



# Technical Assistance Report

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Project Number: 41022  
September 2007

## Nepal: Preparing the Improved Water Quality, Sanitation, and Service Delivery in Emerging Towns Sector Development Program

(Cofinanced by the Japan Special Fund and the Government of the Netherlands through the Water Financing Partnership Facility)

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 10 September 2007)

|               |   |                            |
|---------------|---|----------------------------|
| Currency Unit | – | Nepalese rupee/s (NRe/NRs) |
| NRe1.00       | = | \$0.0153600393             |
| \$1.00        | = | NRs65.104000               |

## ABBREVIATIONS

|      |   |                                          |
|------|---|------------------------------------------|
| ADB  | – | Asian Development Bank                   |
| CBO  | – | community-based organization             |
| DWSS | – | Department of Water Supply and Sewerage  |
| GDP  | – | gross domestic product                   |
| HDI  | – | human development index                  |
| MDG  | – | Millennium Development Goal              |
| MPPW | – | Ministry of Physical Planning and Works  |
| NGO  | – | nongovernment organization               |
| O&M  | – | operation and maintenance                |
| PPTA | – | project preparatory technical assistance |
| PRSP | – | Poverty Reduction Strategy Paper         |
| TA   | – | technical assistance                     |
| TASC | – | TA steering committee                    |
| TDF  | – | Town Development Fund                    |
| UNDP | – | United Nations Development Programme     |
| WSS  | – | water supply and sanitation              |
| WSUC | – | water and sanitation user committees     |

## WEIGHT AND MEASURE

|    |   |                                          |
|----|---|------------------------------------------|
| ML | – | mega liter (equal to one million liters) |
|----|---|------------------------------------------|

## TECHNICAL ASSISTANCE CLASSIFICATION

|                       |   |                                                                            |
|-----------------------|---|----------------------------------------------------------------------------|
| <b>Targeting</b>      | – | Targeted intervention                                                      |
| <b>Classification</b> |   |                                                                            |
| <b>Sector</b>         | – | Water supply, sanitation, and solid waste management                       |
| <b>Subsector</b>      | – | Water supply and sanitation                                                |
| <b>Themes</b>         | – | Sustainable economic growth, governance, environmental sustainability      |
| <b>Subthemes</b>      | – | Developing urban areas, public governance, urban environmental improvement |

## NOTES

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

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|-------------------------|------------------------------------------------------------------------------------|
| <b>Vice President</b>   | L. Jin, Operations Group 1                                                         |
| <b>Director General</b> | K. Senga, South Asia Department (SARD)                                             |
| <b>Director</b>         | H. Kim, Urban Development Division, SARD                                           |
| <b>Team leader</b>      | T. Gallego-Lizon, Urban Development Specialist, SARD                               |
| <b>Team members</b>     | L. Sharma, Project Officer, SARD<br>R.K. Shrestha, Assistant Project Analyst, SARD |

## I. INTRODUCTION

1. The 2007 Country Programming Mission of the Asian Development Bank (ADB) made provision for project preparatory technical assistance (PPTA) to continue<sup>1</sup> supporting the development of the water supply and sanitation sector in small towns in Nepal.<sup>2</sup> ADB's PPTA Fact-Finding Mission visited Nepal from 10 to 17 May 2007 and reached a preliminary understanding with the Government of Nepal (the Government) on the goals, purpose, scope, implementation, financing arrangements, and terms of reference of the PPTA. The design and monitoring framework is in Appendix 1.<sup>3</sup>

## II. ISSUES

2. **Meeting the Millennium Development Goals.** Continuing efforts on the part of the Government have raised living standards, but the country remains one of the poorest in the region, with human development indicators that are among the lowest in the world. Inhabitants of mountain areas have been shown to be poorer than those in the terai<sup>4</sup> and hills across a wide range of social indicators, and Far Western and Mid Western regions display lower values for human development indicators than other parts of the country. Similarly, while daily availability of drinking water has increased significantly, discrepancies among regions remain significant.<sup>5</sup> Nepal is fully committed to achieving the Millennium Development Goals (MDGs). The Tenth Plan (2002–2007), which reflects the country's Poverty Reduction Strategy Paper (PRSP), helped initiate national efforts towards attaining the MDGs; the Interim Three-Year Plan (2008–2010), currently under preparation, is expected to consolidate this endeavor. The recent MDG progress review<sup>6</sup> has indicated that progress remains insufficient, particularly with respect to sanitation, and several activities need to be expanded if MDG targets are to be attained by 2015. While data varies depending on the sources, water supply coverage has increased nationwide from 46% in 1990 to about 75% in 2005; this value is in line with the projected 2007 MDG target. Progress in sanitation has also been significant as the proportion of population with sustainable access to improved sanitation increased from 6% in 1990 to about 40% in 2005;<sup>7</sup> this value, remains substantially below the projected 2015 MDG target of 53%.<sup>8</sup>

3. **Water and Sanitation.** Overall, Nepal has abundant water resources,<sup>9</sup> but population and development pressures, competing uses, and in some cases, poor water resource management serve to compromise quantity, quality and therefore access; some major towns and cities in the hilly areas face acute shortages during dry periods of the year. Groundwater is abundant in the

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<sup>1</sup> ADB. 2000. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Kingdom of Nepal for the Small Towns Water Supply and Sanitation Sector Project*. Manila (Loan 1755-NEP, approved on 12 September 2000, is expected to close on 20 September 2008).

<sup>2</sup> As reflected in ADB. 2007. *Country Operations Business Plan (2008–2010) for Nepal*. Manila.

<sup>3</sup> The TA first appeared in *ADB Business Opportunities* on 15 May 2007.

<sup>4</sup> The terai is the flat southern region of Nepal. Part of the Indo-Gangetic Plain, it stretches from east to west, occupies about 17% of the land area, and is home to almost 50% of Nepal's population.

<sup>5</sup> While the amount of drinking water available in Nepal overall has tripled, from 58 mega liters (ml) (1994/95) to 159 ml (2003/04), areas such as the Mid-Western and Far Western regions barely doubled their capacity over the same period (National Planning Commission. 2005. *Statistical Year Book: Chapter 11.1*. Kathmandu).

<sup>6</sup> National Planning Commission of the Government of Nepal and United Nations Development Programme. 2006. *Millennium Development Goals: Needs Assessment for Nepal*. Kathmandu.

<sup>7</sup> In rural areas, access to improved water sources increased from 43% in 1990 to 79% in 2005; this figure increased from 90% to 93% in urban areas. Access to improved sanitation in rural areas increased from 3% in 1990 to 30% in 2005; in urban areas this proportion increased from 34% to 81% over the same period (Source: HMG/UNDP 2005).

<sup>8</sup> According to this report, projected public investment needed in the drinking water supply and sanitation sector for the 2005–2015 period is around NRs138 billion; the financing gap would be on the order of NRs89 billion.

<sup>9</sup> High rainfall totals generally give rise to abundant water supplies, at least seasonally, and surface water and groundwater are both important sources for domestic, industrial and agricultural use.

aquifers of the terai, yet more limited in the populated hill regions because of the lower permeability of the soils. Many Nepalese use surface water—which is most vulnerable to pollution—for their potable water supply.

4. Improvements in water quality have unfortunately not been matched by progress in adopting sustainable sanitation solutions and achieving necessary coverage. Throughout the country, as water becomes readily available, pour-flush systems are rapidly replacing crude dry toilets. With the progressive adoption of septic tanks and onsite sanitation, groundwater resources, particularly around urbanized centers, are at risk of bacterial contamination caused by effluent leakage and pollutant migration from poorly constructed and maintained pit latrines, and effluent from septic tanks and other disposal facilities.<sup>10</sup> In municipal areas where drainage is present, households often discharge sewage to drains, either directly or through septic tanks; this can result in health hazards during the monsoon season when drains overflow. Surface water quality has seriously deteriorated as a result of poor wastewater management. Municipal areas outside of Kathmandu Valley lack access to a sewerage network or sewage treatment facilities, with virtually all domestic and industrial wastewater being ultimately discharged into the rivers.<sup>11</sup> While plentiful flow during the rainy season may dilute pollutant concentrations and thus limit the impact on downstream populations that obtain drinking water from the same source, the effect of wastewater discharges into rivers can be significant during the dry season. Shallow groundwaters are also at risk from contamination: pathogenic bacteria, pesticides, nitrates and industrial effluents (in urban and periurban areas) are likely to be the greatest problems encountered.<sup>12</sup> Deep groundwaters present in the Kathmandu Valley and the terai are also largely anaerobic and vulnerable to increased concentrations of iron, manganese, ammonium and possibly arsenic.<sup>13</sup>

5. **Policy, Regulations, and Institutions.** The Government's long-term program as reflected in the National Water Plan (2002–2027), seeks to meet increasing demand, and sets targets to provide water supply and sanitation for all by 2017. Within the context of the Ninth Plan, the Government approved the National Water Supply and Sanitation Policy in April 1998. While a specific Rural Water Supply and Sanitation Sector Strategy for Nepal was approved in 2004, policies for water supply and sanitation in the urban sector remain largely unaddressed.<sup>14</sup> In January 2000, the Government also approved its 15-Year Development Plan, which identified support for 209 priority small towns.<sup>15</sup> A review of this plan, however, reveals that (i) the situation throughout the country has significantly changed since its approval, and (ii) many of the priorities highlighted in the plan have already been achieved, either by the Government, other donors or nongovernment organizations (NGOs), indicating the need for development of a new medium-term development plan for the sector. The Department of Water Supply and Sewerage (DWSS) is also formulating an umbrella Drinking Water Act.<sup>16</sup>

<sup>10</sup> The adequacy of onsite sanitation is dependent on the type of soils, geological characteristics, and water table level.

