

PROJECT PREPARATORY TECHNICAL ASSISTANCE

A. Justification

1. The project preparatory technical assistance is required for the Second Kathmandu Valley Water Supply Project to (i) review technical, economic, institutional, and financial viability; (ii) review and update safeguard measures; (iii) review civil works contract documents and prepare consulting packages under the loan; (iv) prepare all requirements to meet the processing criteria for a loan project; and (v) support loan start-up activities.

B. Major Outputs and Activities

2. The major outputs and activities are summarized in Table 1.

Table 1: Summary of Major Outputs and Activities

Major Activities	Expected Completion Date	Major Outputs	Expected Completion Date
Mobilize first consultant	Sep 2016	Institutional Report	Dec 2016 ^a
Institutional assessment	Nov 2016	Inception Report	Mar 2017
Review of Submission 1 (3 DSCs)	Jun 2017	Design Feasibility Report	Jul 2017
Technical assessment	Jun 2017	RFPs issued for 3 DSCs	Sep 2017
Finalize initial tender documents	Aug 2017	Loan safeguards documents	Sep 2017
Safeguards assessment	Dec 2017	Financial analysis report	Oct 2017
Economic appraisal	Dec 2017	Economic analysis report	Oct 2017
Financial appraisal	Dec 2017	30% works tenders floated	Jan 2018
Support bid evaluations	Jul 2018	Draft Final Report	Nov 2017
PPTA completion	Feb 2019	Final Report	Jan 2018

DSC = design and supervision consultant, PPTA = project preparatory technical assistance, RFP = request for proposal.

^a The Institutional Report will be finalized by the individual consultant, to be mobilized before the firm.

Source: Asian Development Bank.

C. Cost Estimate and Proposed Financing Arrangement

3. The technical assistance is estimated to cost \$1.1 million equivalent, of which \$1 million equivalent will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-V). The government will provide counterpart support in the form of counterpart staff, office accommodation and furniture, office internet access, and other in-kind contributions. The detailed cost estimate is presented in Table 2.

Table 2: Cost Estimates and Financing Plan

(\$'000)

Item	Amount
Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants (37.5 person-months)	630.0
ii. National consultants (31 person-months)	195.0
b. International and local travel	43.0
c. Reports and communications	2.0
2. Equipment (computer, software, printer, etc.) ^b	2.0
3. Workshops, training, seminars, and conferences ^c	5.0
4. Surveys	6.0
5. Miscellaneous administration and support cost	10.0
6. Contingencies	107.0
Total	1,000.0

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

^b Equipment procured under the project preparatory technical assistance (PPTA) will be turned over to the executing agency or implementing agencies at the conclusion of the PPTA.

^c Workshops, training, seminars, and conferences (institutional findings and recommendations, technical findings and recommendations, final report - project design).

Source: Asian Development Bank

D. Consulting Services

4. Six individual consultants (17.5 person-months) and one firm comprising 7 international consultants (20 person-months) and 9 national consultants (31 person-months) will be engaged by ADB to undertake the technical assistance in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The firm will be engaged using Quality-and-Cost-Based Selection with 90:10 selection method and full technical proposal. Estimated budget for the firm is \$800,000.

Table 3: Summary of Consulting Services Requirement

Positions	Person-Months Required (international)	Person-Months Required (national)
Individuals		
Institutional Expert	2	
Tunnel Engineer	4	
Hydrologist	2.5	
Environmental Expert	1.5	
Resettlement Expert	1.5	
Procurement Expert	6	
Firm		
Team Leader/ Urban Infrastructure Expert	6	
Deputy Team Leader / Water Supply Expert		6
Nonrevenue Water Expert	3	
Roads and Buried Utility Expert	2	2
Climate Change Expert	2	
Hydrogeologist		2
Financial Expert	3	3
Economist	3	
Urban Planner		3
Environmental Expert		4
Resettlement Expert		4
Communications Expert	1	3
Gender Equality, Social Inclusion, and Social Development Expert		4

Source: Asian Development Bank estimates.

5. The Implementing Agencies are engaging consulting firms through an ongoing project to prepare feasibility studies, detailed designs, bid documents, and environmental and social impact assessment for the proposed project. A combination of individual consultants and a firm is required under the project preparatory technical assistance to match the time requirement for review of critical documents. Outline terms of reference for key technical assistance consultants are described in paragraphs 8–11.

Consultants (individuals)

6. **Institutional Expert (international, 2 person-months).** The expert is preferred to have at least 15 years of experience in a senior utility management position and/or advising utilities. The expert will make recommendations on the management and institutional systems for sustainable service delivery and bulk water supply. He/she is preferred to have a Master's in Business or Economics and be familiar with Nepal political context.

