

PROJECT PREPARATORY TECHNICAL ASSISTANCE

A. Justification

1. The proposed project is multisectoral and technically complex, requiring full scale due diligence in technical, economic, financial, social, resettlement, environmental and institutional aspects, through a project preparatory technical assistance (TA). The objectives of the PPTA are (i) design a project suitable for ADB financing by identifying the most appropriate project components with innovative ideas and approaches; (ii) undertake a rigorous due-diligence of the project components including technical, environmental, financial, economic, social, indigenous peoples, and resettlement aspects; (iii) provide trainings to HCG on project development and implementation procedures; and (iv) formulate measures to ensure long-term sustainability of the project facilities.

B. Major Outputs and Activities

2. A PPTA consulting firm will be deployed to Haidong city, which will be composed of specialists in various disciplines. At the outset, the consultants will assess and determine the optimum lending modality for the proposed project, whether it should be a project loan, sector loan, MFF, or a sector development program. The initial tasks will include (i) conducting a peer review of the project and components, (ii) assist the HCG and the PMO to obtain the data that may be lacking and work with the PMO to develop and implement stakeholder participation, and (iii) refine the scope as needed to ensure the quality and sustainability of the project components.

3. The PPTA consulting firm will have expected outputs of (i) an inception report outlining the overall implementation plan and some key issues identified within the first month of consultant mobilization; (ii) an interim report with a detailed assessment of the project components at the interim stage along with initial cost estimates and financing plan for the ensuing project, and key policy and specific project-related issues within the third month of consultant mobilization; (iii) project environmental impact assessment (EIA), draft resettlement plans, draft gender action plan (GAP), draft social action plan (SAP), draft procurement capacity assessment (PCA), and draft financial management assessment within the fifth month of consultant mobilization; (iv) a draft final report with a detailed assessment of the technical, financial, economic, environmental, social, and institutional aspects within the sixth month of consultant mobilization; and (v) a final report will also be required before completion of the PPTA along with other reports, trainings, and manuals as per Table A3.1.

4. The major outputs and activities are summarized in Table A3.1.

Table A3.1: Summary of Major Outputs and Activities of Consulting Services

Major Activities	Expected Completion Date	Major Outputs	Expected Completion Date
Mobilize consultants	May 2015	Inception Report	June 2015
Development plan review	June 2015		
Conduct socio econ survey	July 2015	Interim report	September 2015
Trainings: DMF, PPMS, EIA, EMP, PAM, DFR	August/September 2015	Draft project EIA, resettlement plans, GAP, SAP, PCA, FMA PAM, EMDP, DMF, PPMS, CPP, and PACP	September 2015
Project Design and PPMS Training	August 2015		
ADB's safeguard policy training	September 2015		
ADB's disbursement and procurement training	September 2015	Draft Final report Final report	November 2015 January 2016

ADB = Asian Development Bank, CPP = community participation plan, DMF = design and monitoring framework, EIA = environmental impact assessment, EMDP = ethnic minority development plan, FMA = financial management assessment, GAP = gender action plan, PAM = project administration manual, PACP = public awareness campaign program, PCA = procurement capacity assessment, PPMS = project performance monitoring system, SAP = social action plan.

Source: Asian Development Bank estimates.

C. Cost Estimate and Proposed Financing Arrangements

5. The PPTA is estimated to cost \$850,000 equivalent, of which \$750,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-other sources). The government will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance, domestic transportation, communication facilities for consultants, and other in-kind contributions. The detailed cost estimate is presented in Table A3.2.

Table A3.2: Cost Estimates and Financing Plan
(\$'000)

Item	Total Cost
Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants (18 person-months)	396.0
ii. National consultants (39 person-months)	234.0
b. International and local travel	32.0
c. Reports and communications ^b	11.0
2. Equipment (computer, printer, etc.) ^c	10.0
3. Workshops, training, seminars, and conference ^d	15.0
4. Surveys	20.0
6. Miscellaneous administration and support costs	10.0
7. Representative for contract negotiations	5.0
8. Contingencies	17.0
Total	750.0

^a Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-other sources).