<sup>11</sup> Access to sewerage facilities is limited to about 15% of the houses, even in valley towns. No area of the country apart from a portion of Kathmandu Valley is supported by wastewater treatment services (the valley's total treatment capacity is designed to be 34.4 ML/day). Within Kathmandu Valley, only one (Guhyeswari) of the five existing treatment plants is reported to be adequately functioning. While the technology (aerated lagoons, oxidation ditch, and stabilization ponds) appears adequate and relatively simple, the systems operate inefficiently or are out of order.

<sup>12</sup> National Planning Commission. 2005. *Statistical Year Book: Chapter 16.1*. Kathmandu.

<sup>13</sup> British Geological Survey and WaterAid Nepal. 2001. *Groundwater Quality: Nepal*. Kathmandu.

<sup>14</sup> With support from the Government of Japan, the Department of Water Supply and Sewerage has initiated the formulation of such policy, but it has not been completed or approved. The main policy thrusts include (i) full water supply and sanitation coverage, (ii) outlining roles and responsibilities for sector stakeholders, (iii) water source protection and management, and (iv) NGO and private sector participation. The draft policy devolves the planning, implementation and operations and maintenance functions of water supply and sanitation services to local bodies.

<sup>15</sup> Based on the plan, 29 town projects were developed and will be completed under the ongoing ADB loan (footnote 1).

<sup>16</sup> A comprehensive assessment and discussion of water-related laws in Nepal was prepared by WaterAid (WaterAid. 2005. *Water Laws in Nepal*. Kathmandu). Areas that may need strengthening include: (i) discharge quality standards; (ii) water users licensing; and (iii) water source registration, disputes, and conflict resolution mechanisms.

6. DWSS, within the Ministry of Physical Planning and Works (MPPW), is the lead agency in the water and sanitation sector.<sup>17</sup> MPPW is responsible for formulating and guiding sector activities to meet targets and objectives outlined in the national development plans. The Town Development Fund (TDF) was established under MPPW in 1996 to provide essential financial, institutional and technical support to institutions involved in town construction, development and expansion activities. In agreement with the regulatory framework,<sup>18</sup> water user committees are, at present, also responsible for implementing water supply projects and operation and maintenance of schemes.<sup>19</sup> To ensure alignment with the decentralization and devolution process, DWSS is reviewing its role with a view to undertaking coordination, monitoring, policy formulation and promotion, and regulatory functions. There is a need, however, to conduct a comprehensive institutional reform program that will clearly define (i) a vision for the sector, with supporting institutional framework and road map; (ii) DWSS's role and responsibilities and its organizational structure; and (iii) institutional mandates.

7. ADB has been an active partner in the sector for 20 years.<sup>20</sup> The PPTA supports the Government in (i) promoting inclusive development and (ii) reducing poverty while promoting equitable development. The PPTA is consistent with ADB's strategic priorities, as outlined in ADB's country strategy and program<sup>21</sup> and its updates, which emphasize support for (i) promoting pro-poor economic growth, (ii) inclusive social development, and (iii) good governance.

### III. THE TECHNICAL ASSISTANCE

#### A. Impact and Outcome

8. The impact of the PPTA is improved basic water supply and sanitation infrastructure and services in emerging small towns in Nepal. Its outcome is a project design and feasibility study agreed by Government and ADB. The PPTA is expected to formulate a comprehensive design for a sector development program. Specific outputs will consist of (i) a revised urban water and sanitation sector policy and development plan, institutional assessment and policy matrix for proposed sector improvements; (ii) a feasibility study for integrated water supply and sanitation in emerging towns<sup>22</sup> suitable for ADB financing that emphasizes inclusive development and responds to needs expressed by the community regarding priority infrastructure; and (iii) capacity development assistance for expediting project implementation and institutionalizing mechanisms for sustainable community-based infrastructure development.

<sup>17</sup> DWSS is the only agency supporting implementation of water supply and sanitation projects in urban areas. Three ministries (Health, Education and Sports, and Local Development) complement these activities.

<sup>18</sup> The Water Resource Act (1992) and Water Resource Regulation (1993) provide for (i) prioritization of water use and (ii) formation and licensing of water user committees (ADB's Small Towns Water and Sanitation Sector Project [footnote 1] follows this model). In other instances local bodies or municipalities are responsible.

<sup>19</sup> The existing system involves the formation of community-based water and sanitation user committees (WSUC). Basic principles include (i) community involvement in planning, design, implementation, and operation and maintenance phases, often facilitated by NGOs; (ii) cost-sharing arrangements, involving contributions from WSUCs and local governments; and (iii) introduction of scheme-specific tariffs to recover operation and maintenance and repayment of the TDF loan. While the WSUC model is generally performing well, feedback indicates the need for continued support after project completion to provide (i) training to new committee members, (ii) technical advice for improved system performance, and (iii) access to financial resources for major rehabilitation and expansion.

<sup>20</sup> Lessons from previous projects highlight the need to (i) integrate water supply and sanitation programs; (ii) avoid conflicts with other water users and secure adequate water access rights; (iii) define mechanisms that involve the poor and disadvantaged and secure access to water and sanitation for all; (iv) implement annual water and sewerage tariff increases, taking into consideration annual inflation and adequate tariff objectives; (v) prepare and conceptualize a sustainability platform for post-project completion; and (vi) develop capacity among users, particularly water and sanitation user committees, and institutionalize their role and responsibilities.

<sup>21</sup> ADB. 2004. *Country Strategy and Program (2005–2009): Nepal*. Manila.

<sup>22</sup> The concept and definition of "emerging" towns will be prepared as part of the TA.

## **B. Methodology and Key Activities**

9. The PPTA will (i) support inclusive social development and subsidiarity; (ii) seek opportunities to strengthen water user committees and promote women's participation; and (iii) aim to involve stakeholders, beginning with the planning and design process.<sup>23</sup> In order to ensure a far-reaching design for a subsequent sector development program, the PPTA has been structured to include three components. Component 1 will focus on strengthening policy and institutions, component 2 will develop an infrastructure investment package and component 3 will devise an action program to expedite implementation and increase the capacity of implementing bodies (the Government, NGOs, etc.). Component 1 will conduct a comprehensive policy and institutional analysis for the urban water supply and sanitation sector and support the Government's efforts in (i) reviewing and updating draft urban water supply and sanitation policies and the medium-term development plan, and (ii) redefining and institutionalizing the role, responsibilities and structure of DWSS within a devolved scheme.

10. Component 2 will focus on the preparation of a comprehensive feasibility study comprising (i) a detailed need and demand evaluation for water supply and sanitation services in emerging towns in Nepal, (ii) formulation of three to four sample subprojects and clear subproject selection criteria, (iii) preparation of associated supporting documents, and (iv) a TDF assessment.<sup>24</sup> In addition to infrastructure development, subcomponents such as hygiene education will be considered.<sup>25</sup> The PPTA will also seek means to institutionalize post-project completion sustainability measures in community-based schemes. Component 3 of the PPTA will provide assistance to expedite project implementation. This component will support advance actions and include (i) provision of training to implementing structures and participating community-based organizations (CBOs) and NGOs for mobilization and planning phases, and (ii) preparation of standardized manuals and guidelines for planning and design.

