- (vi) On the basis of the water allocation plan defined in the IWMPHRB (2015), propose an amended river water allocation mechanism that coordinates and adjusts the diversion volumes dynamically based on the available water resources to ensure the ecological flows are achieved by both Huangshui and Datong Rivers.
- (vii) Consult Qinghai provincial as well as Xining and Haidong municipal water resources authorities to assess possibility of establishing a province level Huangshui River Basin coordination body; help draft a framework and roadmap for its establishment.
- (viii) Organize and facilitate a series of regional workshops involving water resources, agriculture, forestry, urban development and environment protection authorities at Qinghai Province, Xining and Haidong Municipality level to discuss (a) Huangshui River management issues; (b) the IWMPHRB and its vulnerabilities in terms of water diversion; and (c) the draft framework and roadmap to establish Huangshui River water resources coordination body.
- (ix) Prepare a manuscript that synthesizes all activities, findings and agreed actions for publication as a knowledge product.

5. Package CS5— Support on River Smart Management

73. 71. One consulting firm with estimated level of efforts of 20 person-months of national consultant will be engaged through CQS. The consultants will assist PMO in:
- (i) evaluate the planning, design, construction and operation of River Smart construction project, and give improvement suggestions;
 - (ii) provide management knowledge and technical skills training for the management personnel of river smart management platform, and enhance the management ability and skills level of relevant personnel;
 - (iii) share lessons learnt, summarize experiences and lessons, and prepare a report to highlight the demonstration role of the project in river and lake construction.

6. Inputs and Costs of Consulting Services

74. The consulting service inputs for all consulting packages are summarized below.
75. The consulting service budgets for all consulting packages are summarized in the following table.

Table 19: Consulting Service Inputs for All Consulting Packages

Experts inputs	International	National
A. Project Implementation and Institutional Strengthening Support		
Project manager / Project management specialist	11	
Deputy project manager / PPMS and construction management specialist		42
Procurement and contract management specialist		7
River & watershed rehabilitation specialist	4	14
Water and wastewater reclamation specialist	2.5	9
Ecology expert (afforestation & soil erosion)	2	8
Financial management and economic specialist	1.5	14
Environment specialist	2	12
Social development and resettlement specialist	1.5	12
Urban-rural Solid waste management specialist	1.5	7
Landfill O&M specialist		3
Subtotal	26	128
B. External Resettlement and Social Monitoring		
Resettlement and social development experts		12
Subtotal		12
C1. Initial Project Implementation Support		
Project management and procurement expert		5
Subtotal		5
C2. Initial Project Implementation Support		
Resettlement expert		5
Subtotal		5
C3. Initial Project Implementation Support		
Financial management expert		2
Subtotal		2
D. Climate-resilient Water Resources Management Planning Support		
Urban climate change adaptation	2	7
Water resources management expert	2	8
Subtotal	4	15
E. Support on River Smart Management		
Team Leader		8
River Management specialist		6
Informatization technology specialist		6
Subtotal		20
Grand Total	30	187

Source: Asian Development Bank.

Table 20: Consulting Service Budget for All Consulting Packages

Item	Amount (\$000)
CS-1 Project Implementation Management Support	
1. Consultants	
a. Remuneration and per diem (including fees, international and/or local travel)	1529
i. International consultants (26 person-months)	
ii. National consultants (128 person-months)	
b. Communications	3
c. Report preparation, production and transmission	5
2. Provisional Sum	320
3. Contingency	43
Subtotal	1,900
CS-2 External Resettlement and Social Monitor	
1. Consultants	
a. Remuneration and per diem (including fees, international/local travel)	
i. National consultants (12 person-months)	90
b. Reports and communications	0
2. Surveys and data collection ^b	50
3. Miscellaneous administration and support costs	0
4. Contingency	5
Subtotal	145
CS 3.1, CS 3.2 and CS3.3 Initial Project Implementation Support	
1. Consultants	
a. Remuneration and per diem (including fees, international/local travel)	
i. National consultants (12 person-months)	94
2. Reports	5
3. Equipment (office equipment and supplies)	4
4. Miscellaneous administration and support costs	6
5. Contingency	6
Subtotal	115
CS-4 Climate-resilient Water Resources Management Planning Support	
1. Consultants	
a. Remuneration and per diem (including fees, international/local travel, (4 person-months)	100
i. National consultants (15 person-months)	105
2. Reports	10
3. Miscellaneous administration and support costs	5
4. Contingency	5
Subtotal	225
CS-5 Support on River Smart Management	
1. Consultants	
a. Remuneration and per diem (including fees, international/local travel)	
i. National consultants (20 person-months)	168
14	14
2. Equipment (office equipment and supplies)	5
3. Workshops, training, and study tour	10
4. Local transport	5
5. Miscellaneous administration and support costs	3
6. Contingency	5
Subtotal	210
Grand Total	2,595

^a This includes \$25,000, which will be used for CS1 consultant office equipment, including laptops, printers, scanners, phones, etc. (which will ultimately transfer to HPMP), and \$90,000, which will be for HPMP's project management use, including a vehicle, laptops, printers, projectors, etc.

^b This sum is to cover extensive site visits and data collection over the 5-year implementation period to monitor the status of EMDP, SGAP, and resettlement plan.

Source: Asian Development Bank estimates.

VII.SAFEGUARDS

A. Environment

76. **Environmental safeguards categorization due diligence.** The project is classified as category B for environment. An initial environmental examination (IEE) including environmental management plan (EMP) was prepared in compliance with ADB's Safeguard Policy Statement (SPS, 2009) and disclosed on the ADB website. The IEE incorporates findings of the domestic feasibility studies, domestic environmental impact assessments (EIAs), and soil erosion protection plans prepared by licensed domestic institutes,¹⁹ and topical studies conducted in the framework of the project preparatory technical assistance (including biodiversity and habitat survey along the Huangshui river, a comprehensive climate risk and vulnerability assessment, water resources assessment, and others). The domestic safeguards documents were prepared in compliance with the PRC Law on Environmental Impact Assessment (2003), the Technical Guidelines for Environmental Impact Assessment (HJ/T2-93) and other relevant PRC regulations and guidelines. All domestic EIAs and soil erosion protection plans have been approved by the Haidong environment protection and water resources management authorities. The project IEE and EMP (not the domestic EIAs) form the basis of the official loan agreement between ADB and the executing agency. The executing agency, through the PMO, holds final responsibility for implementation and compliance with the IEE and EMP.

77. **Environmental safeguards due diligence at mid-term review in 2021.** Pursuant to ADB's SPS(2009), the two newly proposed subcomponents ((i) Yangjia water treatment plant (WTP) and water transmission and distribution network, and (ii) comprehensive flood control and ecology improvement on the north bank of Huangshui River) will not involve any activities described in the ADB Prohibited Investment Activities List set forth at Appendix 5 of the SPS. The change in project scope has no impact on the current categorization, i.e., environment safeguard category B. Two addendums to IEE including environmental management plan (EMP) were prepared in compliance with ADB's Safeguard Policy Statement (SPS, 2009) respectively for each of the two new subcomponents. The addendums to IEE incorporates findings of the domestic feasibility studies and domestic EIAs prepared by licensed domestic institutes (including brief biodiversity and habitat survey along the north bank of Huangshui river, water resources assessment, and others). The domestic EIAs were prepared in compliance with the relevant PRC laws, regulations and guidelines. They were reviewed and approved by the Haidong ecology and environment bureau respectively on 28 June and 29 July 2021. The new subcomponents' addendums to IEE and EMP (besides the domestic EIAs) will form the basis of the official loan covenants between ADB and the executing agency.

78. **Anticipated impacts and mitigation measures during construction.** Potential impacts during construction have been identified in the consolidated project IEE and the two addendums to IEE. Impact assessment for all project activities covered the following issues: (i) earthworks, (ii) soil erosion, (iii) dust and gaseous air pollution, (iv) noise, (v) construction wastewater, (vi) loss of terrestrial and aquatic habitat, (vii) risk of introducing invasive species, (viii) impacts from pipe-laying, (ix) temporary traffic management, (x) hazardous and polluting materials, and (xi) worker and community health and safety. For each, the severity of potential impact has been assessed in relation to the baseline environment and sensitive receptors, which might be adversely affected. The main findings of the IEE and the two addendums to IEE are that construction will cause no loss of valuable ecology or physical cultural resources, and that construction dust, noise, erosion, and local disruption to traffic and communities will be temporary and can be successfully

¹⁹ All domestic EIAs were approved by the Haidong Environment Protection Bureau (HEPB) in April 2016.

managed. Avoidance of impact through design and site management and mitigation measures through construction management have been identified for each impact and these are listed in the project EMP for the attention of contractors and PMO. In all cases, where the EMP requirements are strictly followed, construction impacts will be kept at acceptable levels.

79. **Anticipated impacts and mitigation measures during operation.** Potential impacts during operation have been identified in the consolidated project IEE and the two addendums to IEE. The operation of flood protection embankments along the Huangshui River will make use of design alternatives to promote the reestablishment of riverside habitats. Downstream afflux effects of flood protection works have been modelled and are not significant. The existing flood warning and early warning system operated at Huangshui watershed (for major floods along the Huangshui River) and at municipal level (for flash floods along small tributaries) will complete the flood protection system. Potential operational impacts arise from the risks of unsustainable water use for the range of irrigation applications (riverside greenbelts and mountain shelter belts) and for the water supply components in the Qijiachuan Valley. Strict water allocations in the reservoir regulation plans will ensure water supply for all target rural communities. A water safety plan will reinforce these outcomes. Additional operational safeguards at the water supply water treatment plants focus on the safe handling of the necessary corrosive chemicals and assurances that the legislative protections given to water sources in PRC are in place and are being enforced. Landfill design, separation buffer, and operational control will minimize impacts to environment and communities. The critical safeguard for the landfill site is the functioning of the leachate treatment system, methane control, and proper site management of the tip face. The leachate treatment plant will be designed to contain leachate for periods of plant malfunction or maintenance. A methane collection system and monitoring system will be part of the detailed design. Control of noise, dust, odor, erosion, and local transportation impacts are also parts of the management. The monitoring of water quality of treated wastewater from Ping'an wastewater treatment plants is also required to ensure continued reuse as irrigation water.

80. The project is classified as **medium climate risk**. A climate risk and vulnerability assessment (CRVA) was conducted at two levels: (i) at regional level to assess the vulnerability of the IWMPHRB; and (ii) at Haidong level to assess the vulnerability of the designs of proposed project components, and the water resource management elements of the Haidong City Master Plan. The CRVA found that (i) total water resources in Qinghai Province will not change significantly in future, but seasonal and annual variability are likely to increase; (ii) climate risks along Huangshui River are likely to increase due to increased seasonal and annual variability in precipitation and hence river flow volumes. Key recommendations of the CRVA were incorporated in the component design, including (i) increased embankment heights to accommodate projected average increase in flood flows resulting from climate change (8%); (ii) provision of alternative water supply source for the Ping'an urban district to reduce increasing water security risk; and (iii) increased capacity of drainage and leachate collection system at landfill site. A capacity development submodule for climate-resilient urban development planning and regional water resources management has been included to component 4 of the project. The submodule will be coordinated and provided by climate change and water resources management specialists. They will, among others, help the HMG review and climate-proof the Haidong City Master Plan and assess the feasibility to establish a provincial-level Huangshui River coordination body to address Huangshui water resources management issues at watershed level.