^b Includes office communications; printing and binding of reports; and translation of inception, interim, draft final, and final reports and documents into Chinese.

^c Equipment (will be turned over to Haidong City Government after completion of TA activities).

Type	Quantity	Cost
Computers (laptop and desktop)	32 each	84.5
Printer and photocopier	1	32.0
Scanner	1	21.5
Others (i.e. projector, digital camera, etc.)	1	2.0

^d Workshop and training.

Purpose	Venue
ADB inception, interim, and loan fact-finding workshops	Haidong city, Qinghai province
ADB project design and project performance monitoring systems training	Haidong city, Qinghai province
ADB safeguards and social development training	Haidong city, Qinghai province
ADB project financial management, disbursement, and procurement training	Haidong city, Qinghai province
Other capacity building training workshops	Haidong city, Qinghai province

Source: Asian Development Bank estimates.

D. Consulting Services

6. An international consulting firm, with total consulting inputs of 57 person-months (18 international and 39 national) will be engaged on the basis of the quality- and cost-based selection method, with a quality-cost ratio of 90:10, using full technical proposal procedures (Table A3.3).¹ Procurement of consultancy services and equipment will be in accordance with

¹ The 90:10 ratio is needed to ensure that high-quality specialized experts could be engaged for this complex and challenging project.

ADB's Guidelines on the Use of Consultants (2013, as amended from time to time) and ADB's Procurement Guidelines (2013, as amended from time to time), respectively.

Table A3.3: Summary of Consulting Services Requirement

Item	International Person-months	National Person-months
Team Leader (Urban Planning Specialists)	4.5	7.0
Hydrologist and River Rehabilitation Specialists	2.5	4.0
Wetland Specialists	2.0	3.0
Water and Wastewater Engineers	2.0	3.0
Municipal Solid Waste Management Specialists	1.0	3.0
Urban Infrastructure and Planning Specialists		2.0
Environmental Specialists	2.5	3.0
Resettlement and Social Development Specialists	2.0	6.0
Financial and Economic Specialists	1.5	3.5
Institutional Specialist		2.5
Nonrevenue Water Specialist		2.0
Total	18.0	39.0

Source: Asian Development Bank.

7. The summary terms of reference including indicative activities for the PPTA consultants are described in paragraphs 8–18.

E. Technical Assistance Specialists

8. The **International Team Leader** (4.5 person-months)² will (i) prepare detailed work plans; (ii) manage and supervise (a) inputs and outputs of all other experts, and (b) quality assurance of all TA outputs in conformity with ADB requirements; (iii) coordinate all activities during PPTA implementation; (iv) develop strong project rationale of integrated components from the urban development, technical, environmental, economic, social, and institutional perspectives, and engage innovative features in each component as appropriate; (v) assisted by other experts and HCG, consolidate the preparation of cost estimates, procurement plan, appropriate contract packaging, implementation schedule, and bid documents; (vi) conduct procurement capacity assessment and governance risk assessment of the executing agency and implementing agency; (vii) provide better alternative engineering and non-engineering options, innovative ideas, and technical advice to improve and optimize overall project design; (viii) develop an effective policy dialogue and reform agenda for the project in consultation with other team members; (ix) design and conduct training workshops to cover ADB's project design, project performance management system, financial management system, safeguards and social requirements, and ADB's procurement and disbursement; (x) assist in preparing a good procurement plan that takes into account economy and efficiency and key thrusts of the recently approved 10 point procurement action plan; (xi) undertake an assessment of urbanization speed and scale in Haidong and future growth expectations, critically review relevant development plans and strategies,³ and demonstrate the project's contribution to, and alignment with, these plans; (xii) at the outset establish an effective coordination mechanism within the government and with ADB; (xiii) be proactive and responsive to the ADB, and the government on all project preparatory matters; (xiv) develop a soft component to prepare the strategic framework for implementing the green aspects of the Haidong City Master Plan along with prioritized investments for pollution control in the Haidong section of the Huangshui River; (xv) non-

² International urban planning specialist with at least 15 years work experience in managing ADB or other international financing institution project preparation.

