

**ASIAN DEVELOPMENT BANK**

**TAR: NEP 36609**

**PROPOSED**

**TECHNICAL ASSISTANCE**

(Cofinanced by the Government of Norway  
and the Japan Special Fund)

**TO THE**

**KINGDOM OF NEPAL**

**FOR PREPARING**

**KATHMANDU VALLEY WATER MANAGEMENT SUPPORT PROJECT**

**March 2003**

## CURRENCY EQUIVALENTS

(as of 15 January 2003)

Currency Unit	–	Nepalese rupee/s (NRe/NRs)
NRe1.00	=	\$0.013
\$1.00	=	NRs76.50
Currency Unit	–	Norwegian krone (NKr)
NKr1.00	=	\$0.1441
\$1.00	=	NKr6.9374

## ABBREVIATIONS

ADB	–	Asian Development Bank
IEE	–	initial environmental examination
JBIC	–	Japan Bank for International Cooperation
KVWA	–	Kathmandu Valley Water Authority
KVWMSC	–	Kathmandu Valley Water Management Support Committee
MC	–	management contractor
MLD	–	million liters per day
MPPW	–	Ministry of Physical Planning and Works
MWSDB	–	Melamchi Water Supply Development Board
MWSP	–	Melamchi Water Supply Project
NORAD	–	Norwegian Agency for International Cooperation
NWSC	–	Nepal Water Supply Corporation
NWSRB	–	National Water Supply Regulatory Board
O&M	–	operation and maintenance
PQ	–	prequalification
PSP	–	private sector participation
PSPC	–	Private Sector Participation High-Level Committee
TA	–	technical assistance

## NOTES

- (i) The fiscal year (FY) of the Government ends on 15 July.
- (ii) In this report, "\$" refers to US dollars.

This report was prepared by a team consisting of K. Tamaki (Team Leader), K. Julian, and N. Sapkota.
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## I. INTRODUCTION

1. In response to a request from the Government of Nepal to the Asian Development Bank (ADB) to provide technical assistance (TA) for institutional reforms, including introduction of the private sector participation (PSP) modality with recruitment of a management contractor (MC),<sup>1</sup> a Fact-Finding Mission visited Nepal from 9 to 20 September 2002. The Mission was carried out in conjunction with a Joint Review Mission for the Melamchi Water Supply Project (MWSP).<sup>2</sup> Meetings were held with concerned officials of the Ministry of Finance; the Ministry of Physical Planning and Works (MPPW); the Melamchi Water Supply Development Board (MWSDB); and other multilateral and bilateral MWSP development partners, including the Japan Bank for International Cooperation (JBIC) and the Norwegian Agency for International Cooperation (NORAD) to discuss and agree on the goals, purpose, scope, implementation arrangements, financing arrangements, and terms of reference for the TA.<sup>3</sup> The TA framework, which is subsumed under the overall MWSP framework, is in Appendix 1. These institutional reforms and the introduction of the PSP modality are integral parts of the MWSP and essential for improving the water supply and sanitation services in the Kathmandu Valley. The TA concept was reviewed and approved by Management on 23 October 2002.

## II. ISSUES

2. In the past, the absence of a clearly defined policy for urban water supply and sanitation services handicapped sector progress in Nepal. The existing urban water supply utility, the Nepal Water Supply Corporation (NWSC), which was supported by a number of development partners for more than 30 years, has been able neither to deliver efficient and affordable services on a sustainable basis, nor significantly to expand its service coverage for the residents of the Kathmandu Valley. Excessive political intervention, weak management, and preoccupation with new investments have contributed to inadequate and inefficient operation and maintenance (O&M) and weak revenue collection. A number of studies, funded by the United Nations Development Programme, the World Bank, and more recently ADB, were carried out to understand the issues and formulate recommendations. As a result, there is a clear consensus among the MWSP development partners and relevant government agencies that the proposed institutional reforms, in particular introduction of the PSP modality for managing and improving water distribution and sanitation services, are essential to the sector's development.

3. Among the issues that have caused the chronic drinking water shortage problem in the Kathmandu Valley, the shortage of sufficient source water is fundamental. Thus, the Government initiated the MWSP, which consists of a river water diversion scheme from the Melamchi Valley to the Kathmandu Valley, distribution network rehabilitation and improvements, construction of a water treatment plant and bulk distribution system, wastewater system improvement, and clearly defined policy and institutional reforms. Governance, PSP, establishment of a regulatory mechanism, cost recovery and sustainability, affordable service delivery for the poor, and optimization of limited water resources are all issues to be addressed to ensure success of the MWSP.

4. The World Bank had earlier indicated an interest in financing the PSP scheme for managing and improving water distribution. However, the Private Sector Participation High-Level Committee (PSPC), in charge of MC recruitment under the World Bank assistance, was unable to award a PSP contract because very few firms were interested, mainly due to

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<sup>1</sup> It was referred to as a private operator (PO) earlier.

<sup>2</sup> ADB. 2000. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to Nepal for the Melamchi Water Supply Project*. Manila

<sup>3</sup> The TA first appeared in *ADB Business Opportunities* on 11 October 2002.

restrictive prequalification (PQ) criteria. The type of PSP, which called for a management lease contract with a significant amount of capital investment funding by the MC itself, also may have dampened private sector interest. Subsequently, the Government and the World Bank mutually agreed to reallocate the World Bank funds that were originally earmarked for this PSP scheme to other activities of national priority. The Government, in turn, requested ADB to assume the lead role for the PSP scheme and associated institutional reforms, and to identify other interested cofinancier(s), particularly from those already involved in the MWSP.