## **C. Cost and Financing**

11. The total cost of the PPTA is estimated at \$848,000 equivalent. It is proposed that \$120,000 equivalent will be financed on a grant basis by the Government of the Netherlands through the Water Financing Partnership Facility and administered by ADB; \$600,000 equivalent for components 2 and 3 will be financed on a grant basis, by the Japan Special Fund, funded by the Government of Japan. The remaining \$128,000 will be contributed by the Government and will include office accommodation and utilities, counterpart staff, background reports, and workshop facilities. Detailed cost estimates and a financing plan are provided in Appendix 3. The Government has been informed that approval of the PPTA does not commit ADB to finance any ensuing project.

<sup>23</sup> The TA will be implemented in an inclusive manner, through extensive consultation, using community participation and ensuring that the design of the ensuing investment has an integrated approach to water and sanitation.

<sup>24</sup> For selected sample subprojects, the consultant will (i) collect and review basic planning data and processes, capabilities, and resources for urban development in three to four urban centers, and in agreement with the Department of Housing and Urban Development directives, formulate basic urban land-use plans; (ii) in coordination with the community and WSUCs, initiate socioeconomic surveys in the identified target areas (NGOs, local CBOs or women groups may be engaged for this purpose); (iii) map and perform spatial analysis of poverty data, incidence of waterborne diseases, current and projected assistance, and concentration of minority and disadvantaged groups; (iv) undertake engineering field surveys and mapping to ascertain the condition of basic infrastructure and amenities, including current data on water and sanitation; and (v) confirm the need for improved coverage and ascertain (a) population projections, and (b) demand for services. Results will be analyzed and discussed at stakeholder consultations at national and town level. Subsequently, the PPTA will review government-proposed technical options acceptable to all stakeholders (developing new options if needed), and evaluate economic and financial feasibility, environmental and social studies, and other documentation, as required by ADB guidelines. An institutional development and capacity-building program for WSUCs, government institutions and beneficiaries will be developed.

<sup>25</sup> Risks, such as project delays, will be considered in the sensitivity analysis.

## D. Implementation Arrangements

12. The MPPW will be the Executing Agency and will appoint a fulltime PPTA unit coordinator with a supportive, coordinating and facilitating role, and provide office space, furniture, equipment and technical and support counterpart staff for the TA consultants as necessary. Overall guidance for TA implementation will be provided by a TA steering committee (TASC).<sup>26</sup> The PPTA will be implemented over a 12-month period (February 2008 to February 2009); components 1 and 2 will be implemented over 7 months, starting in February 2008. A team of international and national consultants will be recruited through a firm, using the quality-and-cost based selection method with a standard quality-cost ratio of 80:20, to provide a total of 51.5 person-months of services. The outline terms of reference for the consultants and indicative scheduling are presented in Appendix 4. International expertise (15.5 person-months) will be obtained in the areas of water supply and sanitation policy, governance and institutional reform, economics, financial management, and safeguards (social and environment). National consultants (36 person-months) will have expertise in water supply engineering, sanitation and sewerage, environment, social development and gender, resettlement, financial analysis, urban planning and policy, governance and institutions. ADB's full technical proposal will be used for selecting the consultant firm. Extensive workshops and consultations will be conducted under both components of the TA. Office equipment to be financed by the TA will be procured in accordance with *ADB's Procurement Guidelines* (2007, as amended from time to time). The team of consultants will submit four major reports: (i) an inception report 4 weeks after commencement of services, (ii) an interim report within 3 months, (iii) a draft report at the end of the sixth month, and (iv) a final report within 4 weeks of receiving comments from the Government and ADB on the draft report. Both draft final and final reports will contain separate sections for (a) the feasibility study and (b) the policy and institutional assessment report. The consultants will also submit short monthly progress notes summarizing project activities, issues, constraints and proposed solutions. Tripartite meetings will be held among ADB, the Government and the consultants to review inception, midterm and draft final reports and verify output-to-purpose accomplishments. Component 3 of the TA will, on completion of the feasibility study, engage individual consultants (approximately 15 person-months) to provide training and support bridging activities, including advanced recruitment and procurement activities. The consultants will be selected and engaged by ADB in accordance with the *ADB's Guidelines on the Use of Consultants* (2007, as amended from time to time). Key deliverables from this TA will be translated by consultants to facilitate their review by Government and other stakeholders. MPPW will complete a TA completion questionnaire to evaluate inputs and outputs, identify lessons learned and follow-up actions.

## IV. THE PRESIDENT'S DECISION

13. The President, acting under the authority delegated by the Board, has approved (i) ADB administering a portion of technical assistance not exceeding the equivalent of \$120,000 to be financed on a grant basis by the Government of Netherlands through the Water Financing Partnership Facility; and (ii) ADB providing the balance not exceeding the equivalent of \$600,000 on a grant basis to the Government of Nepal for preparing the Improved Water Quality, Sanitation, and Service Delivery in Emerging Towns Sector Development Program, and hereby reports this action to the Board.

<sup>26</sup> The TASC will be headed by the Secretary of MPPW, and comprise senior government officials from DWSS, the ministries of Finance, Local Development, Science, Technology and Environment, and Health, National Planning Commission, Department of Housing and Urban Development, and representatives from the Association of District Development Committees of Nepal and the Municipalities Association of Nepal. Periodic consultations with development partners and NGOs will be held. The TASC will meet within 2 weeks of TA commencement to confirm sample TA subprojects, and within 8 weeks to review the first draft of the urban water and sanitation policy. The TASC will subsequently meet bi-monthly to review TA progress and provide direction, particularly on policy issues.

## DESIGN AND MONITORING FRAMEWORK

| Design Summary                                                                                                                                                                                                                                                                                                                                                    | Performance Targets/Indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Data Sources/Reporting Mechanisms                                                                                                                                                                     | Assumptions and Risks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <p><b>Impact</b><br/>Improved basic water supply and sanitation infrastructure and services in emerging small towns in Nepal</p>                                                                                                                                                                                                                                  | <p>Significant support to meeting MDG 10 targets in Nepal.</p> <p>&gt;95% compliance with government water distribution standards in the project area.</p> <p>&gt;80% of all project small town schemes are sustainable.</p>                                                                                                                                                                                                                                                      | <p>National and regional statistics (water supply and sanitation)</p> <p>PRSP monitoring (NPC)</p> <p>UNDP Human Development Reports</p> <p>Nepal Living Standard Surveys</p> <p>ADB PCR and PPER</p> | <p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Political stability and peace</li> <li>• Government commitment to devolution</li> <li>• DWSS commits to abide by its new roles and responsibilities</li> <li>• Macroeconomic stability</li> </ul>                                                                                                                                                                                                                                     |
| <p><b>Outcome</b><br/>Project design and feasibility study</p>                                                                                                                                                                                                                                                                                                    | <p>Project design and feasibility study delivered on time and agreed to by Government and ADB</p>                                                                                                                                                                                                                                                                                                                                                                                 | <p>Inception report</p> <p>Interim report</p> <p>Draft final and final reports</p> <p>Training materials</p>                                                                                          | <p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• All institutions actively participate in the planning and development process.</li> <li>• Government and beneficiary communities are fully committed to long-term sustainability.</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>• Not all key stakeholders participate in consensus-building exercises.</li> <li>• Women and disadvantaged groups are not involved in project planning and design.</li> </ul> |
| <p><b>Outputs</b></p> <p>1. Realistic design of a program of policy and institutional reforms for WSS sector.</p> <p>2. Feasibility sector study for integrated water supply and sanitation in small towns.</p> <p>3. Capacity development assistance for expediting project implementation and institutionalizing sustainable community-based infrastructure</p> | <p>Urban WSS sector policy<br/>Urban WSS development plan</p> <p>Realistic plan (including monitoring systems) to review functions and strengthen central institutions, local bodies, and CBOs, to improve service delivery.</p> <p>Feasibility study for sample towns completed to highest standards and in agreement with government and ADB policies</p> <p>TDF comprehensive assessment</p> <p>Batch 1 implementation activities initiated through community mobilization</p> | <p>Minutes of meetings and reports of the TASC</p> <p>ADB review mission aide memoires</p> <p>Consultant's reports</p> <p>Stakeholder responses in workshops, surveys, and consultations</p>          | <p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Government has a genuine interest in pursuing policy and institutional improvements.</li> <li>• Timely completion of sample subproject selection and criteria.</li> <li>• Local population has the time and opportunity to participate in consultations.</li> </ul> <p><b>Risk</b></p> <ul style="list-style-type: none"> <li>• Fielding of consultants delayed</li> </ul>                                                            |