81. **Environmental management plan (EMP) implementation arrangements.** The responsibilities for environmental management and supervision during the various stages of

implementation of the project are defined in the EMP.²⁰ The EMP will be implemented in all phases of the project—design, pre-construction, construction, and operation. The EMP complies with the PRC's environmental laws and ADB's SPS (2009). The EMP contains (i) objectives; (ii) roles and responsibilities; (iii) mitigation measures; (iv) inspection, monitoring, and reporting arrangements; (v) training and institutional strengthening; (vi) grievance redress mechanism (GRM); and (vii) future public consultation. The EMP is included in this PAM as **Appendix 1** and will be updated at the end of the detailed design. The EMP will also be included as a separate annex in all bidding and contract documents. The contractors will be made aware (through the PMO and the tendering agency) of their obligations to implement the EMP and to budget EMP implementation costs in their proposals. HMG (through the PMO) and the five implementing agencies will assume overall responsibility for implementing, supervising, monitoring, and reporting on the EMP. Their capacity to implement the EMP, as well as the capacity of the operation and maintenance unit to manage project facilities, will be strengthened through capacity building and training activities defined under project component 4 (capacity building). The PMO and the implementing agencies will assign qualified staff to coordinate and monitor EMP implementation. These will be supported by environment management and sector specialists contracted by the PMO.

82. Project management office, environment specialist. The PMO will have main EMP coordination responsibility. A full time environmental specialist will be assigned in the PMO to coordinate implementation of the EMP. The officer will, among others, (i) ensure that environmental management, monitoring, and mitigation measures are incorporated into bidding documents, construction contracts, and operation management plans; (ii) establish and coordinate the project level GRM; (iii) on behalf of PMO, prepare annual EMP monitoring and progress reports, for submission to ADB; (iv) coordinate the training and consultation plans defined in the EMP; (v) respond to any unforeseen adverse impacts beyond those mentioned in this EMP; and (vi) coordinate work with the implementing agency environment specialists.²¹

83. Implementing agency environment specialists. Each implementing agency will assign one environment specialist to coordinate EMP at local level i.e. total of five officers. These officers will (i) implement the EMP at a day-to-day site level; (ii) coordinate the recruitment of construction supervision companies (CSCs); (iii) act as local entry points to the GRM; (iv) report to the implementing agencies and PMO on EMP implementation progress; and (v) work closely with the PMO environment specialist to coordinate EMP work, including reporting, across the project area.

²²

84. Environmental monitoring station. In Haidong, the third party certified test institutes have been contracted by the implementing agencies to implement the external environmental monitoring program described in this EMP (Section E). The implementing agency environment specialists will supervise this monitoring. The third party certified test institutes will report to the local Ecology and Environment Bureau (EEB) and the PMO.

85. Loan implementation environment consultants. Loan implementation environment consultants (LIEC) will be hired under the loan implementation consultant services. The LIEC will advise the contractors, CSCs, implementing agencies, and PMO on all aspects of environmental management and monitoring for the project. The LIEC will (i) assist in updating the EMP and environmental monitoring program, as needed; (ii) supervise the implementation of the mitigation

²⁰ Any revisions of the EMP will be disclosed in compliance with ADB's Public Communications Policy (2011).

²¹ The detailed terms of reference are in the EMP, Annex A.

²² The detailed terms of reference are in the EMP, Annex C.

measures specified in the EMP; (iii) train the PMO and implementing agencies on how to prepare the annual EMP monitoring and progress reports to ADB during the early stages of training, and lead the preparation of these documents; (iv) provide training to the CSC implementing agencies, and PMO, on PRC's environmental laws, regulations, and policies, ADB's SPS (2009), EMP implementation, and GRM in accordance with the training plan; (v) identify any environment related implementation issues, and propose necessary corrective actions; and (vi) undertake site visits for EMP inspection as required.²³

86. The loan implementation consultancy services will also include water and wastewater specialists, a wetland specialist and river ecology and/or hydrology specialists, and ecology experts. In addition, separate contracts will be awarded to consulting firms specialized in municipal waste management, including landfill O&M; wetland O&M; forest management, including irrigation; water resources management; and climate adaptation.

87. **Construction contractors and construction supervision companies.** Construction contractors and CSC contracted by the implementing agencies will be responsible for the daily inspection, monitoring, and evaluation of mitigation measures' implementation. Construction contractors will be responsible for implementing the mitigation measures during construction under supervision of the implementing agency-environmental specialist and the PMO-environmental specialist. In their bids, contractors will be required to respond to the environmental management requirements defined in the EMP. Each contractor will be required to develop site-specific EMPs and will assign a person responsible for environment, health and safety (onsite environment engineer). After project completion, environmental management responsibilities will be handed over to project facility operators. During the operational phase, the implementing agencies and the Haidong EEB will supervise the environmental management and implementation of mitigation measures by the subproject project facility operators.

88. Contractor environmental specifications will be included in all civil works contracts. The contractor environmental specifications (see Appendix 2 to EMP) are standard environmental clauses and subclauses that are applicable to all general infrastructure construction. The objective of these clauses is to reduce and manage all potential environmental impacts caused by the construction activities. These specifications should be included into the standard contractor specifications included in the contract between the implementing agency and the contractor.

89. **Grievance redress mechanism.** A project-specific GRM has been established to receive and manage any public environmental and/or social issues which may arise due to the project. The environment specialists and social officers in the PMO and implementing agency will coordinate the GRM. All project agencies and staff will be trained in the GRM and will take an active role in supporting the GRM when necessary.

90. Pursuant to ADB's SPS, ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the SPS.

B. Land Acquisition and Resettlement

91. **Introduction.** The project is classified as Category A for ADB's involuntary resettlement standard and thus the resettlement plan and subsequent updates or new resettlement plan will need to be reviewed and cleared by ADB's Environment and Social Safeguards Division, in accordance with ADB's SPS.

²³ The detailed terms of reference are in the EMP, Annex B.

92. Since the detailed measurement surveys have not been conducted, the current resettlement plan is considered a draft and will have to be updated and resubmitted to ADB for approval. The update will be based on the final designs, census of affected persons, and inventory of losses (land and fixed assets). The project implementing agencies will re-endorse the final resettlement plan and re-disclosed to affected villages. The construction contract for any civil works involving resettlement impacts will not be awarded until the relevant updated resettlement plan is approved by ADB.

93. **Scope of resettlement impacts.** In order to avoid or minimize the impacts of land acquisition and resettlement (LAR), consultations were conducted with the local government departments, village committees, and affected persons during the preparation of the resettlement plan. Based on the latest feasibility study report, the project will affect 49 villages in eight towns, townships and subdistricts belonging to two districts (Ledu and Ping'an) in the project area.

94. The project will require a total area of 2,705.81 *mu* of land to be permanently occupied, including acquisition of 201.28 *mu* collective owned land (including 689.31 *mu* of irrigated land, 58.68 *mu* of river flat, 409.15 *mu* of woodland, 41.10 *mu* of grassland and 3.04 *mu* of wasteland), occupation of 13,519 *mu* collective owned barren hills, and occupation of 1,508.05 *mu* state-owned non-farmland. In addition, the project will also temporarily occupy 658.70 *mu* collective owned land. The project will affect 1,051 households with 4,144 persons permanently and 880 households with 3,462 persons temporarily, totaling 1,931 households with 7,606 persons (Table 21).

95. **Resettlement policy framework and compensation rates.** The objective of resettlement is to develop an action plan for restoration for those affected by the project so that they benefit from the project, and their living standard is improved or at least restored. HMG will make unified planning for livelihood restoration, and has issued the Letter of Committee of the HMG on land acquisition and livelihood restoration costs of the project based on consultations with the affected persons, HMG, implementing agencies, local government departments, PMO, and project implementation units (PIUs), as well as the practical experiences in the project area. The following principles of resettlement are agreed for the project:

- (i) avoid or minimize resettlement, wherever feasible;
- (ii) compensation and entitlements provided to the affected persons will be adequate to at least maintain their "without project" standard of living, and have prospects of improvement;
- (iii) all affected persons will be provided with resettlement assistance and granted fair compensation based on their title status;
- (iv) where post-requisition cultivated land per capita is not sufficient to maintain livelihood, compensation in cash for other income-generating activities will be provided for the affected persons;
- (v) all the affected persons will be adequately informed on eligibility, compensation rates and standards, livelihood and income restoration plans, project timing, and will be involved in the resettlement plan implementation process;
- (vi) no land requisition will take place unless replacement land or sufficient compensation for resettlement is given to the affected persons;
- (vii) HMG, PIUs, PMO, and an independent and/or third party will monitor compensation and resettlement operations;
- (viii) vulnerable groups will receive special assistance to ensure they are better off, so that the affected persons listed in the resettlement plan will have the opportunity to benefit from the project;

- (ix) resettlement plan will be integrated with the overall city/district planning; and
- (x) the resettlement budget will adequately cover the full aspects of all compensation required.

96. The LAR compensation policies and standards will follow the Land Administration Law of the PRC (2004), Decision of the State Council on Deepening the Reform and Rigidly Enforcing Land Administration (SC [2004] No.28) (1 October 2004), and other applicable guidelines. They will also be based on local policies and standards regarding LAR in Qinghai, and ADB's SPS.

97. According to the Notice of the Qinghai Provincial Government on the Promulgation and Implementation of Uniform Annual Output Values and Location-based Compensation Rates for Land Acquisition (QPG [2015] No. 61), in areas where uniform average annual output value (AAOV) rate for land acquisition apply, compensation rates for collective land shall be as follows:

- (i) The compensation rate for irrigated land is 20 times the corresponding uniform AAOV; if the per capita cultivated area of any affected village is less than 0.3 *mu* after land acquisition, the compensation rate is 30 times.
- (ii) The compensation rate for pasture land is 11 times the corresponding uniform AAOV; vegetable and garden land will be compensated for as cultivated land.
- (iii) The compensation rate for woodland is 6 times the corresponding uniform AAOV; the compensation rate for unused land is equal to the uniform AAOV of the surrounding land.
- (iv) Construction land is compensated for at the rate of the surrounding land.
- (v) Compensation rates for acquired state-owned farmland shall be determined by reference to the above rates; if the right to use state-owned construction land is withdrawn, reasonable financial compensation shall be paid to the holder of such right as otherwise stipulated by the provincial government.
- (vi) The land for riverside shelter forest construction will be obtained by land circulation, and the affected households or collectives will be subject to cash compensation at a rate of CNY1,040 per *mu*. The remaining land contracting period is 12 years (Table 22).