5. MC recruitment is an essential part of the MWSP; it is a key condition for the award of civil works contracts (both the ADB-funded contract and the NORAD/Swedish International Development Cooperation Agency-funded contract) for diversion tunnel construction. As the award of these contracts is now expected in the first half of 2004, MC recruitment is on the critical path for the entire MWSP. Therefore, MC recruitment must be restarted as a matter of urgency to keep the current overall implementation schedule of the MWSP.

6. In view of the earlier unsuccessful PQ under the management lease contract model, the Government and ADB agreed to pursue a shorter performance-based management contract model (i.e., for about 5 years initially, renewable for about an additional 5 years to cover MWSP commissioning). Under this PSP model, the MC would be reimbursed through a fee for management services and through incentive payments based on its performance measured by a set of key performance indicators. This PSP model, which does not require the MC to provide a significant amount of capital investment funding, is more promising than the earlier management lease contract model in the current Nepali context, and possibly the only viable alternative for now. It should facilitate PSP by reducing risks for the Government as well as for the MC, and ensure a more competitive bidding environment and, thus, a better price for the services.

7. According to the current implementation schedule of the MWSP, legislation for establishing a new regulatory body, called the National Water Supply Regulatory Board (NWSRB), needs to be in place by early 2004.<sup>4</sup> The establishment of an independent and autonomous agency for planning, implementing, and managing the urban water supply and sanitation systems in the Kathmandu Valley, called the Kathmandu Valley Water Authority (KVWA), is scheduled for 2005.<sup>5</sup> Under the management contract model (para. 6), however, there must be a counterpart utility entity for the MC to manage upon its recruitment. At the same time, under the management contract model, regulatory arrangements under NWSRB do not need to be as strictly defined as would have been under the management lease contract model. Therefore, some adjustments may be required in the sequencing of these reform efforts. It would be best if the restructuring of NWSC and the establishment of KVWA could be completed before the recruitment of the MC. However, restructuring<sup>6</sup> of this public utility will be complex and, therefore, unbundling of the Kathmandu Valley operations (without senior management) of NWSC from the rest of NWSC is now considered more appropriate to create this counterpart utility entity.

8. Many of the poor do not have access to piped water supply under current NWSC operations, and NWSC has shown insufficient response to their needs. Issues precluding efficient water supply service provision for the poor require further analysis and close integration

<sup>4</sup> Establishment of NWSRB is currently a condition for the award of an ADB-funded civil works contract for diversion tunnel construction.

<sup>5</sup> Establishment of KVWA is currently a condition for the award of civil works contracts for the bulk distribution system.

<sup>6</sup> The voluntary retirement scheme launched by NWSC management in 2002 received many positive responses from NWSC staff, but only 38 persons benefited from this scheme due to limited funding. This scheme should be allowed to continue, with more persons opting for early retirement, releasing current overstaffing pressure.

with the MWSP. Therefore, equitable provision of water supply services for the poor and sufficient public involvement in the reform process are critical themes for this TA as well as for the overall MWSP.

### III. THE PROPOSED TECHNICAL ASSISTANCE

9. The proposed TA is a project preparatory technical assistance but will also assist the Government in overall sector reform, including enabling legislative actions and service delivery strategy development.

#### A. Purpose and Output

10. The primary task of the TA is comprehensive support for the Government in the preparation of the PSP scheme and subsequent recruitment of the MC under a performance-based management contract for the urban water supply and sanitation systems in the Kathmandu Valley. Associated tasks include (i) establishment of NWSRB, (ii) restructuring of NWSC and subsequent establishment of KVWA, (iii) formulation of a pro-poor and gender-sensitive water supply service delivery strategy and its incorporation in the MC contract and the Government's investment programs, and (iv) preparation of a loan project<sup>7</sup> to finance the MC contract and NWSC restructuring for consideration for ADB funding. In addition, the TA will provide some assistance in legislation for groundwater usage licensing and charging, and will facilitate levying arrangements for the interbasin water transfer from the relatively poorer Melamchi Valley to the relatively richer Kathmandu Valley, both of which are already proceeding under the MWSP.

11. NWSC's current operations units for the Kathmandu Valley are expected to be transformed into an embryonic KVWA with necessary transitioning arrangements for the relevant NWSC employees. The Government requires assistance for reviewing and analyzing NWSC's strengths and weaknesses, involving its unions, and for making recommendations for its institutional reform, including possible downsizing. Regarding the establishment of NWSRB, as PSP is relatively new in Nepal, the Government requires start-up assistance for smoothly operationalizing its proper regulatory functions to protect the public interest. A number of associated training, workshops, and consultation activities will also be carried out under the TA.

#### B. Methodology and Key Activities

12. The expected outputs to effect sector reforms will be delivered first by thoroughly reviewing a number of prior studies, draft legislation, and institutional reform proposals—particularly those carried out under the earlier World Bank assistance—and integrating them into a coherent strategic package. A broad range of stakeholders including beneficiaries, in particular those in poor neighborhoods and women; relevant municipalities; concerned nongovernment organizations; and broader civil society must be further consulted. The environmental category of the project is B. In accordance with ADB's Environment Policy and other applicable requirements, rules, and regulations of ADB and the Government, an initial environmental examination will be prepared for the physical works involved with the associated distribution network rehabilitation and improvement in conjunction with the loan project, together with matrices of potential environmental impacts of the policy actions to be included in the loan project.

13. The PQ process for the MC recruitment is expected to have proceeded through advance action up to the PQ application submission stage by TA consultant team mobilization. Therefore, the team will be able to start the PQ evaluation immediately upon its mobilization.

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<sup>7</sup> The loan is likely to be a sector development program with about two thirds of the loan amount to finance the management contract and the remainder for NWSC restructuring and other related purposes.