³ Including, but not limited to: Haidong City Master Plan (2013–2030); Integrated Management Plan for Huangshui River Basin (2011–2015; 2016–2020); Huangshui River Ecological Watershed Landscape Plan (Draft).

structural market-based instruments will also be explored and discussed; (xvi) undertaking procurement capacity assessment, preparation of procurement plan, preparation of bidding document, training in procurement, and other trainings; and (xvii) ensure that the interim report, draft final report, and final report are comprehensive. The **national Deputy Team Leader** (7.0 person-months)⁴ will assist in (i) collecting project-related data for project preparation; (ii) coordinating all activities during PPTA implementation; (iii) undertaking procurement capacity assessment, preparation of procurement plan, preparation of bidding document, training in procurement, and other trainings; (iv) preparing a good procurement plan that takes into account economy and efficiency and key thrusts of the recently approved 10 point procurement action plan; and (v) conducting effective coordination with the government as well as ADB. The Deputy Team Leader will (i) assess non-revenue water and related issues on water supply in Haidong city; and (ii) propose a time-bound action plan to reduce non-revenue water and strengthen water conservation.

9. **Hydrologists and river rehabilitation specialists** (2.5 person-months, international and 4.0 person-months, national). The experts shall be professionally qualified, with a minimum of a graduate degree in environmental engineering, water resources management, hydrology, or related field, and must have at least 15 years (international) and 8 years (national) work experience in inland water resources management, river training works, integrated flood-risk management, surface water quality management, hydraulic modeling, and river landscaping. The experts will (i) assess the rationale and integrity of proposed project components in light of national, provincial, regional, and local water resources, development priorities and policies, and other development projects; (ii) assess the integrated management plan for the Huangshui River Basin and provide suggestions to strengthen the plan; (iii) undertake a technical review of the feasibility study report (FSR) prepared by design institute and ensure that various alternatives be analyzed and evaluated from the technical, environmental, economic, social, resettlement, institutional, and urban planning perspectives; (iv) assess pollution sources within river basin and their impact on water quality; (v) identify objectives for sediment dredging, selected locations for dredging, amount of sediments to be dredged (disaggregated data for polluted and non-polluted sediments), dredging methodology, dredged material pre-treatment, transportation, temporary storage, and final use or disposal; and develop appropriate dredging plan considering performance standards, mitigation measures and monitoring requirements in accordance with international best practice; (vi) ensure that river training and riparian development works adopt environmentally sound and socially inclusive design and non-structural measures are accompanied; (vii) identify social and environmental upstream and downstream impacts; (viii) identify and incorporate innovative features integrating flood-risk management and river revitalization; (ix) review the implementation performance of the Integrated Management Plan for the Huangshui River Basin (2011–2015), and help formulate the follow-up plan [Integrated (2016–2020)]; and (x) identify needs and opportunities for institutional strengthening, capacity development, and non-engineering interventions.

10. **Wetland specialists** (2.0 person-months, international, and 3.0 person-months, national). The experts shall have a master's degree and/or equivalent experience in wetland hydrology, ecology or related field, and at least 10 years (international) and 5 years (national) work experience in wetland valuation, protection and sustainable use (including urban wetland parks) and relevant international best practice. The experts will (i) assess and value existing

⁴ National water engineer with expertise in nonrevenue water with at least 8 years work experience in managing ADB or other international financing institution project preparation.