98. For the resettlement implemented after September 2020, the "Notice on Announcement of Comprehensive Land Price of Qinghai Province Expropriating Agricultural Areas" (QZ [2020] No. 64) will be applied.

99. All affected people are eligible to receive compensation and assistance. The cut-off date for certification of such entitlement will be disclosed to all the affected persons immediately after it is determined (usually on the date when the land acquisition announcement is published by the government according to the Land Administration Law). Inclusion in the project area will have a cut-off-date on 30 June 2016.

100. **Resettlement and rehabilitation measures.** An evaluation was conducted for the land losses of affected villager groups and households. The results show that most affected households are not significantly affected (i.e., lose more than 10% of their income source). For most, cash compensation will be adequate, but for some the income restoration plan will be subject to further negotiation and discussion with the affected persons, with the findings and results included in the final resettlement plan.

101. In general, the income restoration options include:

- (i) **Employment.** Affected persons are mostly employed in nearby towns. The local governments will offer public welfare jobs (i.e. municipal construction, landscaping,

cleaning, and security) first to the affected persons. It is estimated that the project will generate temporary and permanent jobs at the construction stage—including skilled and unskilled jobs—first to the affected persons.

- (ii) **Skills training.** For affected persons who get employed or startup businesses independently, a skills training program has been developed, including agriculture, cultivation, computer, cooking, construction, maternity matron, old-age care, etc. Qualified trainees will receive vocational qualification certificates.
- (iii) **Social security.** Endowment insurance will be provided to eligible farmers affected by land acquisition; older farmers can be provided rural-urban social welfare insurance. Each insured person will receive a basic pension subsidy of CNY120 per month from the local government.

102. **Resettlement budget and financing plan.** The resettlement budget of the project is CNY150 million, including CNY89 million for permanent land acquisition and temporary land occupation. The detailed budget of the resettlement fund will be updated upon finalization of the compensation standards and project design, and included in the final resettlement plan. The resettlement fund will be financed and paid by HMG as a part of the total project investment. A compensation agreement will be negotiated and entered into with the village and/or community committees and the affected households during the LAR implementation. On this basis, the final cost will be further updated. The implementing agencies will be responsible to finance any shortfall in such costs (Table 23).

103. **Institutional arrangements.** The HMG is the executing agency of the project and has established the project leading group for ADB-loan Qinghai Haidong Urban-Rural Eco Development Project to be wholly responsible for the organizational leadership of the project, coordinating and solving major issues, directing and coordinating project implementation, and supervising the progress of project implementation.

104. The HMG and related local governments have designated ADB-loan PMOs in different levels to be responsible for project preparation and management. PMOs will be responsible for managing and coordinating the resettlement activities, including payment of compensation. To be specific, the Resettlement and Social Affairs Departments or full time staff under PMOs will be specifically responsible for preparing and managing the implementation of resettlement, financial payment, and internal monitoring. Delegated by PMOs, land management bureaus in the related district and counties will be responsible for the specific implementation of LAR, while the towns, townships, and villages in the project area will provide assistance in the updating and implementation of the resettlement plan.

105. To ensure smooth implementation, the staff in charge of LAR will undertake training on resettlement implementation organized by the Haidong PMO. A resettlement start-up consultant will provide training in ADB's policy requirements and will assist the implementing agencies to update and finalize their resettlement plan. The resettlement plan will be (i) updated based on the final design, detailed measurement survey, and census of affected persons; (ii) disclosed to affected persons; and (iii) submitted to ADB for review and approval prior to the award of civil works contract and commencement of land acquisition or house demolition.

106. The resettlement implementation schedule has been prepared based on the project preparation and construction timetable. The schedule is quite ambitious with LAR preparatory starting as early as November 2016 (Table 24). This means:

- (i) the resettlement start-up consultant will need to be engaged by the end of February 2017;

- (ii) the external resettlement monitor will need to be engaged by March 2017; and
- (iii) considerable preparatory and implementation work will need to be carried out to ensure there is no delay to the planned construction schedules.

107. **Grievance redress mechanism.** A GRM has been developed in compliance with ADB's SPS (2009) requirement to address environmental, health, safety, and social concerns associated with project construction, operation, land acquisition, and leasing arrangements. The details of the GRM, including a time-bound flow chart of procedures, are included in the project EMP and resettlement plan; the complaint channels are slightly different for environmental and resettlement issues, but the PMO will maintain and integrate system to document, follow up, and reports on all cases.

108. Persons affected by LAR, including land transfer, may file an appeal on any aspect of resettlement, such as compensation rates, etc. The means of appeal, and the names, locations, persons responsible and telephone numbers of the appeal accepting agencies will be communicated to the affected persons at a meeting, through an announcement or the resettlement information booklet, so that the displaced persons know their right of appeal. Mass media will be used to strengthen publicity and reporting, and comments and suggestions on resettlement from all parties concerned will be shared by the resettlement organization. All agencies will accept grievances and appeals from the affected people for free, and costs so reasonably incurred will be disbursed from the contingency costs.

109. During the design and implementation periods of the project, these appeal procedures will remain effective to ensure that the affected people can use them to address relevant issues. Affected persons can also submit complaints to ADB, which will first be handled by the project team. If an affected person is still not satisfied and believes he and/or she has been harmed due to noncompliance with ADB policy, he and/or she may submit a complaint to ADB's Accountability Mechanism.²⁴

110. **Monitoring and evaluation.** A detailed plan for both the internal and external monitoring is included in the resettlement plan. Haidong PMO will include a summary of internal monitoring in the semiannual project progress reports submitted to ADB. Furthermore, the PMO will employ an external resettlement monitoring institute or firm to monitor and evaluate resettlement progress and results. A baseline survey for a sample of affected persons will be completed for each resettlement component before the LAR begins. Semiannual external monitoring reports will be prepared to PMO and ADB directly during the project implementation period.

²⁴ Accountability Mechanism. <http://www.adb.org/site/accountability-mechanism/main>

Table 21: Summary of Resettlement Impacts by Component

Component	Sub-component	Scale	Town	Villages	Collective land (mu)						State-owned Land (mu)	Total (mu)	AH	AP	Remarks
					Irrigated Land	River Flat	Wood Land	Grass Land	Waste Land	Sub-total (mu)					
Huangshui river rehabilitation	Huangshui Ping'an segment	Embankment, blockage removal	Ping'an	Dongzhuang, Zhangjiazhai, Shangtan	168.46		44.74	/	/	213.2	/	213.2	142	602	
			Xiaoxia	Wangjiazhuang, Sanshilipu	42.28		15.03	/	3.04	60.35	/	60.35	76	339	
			Gaodian	Wanzi, Hetanzhai, Hongzhuang	45.26		37.34			82.6		82.6	96	372	
			Subtotal		256	0	97.11	0	3.04	356.15	0	356.15	314	1313	
	Huangshui river Ledu non-urban segment	<ul style="list-style-type: none"> Left embankment, Right embankment Blockage removal 	Gaodian	Hetanzhai, Liushuwan, Xiakou, Daxia, Dongmen, Ximen	36.6	32.06	70.25	22.36	/	161.27	/	161.27	153	501	
			Yurun	Huangtan Hanzhuang, Shengou	13.28	0	24.89	18.74	/	56.91	/	56.91	33	132	
			Hongshui	Xiajie, Axi, Hexi, Shangyaodong, Gaojiawan, Jiangwan, Shuangyi, Dianzi, Shuang'er	130.54	25.54	97.73		/	253.81	/	253.81	250	1000	
			Gaomiao	Dongcun, Xicun, Duanbao, Liuwan, Changli, Xiagou, Laoya, Langya	107.14	1.08	119.17	0	/	227.39	/	227.39	232	928	
			Nianbo	Tangguanying, Tuqiao	12.57	/	/	/	/	12.57	/	12.57	27	108	
			Subtotal		300.13	58.68	312.04	41.1	0	711.95	0	711.95	695	2669	

Component	Sub-component	Scale	Town	Villages	Collective land (mu)						State-owned Land (mu)	Total (mu)	AH	AP	Remarks
					Irrigated Land	River Flat	Wood Land	Grass Land	Waste Land	Sub-total (mu)					
	Binhe river shelter forest construction	New town: 13.5 ha	Ping'an	Shijiaying, Liuwan Guchengya	/	/	/	/	/	0	125.67	125.67	/	/	
	Huangshuihe River Hehuang New District Segment	Embankment, blockage removal	Gaozhai	Xiwan, Dongzhuang, Xizhuang, Caojiabao, Dongcun, Zhongcun, Xicun	/	/	/	/	/	/	1347	1347	/	/	Added Subcomponent
	Total				556.13	58.68	409.15	41.1	3.04	1068.1	1472.67	2540.77	1009	3982	
Eco-environment Protection and Restoration	Mountain boundary shelter forest construction	Caojiabao Airport: 878 ha	Xiaoxia	Sanshilipu, Hongtuzhuang, Xishangzhuang, Shangdian, Xiadian, Baicaowan	/	/	/	/	13174	13174		13174	/	/	Involving no LA
		Xiaoxia area: 23 ha	Xiaoxia	Wangjiazhuang	/	/	/	/	345	345		345	/	/	Involving no LA
		Subtotal			0	0	0	0	13519	13519	0	13519	0	0	
	Ping'an WWTP and water reclamation (phase 2)	Pump stations, landscaping irrigation network	Ping'an	Dongying	2.61		/	/	/	2.61	7.13	6.22	3	12	
	Total				2.61	0	0	0	13519	13521.61	7.13	13525.22	3	12	
Rural water supply and MSW management infrastructure construction	Fatai Reservoir Waterworks	1,500m³/d	/	/	/	/	/	/	/	0	2.47	2.47	/	/	Within station
	Wenzukou Reservoir Waterworks	1,500m³/d	/	/	/	/	/	/	/	0	2.06	2.06	/	/	South of station
	Sanhe Town Waterworks	1,500m³/d	Sanhe	Sanhe	5.73	/	/	/	/	5.73	14.39	20.12	5	41	
	Subtotal				13.3	0	0	0	0	13.3	7.04	20.34	9	31	
	Ledu landfill	Expanding by 670,000 m³	Nianbo	Qilidian	11.44	/	/	/	/	11.44	9.2	20.64	5	18	

Component	Sub-component	Scale	Town	Villages	Collective land (mu)						State-owned Land (mu)	Total (mu)	AH	AP	Remarks
					Irrigated Land	River Flat	Wood Land	Grass Land	Waste Land	Sub-total (mu)					
	Yangjia WTP & Pipeline	Water treatment plant, transmission and distribution pipelines	Gaodian	Shangyangjia, Xiayangjia, Hongzhuang, Hetanzhai	105.83	/	/	/	/	105.83	12.01	117.84	25	101	Added Subcomponent
Total					130.57	0	0	0	0	130.57	28.25	158.82	39	150	
Grand total					689.31	58.68	409.15	41.1	13,522.04	14,720.28	1,508.05	16,224.81	1,051	4,144	

AH = affected households, AP = affected persons, ha = hectare, MSW = municipal solid waste, WWTP = wastewater treatment plant.