14. The shallow groundwater well field development project at the Manohara River, funded by the Japan International Cooperation Agency, will provide additional bulk water supply long before the commissioning of the MWSP. The Manohara project will provide 15 million liters per day (MLD) of bulk water during the dry season and 25 MLD during the wet season, which creates a perfect opportunity to introduce a distribution network rehabilitation and improvement program supported by adequate bulk water supply. A demonstration scheme will, therefore, be designed as an integral part of the prospective MC contract under which the same MC will be given wider and more autonomous responsibilities within the demonstration scheme area. In essence, in exchange for providing higher level service, higher cost recovery will be achieved within the area.<sup>8</sup> This demonstration scheme will not only show off the real potential of efficient private sector management to the general public but also provide an excellent opportunity for fine-tuning the program by incorporating customer feedback and an ideal seedbed for staff training under the new operational modality. The program will then be repeated in a carefully planned long-term sequence to cover more and more areas toward the ultimate goal of covering the entire Kathmandu Valley service area.

15. Under the Local Self-Governance Act, municipalities are responsible for urban water supply and sanitation. Most of the five municipalities of the Kathmandu Valley have already indicated that they intend to participate in KVWA and to be served by the MC under the PSP scheme. However, if there is a municipality that intends to carry out water distribution within its municipal boundary by itself, the MC will then play the role of its bulk water supplier, provided that the municipality can prove itself capable of and ready for performing such a function. The bulk water tariff must be set at a lower level than the tariff for the average customer of the MC because no capital and O&M costs for distribution services are required for such a municipality. This philosophy will also apply to small-scale service providers intending to serve a certain neighborhood with the consent of all its residents.

16. The main risks include (i) general political stability and security in the country regarding the insurgency,<sup>9</sup> (ii) temporary absence of elected municipal government officials<sup>10</sup> and Parliament,<sup>11</sup> and (iii) uncertainty regarding the new decentralized urban service delivery modality under the Local Self-Governance Act (para. 15). However, the Government has unequivocally given its utmost priority to the overall urban water supply sector reform as an essential component of the MWSP, and has continuously shown its commitment to the reform. Furthermore, there is broad-based support for the reform among civil society. Therefore, the proposed ADB intervention under this TA is justifiable and timely.

17. JBIC's Special Assistance for Project Implementation study on the distribution network started in November 2002, while another small JBIC study on poverty mapping began in

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<sup>8</sup> Therefore, the tariff schedule for the demonstration scheme area will be different from the regular tariff schedule for outside the demonstration scheme area. The MC will be allowed to switch from the regular tariff schedule to this alternative tariff schedule for higher level service by declaring that a certain higher level service will be continuously provided for all customers within the demonstration scheme area (or its subset) from a certain date. There will be provisions (i.e., penalty imposed on the MC and compensation given to the customers) for failure to provide such service.

<sup>9</sup> The insurgency, which started in 1996, has intensified since November 2001, when the insurgents broke off an agreed upon cease-fire and attacked the Royal Nepal Army. However, a new cease-fire agreement was reached on 29 January 2003, and the security situation now appears to be improving.

<sup>10</sup> The terms of local elected bodies expired in July 2002, but owing to security conditions, elections could not be held. Despite a provision in the Local Self-Governance Act to extend the terms of the incumbent elected officials up to a year, the Government decided not to extend their terms, and instead reconstituted local-level committees with civil servants as an interim arrangement.

<sup>11</sup> The Government, prompted by a difference of views over the proposed extension of the state of emergency, dissolved the Lower House of Parliament in May 2002 and called for midterm elections, which, owing to security conditions, could not be held.

October 2002. These two JBIC studies and this TA will complement one another. ADB and JBIC will coordinate closely in this regard.

### **C. Cost and Financing**

18. The total cost of the TA is estimated at \$1.75 million equivalent, including a foreign exchange cost of \$1.09 million and a local currency cost of \$0.66 million equivalent. ADB will finance the entire \$1.09 million foreign exchange cost and \$0.31 million equivalent of the local currency cost. The TA will be financed on a grant basis by the Government of Norway, in the amount of Nkr5 million (about \$0.70 million equivalent), and the Japan Special Fund, funded by the Government of Japan, in the amount of \$0.70 million. The Government of Nepal will finance the remaining local currency cost of \$0.35 million equivalent by providing counterpart staff, office accommodation, and other miscellaneous expenditures. The Government has been advised that approval of the TA does not commit ADB to financing any ensuing project.

### **D. Implementation Arrangements**

19. MPPW will be the Executing Agency for the TA, and MWSDDB the Implementing Agency in charge of its overall management and coordination. The Kathmandu Valley Water Management Support Committee (KVWMSC), which reports to MPPW through MWSDDB's Board, has been newly established to take over the functions of PSPC in facilitating preparation and implementation of all the relevant institutional reforms with agencies concerned, and in carrying out MC recruitment on behalf of MPPW. This Committee is headed by a full-time executive director. The executive director will be supported by several full-time deputy directors, seconded from MPPW and other relevant government offices. Specialist inputs required for the committee's mandates will be provided by consultants under the TA. Stakeholder consultation sessions will be held on a regular basis to discuss the TA's progress and obtain feedback.

20. The TA will be implemented over a period of 12 months commencing about April 2003 and with an expected completion date of about April 2004. It will require approximately 40 person-months of international and 60 person-months of domestic consulting services for the main consultant team. In addition, services of individual consultants will be required at certain key junctures to support KVWMSC. The services of three individual international consultants for a total input of 6 person-months and two individual domestic consultants for a total input of 4 person-months are anticipated. For the main consultant team, a water supply expert experienced in MC recruitment will be engaged as the team leader, bearing the overall responsibility for the whole scope of the assignment. The team will comprise international and domestic consultants with various expertise including institutional, legal, regulatory, financial, economic, engineering, procurement, public relations, environmental, social, and labor relations. The outline terms of reference are attached as Appendix 4. All the consultants will report to the executive director of KVWMSC, seeking guidance on the day-to-day implementation of the TA, while they will seek critical guidance from the ADB team leader as and when needed.