riparian wetlands along Huangshui River and their ecosystem services, including regulation services (flood and drought management, erosion control, carbon sequestration), habitat services (biodiversity conservation), producing services (water purification, groundwater recharge), and socio-cultural services (tourism, recreation at local and watershed level); (ii) collect hydrological, biological, and ecological data, conduct baseline field surveys, review international, national and local experiences and good practice in wetland conservation and wetland park design to inform the design the wetland component; (iii) assess the rationale and integrity of the wetland component and ensure that various alternatives be analyzed and evaluated from the technical, environmental, economic, social, resettlement, institutional, and urban planning perspectives; (iv) provide a range of possible wetland design options for the project area, tailored to site-specific management needs and objectives (e.g., ranging from very small sites located at sewage outflows to capture point-source pollution, to larger sites aimed at maintaining general wetland function and downstream flow, etc); (v) identify and recommend any revisions to the project design that will maximize environmental, ecological and socio-economic benefits; (vi) draw lessons and experiences from other projects and studies on wetland park development; (vii) establish baseline and performance targets for impact, outcome, and output indicators based on scientifically sound performance projections; (viii) design a monitoring program for the wetland parks, to include baseline values of selected indicators for water quality, specific indicators, locations, frequency, and timing of monitoring, costs, and implementing agencies, and a simple reporting format for the EA to provide monitoring reports to ADB; (ix) analyze the synergy of the proposed interventions with the urban development plan; (x) provide inputs on cost estimates, procurement plans, appropriate contract packaging, implementation schedule, bid documents; and (xi) prepare operation and maintenance plans and procedures, operation cost and responsibilities, and propose a training and capacity development program.

11. **Water and wastewater engineers** (2.0 person-months, international and 3.0 person-months, national). The experts shall be professionally qualified, with a minimum of a graduate degree in civil or sanitary engineering, and must have at least 15 years (international) and 8 years (national) work experience in water and wastewater engineering. The experts will (i) review the FSR related to water and wastewater infrastructure, population and industrial growth estimates, capacity evaluations, and other relevant development sector plans that relate to water supply, water treatment, water capacity, water distribution, wastewater treatment and wastewater effluent reuse demand to verify the basis of design; (ii) from the preceding data, the experts will determine adequacy of the proposed infrastructure; (iii) carefully review the water demand and wastewater flow projections to ensure that the plants are built to demand capacity and engineering designs are optimized; (iv) conduct regional water resources analysis, including ground water to confirm long-term availability of water resources to sustain planned development; (v) review infrastructure designs prepared by the local design institute (LDI) and suggest any recommended modifications; (vi) work with the LDI to develop sound operation and maintenance plans; (vii) conduct training and capacity building seminars and workshops and highlight best international and national practices that could potentially be replicated; (viii) analyze technical due diligence of the water and effluent reuse components ensuring that engineering designs and specifications of treatment processes are adequate and in line with the PRC regulations and international standards, and conduct technical due diligence and/or audit of project associated and/or existing facilities, including (but not limited to) the upstream reservoir (water source) and the wastewater treatment plant; (ix) prepare a water conservation and management plan for mainstreaming efficiencies in water reuse based on critical assessment of water balance, demand-supply, wastewater reuse option and corporatization in Ping'an county of Haidong city; (x) identify appropriate procurement packaging and procurement plans for the water and wastewater reuse components; (xi) assess institutional capacity of

existing water and wastewater service providers, and O&M requirements of water component including among others the option for joint venture public private partnerships; (xii) provide inputs on cost estimates, implementation schedule, and bid documents; (xiii) review the comprehensive wastewater and stormwater management plans of HCG; and (xiv) review its water demand projections to justify capacity of WTP.