Table 22: Compensation Rates for Land Acquisition (before September 2020)
(CNY/mu)

Tier	Region	District	Areas	Uniform AAOV (CNY/mu)			Amount of Compensation (CNY)		
				Irrigated Land	Non-irrigated land	Pasture Land	20 Times for Irrigated Land (per capita >0.3 mu)	20 times for Non-irrigated Land	11 Times for Pasture Land
							30 Times for Irrigated Land (per capita <0.3 mu)		
1	Huangshui river valley	Ping'an	1. Ping'an Town (Xiyang, Dongzhuang, Shangzhuang, Dalu, Zhangjiazhai), 2. Xiaoxia Town (Guchengya, Shangdian, Xiadian, Liuwan)	2,470	1,330	215	49,400	26,600	2,365
			Ping'an Town: (Zhongcun, Xicun, Dongying)				74,100		
		Ledu	Nianbo Town: (Qilidian)	2,470	1,330	215	49,400	26,600	2,365
2	Huangshui river valley	Ping'an	1. Sanhe Town (Sanhe), 2. Xiaoxia Town (Sanshilipu, Wangjiazhuang)	1,915	1,252	215	38,300	25,040	2,365
		Ledu	1. Hongshui Town (Dianzi, Shangyaodong, Adong, Axi, Matangzi, Xiajie, Shuangyi, Shuang'er, Gaojiawan, Jiangwan)	1,915	1,252	215	38,300	25,040	2,365

Tier	Region	District	Areas	Uniform AAOV (CNY/mu)			Amount of Compensation (CNY)		
				Irrigated Land	Non-irrigated land	Pasture Land	20 Times for Irrigated Land (per capita >0.3 mu)	20 times for Non-irrigated Land	11 Times for Pasture Land
							30 Times for Irrigated Land (per capita <0.3 mu)		
			1.Hongshui Town (Hexi), 2. Gaodian Town (Dongmen, Ximen, Daxia, Liushuwan, Hetanzhai, Xiakou), 3. Yurun Town (Xuan'ergou, Hanzhuang, Yangquan, Shangxingyuan, Xiaxingyuan, Dadiwan, Liujia, Shengou), 4. Gaomiao Town: (Langjia, Laoya, Chaomajia, Baiyazi, Pujiadun, Handiwan, Xiagou, Changli, Liuwan, Dongcun, Xicun, Duanbaozi, Xinsheng, Dalu)				57,450		

Table 23: Compensation Rates for Land Acquisition (after September 2020)

District	Code of the District in the Policy	Township	Name of the applicable areas	Integrated Land Compensation Standard (CNY/mu)
Ledu	IV	Gaodian	Hetanzhai Village, Hongzhuang Village	57,500
	IX	Gaodian	Shangyangjia Village, Xiayangjia Village	36,000
Ping'an	III	Ping'an	Dongzhuang, Shangzhuang, Dalu, Dongcun, Dalu, Shangtan, Zhangjiazhai, Zhongcun, Nancun, Xicun, Yangjia, Yaofang, Xiyang, Shenjia, Baijia, Hongling New Village	74,100
		Sanhe	Zhang Qizhai	74,100
		Xiaoxia	Shijiaying, Guchengya, Xiadian, Xishangzhuang, Hongtuzhuang, Wangjiazhuang, Sanshilipu, Shangdian, Shanghongzhuang, Xiahongzhuang, Liuwan	74,100

Table 24: Budget of Resettlement Costs
(CNY '000)

Item	Unit	Rate (CNY 0,000 /mu)	The Project						Total		Percent
			Huangshui River Rehabilitation		Eco-environment Protection and Restoration		Rural Water Supply and MSW Management Infrastructure Construction		Qty.	Budget	
			Qty.	Budget	Qty.	Budget	Qty.	Budget			
1. Basic Costs	CNY 0,000			71,307.97		290.10		16,114.86		87,712.93	58%
1.1 Compensation for permanent land acquisition	CNY 0,000		1,065.06	47,508.82	2.61	193.40	130.57	9,675.24	1,198.24	57,377.45	38%
Irrigated land	mu	74.10	556.13	41,209.23	2.61	193.40	130.57	9,675.24	689.31	51,077.87	34%
forest land	mu	14.82	409.15	6,063.60	-	-	-	-	409.15	6,063.60	4%
Barren land	mu	2.37	99.78	235.98	-	-	-	-	99.78	235.98	0%
1.2 Endowment insurance for LEFs	CNY 0,000		1,065.06	23,754.41	2.61	96.70	130.57	4,837.62	1,198.24	28,688.73	19%
1.3 Temporary land occupation	<i>mu</i>	2.50	17.90	44.75	-	-	640.80	1,602.00	658.70	1,646.75	1%
1.4 Compensation for young crops and ground attachments	CNY 0,000			14,261.59		58.02		3,222.97		17,542.59	12%
2. Administrative costs (2% of basic costs)	CNY 0,000			1,426.16		38.68		1,935.05		3,399.89	2%
3. Resettlement planning and monitoring costs	CNY 0,000			5,704.64		23.21		1,935.05		7,662.89	5%
3.1 Resettlement planning and design costs(3% of basic costs)	CNY 0,000			2,139.24		8.70		483.45		2,631.39	2%
3.2 Resettlement M&E costs(5% of basic costs)	CNY 0,000			3,565.40		14.51		805.74		4,385.65	3%
4. Training costs (1% of basic costs)	CNY 0,000			713.08		2.90		967.52		1,683.50	1%

Item	Unit	Rate (CNY 0,000 /mu)	The Project						Total		Percent
			Huangshui River Rehabilitation		Eco-environment Protection and Restoration		Rural Water Supply and MSW Management Infrastructure Construction		Qty.	Budget	
			Qty.	Budget	Qty.	Budget	Qty.	Budget			
5. Taxes and fees on land acquisition	CNY 0,000			18,044.99		76.77		320.40		18,442.16	12%
5.1 Land occupation tax	mu	16.68	556.13	9,273.47	2.61	43.52	130.57	2,177.25	689.31	11,494.24	8%
5.2 Land restoration costs	mu	2.80	17.90	50.12	-	-	640.80	1,794.24	658.70	1,844.36	1%
5.3 Land reclamation costs	mu	3.40	556.13	1,890.84	2.61	8.87	130.57	443.94	689.31	2,343.65	2%
5.4 Forest vegetation recovery payments	mu	4.00	409.15	1,637.42	-	-	-	-	409.15	1,637.42	1%
5.5 Compensation fees for the use of addition construction land	mu	9.34	556.13	5,193.14	2.61	24.37	130.57	1,219.26	689.31	6,436.78	4%
Subtotal of Items 1–5	CNY 0,000			111,458.44		489.68		24,495.85		136,443.96	91%
6. Contingencies (10% of total costs)	CNY 0,000			11,145.84		48.97		2,449.58		13,644.40	9%
Total of Items 1–6	CNY 0,000			122,604.28		538.65		26,945.43		150,088.36	100%
Compensation for land circulation	CNY 0,000			-		-		-		-	
Total	CNY 0,000			122,604.28		538.65		26,945.43		150,088.36	100%

Table 25: Resettlement Implementation Schedule

No.	Activity	Agency Responsible	Target	Time
1	Resettlement Plan Preparation Stage	/	/	2015.10-2016.5
1.1	Appointment of the resettlement plan preparation agency	Haidong PMO	Preparation agency	2015.10
1.2	Socioeconomic survey	Consulting agency, Haidong PMO, owner	Surveys	2015.10-11
1.3	Resettlement plan preparation	Haidong PMO	Resettlement plan	2015.10-2016.12
2	Information Disclosure and Public Participation	/	/	2016.3-2016.6
2.1	Consultation with departments concerned and affected persons	Haidong PMO	Departments concerned and consulting agency	2016.3
2.2	Disclosure of the resettlement plan on ADB's website	Haidong PMO, ADB	Affected persons, public	2016.6
2.3	Disclosure of the draft resettlement plan and the resettlement plan to affected persons	Haidong PMO	Affected persons	2016.6
3	Implementation Stage	/	/	2016.8-2024.
3.1	Detailed measurement of surveys	Haidong PMO, land and resources bureaus	Affected villages, affected persons	2016.8-2022.12
3.2	Updating and/or finalization of resettlement plan	Haidong PMO	Resettlement plan	2016.11
3.2	Execution of resettlement agreements and payment of compensation fees	Haidong PMO, land and resources bureaus	Affected persons	2017.3-2024
3.3	Income restoration measures	Haidong PMO, township governments	Affected persons	2017.5-2024
3.4	Skills training	Haidong PMO, township governments	Affected persons	2017.1-2024
4	Monitoring and Evaluation	/	/	2016.10-2024
4.1	Baseline survey	External M&E agency	Affected villages	2019.6
4.2	Internal monitoring	Haidong PMO	Semiannual report	From 2016.10
4.3	External M&E	External M&E agency	Semiannual report	2017.10.-2024
5	Participation Records	Haidong PMO	/	Ongoing
6	Grievance Redress Records	Haidong PMO	/	Ongoing
7	Construction	/	/	/
7.1	River rehabilitation	Construction agency	/	2017.10-2024
7.2	Eco-environment protection and restoration	Construction agency	/	2020.12
7.3	Urban water reclamation	Construction agency	/	2017.4-2020.12
7.4	Urban-rural environment rehabilitation	Construction agency	/	2017.10-2020.12
7.5	Urban-rural water supply	Construction agency	/	2017.10-2024

ADB = Asian Development Bank, M&E = monitoring and evaluation, PMO = project management office.

Source: Asian Development Bank.

C. Ethnic Minority Development Plan

111. The project is classified category B for ADB's indigenous peoples safeguard. The project components are focused on urban and rural areas of Haidong, with ethnic minorities forming about 10% of population. There are 10,054 Hui people or 4.6% and 4,192 Tibetans or 1.9% of total population, together with Menggu and Tu, living in the direct project area who will benefit from better access to public services and enjoy the improved living and business environment. Only the Urban-Rural Water Supply component involves direct benefit to minority villages. These are three Tibetan villages in Shihuiyao Xiang (Shiguasi, Shihuiyao, and Yima) with a total minority population of 370 accounting for 85.4%, 34.4%, and 40.7% of the total population in these villages respectively. One ethnic minority group affected by the Ledu District Yangjia Water Plant, namely Group 4 of Shang Yangjia Village, Gaodian Township. It is an ethnic minority group with 36 households 126 Tu People, accounting for 28.6% of the total population of Shang Yangjia Village (126 households with 440 persons). The remaining minority population involved in the project area lives in a scattered manner in Gaodian, Gaomiao, Hongshui, Nianbo, and Yurun towns in Ledu District, and Ping'an, Sanhe, and Xiaoxia towns in Ping'an District. Generally, they will not be adversely impacted but will be direct or indirect project beneficiaries.