| Activities with Milestones                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Inputs                                                                                                                                                           |
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| <p><b>1.1 Performing a Sector Assessment</b></p> <p>1.1.1 Urban WSS sector analysis (legal framework, regulatory process, and policy framework) completed by middle of month 2</p> <p>1.1.2 Urban WSS sector financing assessment by end of month 2</p> <p>1.1.3 Development coordination matrix by end of month 3</p> <p>1.2.4 Institutional and capacity assessment of sector-related institutions and reform recommendations by end of month 3</p> <p><b>1.2 Formulating an Urban WSS Policy and Development Plan</b></p> <p>1.2.1 Review and assess Government's draft urban WSS policy by end of month 2</p> <p>1.2.2 Formulate a revised draft urban WSS policy by end of month 3 and present to stakeholders by middle of month 4.</p> <p>1.2.3 Review and update Government's Small Towns WSS Development Plan by end of month 5.</p> <p><b>1.3 Program Design</b> (all by end of month 6)</p> <p>1.3.1 Macroeconomic context</p> <p>1.3.2 Description of policy and institutional reforms</p> <p>1.3.3 Policy matrix (including objective, actions, indicators, and implementation responsibilities)</p> <p>1.3.4 Program organization and implementation mechanisms by mid-month</p> <p>1.3.5 Program design and monitoring framework</p> <p>1.3.6 Poverty impact of policy reform</p> <p>1.3.7 Cost of policy reforms</p> <p>1.3.8 Environmental and social assessment of policy actions</p> <p>1.3.9 Program benefits, impacts and risks</p> <p><b>2.1 Formulating Sample Subproject Proposals</b></p> <p>2.1.1 Review experience from ongoing projects as well as material developed under previous assistance by end of month 1</p> <p>2.1.2 Socioeconomic assessment of sample towns completed by end of month 4</p> <p>2.1.3 Demand analysis of sample towns by end of month 2</p> <p>2.1.4 Technical feasibility proposal for sample towns by end of month 5</p> <p>2.1.5 Cost estimates, financial and economic analyses for sample towns by end of month 6</p> <p>2.1.6 Summary poverty reduction and social strategy for sample towns by end of month 5</p> <p>2.1.7 Initial environmental examination for sample towns and environmental assessment review procedures by end of month 5.</p> <p>2.1.8 Resettlement plans for sample towns and resettlement framework by end of month 6.</p> <p>2.1.9 Indigenous peoples development framework by end of month 5</p> <p><b>2.2 Conducting a Full Assessment of TDF</b></p> <p>2.2.1 Institutional, capacity, and performance assessment of the TDF by end of month 5</p> <p>2.2.2 Financial management assessment of the TDF by end of month 5</p> <p>2.2.3 Safeguards implementation and monitoring capacity assessment by end of month 5</p> <p><b>2.3 Preparing a Sector Project for Emerging Towns WSS</b></p> <p>2.3.1 Countrywide urban WSS demand projections are determined by end of month 3</p> <p>2.3.2 Poverty and social assessment (country-based) by end of month 3</p> <p>2.3.3 Proposed implementation structure and arrangements by end of month 6</p> <p>2.3.4 Gender action plan by end of month 5</p> <p>2.3.5 Institutional strengthening program for institutionalizing sustainability by end month 5</p> <p>2.3.6 Project management program by end of month 6</p> <p><b>3.1 Assistance for expediting project implementation</b></p> <p>3.1.1 Program of actions to be undertaken over bridging period agreed with the Government by end month of 6</p> <p>3.1.2 Support team mobilized by end of month 8</p> <p>3.1.3 NGO, design consultants, and contractor prequalification exercises conducted by end of month 9.</p> <p>3.1.4 NGO training on technical, financial, social and safeguard issues by end of month 11</p> | <ul style="list-style-type: none"> <li>• ADB (\$720,000)</li> <li>• Government (\$128,000)</li> <li>• Beneficiaries (time and participation, in-kind)</li> </ul> |

| <b>Activities with Milestones</b>                                                                                                                                                                                                                                                                |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 3.1.5 Manuals and guidelines on design specification and standards prepared by end of month 12.<br>3.1.6 Manuals on mobilization and planning approaches, surveys, and appraisals for NGOs reviewed and updated by end of month 11.<br>3.1.7 Community mobilization initiated by end of month 12 |  |

ADB = Asian Development Bank, DWSS = Department of Water Supply and Sewerage, MDG = Millennium Development Goal, NGO = nongovernment organization, PCR = project completion report, PRSP = Poverty Reduction Strategy Paper, TASC = technical assistance steering committee, TDF = Town Development Fund, UNDP = United Nations Development Programme, WSS = water supply and sanitation.

## INITIAL POVERTY AND SOCIAL ANALYSIS

### A. Linkages to the Country Poverty Analysis

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                            |                                                                                                  |                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>Is the sector identified as a national priority in country poverty analysis?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <input checked="" type="checkbox"/> Yes<br><br><input type="checkbox"/> No | <b>Is the sector identified as a national priority in country poverty partnership agreement?</b> | <input checked="" type="checkbox"/> Yes<br><br><input type="checkbox"/> No |
| <p><b>Contribution of the sector or subsector to reduce poverty in Nepal:</b> Despite significant improvements in economic and social indicators over the past two decades, studies show that poverty is still widespread in Nepal. While Nepal was one of the countries in Asia that recorded significant improvement in the United Nations Development Programme (UNDP) human development index (HDI) over the past decade, indicator levels remain low, even by South Asian standards, and the level of absolute poverty is one of the highest in Asia. Nonetheless, Nepal's continued efforts have led to an overall decline in poverty incidence from 42% in 1995/1996 to 31% in 2003/2004 (Poverty Reduction Strategy Paper review 2004/2005). In 2005, Nepal ranked 136th out of 177 countries on the HDI, with a life expectancy at birth of 61.6 years and an adult literacy rate of 48.6%. Gross domestic product (GDP) per capita has slowly increased from \$233 (2002) to about \$311 (2006), and much of the economic activity and wealth is concentrated in a few parts of the country. Human poverty in rural areas (42%) exceeds that in urban areas (25%). Inequalities across geographic regions and ecological zones and between rural and urban areas remain significant, as do inequalities across gender, ethnic, and caste lines. Poverty incidence in urban areas decreased from 22% to 10% (1995-2004 period), but the decrease in rural poverty was modest. Except for the rural eastern hills, overall poverty has declined in all geographic regions.</p> <p>Nepal adopted the Millennium Declaration in 2000, committing to work towards attaining the Millennium Development Goals by 2015. Access to safe drinking water and basic sanitation is a priority of the Poverty Reduction Strategy, which aims to raise water supply coverage from 71% to 85%. Poor access to water supply and sanitation is often associated with poor health. The Asian Development Bank's (ADB's) country strategy for Nepal emphasizes the role of water supply, sanitation and urban development infrastructure, and the need to target the poor to reduce both poverty and inequalities. In a similar fashion, the Government's Interim Plan is expected to emphasize the importance of providing safe drinking water through construction of new and augmentation of existing schemes ones. Access to safe drinking water, improved sanitation, and improved environmental quality will reduce the vulnerability of poor communities to environmental hazards. Improved quantity and quality of domestic water supply and sanitation facilities will reduce morbidity and mortality, especially among young children. The availability of safe drinking water supplies will reduce water-carrying time, which will mainly benefit women and girls.</p> |                                                                            |                                                                                                  |                                                                            |

### B. Poverty Analysis

#### Targeting Classification: Targeted intervention

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>What type of poverty analysis is needed?</b> Poverty incidence is higher among ethnic minorities (e.g., the Limbus, Tamangs, Magars, Tharus, and Mushahars), and caste-based social exclusion contributes to disparities in both poverty incidence and human development indicators. Causal factors underlying poverty in Nepal include (i) slow overall economic growth in the face of relatively rapid population growth; (ii) weak redistributive and institutional capacity overall on the part of the Government; (iii) nonagricultural growth that lacks any significant spillover effects on the rural poor; (iv) low productivity and slow growth of output in the agriculture sector; and (v) weak social and economic infrastructure (education, health, drinking water, transport, and energy), leading to inadequate access by the poor to the means for escaping poverty.</p> <p>A multidimensional and multivariable poverty analysis will be required for the project. Although national and district survey data are a good starting point, local level detail is lacking. Town and village development committee-level data on population, literacy, health indicators, water and electricity availability, sanitation services, and other human development indexes will be utilized as part of the coverage selection criteria. Detailed survey data will be required to estimate (i) access by various groups to water and sanitation facilities, (ii) modes of delivery, (iii) quality of water sources, (iv) time spent by women and children collecting water, (v) cost of various services and infrastructure in the area, (vi) affordability of most disadvantaged groups, and (vii) direct and indirect poverty impact of various services.</p> <p>The detailed socioeconomic survey will be conducted for selected sample towns where specific information on income and expenditure, demographic trends, gender issues, health, water and sanitation, and the urban environment will be determined. Sample data and secondary data sources will be utilized and extrapolated to other project areas. The findings of the socioeconomic baseline survey will be used to improve the access of the poor to existing and newly created infrastructure facilities and urban services. Participatory methods and innovative poverty assessment techniques will be considered to identify the most disadvantaged and vulnerable groups.</p> |
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### C. Participation Process