21. The individual consultants will be recruited on an individual basis, while the main consultant team will be recruited on a corporate basis following submission of full technical proposals in accordance with ADB's *Guidelines on the Use of Consultants*. For the engagement of domestic consultants, other arrangements satisfactory to ADB may be used, too.

## **IV. THE PRESIDENT'S RECOMMENDATION**

22. The President recommends that the Board approve (i) ADB administering a portion of technical assistance not exceeding Nkr5 million (\$0.70 million equivalent) to be financed on a grant basis by the Government of Norway, and (ii) ADB providing the balance not exceeding the equivalent of \$0.70 million on a grant basis, to the Government of Nepal for preparing the Kathmandu Valley Water Management Support Project.

### TECHNICAL ASSISTANCE FRAMEWORK UNDER OVERALL MWSP FRAMEWORK

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
<p><b>Goal</b> Improve health and well-being of Kathmandu Valley urban residents, in particular the poor</p>	Reduced incidence of water-borne diseases of the population	Government health statistics	
<p><b>Purpose</b> Alleviate shortage of potable water in the Kathmandu Valley</p> <p>Establish institutional framework for equitable distribution of benefits, in particular targeting the poor customers, through private sector-managed water supply service operation in the Kathmandu Valley</p>	<p>Potable piped water available to Kathmandu Valley urban residents increased from 65-85 MLD (dry season)/ 140 MLD (wet season) in 2000 to 250-270 MLD (dry season)/ 335 MLD (wet season) by 2009 under entire MWSP</p> <p>Number of additional water supply connections (total and for the poor) Amount of water consumption (total and for the poor)</p>	NWSRB benchmarking	<p>Safe drinking water supply will contribute to reduction of water-borne diseases and to economic development.</p> <p>Conjunctive use of surface water and groundwater can provide adequate water sources .</p> <p>Private sector involvement will provide efficient operations.</p> <p>Construction is not delayed.</p>
<p><b>Outputs</b> Management contractor (MC) starts operation and carries out urgently required distribution network rehabilitation.</p> <p>National Water Supply Regulatory Board (NWSRB) starts regulation.</p> <p>Kathmandu Valley Water Authority (KVWA) starts operation.</p> <p>Conditions for pro-poor water distribution service expansion modalities to be incorporated in the prospective request for proposals (RFP) and in the subsequent contract with the MC</p> <p>Facilitate an agreement on water levy and long-term development plan for Melamchi Valley using these levy funds.</p> <p>Proposed Manohara demonstration project to be designed and</p>	<p>First half of 2004</p> <p>First half of 2004</p> <p>2005</p> <p>Third quarter of 2003</p> <p>Third quarter of 2003</p> <p>Third quarter of 2003</p>	<p>MPPW KVWMS</p> <p>NWSRB</p> <p>KVWA</p>	<p>Capital investment funding by ADB and other cofinancier(s)</p> <p>NWSRB will carry out effective regulation.</p> <p>KVWA will manage MC contract well.</p>

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
incorporated in the prospective RFP and in the subsequent contract with the MC.			
<b>Activities</b> Implement institutional reforms on:  Establishment of NWSRB  Initiation of private sector participation (PSP) scheme  Establishment of KVWA  Groundwater licensing/charging  Restructuring of Nepal Water Supply Corporation (NWSC)  Poverty mapping exercise to identify pockets of poor neighborhoods  Designing of modalities to be used for pro-poor water distribution services expansion  Water levy arrangements	First half of 2004  First half of 2004  2005  2005  First half of 2004  Third quarter of 2003  Third quarter of 2003	KVWMSC  KVWMSC MPPW  KVWMSC MPPW Municipalities  GWRDB KVWMSC  NWSC MPPW KVWMSC  MWSDB	Strong political will  Competitive bidding  Good working relationship between nongovernment organizations, community-based organizations, and overall civil society, and KVWMSC and MWSDB
<b>Inputs</b> TA total Consulting services	\$1.4 million 46 person-months international; 64 person-months domestic	Monthly progress reports of KVWMSC  ADB mission	Political support with counterpart fund and counterpart staff engagement

GWRDB – Groundwater Resources Development Board; KVWA – Kathmandu Valley Water Authority; KVWMSC – Kathmandu Valley Water Management Support Committee; MC – management contractor; MLD – million liters per day; MPPW – Ministry of Physical Planning and Works; MWSP – Melamchi Water Supply Project; NWSRB – National Water Supply Regulatory Board; RFP – request for proposals

## SUMMARY INITIAL POVERTY AND SOCIAL ANALYSIS

### A. Linkages to the Country Poverty Analysis

Sector identified as a national priority in country poverty analysis?	Yes	Sector identified as a national priority in country poverty partnership agreement?	Yes
<p>Contribution of the sector/subsector to reduce poverty in Nepal:          The Melamchi Water Supply Project (MWSP) will provide a least-cost solution to mitigate the socioeconomic stress caused by the inadequate supply of safe drinking water for Kathmandu Valley residents by optimizing water use in the valley as well as developing new water sources outside the valley. This will benefit 180,000 households in the valley by improving water supply services, in terms of quantity, quality, and timeliness of supply, as well as more equitable distribution. The impact ratio for the poor has been estimated to be four times that for the not-so-poor. The Project will also provide socioeconomic benefits to about 40,000 residents of the Melamchi Valley by increasing incomes from improved access and expanded markets, reduced workload for women, and better education for children. These benefits have not been quantified and, to that extent, the economic benefits are understated.</p>			