112. An ethnic minority development plan (EMDP) has been prepared to facilitate the inclusion of ethnic minority people in all project activities and was updated and disclosed online in November 2021.²⁵ The EMDP also includes measures to ensure that their customs and beliefs will be respected throughout project construction and operation. Key issues addressed in the EMDP ensure (i) that affected ethnic minority people are effectively involved in planning, implementation, and monitoring of the project; (ii) that impacts and risks potentially affecting ethnic minority people are mitigated; and (iii) that ethnic minority people will benefit in an inclusive and culturally appropriate manner. The EMDP includes measures to mitigate potential social risks and to enhance project benefits, particularly for women and the poor. The project will support (i) the targets set for the contractors with respect to the employment of ethnic minorities (15%), including the poor; (ii) measures to facilitate the effective inclusion of ethnic minorities (50%) in project activities through the public participation and awareness, by removing potential cultural barriers to such participation; and (iii) measures to reduce the risk of unintentional offence being caused to ethnic minority communities during project construction and operation. Implementation and monitoring of the EMDP is included in the loan assurances and design and monitoring framework. The plan also includes enhancement measures, which will be integrated into HMG ethnic minority development program, and financed by HMG for the ethnic minorities to increase their environmental awareness and skills.

113. The actions to be implemented under the EMDP are for the most part to be included as part of the project's administrative budget. Where local government agencies collaborate with actions in the EMDP, the local government administrative budgets will cover the costs of local government staffing and other related costs. Each PIU will nominate at least one person responsible for overseeing the implementation of the EMDP, the social and gender action plan, and to coordinate the social monitoring. The ethnic and religious affairs, as well civil affairs bureaus in each district will provide support as necessary, as will the community offices, the district centers for disease control, and the labor bureaus. An external monitoring agency to provide independent monitoring and evaluation of the EMDP has been included in the overall project budget.

²⁵ Ethnic Minority Development Plan is accessible from the list of linked documents in the RRP, Appendix 2.

114. Prior to the commencement of any component, the HPMO will ensure that briefings on ADB's policies with respect to ethnic minorities, and on the EMDP, are provided both for their own members and the PIUs. The ethnic and religious affairs bureaus will assist in these briefings. Contractors, their supervisors, and workers will also be required to undergo briefings on local ethnic minority customs and beliefs, and to ensure that no offense to ethnic minority beliefs or customs occurs during construction. The national social development specialist in the project implementation consulting services will support EMDP implementation and monitoring. The EMDP endorsed by the government has been disclosed on to ethnic minority people targeted by the project and uploaded on the ADB website. Detailed monitoring and reporting arrangements are included in the Section IX.B and the project agreement.

VIII. GENDER AND SOCIAL DIMENSIONS

115. A poverty and social assessment (PSA) was undertaken during the project preparation phase in accordance with ADB guidelines on gender and social dimensions. The PSA included a review of secondary data, a household survey, focus group discussions and key informant interviews. The PSA assisted in the design of the various subcomponents to ensure they are social inclusive and implemented with a high degree of community participation, especially for the barren hills greening, the wetland rehabilitation and the solid waste management.

116. The project will promote the sustainable social and environmental urban and rural development of Haidong. The project will also have public awareness campaigns to promote environmental protection and generate part-time and full-time employment during construction and operation, particularly for women and the poor. Based on the PSA, a social and gender action plan (SGAP) has been formulated and agreed by the Haidong PMO and implementing agencies. These actions will be implemented, progress will be monitored, and achievement of results will be measured and reported. The following sections provide some further guidance for the implementing agencies.

A. Summary Poverty Reduction and Social Strategy

117. Haidong is a prefecture-level city in Qinghai, which governs two districts and four autonomous counties, with a land area of 13,200 square kilometers (km²), and a total population of 1.7 million. In 2015, Haidong had a poor population of 175,800, accounting for 33.8% of provincial poor population. The project area covers Ping'an District, Ledu District, and Hehuang New District—ten towns or townships—over 180 urban communities and villages. Ping'an and Ledu districts are both state-level key counties for development-oriented poverty reduction. In 2015, these districts had 44 and 141 poor villages; and a poor population of 7,500 and 30,000, respectively. The project design includes a number of non-structural measures to support and ensure the sustainability of the new infrastructure for environmental protection, flood management, wastewater management and solid waste management, including (i) improvements to the MSW collection and transport system; (ii) creation of job opportunities for the poor, women, and ethnic minorities; (iii) strengthened public participation and information disclosure about project, resettlement policies and plans, environment assessment and EMP, other social impacts and plans (i.e., EMDP and SGAP), and project implementation plan; (iv) public awareness education programs related to water saving, environment and forest protection, and flood risk management; (v) establishment of project-level grievance redress mechanisms; and (vi) establishing six pilot community environment supervision education teams (CEST) to conduct consultation, education, and management.

118. The project will directly benefit 247,000 people in 180 villages of ten townships within the three districts, including an urban population of 182,000, or 74%, and a rural population of 65,000 or 26%. The project will create 135 skilled and 404 unskilled employment opportunities during the project construction phase, including a target for about 30% employment for women and 15% for the poor and ethnic minorities. It will generate 162 skilled and 331 unskilled jobs (cleaners, landscaping, maintenance workers, etc.) during the project operation phase. The HPMO and PIUs have assured that employment priorities will be given to vulnerable groups, including women, the poor, and ethnic minorities.

119. **Design features.** The project design directly responds to issues raised by the poverty and social analysis, related to basic urban infrastructure. Key design features include (i) setting employment targets for women, ethnic minorities, and the poor in construction and operations; (ii) strengthening public participation and consultation in decision-making related to public hearings for water supply and solid waste management; (iii) targeting beneficiary ethnic minority people through public awareness and education campaign and skills enhancement programs funded by the local government; and (iv) more focus on providing public education and pilot programs on water saving, solid waste recycle,²⁶ and forest management with up to 50% female participation. In addition, it ensures (i) protection of labor that will be employed on project works, and (ii) mitigation of communicable diseases including HIV and prevention of drug and human trafficking. The EMDP and SGAP outlined actions to ensure mitigation of adverse impacts and increase positive impacts of the project. Implementation and monitoring of SGAP is included in the loan assurances.

B. Social and Gender Development Action Plan

120. The SGAP has been prepared for the project.²⁷ It sets out activities (i) for the mitigation of adverse impacts and risks identified in the course of the poverty and social analysis of the project, and (ii) to help maximize the benefits to be derived from the project. Actions include (i) targets for employment of local labor, women, the poor and ethnic minorities during construction and operation; (ii) public awareness program on construction safety and labor law; (iii) measures to reduce potential risks, such as, communicable diseases including HIV, sexual harassment, drugs and human trafficking, and waterborne health problems; (iv) public participation and education in water saving, solid waste recycle, and forest management; and (v) public hearing for water supply and solid waste management. SGAP implementation will be monitored through the project performance management system, project progress reports, and ADB supervision missions.

121. The project is categorized by ADB as effective gender mainstreaming (EGM). The project will have significant benefits for women to reduce the energy, time, and effort spent by women on these activities, allowing them greater participation in income-generating activities, family entertainment, or leisure. Women strongly support the project across all subcomponents, and they perceive that the project will improve their quality of life and create employment and income opportunities for them. The SGAP will help to ensure (i) increased women's participation in the project, including a target for at least 30% employment for women; (ii) participation and gender sensitive trainings on water saving, solid waste recycle, and forest management with up to 50% female participation; (iii) participation in capacity building activities; and (iv) appropriate gender

²⁶ Women's active participation in water and sanitation is essential because of their key roles in the provision and maintenance of water, sanitation and hygiene at the household level. Thus, during the public awareness and education program's implementation gender and the particular needs and interests of women will be integrated into the training materials.

²⁷ A combined SGAP has been prepared for this project and is presented in the PAM and assurances.

targets, indicators and sex-disaggregated data for project monitoring and evaluation. The social, gender, and community participation consultants (international, 2 person-months; national, 12 person-months) will be provided under the capacity development component to ensure the effective implementation of the SGAP. A loan assurance for implementation of the SGAP has been included.

122. To address the risk of spread of HIV/AIDS, the project requires (i) inclusion of clauses on HIV and other communicable disease into contract bidding documents; (ii) conduct of public health and HIV prevention education to the civil works contractors; (iii) establishment of health measures for construction workers (e.g., setting up a temporary infirmary, using local medical resources); and (iv) conduct of diverse publicity activities on HIV/AIDS (e.g., brochures, posters and picture albums).

C. Other Social Aspects

123. As per the loan assurances, construction workers hired from the local communities will be trained on sanitation knowledge campaigns and training, and capacity building will be undertaken to protect their legal labor rights during construction or operations.

124. **Labor issues.** Core labor standards will be complied with based on national laws. Civil works contracts will stipulate priorities to (i) employ local people for works, (ii) ensure equal opportunities for women and men, (iii) pay equal wages for work of equal value, (iv) pay women's wages directly to them, (v) not employ children or forced labor, and (vi) ensure that all contracted labor have written contracts. Specific targets for employment have been included in the SGAP. HPMO is responsible for the implementation of the SGAP. HPMO will monitor contractors' compliance with these project assurances in conjunction with the Human Resources and Social Security Bureau, and Civil Affairs Bureau.

125. Under the project management consulting services, a social, gender, and community participation specialists will be engaged to support HPMO to implement the EMDP, SGAP, and other social aspects. They will be monitored internally and reported to ADB via quarterly progress reports.

Table 25: Project Beneficiaries by Project Subcomponent

District	Component	Directly Affected Areas	Directly Affected Population	Remarks
Ledu	River rehabilitation	Nianbo, Gaodian, Yurun, Hongshui and Gaomiao towns	140,000	
	Yangjia Water Treatment Plant	Gaodian, Yurun, Ledu Urban Area, Agricultural Demonstration Zone and Ledu industrial park of Ledu District	140,000	Overlapping with the population affected by River Rehabilitation and Urban-Rural Environment Rehabilitation in Ledu District
	Urban-rural environment rehabilitation	Main urban area of Ledu District	100,000	
Ping'an	River rehabilitation	Ping'an, Xiaoxia towns	65,000	
	Eco-environment protection and restoration	Ping'an, Xiaoxia towns	65,000	Overlapping with the population affected by river rehabilitation
	Urban water reclamation	Ping'an town	48,000	

District	Component	Directly Affected Areas	Directly Affected Population	Remarks
	Urban-rural water supply	Sanhe town, Shihuiyao Xiang, and Ping'an town	12,000	(Excluding overlap)
Hehuang New District	Huangshuihe River Channel, Hehuang New Zone Segment	Hehuang New Zone	30,000	To be 249,000 in 2035 based on the general planning for Hehuang New Zone.
Total			217,000	(Excluding overlap)

Source: Asian Development Bank.