7. **Tunnel Engineer (international, 4 person-months)**. The engineer is preferred to have a Master's Degree in Engineering Geology or Geotechnical Engineering and a minimum of 15 years of experience in design and construction of civil engineering structures, with minimum of 2 years of experience in design and 2 years in construction of water supply or hydropower-related tunneling. Experience in Hindu-Kush Himalaya mountain region is preferred.
8. **Hydrologist (international, 2.5 person-months)**. The hydrologist is preferred to have a Master's Degree in Hydrology and a minimum of 15 years of experience on water resources assessments. Experience in Nepal is preferred.
9. **Environmental Expert (international, 1.5 person-months)**. The expert is preferred to have at least 10 years of relevant experience on complex infrastructure projects; and a Master's Degree in Biology, Environmental Sciences, or related field.
10. **Resettlement Expert (international, 1.5 person-months)**. The expert is preferred to have at least 10 years of relevant experience on complex infrastructure projects; and a Master's Degree in Social Sciences.
11. **Procurement Expert (international, 6 person-months)**. The expert is preferred to have an engineering degree and at least 5 years of experience on procurement of international financial institution funded projects, preferably ADB projects.

Consultants (firm)

12. **Team Leader and Urban Infrastructure Expert (international, 6 person-months)**. The Team Leader is preferred to be a Civil Engineer with a minimum 15 years of experience in the urban water supply sector and extensive experience in developing country context. ADB experience is preferred.
13. **Deputy Team Leader/ Water Supply Expert (national, 6 person-months)**. She/he is preferred to have a Master's Degree in Civil Engineering and at least 15 years of relevant experience with distribution network system serving population of 500,000 or more. Experience on international finance institution-funded projects is preferred.
14. **Nonrevenue Water Expert (international, 3 person-months)**. She/he is preferred to have at least 15 years of relevant experience, including as nonrevenue water expert in cities with population of over 1 million and application of district metered area approach. Experience on international financial institution-funded projects is preferred.
14. **Financial Expert (international, 3 person-months; national, 3 person-months)**. She/he is preferred to have at least 10 years of relevant experience, preferably for ADB-funded projects and a degree in Finance. Chartered Accountant or Certified Public Accountant qualification is preferred.
15. **Economist (international, 3 person-months)**. She/he is preferred to have at least 10 years of relevant experience, preferably for ADB-funded projects. Analysis shall be undertaken in accordance with ADB's Guidelines for the Economic Analysis of Projects (1997).
16. **Urban Planner (national, 3 person-months)**. She/he is preferred to have at least 10 years of relevant experience, preferably for international finance institution-funded projects; and a Master's in Urban Planning.

17. **Environmental Expert (national, 4 person-months).** She/he is preferred to have at least 10 years of relevant experience, preferably for international finance institution-funded projects; and a Master's degree.

18. **Resettlement Expert (national, 4 person-months).** She/he is preferred to have at least 10 years of relevant experience, preferably for international finance institution-funded projects; and a Master's degree.

19. **Communications Expert (international, 1 person-month; national, 3 person-months).** Experts are preferred to have at least 5 years of relevant experience on complex infrastructure projects, and Master's degrees. Work experience in the urban water supply sector is preferred.

20. **Gender Equality, Social Inclusion, and Social Development Expert (national, 4 person-months).** Expert is preferred to have at least 5 years of relevant experience on complex infrastructure projects, including urban water supply, and a Master's degree.

21. Key tasks to be performed by the experts are to review population and demand projections; the hydrological model; design parameters and materials, and existing designs. Experts shall mitigate risks of climate change and other disasters, ensure integrated environmental approach, recommend viable solutions for services to the poor, prepare terms of reference for loan consultants, and assess financial management and procurement and capacity. Experts shall prepare cost estimates and assess financial sustainability. They will prepare or update safeguards documents and ensure compliance with ADB Safeguard Policy Statement 2009; identify measures to ensure the project has meaningful impact on the poor, women, and marginalized persons; and prepare Gender Equality and Social Inclusion Action Plan.

E. Implementation Arrangements

22. ADB will be the executing agency of the technical assistance, and the Ministry of Water Supply and Sanitation will be the implementing agency. Through the Kathmandu Valley Water Supply Management Board, it will provide in-kind contributions in the form of counterpart staff, office accommodation and furniture, and office internet access. The tentative project implementing agencies are the (i) Melamchi Water Supply Development Board, (ii) Kathmandu Valley Water Supply Management Board, and (iii) Kathmandu Upatyaka Khanepani Limited (and its Project Implementation Directorate). Disbursements under the technical assistance will be done in accordance with the Technical Assistance Disbursement Handbook (May 2010, as amended).

23. The proposed technical assistance processing and implementation schedule is listed in Table 4.

Table 4: Technical Assistance Processing and Implementation Schedule

Major Milestones	Expected Completion Date
Concept paper clearance (including PPTA)	1 September 2016
Consultant mobilization (individuals)	30 September 2016
Consultant mobilization (firm)	28 February 2017
Completion of PPTA	28 February 2019

PPTA = project preparatory technical assistance.
Source: Asian Development Bank