### B. Poverty Analysis

#### Proposed Classification: Human Development/Environment

<p>What type of poverty analysis is needed?</p> <p>Poverty in Nepal          (i) The recent estimate indicates that 42% of Nepal's total population are living below the official poverty line, and poverty reduction is the primary objective of the Government's development policy, as indicated in the Government's Tenth Development Plan (2002-2007).</p> <p>Poverty in the Kathmandu Valley          (ii) Although no official estimates of the extent of poverty in the Kathmandu Valley are available, data derived from the Nepal Living Standards Survey of 1995/96 indicate that, based on a poverty threshold of NRs9,000 per capita per annum, equivalent to about \$122, the extent of the urban poor ranges from 10 to 13%. However, given that rents and other costs are higher in Kathmandu than in other urban areas of the country, 12-15% would be a conservative estimate of urban poverty in the Kathmandu Valley. Nevertheless, income poverty alone is insufficient to understand the extent of poverty in the valley.</p> <p>(iii) Most of Kathmandu's poor live in very low quality houses, squatter settlements, or rental accommodation. Rental accommodation is occupied by a range of low-income groups, such as daily wage earners, hawkers, and partly skilled laborers. Squatters live mainly on marginal government-owned land; their population has grown considerably and is now estimated at 18,000. Overall, most poor live in small settlements in the midst of higher-income housing and, consequently, are not very visible.</p> <p>(iv) Access to reliable water supplies is a problem for most low-income communities. Reliance on public supplies from the Nepal Water Supply Corporation (NWSC) is minimal; most urban poor depend on private or traditional sources of supply. Shallow wells are a popular source, but these are usually contaminated and responsible for a variety of waterborne diseases. About 67% of the population believe that the quality of water supplied by NWSC is poor; almost 72% of households in the Kathmandu Valley treat their water before consumption. Boiling and filtering, the most common means of treatment, involve considerable expense and impact mainly on the poor. Based on a 1999 survey undertaken during MWSP project preparation, 36% of the households suffer from water-related diseases. Diarrhea, stomach ailments, and dysentery are the dominant health problems and impact significantly on productivity and income because of working days lost and treatment expenses. Although no data are officially available, diarrhea is a leading cause for child mortality throughout Nepal, and in the Kathmandu Valley in particular.</p> <p>(v) The hardships in accessing water in the Kathmandu Valley are severe. With piped water supplies limited to 2 hours every alternate day, most consumers, and particularly the poor, rely on secondary sources. Although the time spent by the poor in accessing water for domestic use varies, approximately 1 hour is required. A number of domestic functions are undertaken at the water point to minimize the volume of water to be carried home. Women are the predominant carriers of water. Residents of low-income areas carry home only about 10 liters per person of water every day. This is insufficient to maintain basic hygiene and sanitation standards, and is a prime cause of the high levels of morbidity and mortality.</p> <p>Poverty in the Melamchi Valley          (vi) The project area of the MWSP also covers the Melamchi Valley, which includes a large part of Sindhupalchok District and a small part of Kabhre Palanchok District, both of which are predominantly rural despite their proximity to Kathmandu. The poverty incidence in Sindhupalchok District is high at about 50-55%; 85% of the population live at a</p>
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subsistence level. Small landholding size (0.6 hectare on average), physical remoteness due to topography and lack of roads, low agricultural productivity, and poor access to health and education services perpetuate poverty in the district.

### C. Participation Process

Stakeholder analysis:

The MWSP has been prepared with extensive participation of stakeholders, including beneficiaries, adversely affected people, village development committees and ward representatives, district development committees and municipality officials and representatives, ministries concerned and the Melamchi Water Supply Development Board (MWSDB), the private sector, external funding agencies, nongovernment organizations, and consultants. The Project will address the direct participation of beneficiaries through (i) social uplift program implementation, (ii) representation of adversely affected people in the compensation determination committee, and (iii) representation of Kathmandu Valley beneficiaries in a water users association. The Project will also undertake consensus building at all levels on issues such as water services, environmental and social impact mitigation and compensation, and employment. For adversely affected communities in the Melamchi Valley, local consultative groups will be established in each affected ward and village development committee. Prior to 31 December 2001, a consultative committee was established representing the inhabitants of the Melamchi Valley and includes representatives of MWSDB and the chairperson. Memoranda of understanding will be signed between this consultative committee and the Government. To ensure that women's participation and gender concerns are fully addressed, a gender strategy will be developed and implemented. Apart from this, it has been agreed that at least one of the members of the regulatory body will be female.

Participation strategy required: Yes

To support the introduction of privately operated water supplies, a public awareness/relations unit will be established in the MWSP Project Management Unit. This unit will ensure that stakeholders are kept informed about the MWSP and are given an opportunity to express their views. The public relations program will be a proactive campaign that will identify any potential conflict area at an early stage, assist in consensus building between the Project and the local communities, and manage public expectations on compensation and the social uplift program.

### D. Potential Issues

Subject	Significant, Not Significant, Uncertain, None	Strategy to Address Issues	Plan Required
Resettlement	Significant	Resettlement plan has been prepared.	Full
Gender	None	Hardship in water management is more severe among the poorer households, and mostly among women, who bear the predominant responsibility for water collection, storage, and treatment. Thus, the Project will benefit women significantly.	None
Affordability	None	A recent survey indicates that there is significant willingness to pay among Kathmandu Valley residents, ranging from \$0.43 per cubic meter (poor/upgraded from unconnected to shared connection) to \$0.86 per cubic meter (non-poor/already connected).	None
Labor	None	People severely affected by the Project and the identified vulnerable groups will have highest priority access to Project-related employment opportunities, as part of their entitlement.	None
Indigenous People	None	The Project will not adversely impact a specific ethnic/caste group.	None
Other Risks/Vulnerabilities	None		None