SOCIAL AND GENDER ACTION PLAN

Actions or Activities	Target and Indicators	Responsible Agencies	Timeline	Budget and Cost
A. Integrated Flood Plain Management Infrastructure for Huangshui River Provided—Output 1				
<ul style="list-style-type: none"> Public consultation on selecting suitable locations for sludge disposal and transportation to minimize negative impacts on communities along Huangshui River, Channel Ping'an, Ledu and Hehuang New District segment Public awareness raised on wetland conservation area 	<ul style="list-style-type: none"> Number and % of participants with 50% female participation Number, type, and frequency of awareness raising activities provided (sex- disaggregated) 	<p>Agencies responsible: PMOs, implementation agencies, Land Resources Bureau</p> <p>Assisting agencies: EPB, women's federation, PAO</p>	2016–2024	<p>Financial budget of the local governments</p> <p>The project's detailed engineering design cost</p>
B. Measures to Control Soil Erosion in Haidong's Urban Catchment are Implemented—Output 2				
<ul style="list-style-type: none"> Knowledge and skills training and education program on forest maintenance and fireproofing for residents of Ping'an town Developing a community and/or villages manual on forest maintenance through participation and consultation of Ping'an town's residents 	<ul style="list-style-type: none"> Number, type, and frequency of training provided with 50% female participation Community committees collect comments from residents with 50% female participation 	<p>Agencies responsible: PMOs, Forest Bureau, EPB</p> <p>Assisting agencies: Women's federation, PAO</p>	2016–2024	<p>Financial budget of the local governments</p> <p>Capacity building component community participation consultant (2 person-month, \$18,000)</p>
C. Rural Water Supply and Urban Solid Waste Infrastructure Constructed—Output 3				
<ul style="list-style-type: none"> Consultation with local residents on Ledu landfill extension Identifying the location of garbage bins in consultation with residents Ping'an and Ledu communities Public awareness and education program on water saving and solid waste recycling for communities and schools Public hearings held for water supply and sanitation and solid waste tariff 	<ul style="list-style-type: none"> Number and % of participants with 50% female participation Number and type of schools and % of participants, (50% female) Development of gender and age-sensitive training materials^a Number and % of participants, with 50% female and 40% low income people participation 	<p>Agencies responsible: PMO, Water Resources Bureau, Health Bureau, design institute, Price Bureau</p> <p>Assisting agencies: EPB, women's federation, PAO</p>	2016–2024	<p>Financial budget of the local government</p> <p>The project's detailed engineering design cost</p>
D. All Outputs				
1. Generating Job Opportunities				
<ul style="list-style-type: none"> About 135 skilled and 404 unskilled jobs generated in the project construction phase 162 skilled jobs and 331 unskilled jobs (maintenance, cleaners, landscaping workers, etc.) created during the operation phase 	<ul style="list-style-type: none"> 30% of which is first made available to women and 15% to the poor and ethnic minorities; (baseline for women: 15%) 30% of which is first made available to women and 15% to 	<p>Agencies responsible: PMO, implementing agencies, contractor</p> <p>Assisting agencies: Labor, Social Security and Civil Affairs bureaus,</p>	2016–2024	<p>Project construction and operation funds</p>

Actions or Activities	Target and Indicators	Responsible Agencies	Timeline	Budget and Cost
	the poor and ethnic minorities; (baseline for women: 20%)	PAO, women's federation		
2. Health Publicity and HIV/AIDS Prevention Education				
<ul style="list-style-type: none"> Public health and HIV/AIDS prevention education to the civil works contract and development zone employee are conducted 	<ul style="list-style-type: none"> Public health and HIV/AIDS prevention training courses and number of trainees (disaggregated by sex and target group) 	Agencies responsible: Industry and Enterprises Bureau, contractor	2016–2024	Funds under the construction contract (\$2,000 per year)
<ul style="list-style-type: none"> Conduct publicity activities on HIV/AIDS and sexual harassment, e.g., brochures, posters, and picture albums 	<ul style="list-style-type: none"> Forms of publicity on HIV/AIDS, sexual harassment at the construction stage, drugs, and human trafficking prevention, e.g., number of materials distributed 	Assisting agencies: PMO, enterprises, women's federation, communities		
3. Establishing Community Environment Supervision and Education Team—All Outputs				
<ul style="list-style-type: none"> Establishment of six community environment supervision and education team (urban [2] and rural [4]) as pilot for 3 years to develop and implement public awareness and education programs on environment management, forest protection and maintenance , solid waste recycle, and water saving to promote changes of public behavior Assessment of the effect of the awareness raising and behavior change communication work 	<ul style="list-style-type: none"> Each pilot community with at least five members (50% female) Number, type, and frequency of training provided to the community environment supervision and education team (sex-disaggregated) Survey or assessment report under project progress report by social and gender specialist 	Agencies responsible: PMOs , implementing agencies, selected town and/or township ,village and/or community committees Assisting agencies: Women's federation, contractor, PAO, design agency, Civil Affairs Bureau	2016–2024	Project budgets and ethnic minority development funds Support (Ledu District) and package CS5–Wetland O&M and Forest Management Support (Ping'an district) CNY246,000/year * 3 years = CNY738, 000 (\$13,000)
4. Project Management				
<ul style="list-style-type: none"> PMO and implementing agency staff are trained to ensure effective implementation of the project, particularly SGAP Recruitment of international and national social development and/or gender consultants as part of the loan implementation consultancy PMO and implementing agencies assign persons to be responsible, specifically for the implementation and reporting of the SGAP 	<ul style="list-style-type: none"> 100% staff of PMO and implementing agencies receive training on SGAP (at least 30% women representatives in all trainings)—baseline is 20 % 2 person-months international and 12 person-months national consultants Number of staff members of the PMO and implementing agencies responsible for SGAP reporting 	Agencies responsible: PMO, local PMOs, implementing agencies Assisting agencies: Social and gender experts	2016–2024	Budget of the capacity building component CNY60,000/year * 5 years = CNY300,000 (\$50,000)

Actions or Activities	Target and Indicators	Responsible Agencies	Timeline	Budget and Cost
<ul style="list-style-type: none"> Sex-disaggregated data will be collected by the project performance monitoring system to ensure the monitoring and reporting of the SGAP 	<ul style="list-style-type: none"> Social development and gender indicators included in the project performance monitoring system 			

CNY = Chinese yuan, EPB = environmental protection bureau, O&M = operation and maintenance, PAO = poverty alleviation office, PMO = project management office, SGAP = social and gender action plan.

^a Since rural adult women education level is lower, the training and education materials to be developed should consider the gender sensitive, easy to be understood by rural women, such as disseminate information leaflet or poster.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

Impacts the Project is Aligned with

Environmental protection, ecological rehabilitation, and climate change adaptation enhanced (National Economy and Social Development Thirteenth Five-Year Plan, 2016–2020; and National New-type Urbanization Plan, 2014–2020)^a

Flood control standards and urban aesthetics along the Huangshui River improved (Master Planning of Haidong Urban Area, 2013–2030)^b

Results Chain	Performance Indicators with Targets and Baselines		Data Sources and Reporting Mechanisms	Risks
	Original	Revised		
Outcome Ecological and environmental services in Haidong improved	By 2021 (Baseline 2016) a. Flood risk reduced to a minimum of 20-year return period for farmland and at least 30-year return period for residential and commercial areas (Baseline for farmland: below 1-in 5-year return period; baseline for residential and commercial areas: 1-in 20-year return period) b. Public satisfaction with ecological management in Haidong increased to 70% (Baseline= 61.35%) ^c	By 2024 (Baseline 2016) a. Flood risk reduced to a minimum of 20-year return period for farmland and at least 30-year return period for residential and commercial areas (Baseline for farmland: below 1-in 5-year return period; baseline for residential and commercial areas: 1-in 20-year return period) b. Public satisfaction with ecological management in Haidong increased to 70% (Baseline= 61.35%) ^c	a. Annual environmental monitoring report from Haidong EPB and modeling performed using the hydrologic modeling system of Hydrologic Engineering Center b. Social survey results provided by the end of project from the PMO	Changes to government priorities lead to inadequate financial and human resources provided to properly manage project facilities
Outputs 1. Integrated flood plain management infrastructure for the Huangshui River provided	By 2020 (Baselines 2016) 1a. 70.0 km of new embankments on main channel and tributary (Baseline: 0) 1b. 71.2 ha of new riverside greenbelt established d (Baseline: 0) 1c. 20.0 ha Yizhou ecological wetland park newly established (Baseline: 0) 1d. 335 new temporary jobs created for construction, with at least 30% for women (Baseline: 0)	By 2024 (Baselines 2016) 1a. 65.1 km ²⁸ of new embankments on main channel and tributary (Baseline: 0) 1b. 8.4 ha of new riverside greenbelt established ²⁹ (Baseline: 0) 1c. cancelled ³⁰ 1d. 335 new temporary jobs created for construction, with at least 30% for women (Baseline: 0)	1a. Review mission MOUs, internal and external environment annual monitoring reports, project completion report. 1b-1d. Haidong City Annual Report	
2. Measures to control soil	2a. 105 ha of new mountainside	2a. 901.3 ha of new mountainside	2a–2b. Review mission	

²⁸ According to the latest approval result of the revised FSR, the length of the embankments is slightly changed.

²⁹ According to the latest approval result of the revised FSR, the completed areas of the riverside greenbelt are largely reduced.

³⁰ Due to a similar wetland park has been built in the nearby area, this output will be dropped during the MTR.