12. **Municipal solid waste management specialists** (1.0 person-month, international and 3.0 person-months, national). The experts shall be professionally qualified, with a minimum of a graduate degree in civil engineering or related field, and must have 8 years work experience in solid waste management. The experts will (i) undertake a technical review of the feasibility study report (FSR) and other documents related to municipal solid waste management and work with stakeholders to obtain new data as needed; (ii) work with the LDI and HCG to conduct options analysis on different locations for the landfills and transfer stations and review all MSW management options and optimize engineering design to reduce land required and resettlement impacts; (iii) facilitate public consultations; (iv) research on the capacity, design life, process technology, and operational problem of the existing collection, transfer, diversion, and recycling programs, and disposal systems and recommend modifications and improvements where appropriate; (v) provide inputs on cost estimates, procurement plan, appropriate contract packaging, implementation schedule, and bid documents; and (vi) develop a 3R plan to minimize solid waste amount that goes into the landfill sites including awareness campaign. The consultants will also review and prepare a local regulation for Haidong city on MSW management.

13. **Urban infrastructure and planning specialist** (2.0 person-months, national). The expert shall be professionally qualified, with a minimum of a graduate degree in urban planning or related field and must have at least 15 years (international) and 8 years (national) work experience in rural-urban planning, and urbanization in the PRC. Experience or professional certification in Landscape Architecture will be an advantage. The expert will (i) review all related plans and studies to verify the project rationale; (ii) identify opportunities to improve green space and tourism; (iii) assess urbanization projections in light of proposed interventions; (iv) provide strategic and policy direction; (v) work with other specialists to improve the design of project features; and (vi) propose capacity development program for parks management and tourism-related programs associated with this project.

14. **Environment specialists** (2.5 person-months, international and 3.0 person-months, national). The experts shall be professionally qualified, with a minimum of a graduate degree in environmental planning, environmental impact assessment or related field, and must have at least 15 years (international) and 8 years (national) work experience in environmental impact assessment. The experts will (i) assess the capacity of HCG and the IAs and PIUs for environmental assessment, management, and monitoring and recommend capacity building measures; (ii) provide guidance and training to the domestic design institutes, executing agency, and implementing agency, on ADB's environmental safeguards requirements; (iii) review the quality and comprehensiveness of the domestic environmental impact statements and environmental impact assessments (EIA) prepared for the project components and make sure that all domestic EIA documents meet requirements specified in the ADB's Safeguard Policy Statement (SPS) (2009); (iv) based on detailed review, prepare a consolidated project EIA report including the environmental management plan in both English and Chinese, in ADB's required format; (v) assist the HCG to conduct required EIA public consultations and in establishing a grievance redress mechanism; (vi) deepen the assessment of the project's vulnerability to climate change, and recommend climate resilient project design; (vii) assess ecological value and sensitivities of the Huangshui River and establish robust ecological

baseline and performance targets; (viii) conduct detailed assessment of environmental impacts of flood control, river enhancement, wetland park works, solid waste management and other project components, and assess downstream environmental impacts and potential application of adaptive environmental management for the river component; (ix) assist HCG with meaningful stakeholder participation, consultation, and involvement during preparation of EIAs and disclosure of relevant information; (x) discuss and help develop a project-level grievance redress framework covering formal and informal channels, and setting out the timeframe and mechanisms for resolving complaints about environmental performance; (xi) conduct environment due diligence and/or audit of project associated and/or existing facilities, as required; (xii) draft terms of reference (TOR) and budget requirements for environment monitoring and evaluation during project implementation (including external environment monitoring and evaluation); and (xiii) prepare the required appendixes and linked documents for the report and recommendation of the President.