**COST ESTIMATES AND FINANCING PLAN**  
(\$'000)

Item	Foreign Exchange	Local Currency	Total Cost
<b>A. Asian Development Bank Financing<sup>a</sup></b>			
1. Consultants			
a. Remuneration and Per Diem			
i. International Consultants	900.0	0.0	900.0
ii. Domestic Consultants	0.0	240.0	240.0
b. International and Local Travel	80.0	20.0	100.0
c. Reports and Communications	5.0	5.0	10.0
2. Equipment	20.0	5.0	25.0
3. Training, Seminars, and Conferences			
a. Facilitators	9.0	3.0	12.0
b. Training Program	9.0	3.0	12.0
4. Surveys	0.0	4.0	4.0
5. Miscellaneous Administration and Support Costs	0.0	30.0	30.0
6. Representative for Contract Negotiations	5.0	2.0	7.0
7. Contingencies	60.0	0.0	60.0
<b>Subtotal (A)</b>	<b>1,088.0</b>	<b>312.0</b>	<b>1,400.0</b>
<b>B. Government Financing</b>			
1. Office Accommodation and Transport	0.0	50.0	50.0
2. Remuneration and Per Diem of Counterpart Staff	0.0	250.0	250.0
3. Others	0.0	50.0	50.0
<b>Subtotal (B)</b>	<b>0.0</b>	<b>350.0</b>	<b>350.0</b>
<b>Total</b>	<b>1,088.0</b>	<b>662.0</b>	<b>1,750.0</b>

<sup>a</sup> Financed by the Japan Special Fund and the Government of Norway.  
Source: Asian Development Bank estimates.

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

### A. General

Responsibilities are categorized under the following five subtasks: A- Management Contractor (MC) Recruitment; B- National Water Supply Regulatory Board (NWSRB); C- Nepal Water Supply Corporation (NWSC) and Kathmandu Valley Water Authority (KVWA); D- Project Preparation; and E- Other Related Tasks. In addition to the services to be provided by a team of international (I) and domestic (D) consultants, additional services of individual international and domestic consultants are required at certain key junctures, in particular during the initial few months of the TA, to assist the Government's counterpart staff. A check (✓) indicates the subtask(s) each expert is expected to carry out.

### B. International and Domestic Consultants for the Main Team

Position	Assignments					
	MC Recruit	NWSRB	KVWA	PPTA	Others	
	A	B	C	D	E	
1. Team leader (I)	0	0	0	0	0	(i) Coordinate closely with the Ministry of Physical Planning and Works (MPPW); the Melamchi Water Supply Development Board (MWSDB), in particular its Kathmandu Valley Water Management Support Committee (KVWMSC); and other relevant government agencies, and relevant multilateral and bilateral development partners. (ii) Hold monthly coordination/progress-review meetings with all relevant government agencies and their consultants. Prepare the minutes of meetings and issue them to all parties concerned within 1 week. (iii) Provide advice to MPPW, MWSDB, and KVWMSC as required. (iv) On behalf of KVWMSC, prepare reports for submission to higher authorities and relevant development partners including ADB. (v) Turn over all study outputs, reports, and other documentation to KVWMSC in electronic and paper forms upon completion of the assignment.
2. Deputy team leader/ municipal engineer (D)	0	0	0	0	0	
These two professionals will assume overall responsibility for the effective performance of the team as a whole. The deputy team leader will also assume the responsibilities of the domestic municipal engineer, which are described under Position #11.						
3. Transaction advisor (I)	0					(i) Review lessons learned from past efforts and prior studies. (ii) Assess risks and bidding climate, and sound out potential bidders. (iii) Develop an overall contracting strategy, both immediate and long-term (i.e., including succeeding contracts after the renewed (i.e., second) 5-year management contract), for the urban water supply and sanitation private sector participation (PSP) scheme in Kathmandu Valley for KVWMSC and MPPW's approval. (iv) After approval, finalize the implementation plan for the approved contracting strategy. (v) Evaluate the prequalification (PQ) applications and prepare a list of prequalified applicants. (vi) Develop request for proposals (RFP) documents including draft MC contract in consultation with relevant government agencies and prequalified applicants, and issue the RFP to the prequalified applicants. (vii) Evaluate proposals and prepare award recommendation. (viii) Help KVWA (or MPPW if KVWA is not ready by then) negotiate and reach agreement with the recommended bidder.
4. Contract/procurement specialist (D)	0					
These two professionals will work as a subteam for the assigned tasks. The transaction advisor will assume primary responsibility, while the contract/procurement specialist will support him/her.						