Results Chain	Performance Indicators with Targets and Baselines		Data Sources and Reporting Mechanisms	Risks
	Original	Revised		
erosion in Haidong's urban catchment are implemented	greenbelt established e (Baseline: 0) 2b. New reclaimed-water irrigation system installed for 663 ha of mountainside greenbelt (Baseline: 0)	greenbelt established ³¹ (Baseline: 0) 2b. New reclaimed-water irrigation system installed for 663 ha of mountainside greenbelt (Baseline: 0)	MOUs, project completion report	
3. Rural-urban water supply and solid waste infrastructure constructed	3a. Three new WTPs with total capacity of 23,000 m3/day built in Ping'an District (Baseline: 0) 3b. 35 km of new water conveyance pipes installed for rural-urban water supply (Baseline: 0 km) 3c. 850,000 m3 of capacity added to Ledu landfill (Baseline: 0) 3d. 95 new temporary jobs created for construction with at least 30% for women (Baseline: 0)	3a. Three new WTPs with total capacity of 23,000 m3/day built in Ping'an District (Baseline: 0) 3b. 52 km of new water conveyance pipes installed for rural-urban water supply (Baseline: 0 km) 3c. 850,000 m3 of capacity added to Ledu landfill (Baseline: 0) 3d. 95 new temporary jobs created for construction with at least 30% for women (Baseline: 0) 3e. One new WTP with capacity of 100,000 m3/day built in Ledu District ³² (Baseline: 0)	3a. Review mission MOUs, project completion report; internal and external environment annual monitoring reports 4b-4f. Haidong City annual report	Water supply for Sanhe and Shihuiyao townships and surrounding villages is not guaranteed in dry and very dry years
4. Project management capacity strengthened	4a. At least 30 people, including HMG, PMO, implementing agencies, and PIO staff with new capacity for project management and implementation, ADB procedures and requirements (30% women) (Baseline: 0) 4b. New standard operating procedure developed and at least 10 people in the landfill O&M unit with new capacity for executing landfill standard operating procedure (30% women) (Baselines: not developed, 0) 4c. At least 15 people in the wetland and forest O&M units with new skills and knowledge in	4a. At least 30 people, including HMG, PMO, implementing agencies, and PIO staff with new capacity for project management and implementation, ADB procedures and requirements (30% women) (Baseline: 0) 4b. New standard operating procedure developed and at least 10 people in the landfill O&M unit with new capacity for executing landfill standard operating procedure (30% women) (Baselines: not developed, 0) 4c. At least 15 persons in the center of rivers and lakes governance with new skills and knowledge in river	4a-4e. Review mission MOUs, project completion report	

³¹ According to the latest approval result of the revised FSR, the completed areas of the mountainside greenbelt are largely increased.

³² Added output indicator after MTR.

Results Chain	Performance Indicators with Targets and Baselines		Data Sources and Reporting Mechanisms	Risks
	Original	Revised		
	<p>wetland or forest management (Baseline: 0)</p> <p>4d. Enhanced knowledge and understanding of at least 60 government staff in the application of IWRM, integrated urban ecological planning and management, solid waste management, and wetland development and management. (Baseline: 0)</p> <p>4e. 100% staff of PMO and PIOs with increased knowledge and skills in ADB safeguard policy implementation and gender mainstreaming concepts (at least 30% women participants). (Baseline: 0%)</p>	<p>smart management³³ (Baseline: 0)</p> <p>4d. Enhanced knowledge and understanding of at least 60 government staff in the application of IWRM, integrated urban ecological planning and management, solid waste management, and river smart management. (Baseline: 0)</p> <p>4e. 100% staff of PMO and PIOs with increased knowledge and skills in ADB safeguard policy implementation and gender mainstreaming concepts (at least 30% women participants). (Baseline: 0%)</p>		

Key Activities with Milestones

1. Integrated flood plain management infrastructure for the Huangshui River provided

- 1.1 Detailed design and engineering by Q4 2022
- 1.2 Acquire land and implement resettlement by Q4 2022
- 1.3 Procure works and goods by Q4 2022
- 1.4 Construct project facilities by Q2 2024
- 1.5 Turn over facilities and make operational by Q3 2024

2. Measures to control soil erosion in Haidong's urban catchment implemented

- 2.1 Detailed design and engineering completed by Q2 2018
- 2.2 Acquire land and implement resettlement completed by Q1 2019
- 2.3 Procure works and goods completed by Q1 2019
- 2.4 Construct project facilities completed by Q4 2021
- 2.5 Turn over facilities and make operational by Q4 2022

3. Rural-urban water supply and solid waste infrastructure constructed

- 3.1 Detailed design and engineering completed by Q4 2021
- 3.2 Acquire land and implement resettlement completed by Q1 2023
- 3.3 Procure works and goods completed by Q1 2023
- 3.4 Construct project facilities by Q2 2024
- 3.5 Turn over facilities and make operational by Q3 2024

4. Project management capacity strengthened

- 4.1 Recruit and mobilize the start-up consultants completed by Q3 2017
- 4.2 Recruit and mobilize the implementation support consultants completed by Q2 2019
- 4.3 Finalize institutional arrangement between executing agency and implementing agencies and start implementation of resettlement plan, EMP, and SGAP completed by Q2 2019
- 4.4 Provide training to build capacity from 2017–2024
- 4.5 Monitor and report on the implementation of the resettlement plan, EMP, and SGAP from 2017–2024
- 4.6 Conduct project-specific surveys to measure results for the midterm review (2021) and project completion (2024)

³³ Adjusted output indicator due to replacement of original consulting package of *Wetland O&M and Forest Management Support with Support on River Smart Management*.

Inputs

ADB: \$150,000,000 (loan) Government: \$157,100,000

Assumptions for Partner Financing

Not applicable

ADB = Asian Development Bank, EMP = environmental management plan, EPB = environmental protection bureau, FSR = feasibility study report, ha = hectare, HMG = Haidong Municipal Government, IWRM = integrated water resource management, km = kilometer, MOU = memorandum of understanding, m³ = cubic meter, m³/day = cubic meter per day,

O&M = operation and maintenance, PIO = project implementation office, PMO = project management office, SGAP = social and gender action plan, WTP = water treatment plant.

^a Government of the People's Republic of China, State Council. 2015. *National Economy and Social Development Thirteenth Five-Year Plan, 2016–2020*; Government of the People's Republic of China, State Council. 2014. *National New-type Urbanization Plan, 2014–2020*. Beijing.

^b Government of the People's Republic of China, Haidong Municipal Government. 2013. Master Planning of Haidong Urban Area, 2013–2030. Haidong.

^c Hydrologic Modeling System of Hydrologic Engineering Center (HEC-HMS) available at the US Army Corps of

^d Engineers Hydrologic Engineering Center Website. <http://www.hec.usace.army.mil/software/hec-hms>.

^e Extent: area of established shrubs and trees.

^f Extent: area of established trees. Source: Asian Development Bank.

B. Monitoring**1. Project Performance Monitoring**

126. At the beginning of the project implementation stage, the Haidong PMO will develop a project performance management system (PPMS) to monitor the progress of the project in achieving the planned outcome and outputs. The project implementation management consultant will assist in developing the PPMS in accordance with ADB's policy requirements, including baseline setting, operational data collection, data analysis, and reporting.

127. The PPMS will adopt indicators relating to the following aspects of the project: (i) physical progress of subproject implementation, (ii) financial progress, (iii) improvement of ecological condition and flood control facility along the Huangshui River, (iv) improvement in urban and rural environmental service infrastructure in Ledu and Ping'an districts, (v) improvement of catchment soil erosion, (vi) results of capacity development program (vii) progress on safeguard implementation, and (viii) social and poverty development. The PMO will assign staff, or contract consultants, to collect baseline and progress data at the requisite time intervals to be used in the PPMS. The PMO will be responsible for analyzing and consolidating reported data, and reporting outcomes to ADB through semiannual progress reports.

2. Compliance Monitoring

128. During project implementation, ADB and the PMO will closely monitor the compliance of all the covenants under the project and will take necessary remedial actions for any noncompliance. The compliance status will be reported in the quarterly progress report by the PMO and will be reviewed during project review missions.

3. Legal Covenants

129. HMG shall ensure that in the event of (i) any change in ownership or control of the project facilities; or (ii) any sale, transfer, or assignment of the shares of project implementation units

(PIUs) is anticipated, HMG will consult with ADB at least 6 months prior to the implementation of such change. HMG shall cause PIUs to further ensure that such changes are carried out in a lawful and transparent manner.

4. Financial Covenants

130. **Counterpart funding.** HMG shall provide the details of the sources of the counterpart funding as well as provide corresponding commitment letters. The total cost includes physical and price contingencies, interest during construction.

131. **Financial management.** The HMG shall establish and maintain sound financial management systems in accordance with ADB's guidelines on the financial management and analysis of projects, including the establishment of separate project accounts and the maintenance of minimum balances to ensure smooth cash flow and the timely settlement of project construction liabilities and future debt servicing.³⁴

5. Governance and Anticorruption

132. ADB's Anticorruption Policy (1998, as amended to date) were explained to and discussed with the HMG and implementing agencies. Specific policy requirements and supplementary measures will be described in the project administration manual.

6. Safeguards Monitoring

a) Environment

133. Environment safeguards monitoring obligations are defined in the EMP and include (i) project readiness monitoring, to be conducted by the PMO environment specialist and LIEC; (ii) internal monitoring, to be conducted by the construction supervision companies (CSCs) and contractors; (iii) external environment monitoring, to be conducted by the Haidong environmental monitoring station (EMS, contracted by the implementing agencies); (iv) EMP compliance monitoring during project implementation and the first year of project operation (or up to the date as further to be agreed with the ADB mission), to be conducted by the PMO environment specialist and LIEC; and (v) regular monitoring by operation and maintenance units during operation of the project facilities under their responsibility. Monitoring and reporting arrangements defined for this project are described below.

134. **Assessment of project readiness.** Before construction, the LIEC and PMO environment specialist will assess project readiness in terms of environmental management based on a set of indicators defined in the EMP and report it to the ADB and PMO. This assessment resettlement plan demonstrate that environmental commitments are being carried out and environmental management systems are in place before construction starts, or suggest corrective actions to ensure that all requirements are met.

135. **Internal monitoring and supervision and reporting by construction supervision companies.** During construction, the CSCs and contractors will be responsible for conducting internal environmental monitoring in accordance with the monitoring plan. Supervision results will be reported through the CSC reports to the implementing agencies.

³⁴ ADB. 2005. *Financial Management and Analysis of Projects*. Manila.

136. **Environmental management plan implementation compliance monitoring and progress reporting.** The LIEC and PMO environment specialist will review project progress and compliance with the EMP based on field visits and the review of the environmental monitoring conducted by the EMS. The LIEC and PMO environment specialist will report EMP implementation progress and compliance along with information on project implementation, environmental performance of the contractors, and environmental compliance through quarterly project progress reports and annual environmental monitoring reports (EMP, Table A.6). The LIEC will support the PMO environment specialist in developing the annual environmental monitoring reports (EMR). The reports will identify any environment related implementation issues and necessary corrective actions, and reflect these in a corrective action plan. Operation and performance of the project grievance redress mechanism, environmental institutional strengthening and training, and compliance with all covenants under the project will also be included in the report.

137. **External monitoring by Haidong environmental monitoring station.** The implementing agencies will contract the Haidong EMS to conduct environmental monitoring in accordance with the monitoring program. A detailed cost estimate will be provided by the EMS prior to implementation. Monitoring will be conducted during construction and operation period, until a project completion report (PCR) is issued. Semiannual monitoring reports will be prepared by the EMS and submitted to PMO and the implementing agencies.