15. **Resettlement and social development specialists** (2.0 person-months, international and 6.0 person-months, national, including 3.0 person-months resettlement and 3.0 person-months social development). The experts shall have a minimum of a graduate degree in a relevant field with experience in social sector surveys and analyses with at least 15 years (international) and 8 years (national) work experience in resettlement, indigenous peoples, and gender and social impact assessments. The resettlement consultants will (i) orient the HCG on ADB's Safeguard Policy (2009) requirements and procedures; (ii) review the component draft RPs and assist the IAs to prepare and finalize the RPs in compliance with ADB's Safeguard Policy (2009); (iii) review the results of the socio-economic surveys and analysis and conduct additional resettlement household surveys⁵ if necessary; (iv) assess the baseline socio-economic condition, needs, and priorities of women and vulnerable groups including ethnic minorities affected by land acquisition and resettlement, and identify specific measures to assist them; (v) assess and justify that (a) the compensation standards are based on replacement value, and (b) the overall resettlement budget is sufficient to acquire the land and implement the RP based on the proposed entitlements and rehabilitation plans; and (vi) prepare summary RP, implementation schedule for each subproject and inputs for PAM. As for the social, gender, and ethnic minorities' aspect, the consultants will (i) conduct a poverty and social analysis (PSA) which will allow identifying the positive and negative impacts of the project on beneficiaries, including women, poor, and ethnic minorities; (ii) collect a baseline socio-economic data (sex income and ethnicity-disaggregated) on project area and beneficiaries which further can be used for monitoring and evaluation purposes; (iii) organize focus group discussions and key informant interviews as part of PSA with all relevant stakeholders, including female, poor and ethnic minority groups; (iv) conduct consultations with women and ethnic minority groups to find out project impacts, both positive and negative, and identify mitigation measures; (v) prepare EMDP as required in compliance with ADB's Safeguard Policy (2009); (vi) prepare and finalize the Social Action Plan and Gender Action Plan;⁶ and (vii) prepare related inputs to the PAM including implementation arrangements, schedule, budget, capacity building, monitoring, and related TOR for consultant support.

⁵ For household surveys, ADB requires, at best (depends on total Aps), 10%–20% of affected people and enterprises, including 20% of severely affected people.

⁶ Consultants will (i) explore opportunities for meaningful and decent jobs for women and men and prepare training plan for skills of women and men to deal with new job opportunities for green jobs to be integrated into the project design; (ii) collect sex-disaggregated baseline data, such as the workforce in the municipal offices and in construction sector, solid waste management business, and the current training participants, both on technical and administrative areas; and (iii) consider ways to engage women in more important decision-making that affect their lives, such as integrated flood-risk management and climate change adaptation management within the communities; and the use of multipurpose parks to benefit women, children, and the communities.

16. **Financial and economic specialists**⁷ (1.5 person-months, international and 3.5 person-months, national). The experts shall have relevant qualifications, with a minimum of a graduate degree in finance, economics, or related field. The experts should have technical knowledge in economic and financial analyses, assessment, procurement, and governance risk assessment with at least 15 years (international), 8 years (national) work experience, and for the financial specialist, the expert must have a recognized professional accountancy qualification. For the financial analysis part, the consultant⁸ will (i) undertake financial analysis of the project components in accordance with relevant ADB documents; (ii) work with the economist to provide financial information and analysis relevant to a review of the policy and practice relating to financing, operating, and maintaining urban infrastructure services; (iii) assess the financial sustainability of the project components; (iv) identify capacity building needs of improved financial management system; (v) review financial performance of the executing agency and implementing agency in the past five years and evaluate their financial capacity regarding cost recovery, borrowing capacity, and subsidies; (vi) review detailed cost tables with unit costs, physical quantities, and phasing of the project costs; (vii) review and identify contract packages and financing plan, and propose most appropriate funds flow and disbursement mechanisms; (viii) conduct financial management assessment of the executing agency, implementing agency, and proposed project facilities, assess Haidong City Government and its PMO's capability to manage the ADB's imprest fund and SOE procedures (if applicable) without specific ceilings from the perspective of MTR Strategy 2020 Action Plan and the minor change for removal of SOE ceilings for eligible projects in the PRC,⁹ identify needs of any further capacity building (financial management and ADB's disbursement procedures) that will be necessary for the project based on the results of the FMA; (ix) compute the financial internal rate of return and the sensitivity analysis; and (x) review the tariff structure and affordability. For the economic analysis part, the consultant will (i) undertake economic analysis for each project component and for the overall project in accordance with ADB's Guidelines for Economic Analysis of Projects and other relevant policies and guidelines; (ii) review of the economic rationale for each project component, and recommendation of changes to the proposed role of government in each as needed; (iii) assess the social and economic justification for each project component; (iv) evaluate demand for component services, considering population and economic growth, efficiency of service delivery, change in service charges, and all quantifiable and non-quantifiable economic benefits and costs of each component; (v) undertake as needed non-market valuation methods related to environmental aspects; and (vi) compute the economic internal rate of return and the sensitivity analysis.

