



Technical Assistance Report

Project Number: 36339
November 2006

Lao People's Democratic Republic: Preparing the Small Towns Water Supply and Sanitation Sector Project (Financed by the Japan Special Fund)

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 8 November 2006)

Currency Unit	–	kip (KN)
KN1.00	=	\$0.000101036
\$1.00	=	KN9,897.50

ABBREVIATIONS

ADB	–	Asian Development Bank
AFD	–	Agence Française de Développement
CAT	–	community action team
DCTPC	–	Department of Communication, Transport, Post, and Construction
DHUP	–	Department of Housing and Urban Planning
EGDF	–	ethnic groups development framework
EGDP	–	ethnic groups development plan
Lao PDR	–	Lao People's Democratic Republic
LAR	–	land acquisition and resettlement
JICA	–	Japan International Cooperation Agency
MCTPC	–	Ministry of Construction, Transport, Post, and Communication
MOH	–	Ministry of Health
NCRWSSSP-I	–	Northern and Central Regions Water Supply and Sanitation Sector Project, Phase I
O&M	–	operation and maintenance
OCTPC	–	District Office of Communication, Transport, Post, and Construction
PCU	–	project coordination unit
PNP	–	provincial nam papa
PSA	–	poverty and social analysis
SEDP6	–	Sixth National Socioeconomic Development Plan
SIP	–	Sector Investment Plan
SSIP	–	small-scale independent providers
TA	–	technical assistance
WASA	–	Water Supply Authority
WATSAN	–	water supply and sanitation unit
WHO	–	The World Health Organization
WSD	–	Water Supply Division
WSS	–	water supply and sanitation
WSSSP	–	Water Supply and Sanitation Sector Project

TECHNICAL ASSISTANCE CLASSIFICATION

Targeting Classification	–	General intervention
Sector	–	Water supply, sanitation, and waste management
Subsector	–	Water supply and sanitation
Themes	–	Environmental sustainability, inclusive social development, gender and development
Subthemes	–	Urban environmental improvement, human development, gender equity in opportunities

GLOSSARY

nam papa – Provincial water supply companies looking after the water supply service in each province.

NOTES

- (i) The fiscal year of the Government ends on 30 September.
- (ii) In this report, "\$" refers to US dollars.

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I. INTRODUCTION

1. The Asian Development Bank (ADB) has supported the urban water supply and sanitation (WSS) sectors in the Lao People's Democratic Republic (Lao PDR) since the early 1990s.¹ During the 2006 Country Programming Confirmation Mission, the Government of the Lao PDR confirmed its request for technical assistance² (TA) to support preparation of the Small Towns Water Supply and Sanitation Sector Project. A TA Fact-Finding Mission visited the Lao PDR from 22 to 25 August 2006 and reached an understanding with the Government on the TA impact, outcome, outputs, implementation arrangements, cost and financing arrangements, and terms of reference. The TA supports the Water Supply Sector Policy Statement (1999) and the Water Supply Sector Investment Plan (SIP) 1999–2020 and is aligned with the Sixth National Socioeconomic Development Plan (SEDP6) 2006–2010. It is included in the Lao PDR Country Strategy and Program Update 2006–2008. The design and monitoring framework is in Appendix 1.

II. ISSUES

2. In 2005, the population of the Lao PDR was about 5.6 million, with a density of about 24 people per square kilometer. About 75% of the population lives in nearly 12,000 small rural villages, and the remaining 25% in 142 officially designated urban centers in 139 districts. The Lao PDR experienced a sharp reduction in poverty from 46% in 1992 to 32% in 2003, and the estimated per capita gross domestic product reached \$491 in 2005. As the Lao PDR becomes more regionally connected by better road networks and expanded interregional trade, the importance of developing small towns as key administrative and economic centers is increasing, particularly in the poorest 47 districts.

3. In 1999, the Government of the Lao PDR issued a policy statement³ that sets the sector target of providing 24-hour access to safe drinking water for 80% of the urban population by 2020. Based on the 2005 census, overall access to safe water supply in urban areas is about 55% (716,000 urban residents), with 43% of urban households having access to piped water.⁴ However, large differences exist between the five largest towns (Vientiane, Savannakhet, Pakse, Thakhek, and Luang Prabang) and the 139 small towns.⁵ In 2003, overall access to piped water in urban areas was 39% but was about 69% in the five largest towns and only about 17% in small towns. Similarly, about 54% of urban households have pour-flush toilets, with 78% in the five largest towns and 42% in small towns.