**Will a stakeholder analysis be prepared?**  Yes  No

Preliminary stakeholder assessment was conducted during the project preparatory technical assistance (PPTA) fact-finding mission. Stakeholders to participate in the project include the urban poor (including women and different ethnic and caste groups), all tiers of government (including central and district governments and local authorities), water user and sanitation committees, community based organizations (CBOs), aid agencies, nongovernment organizations, and, where relevant and appropriate, selected members of the private sector.

**Will a participation strategy be prepared?**  Yes  No

The participation strategy for the technical assistance (TA) will focus on ensuring inclusive development through the project's planning, design implementation, management, and operation and maintenance. Communities will be involved from the outset through a socioeconomic analysis that will include appreciative enquiry and rapid assessment methods, and through community participation in the identification and mapping of current urban infrastructure and services. Workshops will be held with representatives of all stakeholder groups during all stages of project design. The participatory project mechanism will be based on the self-help tradition, adapted to local conditions. The existing extended household structure provides natural groupings that can be mobilized, strengthened, and utilized as a nucleus for CBOs. By building partnerships with CBOs and responding to their demands, the project will contribute to grassroots participatory development. This approach ensures (i) participation of beneficiaries in project design and implementation, leading to greater ownership; and (ii) decentralized and localized implementation arrangements, with capacity support to government and community groups in implementation and maintenance; and (iv) the use of widely accepted technology.

### D. Gender Development

**Strategy to maximize impacts on women:** Social policies, slow economic growth and consequent persistent poverty among segments of the population, in combination with armed conflict and social norms, have contributed to uneven development that impacts women's quality of life. Gender-based exclusion in Nepal is pervasive and deep-rooted, with discrimination against women negatively affecting their physical survival, health and educational opportunities, asset ownership, mobility, and overall status.

Women have major responsibilities within households, including ensuring water is available for household purposes and the needs of individual household members. In the areas to be served by the proposed project, women face various problems relating to access to safe water and sanitation facilities due to a lack of water sources, deterioration of water quality, and increased time required to obtain water, which reduces time for other activities. The TA will specifically address gender issues, including through participation by women in planning and design, and identification of constraints to and opportunities for the active participation by women in the implementation of the ensuing project. A gender action plan for the project will be prepared. Targeting of women requires a modified approach consistent with local culture and traditions in different parts of Nepal. Specific activities will include: (i) inclusion of both local men and women in the project activities; (ii) gender training and awareness-raising for all; (iii) promotion of women's employment in water projects; and (iv) use of participatory approaches, along with the presence of gender sensitive individuals.

**Has an output been prepared?**  Yes  No, it will be prepared as part of PPTA.

**E. Social Safeguards and Other Social Risks**

| Item                                      | Significant/<br>Not Significant/<br>None                                                                                          | Strategy to Address Issues                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Plan Required                                                                                               |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Resettlement</b>                       | <input type="checkbox"/> Significant<br><input checked="" type="checkbox"/> Not significant<br><input type="checkbox"/> None      | Resettlement needs are uncertain at this stage. Past project interventions requiring construction of facilities have typically done so on Government or community-owned land. Although rehabilitation and upgrading of water and sanitation infrastructure often requires resettlement, both urban and community interventions will be small in size. Resettlement needs will be minimized through project design; nonetheless, provision for a full assessment of resettlement needs and an ensuing resettlement plan and framework has been made in this TA.                                                                                                                                               | <input type="checkbox"/> Full<br><input checked="" type="checkbox"/> Short<br><input type="checkbox"/> None |
| <b>Affordability</b>                      | <input type="checkbox"/> Significant<br><input type="checkbox"/> Not significant<br><input checked="" type="checkbox"/> Uncertain | An affordability analysis will be conducted as part of the socioeconomic survey, to ensure both project sustainability and affordability for all project stakeholders. The ensuing project will take into account affordability, as well as operational improvements and capacity building for efficient administration and management of schemes.                                                                                                                                                                                                                                                                                                                                                           | <input type="checkbox"/> Yes<br><input type="checkbox"/> No                                                 |
| <b>Labor</b>                              | <input type="checkbox"/> Significant<br><input checked="" type="checkbox"/> Not significant<br><input type="checkbox"/> None      | No significant labor implications are expected. Employment opportunities will be examined and recommendations made regarding service delivery-related employment generation and improvements in working conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No                                      |
| <b>Indigenous Peoples</b>                 | <input type="checkbox"/> Significant<br><input checked="" type="checkbox"/> Not significant<br><input type="checkbox"/> None      | The ensuing project is not expected to impact indigenous peoples, but the status of ethnic minorities and cast groups will be determined, and their participation sought and closely monitored. A framework will be prepared; if indigenous peoples are identified to be an emerging issue, plans will be prepared under the TA. In urban areas different groups are sufficiently integrated such that economic and social activities undertaken by small groups are not necessarily distinct from activities undertaken by larger groups; however, care will be taken during project design to ensure that no discrimination or increased vulnerability results as a consequence of development activities. | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No                                      |
| <b>Other Risks and/or Vulnerabilities</b> | <input type="checkbox"/> Significant<br><input type="checkbox"/> Not significant<br><input checked="" type="checkbox"/> None      | No other risks or vulnerabilities are foreseen. If identified during TA implementation, appropriate action will be taken.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <input type="checkbox"/> Yes<br><input type="checkbox"/> No                                                 |

## COST ESTIMATES AND STAFFING SCHEDULE

**Table A3.1: Cost Estimates and Financing Plan**  
(\$'000)

| Item                                              | Comp. 1 <sup>a</sup><br>Cost | Comp. 2 <sup>b</sup><br>Cost | Comp. 3 <sup>b</sup><br>Cost | Total<br>Cost |
|---------------------------------------------------|------------------------------|------------------------------|------------------------------|---------------|
| <b>A. Asian Development Bank Financing</b>        |                              |                              |                              |               |
| 1. Consultants <sup>c</sup>                       |                              |                              |                              |               |
| a. Remuneration and Per Diem                      |                              |                              |                              |               |
| i. International Consultants                      | 70.00                        | 220.00                       | 0.00                         | 290.00        |
| ii. National Consultants                          | 25.00                        | 105.00                       | 40.00                        | 170.00        |
| b. International and Local Travel                 | 8.00                         | 25.00                        | 6.00                         | 39.00         |
| c. Reports and Communications                     | 4.00                         | 6.00                         | 4.00                         | 14.00         |
| 2. Equipment <sup>d</sup>                         | 0.00                         | 8.00                         | 0.00                         | 8.00          |
| 3. Training, Seminars, and Conferences            | 0.00                         | 0.00                         | 0.00                         | 0.00          |
| a. Workshops and Consultations                    | 5.00                         | 10.00                        | 10.00                        | 25.00         |
| b. Training Program                               | 0.00                         | 10.00                        | 15.00                        | 25.00         |
| 4. Studies and Surveys <sup>e</sup>               | 0.00                         | 60.00                        | 0.00                         | 60.00         |
| 5. Miscellaneous Administration and Support Costs | 0.00                         | 8.00                         | 2.00                         | 10.00         |
| 6. Representative for Contract Negotiations       | 0.00                         | 5.00                         | 0.00                         | 5.00          |
| 7. Contingencies                                  | 8.00                         | 53.00                        | 13.00                        | 74.00         |
| <b>Subtotal (A)</b>                               | <b>120.00</b>                | <b>510.00</b>                | <b>90.00</b>                 | <b>720.00</b> |
| <b>B. Government Financing<sup>f</sup></b>        |                              |                              |                              |               |
| 1. Office Accommodation                           | 10.00                        | 45.00                        | 5.00                         | 60.00         |
| 2. Remuneration and Per Diem Of Counterpart Staff | 10.00                        | 35.00                        | 6.00                         | 51.00         |
| 3. Workshop Venues                                | 2.00                         | 10.00                        | 5.00                         | 17.00         |
| <b>Subtotal (B)</b>                               | <b>22.00</b>                 | <b>90.00</b>                 | <b>16.00</b>                 | <b>128.00</b> |
| <b>Total</b>                                      | <b>142.00</b>                | <b>600.00</b>                | <b>106.00</b>                | <b>848.00</b> |

ADB = Asian Development Bank, comp. = component.