17. **Institutional specialist** (2.5 person-months, national). The expert shall be professionally qualified with at least a bachelor's degree and 10 years of relevant work experience in city government operation, management and financial control, and with private sector participation experience. The expert must also be thoroughly conversant with ADB's procedures, guidelines, and publications in relation to procurement, disbursement, DMR and PPMS and have working knowledge about ADB's safeguard policy and procedures. The expert will (i) review institutional arrangements for the project and assess the capacities of HCG in formulating infrastructural development projects, and provide recommendations on staff

⁷ The consultants are required to download as reference the [Financial Management Starter Kit](#) from the ADB website.

⁸ The consultant will also assess the current water, wastewater, and SWM tariffs, and fees for the wetland education component.

⁹ Action Plan 2.27 "Remove ceiling on imprest accounts and SOE for executing agencies with adequate capacity, and finance imprest account on the basis of 6-months estimate expenditure."

resources and their responsibilities, and capacity development needs; (ii) assist the team leader in preparing institutional and regulatory strengthening measures; (iii) assist financial experts in financial management and procurement capacity assessments; (iv) compile the capacity development needs for HCG and other concerned agencies and design a capacity development program for relevant project components; and (v) design and conduct training workshops to cover ADB procedural requirements. The expert will also (i) assess the key impediments and opportunities for the private sector in Haidong water supply and wastewater treatment; and (ii) prepare a roadmap for progressing the Haidong Water Supply Company towards increased private sector participation and achieving the long-term goal of being listed on one of the local stock exchanges.

18. **Nonrevenue water specialist** (2.0 person-months, national). The expert shall (i) assess nonrevenue water (NRW) rates in Haidong and main causes and sources of NRW; (ii) help define a NRW reduction strategy including roadmap, targets, measures, and timeframe; (iii) identify investments needed, expected results and other changes required, including organizational and contractual arrangements that would be needed to enable NRW reduction to occur; and (iv) formulate a capacity development component to enable the achievement and sustain targeted NRW levels.

F. Implementation Arrangements

19. The PPTA will be implemented over 8 months from May 2015 to December 2015 including consultant recruitment, and will be financially closed on 30 April 2016. The HCG will serve as the executing agency for the TA. A project management office (PMO) has been established under HCG to manage day-to-day PPTA activities. HCG will provide a suitably furnished office with utilities, telecommunications access, local city transport for consultants' site visits, materials, maps, data and documents required by the PPTA, and will cover the cost of counterpart staff and support staff. The PPTA equipment will be procured by the consultants in accordance with ADB's Procurement Guidelines (2013, as amended from time to time) and transferred to HCG upon PPTA completion.

20. PPTA reports will be prepared in English and Chinese. Five copies of each report in English will be submitted to ADB, and 10 copies of both English and Chinese reports will be submitted to HCG. The consultants will present the key findings of each report in tripartite workshops to be held after the submission of the inception report, interim report, and draft final reports. The proposed TA processing and implementation schedule is listed in Table 4.4.

Table 4.4: Technical Assistance Processing and Implementation Schedule

Major Milestones	Expected Completion Date
TA reconnaissance mission	July 2014
Concept paper clearance and TA approval	December 2014
Selection and recruitment of consultants	Jan–April 2015
Consultant mobilization	May 2015
TA inception report	June 2015
TA interim report	September 2015
TA draft final report	November 2015
TA final report	January 2016
Physical completion	February 2016
Financial completion	April 2016