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	A	B	C	D	E	
5. Regulatory specialist (I)		0				(i) Review prior preparatory studies on the regulatory body. (ii) Define the roles and responsibilities of NWSRB by clearly differentiating its responsibilities as regulator and those of KVWA as administrator of the urban water supply. (iii) Draft supporting policies for NWSRB, and help gain approval for such supporting policies. (iv) Help KVWMSC identify candidates and appoint NWSRB Board commissioners. (v) Develop a draft organization chart for NWSRB, identify working-level staffing needs, develop job descriptions, and assist in hiring staff members for NWSRB. (vi) Design and implement training programs for NWSRB Board commissioners, assist in establishing its operations, and provide training for its working-level staff as needed. (vii) Develop and document necessary regulations and procedures and present them for NWSRB Board approval. (viii) Establish reporting procedures to maintain utility information, customer information and socioeconomic information; and set up adequate software and hardware to systematically maintain and update such an information database. (ix) Work with the public relations specialists to build relationships with relevant stakeholders.
6. Public administration specialist (D)						
<p>These two professionals will work as a subteam for the assigned tasks. The regulatory specialist will assume primary responsibility, while the public administration specialist will support him/her.</p>						
7. Water sector management/policy specialist (I)		0				(i) Work with the transaction advisor and contract/procurement specialist on the overall contracting strategy. (ii) Establish baseline conditions, develop a set of key performance indicators (KPIs), their targets, and methods to measure actual performance against the targets. (iii) Prepare MPPW (subsequently KVWA) to administer their responsibilities under the management contract.
8. Water supply management specialist (D)						
<p>These two professionals will work as a subteam for the assigned tasks. The water sector management/policy specialist will assume primary responsibility, while the water supply management specialist will support him/her. In particular, they will plan and implement the institutional transition from NWSC to KVWA.</p>						
		0				Provide policy development support for the regulatory specialist/public administration specialist.
			0			(i) Review prior preparatory studies on the establishment of KVWA. (ii) Define the roles and responsibilities of MPPW (subsequently KVWA) by clearly differentiating its responsibilities as administrator of the management contract from those of NWSRB as regulator of urban water supply. (iii) Draft supporting policies for KVWA and help gain approval for them. (iv) Facilitate agreement on the powers and duties of KVWA. (v) Facilitate agreement on appropriate representation on the board of directors (number of members, qualifications, etc.) and voting rules of KVWA. (vi) Help KVWMSC identify candidates and appoint KVWA Board members. (vii) Develop a draft organization chart for KVWA, identify working-level staffing needs, develop job descriptions and a staffing plan for KVWA, and assist in reassigning/transferring staff in the unbundled Kathmandu Valley operations units of NWSC. (viii) Design and implement training programs for KVWA Board members and working-level staff. (ix) Help KVWA staff develop necessary regulations and procedures for KVWA Board approval. (x) Identify management information resources related to utility operations at NWSC that must be transferred to the new KVWA. Establish reporting procedures to maintain such management information and additional information on water resources management, in particular what has been prepared under the Optimizing Water Use in Kathmandu Valley study (ADB TA 3700 NEP). (xi) Develop mechanisms for licensing and charging for use of groundwater in the Kathmandu Valley.

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	A	B	C	D	E	
9. Labor relations specialist (I+D)	0		0			<ul style="list-style-type: none"> <li>(i) Review prior reports on restructuring and staff retrenchment of NWSC.</li> <li>(ii) Meet with NWSC management and representatives of its unions to understand their concerns and perspectives.</li> <li>(iii) Work with KVWMS, MPPW, other relevant government agencies, and local International Labour Organisation (ILO) officials to understand policies with respect to retrenchment and retraining of excess NWSC employees and potential options for them, and propose a strategy for the transition of NWSC to KVWA.</li> <li>(iv) Prepare a plan for facilitating reassignment/transfer of NWSC employees to KVWA and other potential workplaces. Also, prepare an additional severance payment package (so-called "golden handshake") for NWSC employees. Consolidate these as a set of policy conditionalities for a program-type loan.</li> <li>(v) Draft clauses regarding conditions related to (former) NWSC employees, if any, and include them in draft MC contract documents.</li> </ul>
10. Groundwater management specialist (I+D)			0		0	Work with the Groundwater Resources Development Board (GWRDB) for outside the Kathmandu Valley and with KVWA for the Kathmandu Valley to establish mechanisms for licensing and charging for use of groundwater.
11. Municipal engineer (I+D)  The domestic municipal engineer will also assume the responsibilities of the deputy team leader, which are described under Position #2 above.	0					<ul style="list-style-type: none"> <li>(i) Evaluate the technical part of the proposals submitted for MC selection.</li> <li>(ii) Prepare a preliminary design for the demonstration scheme using additional bulk water from the Manohara River (JICA project).</li> </ul>
			0			Work with relevant Government counterparts to make the best use of the accomplishments of the Optimizing Water Use in Kathmandu Valley study.
				0		<ul style="list-style-type: none"> <li>(i) Prepare preliminary engineering design in conjunction with the new loan project. (Note that the new loan project is not expected to finance any substantive capital investments. These investments are expected to be financed initially by reallocating funds under MWSP.)</li> <li>(ii) Prepare cost estimates for the capital investments in conjunction with the new loan project.</li> <li>(iii) Prepare contract packaging for the new loan project.</li> <li>(iv) Prepare initial environmental examination report for the physical works involved with the associated distribution network rehabilitation and improvement in conjunction with the loan project, together with matrices of potential environmental impacts of the policy actions to be included in the loan project.</li> </ul>
12. Economist (I)		0	0			<ul style="list-style-type: none"> <li>(i) Carry out an economic survey of various currently available alternative water supply options.</li> <li>(ii) Carry out economic analysis of overall regulation for the designing of NWSRB.</li> <li>(iii) Help MPPW/NWSRB review the economic impact of the regular tariff schedule and alternative tariff schedule for the demonstration scheme area, in particular on the poor.</li> </ul>
				0		<ul style="list-style-type: none"> <li>(i) Carry out economic feasibility analysis and alternatives consideration.</li> <li>(ii) Prepare a logical framework together with proposed tranche conditions and key performance indicators/targets for the program loan part (i.e., NWSC restructuring) of the prospective SDP project. In collaboration with the labor relations specialists, carry out consultation sessions among relevant stakeholders to build consensus on the development of the logical framework.</li> <li>(iii) Carry out a benefit distribution analysis and a poverty impact analysis.</li> <li>(iv) Carry out an affordability analysis on the proposed cost recovery arrangements.</li> </ul>