<sup>a</sup> Financed on a grant basis by the Government of the Netherlands through the Water Financing Partnership Facility and administered by ADB.

<sup>b</sup> Financed by Japan Special Fund, funded by the Government of Japan.

<sup>c</sup> Specific consulting inputs for components 1 and 2 are provided in the indicative staffing schedule for consultants (Table A3.2).

<sup>d</sup> Office equipment (1 laser printer, 1 photocopier, and 2 computers) will be purchased by the consultant in accordance with ADB's *Procurement Guidelines* (2007, as amended from time to time). The equipment will be turned over to the Government on completion of the technical assistance.

<sup>e</sup> Eligible surveys include: (i) socioeconomic surveys, (ii) hydrological investigations and tubewell testing, (iii) water quality testing, and (iv) engineering mapping and water baseline surveys.

<sup>f</sup> In kind.

Source: Asian Development Bank estimates.



## **OUTLINE TERMS OF REFERENCE FOR CONSULTANTS**

1. Components 1 and 2 of the technical assistance (TA) will design a sector development program and be implemented over 7 months. Component 1 will provide a design to improve policy and institutional arrangements in the urban water and sanitation sector; component 2 will prepare a feasibility study for a water and environmental infrastructure investment proposal. The components will complement and inform each other. Component 2 will be divided into two phases, the first involving a detailed analysis of the sector and its institutions and collecting essential data (including poverty, social and technical information), and the second preparing a detailed feasibility study.

### **A. Component 1 – Designing Policy and Institutional Improvements**

#### **1. Assessing the Sector and its Institutions**

2. The consultants will conduct a detailed analysis of the urban water supply and sanitation sector in Nepal, conducting a thorough assessment of (i) the existing legal and policy framework (to include both urban town planning and water and sanitation sectors) and its relation with decentralization acts and processes, and (ii) the Government’s financing resources, financing gaps and existing sector modalities and approaches. The consultants will prepare (i) a development coordination matrix outlining existing and proposed interventions in related sectors, and an institutional and capacity assessment of sector-related institutions; and (ii) formulate recommendations for reform. In particular, the consultant’s team will review service delivery protocols and assess local-level service delivery, regulation, monitoring, coordination and planning, determining existing levels and needs. Based on this assessment and extensive work conducted by institutional specialists under the on-going *Small Towns Water Supply and Sanitation Project*, and in close consultation with other development partners, they will review and propose (i) a new vision, (ii) revised roles and responsibilities, and (iii) a supporting organizational structure for the Department of Water Supply and Sewerage (DWSS).

3. Take the lead role in organizing discussion sessions across the country (both at the center and district levels) to provide an opportunity for the project preparatory technical assistance (PPTA) team to better understand the context of governance reforms in relation to service delivery (including central-level reforms and their impact on local governance). This includes assessing how service delivery is to be improved and the potential roles of community groups, the private sector, and local governments.

#### **2. Formulating an Urban Water Supply and Sanitation (WSS) Policy and Development Plan**

4. The team will (i) review the Government’s draft urban water and sanitation policy; (ii) assess its relevance within the current country context and propose any needed revisions;<sup>1</sup> and (iii) conduct wide consultations with and incorporate comments from the Government, development partners and other stakeholders working in the sector. The team will also (i) review the Government’s 15-year Development Plan for Small Towns Water Supply and Sanitation and evaluate implementation progress, (ii) review its applicability to current conditions, and (iii) formulate a new and/or revised medium-term development plan for urban sector WSS. The team will also support the Government in defining the “emerging town” concept.

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<sup>1</sup> Essential needed elements may include (i) fully inclusive pro-poor principles, and (ii) integrated water and sanitation approaches to service delivery.

### 3. Program Design

5. Based on information collected, the consultants will prepare the design for a program component (i) outlining the macroeconomic context, and (ii) describing and detailing proposed policy and institutional reforms. The consultants will prepare (i) a policy matrix,<sup>2</sup> including objective, actions, indicators and implementation responsibilities; (ii) program organization and implementation mechanisms; (iii) a program design and monitoring framework; and (iv) specific assessments identifying (a) the poverty impact of the policy reform, (b) the proposed cost of policy reforms, (c) environmental and social assessment of policy actions,<sup>3</sup> and (d) program benefits, impacts, and risks.

6. Improvements will include (i) building the capacity of local governments, local government service (once established), and community-based organizations to deliver more effective service; and (ii) the use of tools to allow service providers to be held accountable for their performance. Means to improve the performance of water and sanitation user committees (WSUCs) may include development and/or strengthening of national and district-level federations of water user committees.

#### B. Component 2 – Preparing a Sector Feasibility Study

##### 1. Formulating Project Concept and Sample Subproject Proposals

7. **Lessons.** The team will review and analyze existing studies, reports, urban water and sanitation data, and related information, including lessons from past water supply and sanitation and urban development projects in Nepal, including projects assisted by the Asian Development Bank (ADB) and other agencies, nongovernment organizations (NGOs), and community-based organizations (CBOs), especially those involving WSUCs.<sup>4</sup> The team will share lessons learned with the government and local authorities, as well as representatives of citizen groups. Findings, recommendations and responses will be reflected in the inception report.

8. **Sample Subproject Selection.** The consultants will review the adequacy of the Government's sample subproject criteria and subsequent selection of three to four sample subprojects. Conditions in the sample subproject areas (e.g. population sizes and densities,<sup>5</sup> geographical characteristics, and socioeconomic conditions) should vary, so as to facilitate subsequent replication. Subproject proposals should develop options for (i) water, (ii) sanitation,<sup>6</sup> and (iii) solid waste management. If necessary, subproject criteria for replication of non-sample subprojects will be provided.

9. **Data Collection on Infrastructure and Service Delivery.** The consultants will (i) assess total financing available for the urban WSS sector, including from the central and provincial governments and aid pipelines; (ii) collect and assess community data on general

<sup>2</sup> Policy actions may relate to efficiency incentives, devolution of managerial powers, empowerment of communities or the private sector, among others.

<sup>3</sup> See also [http://www.adb.org/documents/Guidelines/Environmental\\_Assessment/eaguidelines004.asp](http://www.adb.org/documents/Guidelines/Environmental_Assessment/eaguidelines004.asp).

<sup>4</sup> Using lessons drawn from past experience, the consultants will also search the Evaluations Information System (available: <http://ADB.org/evaluation>), and past project completion and project performance evaluation reports to identify lessons relevant to the project design, indicating in the report how these lessons have influenced the project design and proposed implementation arrangements.

<sup>5</sup> Population levels are expected to range between 4,000 and 40,000 inhabitants.

<sup>6</sup> It is expected that a simple sewerage model with basic sewage treatment facilities will be developed for a larger town. Models involving septic tanks and sludge removal and drying (with possible private sector participation) are expected in smaller towns.

affordability and willingness to pay<sup>7</sup> for WSS in sample subproject towns; (iii) describe, map, and quantify the condition of basic amenities and services in urban areas, highlighting needs and deficiencies, including the water supply, sanitation, sewerage, sewage treatment, and drainage subsectors, making specific reference to existing distribution systems, leakages, pressure and water frequency, materials used, and system adequacy and efficiency; (iv) discuss managerial and administrative arrangements; (v) examine the current environmental situation and the severity of potential environmental health problems due to the lack of access to basic infrastructure; (vi) conduct an inventory and critically review (a) all relevant initiatives for infrastructure development, (b) studies, plans and programs, and (c) public and private sector proposals; and (vii) describe existing relevant operation and maintenance (O&M) procedures, tariffs, and the status of billing and collection for the selected subsectors.