138. **Project completion environmental audits.** Upon completion, environmental acceptance monitoring and audit reports shall be (i) prepared by a licensed environmental monitoring institute in accordance with the PRC's Guidelines on Project Completion Environmental Audit (2001) for all components that required an environmental impact assessments (EIA) or tabular EIA, (ii) reviewed for approval by the environmental authorities, and (iii) reported to Asian Development Bank (ADB) through the semiannual progress reports. Subproject completion reports shall be finalized within 3 months after each subproject completion, or no later than 1 year with permission of the local environment protection bureaus.

b) Land Acquisition and Resettlement

139. Internal and external monitoring of resettlement plan implementation will be conducted. The Haidong project management office (HPMO) will submit an internal monitoring report quarterly to ADB. Furthermore, monitoring methodologies are specified in the resettlement plan. A detailed plan for both internal and external monitoring and evaluation is included in the resettlement plan. The PPMS will include indicators on resettlement plan monitoring and the required frequencies. The HPMO will prepare and submit a resettlement completion report to ADB.

140. HPMO will employ an external resettlement monitoring institute or firm acceptable to ADB to conduct independent external monitoring and reporting. The external monitoring agency will prepare a baseline study prior to commencement of land acquisition, and then conduct external monitoring and evaluation of resettlement plan implementation. Semiannual external monitoring reports will be prepared and submitted to ADB during resettlement plan implementation, and annual evaluation reports will be forwarded directly to both the PMO and ADB for 2 years after conclusion of resettlement plan implementation.

c) Ethnic Minority Development Plan

141. Internal and external monitoring of the ethnic minority development plan (EMDP) will be conducted. Monitoring and reporting methodologies are specified in the EMDP. Each implementing agency will carry out internal supervision and monitoring to ensure compliance with the provisions of the EMDP. HPMO will employ an external resettlement monitoring institute or firm to conduct the EMDP external monitoring. Semiannual external monitoring reports will be forwarded directly to the PMO and ADB until the project completion. The HPMO will prepare and submit an EMDP completion report to ADB.

7. Social and Gender Action Plan Monitoring

142. The PPMS will have the monitoring of the social and gender action plan (SGAP). Clear targets and indicators have been established and some indicators, such as those on employment, are also captured in the design and monitoring framework. The international social development consultant will assist the executing and implementing agencies set up effective monitoring systems, and work with the focal points in the executing and implementing agencies to ensure implementation of the SGAP. The SGAP will be monitored semiannually and reported via the quarterly project progress reports and during ADB review missions.³⁵

C. Evaluation

143. In addition to regular monitoring, ADB and HMG will jointly review project performance at least once a year. The review will assess implementation performance and achievement of project outcomes and outputs, assess financial progress, identify issues and constraints affecting implementation, and work out a time-bound action plan for resolution. ADB and HMG will undertake a midterm review to assess implementation status and take appropriate measures—including modification of scope and implementation arrangements, and reallocation of loan proceeds, as appropriate—to achieve the project impact and outcome.

D. Reporting

144. **Environmental safeguards reporting.** Environmental monitoring and inspection activities and findings shall be documented for purposes of reporting, recording, verifying, referring on, and evaluating the environmental performance of the project. The documentation shall also be used as basis in correcting and enhancing further environmental mitigation and monitoring. Annual EMR will be reviewed and cleared by ADB and disclosed on the ADB website. Environment safeguards reporting requirements are defined below.

- (i) **Monthly internal progress reports by the contractors** during construction, submitted to the implementing agencies. These monthly reports will include (a) physical construction progress; (b) mitigation measures implemented; (c) grievances received, resolved, closed and/or directed to other mechanisms; (d) emergencies responded to; (e) internal monitoring conducted by CSCs; and (f) corrective actions taken.
- (ii) **Quarterly progress reports by implementing agencies.** The quarterly reports by the implementing agencies to the PMO will include a separate section on EMP implementation progress and performance.
- (iii) **Semi-annual environmental impact monitoring reports** by the Haidong environmental monitoring station to report on the results of external environmental

³⁵ The social and resettlement consultant engaged will focus on the progress of the social and gender action plan with the project's progress report.

monitoring, as specified in the EMP. The reports will include the analysis results and assessment of compliance/non-compliance with PRC and international standards.

- (iv) **Annual environment monitoring report.** The PMO will submit to the executing agency and ADB the EMRs to comply with the loan environmental agreement and PRC Law on EIA. The annual EMR will report on the progress and results of environmental monitoring and compliance of EMP implementation, and also briefly (a) assess the effectiveness of instituted measures; (b) point out violation(s), if any; (c) assess and/or recommend corrective actions; and (d) cite any coordination made for corrective actions and, if applicable, certifications for having instituted them effectively. It shall also feature possible innovative mitigation measures applied by the contractor, operator, or affected residents themselves and other lessons learned in EMP implementation. These will be useful in adjusting the EMP to adapt to real ground situations. Proposed adjustments and/or enhancement of the EMP must have prior ADB approval.

145. **Project implementation.** HMG 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 next 12 months; and (iii) a project completion report within 6 months of physical completion of the project. To ensure projects continue to be both viable and sustainable, project accounts and the executing agency audited financial statements, together with the associated auditor's report, should be adequately reviewed.

146. Within 6 months after project completion, the PMO will prepare, in coordination with the implementing agencies and HMG, and submit to ADB a PCR evaluating the performance of the PMO and implementing agencies; and summarizing the loan funds utilization, project implementation, attainment of project impact, outcome, and outputs, implementation experience, project performance, actual costs incurred, benefits, and other information requested by ADB, and assessing the accomplishment of the purposes of the loan.

E. Stakeholder Communication Strategy

147. Relevant project information, including implementation progress, will be disclosed in the ADB website and at the PMO. This will include the design and monitoring framework, environmental assessment, and the EMP. Stakeholder workshops will be held throughout project implementation to encourage key stakeholders, particularly residents in project areas, to participate in achieving the project benefits and to make sure all stakeholders, including women, poor, and other vulnerable groups benefit from the project.

148. A stakeholder communication strategy has been prepared to ensure inclusiveness, transparency, and meaningful participation of concerned stakeholders for the project. It provides an agreed communication platform for key stakeholders, particularly between the project's affected groups and the executing and implementing agencies; and ensures that the stakeholders' views and interests are fully integrated into the project design, implementation, and operation.³⁶ Specifically, the stakeholder communication strategy could help in ensuring a regular flow of reliable project information and inclusion of vulnerable groups in the distribution of project benefits

³⁶ Stakeholders will be further defined during implementation.

during project implementation and operation. The communication strategy matrix outlines and/or identifies key messages, means of communication, and timeline of delivery for various stakeholders during the project cycle.

149. A consultation and participation plan (social and gender action plan, pages 61–62) has been prepared for the concerned stakeholders within the project areas to ensure social inclusion (SPS). The purpose of this plan is to engage the stakeholders in meaningful consultation and decision-making process; inform them about the project and consult them on various issues relevant to the project/subcomponents and activities during project design and implementation. Consultation and participation serve venue for the key stakeholders (i.e., government agencies, project beneficiaries, women, etc.) to (i) be informed about the project; (ii) clarify and express feedback, issues, concerns, and suggestion; (iii) learn how they will be benefited by the projects; and (iv) participate in decision-making and take action and/or be involved during the design, project implementation, and operation and/or maintenance stages.

150. **Environment.** Meaningful consultation to safeguard the environment and local residents will continue throughout construction and operation phases. The PMO and the implementing agencies will be responsible for organizing the public consultations with the support of the loan implementation environmental consultant (LIEC). Civil works contractors will be required to frequently communicate and consult with the communities in the project area of influence, especially those near the project areas. Consultation will focus on public complaints about public nuisances from construction and operation activities, such as water quality, noise, asphalt fume nuisance, dust, odor, and traffic disturbance.

Table 19: Environment Consultation and Communication Plan

Organizer	Format	Frequency	Subject	Attendees
Construction Phase				
PMO, implementing agencies, LIEC	Public consultation and site visits	Once each year during construction	Adjusting of mitigation measures, if necessary; construction impact; comments and suggestions	Residents in project areas
PMO, LIEC	Expert workshop	As needed, based on public consultation	Comments and suggestions on mitigation measures, public opinion	Experts of various sectors, district EPBs, HEPB
PMO, LIEC	Public opinion survey	Once at MTR stage	Public satisfaction with EMP implementation	Residents in project areas
Operation Phase (until PRC)				
PMO, implementing agencies, LIEC	Public consultation and site visits	Once in the first year	Effectiveness of mitigation measures, impacts of operation, comments and suggestions	Residents in project areas
LIEC, PMO	Public satisfaction survey	Once at PCR stage	Public satisfaction with EMP implementation. Comments and suggestions	Residents in project areas

EMP = environmental management plan, EMP = environment management plan, EPB = environmental protection bureau, HEPB = Haidong environmental protection bureau, LIEC = loan implementation environmental consultant, MTR = midterm review, PCR = project completion report, PMO = project management office, PRC = People's Republic of China.

151. **Ethnic minority, and social and gender action plan.** Consultations with communities have taken place and will continue at different points in the implementation of the EMDP and SGAP to inform people about the component or specific activities, but also to enable people in

the community to ask questions, make suggestions, state preferences, and express concerns. Special attention will be paid to the participation of women, ethnic minorities, and any other vulnerable groups, such as the poor. The HPMO and implementing agencies has disclosed the EMDP in the offices as well as the community offices and to ethnic minority beneficiaries in the Chinese language.

152. Public awareness and education program on water saving, solid waste recycle, and forest management will be conducted as part of the project components, and actions to enhance the involvement of women is included in the SGAP. Public hearings will be held for any proposed adjustments in water supply and solid waste tariff attended with adequate representation of poor, women, and ethnic minorities.

153. **Public disclosure.** Public disclosure of all project documents will be undertaken through HPMO and on the ADB website, including the project data sheet, design and monitoring framework, initial environmental examination, resettlement plan, EMDP, SGAP, and the report and recommendations of the President. Disclosure of external resettlement, social, and environmental monitoring reports will be undertaken during project implementation.

X. ANTICORRUPTION POLICY

154. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.³⁷ 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 project.³⁸

155. To support these efforts, relevant provisions are included in the loan agreement and the bidding documents for the project.

XI.ACCOUNTABILITY MECHANISM

156. 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 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 persons should make a good faith effort 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.³⁹

XII.RECORD OF PAM CHANGES

157. All revisions and/or updates during course of implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in the PAM.

³⁷ ADB. 2010. *Anticorruption and Integrity: Policies and Strategies*. Manila.

³⁸ ADB's Integrity Office, available at <http://www.adb.org/integrity/unit.asp>

³⁹ Accountability Mechanism, available at <http://www.adb.org/Accountability-Mechanism/default.asp>

Number of change	Date	Summary of Changes
1	19 January 2018	Procurement and implementation plans, and terms of reference
2	18 October 2022	Minor Change in Project Scope and Implementation Arrangements, Reallocation of Loan Proceeds, Increase in ADB Disbursement Percentage, and Extension of Loan Closing Date