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13. Financial specialist (I+D)	0					<ul style="list-style-type: none"> <li>(i) Update fixed asset registers.</li> <li>(ii) Prepare a mock budget for the prospective MC for the first year of its operation of the water supply systems to assess the financial requirements for the MC.</li> <li>(iii) Prepare a 5-year financial projection and mock cost recovery plan to simulate financial viability of the MC operations from its viewpoint.</li> </ul>
		0				<ul style="list-style-type: none"> <li>(i) Estimate the costs of establishing NWSRB.</li> <li>(ii) Identify all the potential sources of funding and subsidies, if any, for NWSRB.</li> <li>(iii) Help KVWMS and MPPW (subsequently NWSRB) prepare a 5-year financing plan for NWSRB (primarily by a surcharge on the water tariff) to ensure its sustainable operations.</li> </ul>
			0			<ul style="list-style-type: none"> <li>(i) Help KVWMS and MPPW/KVWA develop a regular tariff schedule and an alternative tariff schedule for the demonstration scheme area for NWSRB's approval.</li> <li>(ii) Estimate the costs of NWSC retrenchment.</li> <li>(iii) Estimate the costs of establishing KVWA.</li> <li>(iv) Identify all the existing and potential sources of funding/subsidies for KVWA, including portions of MPPW budget, if any, that will be transferred to KVWA.</li> <li>(v) Determine the timing and amount of capital investment subsidies that will be provided under the loan-grant blend financing of the Melamchi Water Supply Project (MWSP).</li> <li>(vi) Design financial mechanisms to charge for groundwater usage.</li> <li>(vii) Help KVWMS and MPPW (subsequently KVWA) prepare 5-year financial projection and cost recovery plan (including water tariffs, connection charges and other charges) to ensure financial viability of the KVWA operations.</li> </ul>
				0		<ul style="list-style-type: none"> <li>(i) Prepare cost estimates and overall financing plan for the loan project.</li> <li>(ii) Carry out financial feasibility analysis for the loan project.</li> </ul>
14. Legal specialist (I+D)	0					<ul style="list-style-type: none"> <li>(i) Provide assistance for the transaction advisor and contract/procurement specialist in developing RFP documents, including a draft MC contract.</li> <li>(ii) Help MPPW negotiate and reach agreement with the recommended bidder.</li> </ul>
		0				<ul style="list-style-type: none"> <li>(i) Draft/refine legislation required for establishing NWSRB.</li> <li>(ii) Incorporate NWSRB in the draft Municipal Water Services Act.</li> <li>(iii) Help MPPW present legislation for NWSRB for approval and enactment.</li> <li>(iv) Take any additional legislative steps necessary to establish NWSRB.</li> <li>(v) Draft relevant clauses related to NWSRB and include them in the draft MC contract documents.</li> </ul>
			0			<ul style="list-style-type: none"> <li>(i) Draft amendments to the existing NWSC Act, if necessary, for its transition to KVWA.</li> <li>(ii) Draft/refine legislation required for establishing KVWA.</li> <li>(iii) Help MPPW present legislation for KVWA for approval and enactment.</li> <li>(iv) Take any additional legislative steps necessary to establish KVWA.</li> </ul>
					0	<ul style="list-style-type: none"> <li>(i) Review draft legislation for the proposed Municipal Water Services Act and prior studies on institutional/policy reform with relevant government officials.</li> <li>(ii) Finalize draft legislation of the proposed Municipal Water Services Act.</li> <li>(iii) Help MPPW present legislation on the proposed Municipal Water Services Act for approval and enactment.</li> <li>(iv) Help MWR prepare and enact legislation for licensing and charging for use of groundwater.</li> </ul>

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	A	B	C	D	E	
15. Social development specialist (I+D)	0	0	0			(i) Define the meaning of being poor as a matter of government policy; identify the people who fall under this definition; understand their needs, in particular the women, through consultation regarding service levels and affordability; develop a strategy to require the MC to facilitate pro-poor and gender-sensitive urban water supply service delivery in the Kathmandu Valley; and ensure its incorporation in draft MC contract documents and government investment programs. (ii) Ensure that a regular tariff schedule and an alternative tariff schedule for the demonstration scheme area proposed by MPPW (subsequently KVWA) for NWSRB's approval are pro-poor.
				0		(i) Prepare a resettlement plan for the new loan project, if necessary. (ii) Ensure that project components incorporate features to meet the needs of the poor.
					0	(i) Facilitate levying decision-making regarding the interbasin water transfer from the relatively poorer Melamchi Valley to the relatively richer Kathmandu Valley in conjunction with MWSP. (ii) Propose a new unit to support water supply service delivery to potential low-income customers with its institutional arrangements and implementation modality.
16. Public relations specialist (I+D)	0					Keep the public updated on the status of MC recruitment in coordination with MWSDB and its public relations (PR) consultant.
		0				(i) Identify relevant stakeholders, establish contact with them, understand their interests and propose the ways in which these interests can best be served, and help establish a customers' advisory committee to be incorporated in NWSRB. (ii) Establish contact with other similar regulatory bodies in neighboring/other countries and/or international professional regulatory associations to obtain and update relevant information on utility regulation outside Nepal.
			0			Establish contact with other similar agencies in neighboring/other countries and/or international professional water utility associations.
					0	(i) Identify issues and topics of interest among relevant stakeholders, develop and implement means to gather feedback from the public on urban water supply sector reforms in the Kathmandu Valley to be conducted under the Project, compile information, and propose effective means for making the information available for the public. (ii) Coordinate with the public relations efforts of MWSDB with regard to MWSP in general in cooperation with MWSDB's public relations consultant.

### C. Individual International and Domestic Consultants

Expertise required for the three individual international consultants is as follows: (i) transaction advisory on MC recruitment; (ii) overall water supply utility management, focusing particularly on its finance; and (iii) physical planning of the water supply distribution network. A total input of 6 person-months is expected from these three individual international consultants. Similarly, expertise required for the two individual domestic consultants is as follows: (i) overall water supply utility management, focusing particularly on its finance; and (ii) physical planning of the water supply distribution network. A total input of 4 person-months is expected from these two individual domestic consultants.