10. **Project Design.** The consultants will review preliminary technical engineering designs provided by the Government for three to four sample subprojects in small town areas and undertake detailed subproject preparation activities, including suitable technical options acceptable to the communities. The consultants will undertake the following activities while considering integrated water resource management principles: (i) screen several viable technical options and complete the selected least-cost WSS technical design;<sup>8</sup> determine sewerage, wastewater treatment, and drainage options in consultation with the stakeholders and local community; (ii) conduct physical reconnaissance of underground and surface water supplies, including (a) testing and basic empirical modeling of water-table replenishment and the sustainability of the scheme, (b) an assessment of surface water resources suitable for water extraction, including flow fluctuations throughout the year and an analysis of existing upstream and downstream uses, and (c) water quality analyses for the proposed options for each of the three to four sample towns subprojects;<sup>9</sup> (iii) discuss the technical viability of the various proposed options for each project subcomponent, demonstrating that they are the least cost-option under a combined system approach; and (iv) in close consultation with representatives from district and village development committees, develop a water quality catchment program containing (a) source protection implementation guidelines generally applicable to the country, and (b) a specific action plan, including community awareness.

11. For each sample subproject, the consultants will (i) assess the impact of wastewater collection and treatment on the water quality of receiving watercourses prior to and after project construction; (ii) assess the adequacy of on- and offsite wastewater treatment to accommodate incremental amounts; (iii) review current approaches and develop an outline strategy for proposed hygiene education, and water and environmental monitoring systems; (iv) review existing O&M options and, if necessary, prepare a revised strategy for community implementation, including (a) technical procedures to ensure the efficiency, longevity and sustainability of sewers, waterways, pumping stations subcomponents, etc., and (b) proper financial, accounting and managerial arrangements for O&M; (v) review and/or define design criteria and standards; (vi) outline designs, construction staging, implementation, tendering and major civil works schedules, staffing requirements, and selection of appropriate equipment, including maintenance and inspection of subcomponents; (vii) prepare consulting inputs for

<sup>7</sup> The consultants will be informed by ADB's Economics Research Department *Technical Note 19*. While it is generally recommended for willingness-to-pay and socioeconomic surveys to be conducted separately, this may not always be feasible. The economist will provide clear guidelines describing means and methods to minimize inaccuracies and biased responses; this shall be discussed with the surveying team at the time of survey testing.

<sup>8</sup> Sanitation options may include toilets enabling separation of solid and liquid matter for reuse in agricultural land.

<sup>9</sup> Tests will include fluoride, iron, manganese, chloride/salinity, bacteriological contamination, and others, such as blue-green algae, if deemed necessary. Compare results with national quality standards and World Health Organization standards for drinking water and recommend appropriate treatment necessary to comply with the standards. In particular, identify the difference in contamination between source and consumer, as this might result from intermittent supply.

project implementation; (viii) identify requirements for key advance actions to avoid implementation delays; (ix) in accordance with ADB's requirements for project performance management systems, develop project monitoring and evaluation arrangements for executing and implementing agencies, including content and format of progress reports, and discuss with all stakeholders, ensuring that monitoring and evaluation is also undertaken by the beneficiaries; and (x) prepare an integrated and comprehensive non-revenue water reduction program, taking into consideration local and national implementation. In consultation with stakeholders, develop a logical framework outlining goal, purpose, outputs, and activities, with clear links to targets and indicators, to monitor project development impact and overall performance. Prepare draft design specifications for standardization and replication throughout the project.

12. **Project Costs.** For each subproject, the consultants will (i) estimate project costs; (ii) summarize the project costs estimated for land, civil works, equipment, materials, resettlement (if any), environmental monitoring and mitigation, consulting services, taxes and duties, project management and capacity building, and interest and other charges during construction; (iii) compile and present procurement contract packages, clearly indicating the packages to be financed by the ADB loan in line with its *Procurement Guidelines* (2007, as amended from time to time); and (iv) prepare detailed financing and disbursement plans.

13. **Financial and Economic Analyses.** The consultants will conduct project economic and financial analyses for sample subproject towns in accordance with ADB's *Guidelines for the Economic Analysis of Projects*, *Guidelines for Economic Analysis of Water Supply Projects*, *Guidelines for the Financial Governance and Management of Investment Projects Financed by the Asian Development Bank*, *Economic Analysis in 2002: a Retrospective*, and *Economic Analysis Retrospective 2003 Update*.<sup>10</sup> The consultants will (i) describe the macroeconomic and sector context; (ii) update water demand, wastewater discharge, and solid waste generation and disposal levels, as well as projections for various end-user groups (e.g., irrigation water re-use); (iii) assess project alternatives and confirm the least-cost solution; (iv) review cost recovery policies and tariff levels in each town;<sup>11</sup> (v) propose (a) cost-recovery mechanisms (including necessary institutional arrangements) through taxes, user charges and/or other techniques for O&M and initial investment recovery, and (b) a short- and medium-term tariff structure for each subproject, taking into account affordability, willingness to pay, water conservation, cross-subsidization, and full cost-recovery requirements;<sup>12</sup> (vi) estimate the detailed economic project cost for the selected alternative, applying appropriate disaggregation of costs, standard conversion factors, and shadow prices as required; (vii) identify all quantifiable and unquantifiable project economic benefits, considering both with and without scenarios, as well as incremental and non-incremental benefits; (viii) prepare financial projections for operations 10 years after project completion; (ix) compute relevant financial indicators for each town to assess financial viability; (x) assess the financial viability of the project; (xi) estimate economic and financial internal rates of return and perform sensitivity analyses, including switching values and calculation of the real weighted-average cost of capital; and (xii) calculate the poverty impact ratio and conduct a distribution analysis. The consultants will prepare financial projections based on proposed and/or revised lending arrangements between the Government and the Town Development Fund (TDF).

<sup>10</sup> ADB. 1997. *Guidelines for the Economic Analysis of Projects*, Manila; ADB. 1998. *Guidelines for Economic Analysis of Water Supply Projects*. Manila; ADB. 2003. *Guidelines for the Financial Governance and Management of Investment Projects Financed by the Asian Development Bank*. Manila; ADB. 2002. *Economic Analysis in 2002: a Retrospective*. Manila; and ADB. 2003. *Economic Analysis Retrospective 2003 Update*. Manila.

<sup>11</sup> While tariffs ensuring the sustainability of the schemes will be prepared for each of the sample subproject towns for water, sanitation and solid waste management (where relevant), it is also essential that brief guidelines be prepared and sample tariffs clearly presented so as to guide future investments under a sector loan.

<sup>12</sup> The consultants will be informed by ADB's Economics Research Department Technical Notes 9, 10, and 17.

14. **Poverty and Social Assessment.** Through a socioeconomic survey and other tools, and in accordance with *Guidelines for Incorporation of Social Dimensions in ADB Operations*,<sup>13</sup> the consultants will assess the project's social impact, including patterns of water use, water costs, perception of the environment, and income levels and distribution in subproject towns. The consultants will review existing per capita poverty data, access to basic services by the poor, and acuteness of environmental problems in (i) selected urban centers and (ii) selected districts where rural interventions are to be supported. The consultants will review the Government's development strategy.<sup>14</sup> Guided by ADB's *Handbook on Poverty and Social Analysis*,<sup>15</sup> the consultants will conduct a detailed poverty and social analysis for project areas. Specific activities will include but will not be limited to (i) conducting a full socioeconomic survey<sup>16</sup> of project beneficiaries by gender and income group, estimating the number of project beneficiaries with incomes below the official poverty line, conducting an affordability analysis, and identifying vulnerable groups (including any potential minorities); (ii) evaluating social and economic benefits, assessing project impacts, and recommending mitigation measures; (iii) collecting and analyzing health data, including morbidity and mortality rates due to waterborne diseases; (iv) analyzing and evaluating social networks; and (v) preparing a poverty reduction and social development strategy and summary.

15. Based on ADB's *Policy on Gender and Development* (1998) ADB's *Gender Checklist for Water Supply and Sanitation* and *Gender Checklist on Urban Development Projects*, (i) conduct a gender analysis and identify the potential for women's participation in project design, implementation, O&M, and training; (ii) assess local gender-related constraints to and opportunities for development; and (iii) formulate a gender action plan for the ensuing project.

16. The consultants will (i) develop a participatory framework for community participation in the identification, planning, and design of the project; (ii) review and update as necessary guidelines and manuals developed under the Small Towns Water and Sanitation Project for (a) selecting NGOs, (b) social mobilization and community participatory planning processes, (c) conducting socioeconomic surveys, (d) environmental conservation plans, and hygiene and sanitation, (e) participatory rural appraisals, and (f) cost-sharing; (iii) prepare a strategy for community mobilization and organization for implementation under the resulting project; and (iv) assess the required needs, distribution and capabilities of local NGOs in selected subsectors in proposed town areas.

17. **Social Safeguards.** The consultants will determine the number of minorities and vulnerable people, their socioeconomic status, and the anticipated impact of the project on them, using (among other tools) ADB's *Checklist for Categorization of Indigenous People*; if necessary, an indigenous peoples development framework and plans will be developed according to ADB's *Policy on Indigenous People* (1998). Responses will be based on information gathered using culturally appropriate methodologies, including a well-devised consultation process.

18. Early during TA implementation the consultant will apply ADB's resettlement checklists to identify resettlement issues and ascertain the nature and degree of the project's impacts on affected households. Based on the assessment, the consultants will determine if there are involuntary resettlement impacts in sample subproject towns; if impacts exist consultants will prepare, in accordance with ADB's *Involuntary Resettlement Policy* (1995), *Handbook on*

<sup>13</sup> ADB. 1993. *Guidelines for Incorporation of Social Dimensions in Bank Operations*. Manila.

<sup>14</sup> Documents will likely include, among others, the draft Three-Year Interim Plan.

<sup>15</sup> ADB. 2001. *Handbook on Poverty and Social Analysis: A Working Document*. Manila.

<sup>16</sup> The use of qualified NGOs to assist with and conduct surveying and poverty mapping may be considered.

*Resettlement* (1998) and *Operations Manual F2 on Involuntary Resettlement* (2006),<sup>17</sup> a resettlement plan based on subproject design in each town that (i) includes a review and assessment of key national policies, laws, and guidelines regarding land acquisition and compensation; (ii) identifies and enumerates people likely to be affected through a survey and/or census and asset inventory that identifies all types of loss; (iii) through consultation with potentially affected people, ascertains preferential relocation areas, compensation, and livelihood restoration; (iv) establishes an entitlement cutoff date and estimates the requirements for financial resources, comparing this with resources made available within the country; (v) provides (a) options for relocating housing and other structures, including through transfers to established new sites, (b) options for livelihood restoration, and (c) mechanisms for addressing grievances; and (vi) defines institutional responsibilities for (a) approving, implementing, managing, financing, and monitoring the resettlement plan, (b) implementation schedules, (c) capacity building, (d) financial plan and budgets, and (e) a plan for internal and external monitoring and evaluation of the resettlement plan. The consultants will also prepare a resettlement framework, whose contents shall be consistent with those outlined in the resettlement plan(s) for small towns.

19. **Environmental Assessment of Sample Subprojects.** The consultants will prepare an initial environmental examination and summary for each of the sample project towns covering each subcomponent, in accordance with ADB's *Environment Policy* (2002) and ADB's *Environmental Guidelines* (2003)<sup>18</sup>, as well as Nepal's Environment Protection Act and associated environmental regulations.<sup>19</sup> The consultant will (i) assess positive and negative environmental impacts of proposed urban social infrastructure and services related to location, design, construction, and O&M; (ii) propose mitigation measures and develop a full environmental monitoring plan; (iii) conduct consultations as per ADB requirements; and (iv) formulate environmental management plans for environmentally sensitive subcomponents. As per para 20 (below), the consultants will also evaluate TDF's environmental management systems,<sup>20</sup> and procedures for environmental assessment and review of loans; if necessary, the consultants will prepare an environmental assessment and review procedure framework.

## 2. Assessing the Town Development Fund

20. The consultants will assess (i) TDF's financial soundness as evidenced by adequate capital, asset quality, liquidity, and profitability; (ii) adequacy of credit and risk management policies, operating systems, and procedures; (iii) compliance with prudential regulations, including exposure limits; (iv) acceptability of corporate and financial governance and management practices, including, among other things, transparent financial disclosure policies and practices; (v) soundness of business objectives and strategy and/or plan; (vi) autonomy in lending decisions; and (vii) adequacy of policies, systems, and procedures to assess and monitor the economic, social, and environmental impact of subprojects, in accordance with parameters established by and procurement methods acceptable to ADB. Based on the assessment, the consultants will (i) provide any necessary recommendations for improving TDF performance, (ii) include a time-bound action program to implement measures allowing TDF to

<sup>17</sup> ADB. 1998. *Handbook on Resettlement*. Manila; and ADB. 2006. *Operations Manual*. Section F2: Involuntary Resettlement. Manila.

<sup>18</sup> ADB. 2003. *ADB Environmental Assessment Guidelines*. Manila.

<sup>19</sup> See also [http://www.adb.org/documents/Guidelines/Environmental\\_Assessment/eaguidelines005.asp](http://www.adb.org/documents/Guidelines/Environmental_Assessment/eaguidelines005.asp).

<sup>20</sup> Here the term "environmental management system" is defined as a system for planning, implementing, reviewing and improving the processes and actions that an organization undertakes to meet its environmental goals. The major components comprise environment policy, environmental management capability, environmental assessment and review procedures for subprojects (credit lines), and environmental monitoring and reporting. See [http://www.adb.org/documents/Guidelines/Environmental\\_Assessment/eaguidelines006.asp](http://www.adb.org/documents/Guidelines/Environmental_Assessment/eaguidelines006.asp).

meet the above criteria, and (iii) evaluate how to improve TDF's client responsiveness.<sup>21</sup>

### 3. Sector Project Design

21. **Capacity Building and Institutional Strengthening.** To ensure the sustainability of the investments under the project, the consultants will develop a carefully designed capacity-building program for WSUCs and beneficiaries. In addition, the consultants will devise a comprehensive capacity-building program for communities to manage, operate, and maintain proposed facilities, including, where relevant, user charges, community collection and administration, and hygiene education and awareness programs and campaigns.

23. **Project Management and Implementation Assistance.** The consultants will estimate requirements for adequate project implementation in engineering, planning, project management, and other essential disciplines. Based on evaluation of staff and available skills, consultants will recommend additional recruitment and/or upgrading of expertise. They will assess the institutional strengths and weaknesses of executing and implementing agencies, recommend strengthening of institutional capabilities through organizational changes, implementation arrangements, staff training and use of consultants, and prepare terms of reference accordingly. The consultants will also identify essential activities to be conducted under component 3 of this TA to expedite project implementation.

24. Based on reported experience, consultants will propose (i) effective implementation arrangements for the ensuing project; (ii) a procurement plan for the project that supports effective and comprehensive packaging; (iii) a schedule enabling timely interaction between NGOs, consultants, and contractors; (iv) effective loan implementation arrangements in line with devolution mandates; and (v) innovative mechanisms for inclusion of the poorest and most disadvantaged sectors of the population in WSS.

25. **Consultations and Consensus Building.** To ensure community participation from planning and design stages and enhanced ownership, the consultants will carry out public consultations in each of the selected towns.<sup>22</sup> Stakeholder workshops at national, district and town level will be conducted throughout the Project, including (i) initial data collection phase and evaluation study; (ii) early stages of design to identify needs, options and priorities; (iii) discussions with other water users and reaching of a common agreement; (iv) disclosure and agreement on final designs; and (v) environmental and social safeguards public consultation.

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<sup>21</sup> TDF was established under the Ministry of Physical Planning and Works in 1996 to provide essential financial, technical and institutional support to institutions for town construction, development and expansion. TDF has received funding loan and grant projects from the United Nations Development Programme, the World Bank, and Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ). Currently, TDF's portfolio and operations are supported through KfW Development Bank grants and ADB funding. The financial statements are audited annually by an independent auditor and submitted to the Government. Projects under KfW include loans (75%) and grants (25%) to municipalities. Reserve funds have been generated, but guidelines regarding their use have yet to be prepared and issued. TDF has limited staff available and functions under the ongoing ADB Small Towns Water Supply and Sanitation Project relate to economic and financial viability assessments only, with technical evaluations left exclusively to the implementing agency. As a financial intermediary the TDF should also secure technical and safeguards compliance. In addition to Government's long-term bond interest rates, the TDF charges a service fee, which has sometimes been challenged by communities when comparing with commercial rates. Programs for capacity development of water user committees on accounting and financial matters must also be systematically conducted by this agency, as this would also ensure adequate client response and communication.

<sup>22</sup> The use of qualified NGOs to assist with participation and consultative activities may be considered. The use of the "enhanced methodology for participatory assessments", successfully piloted by ADB, may be considered, as the analytical framework focuses on sustainability while integrating demand, gender and poverty concerns at every stage of the project cycle. This has proven to be a cost-effective tool that empowers communities to make their own observations and analyses, from the planning stage to long-term operations.