¹ ADB. 1991. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Lao People's Democratic Republic for the Southern Provincial Towns Water Supply Project*. Manila; ADB. 1992. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Lao People's Democratic Republic for the Rehabilitation and Upgrading of Vientiane Water Supply Project*. Manila; ADB. 1993. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Lao People's Democratic Republic for the Northern Provincial Towns Water Supply and Sanitation Project*. Manila; ADB. 1999. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Lao People's Democratic Republic for the Water Supply and Sanitation Sector Project*. Manila; and ADB. 2005. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Lao People's Democratic Republic for the Northern and Central Regions Water Supply and Sanitation Sector Project*. Manila.

² Formerly the Northern and Central Region Water Supply and Sanitation Sector Project, Phase II. The TA first appeared in *ADB Business Opportunities* on 16 August 2006.

³ Lao PDR. 1999. Prime Ministerial Decision No. 37/PM on *Management and Development of Water Supply and Wastewater Sector*. Vientiane (30 September).

⁴ According to the census, safe water comes from pipes or protected wells and/or boreholes, but may still require treatment prior to distribution due to high salinity or mineral content. The Water Supply Authority has prepared draft legislations on water quality standards that comply with the World Health Organization requirements.

⁵ Urban centers with populations of 2,000–20,000 people are considered small towns. On average, small towns with a projected population greater than 4,000 people by 2015 will be considered for inclusion into the project.

4. Improved water supply and sanitation (WSS) helps reduce poverty and the burden of disease, thereby improving the quality of life, especially for women and girls. Small town residents lack access to safe water and have inadequate sanitation coverage. Residents often rely on shallow wells, ponds and streams, which are often biologically contaminated. On average, residents require about 40 to 70 liters per capita per day, depending on the cost of water, household income, distance to the water source, and effort required for collection. In smaller towns, a number of small-scale independent providers (SSIPs) offer basic water services to households and communities at a higher cost than regulated providers.⁶ Nearly half of small town residents do not have proper toilet facilities and use open ground, fields, local drains, and watercourses for disposal of excreta and wastewater. About 7% of households use septic tanks systems that discharge to drains or soakaways.⁷ Markets and temples have few public toilets, and fewer than 10% of primary schools have proper latrines. Lack of safe water supply and poor sanitation harm the health of individuals. The poor are more vulnerable to health shocks due to the high cost of treating disease and lost work days for recovery. Diarrhea is a major cause of child mortality. The 2005 census estimates the mortality rate of children under 5 years old at 98 per 1,000 live births.

5. Individual property owners are responsible for developing and managing on-site sanitation systems, which often vary in quality and hygienic safety because of weak provincial sanitation regulations and unclear institutional responsibility. The Northern and Central Regions Water Supply and Sanitation Sector Project, Phase I (NCRWSSSP-I) requires provincial governments to introduce modified sanitation regulations and property owners to use sanitation systems that have been approved by the District Office of Communication, Transport, Post and Construction (OCTPC) before connecting to the piped water supply system.⁸ In addition, experiences from previous WSS projects show that links between water and sanitation have to be well understood in communities to improve health and hygiene, generate demand for sanitation facilities, and improve the operation and maintenance (O&M) of on-site facilities.

6. In 2005, the Government updated the 1999 SIP to reflect its emphasis on equitable development by improving small towns, especially those in the 47 poorest districts.⁹ The updated SIP provides a balanced, stepwise approach to water supply development in the Lao PDR, as investments are prioritized according to population; poverty status; location relative to a major road, growth corridor, or international border; tourism potential; and the provincial government's development priorities. It identifies 112 priority small towns and estimates future investment needs at \$103 million.¹⁰ The NCRWSSSP-I includes 10 of the 18 first-ranked towns.

7. The Government is committed to improving access to safe and reliable urban water supply in a decentralized sector. The policy statement had two major impacts: (i) creating the Water Supply Authority (WASA) under the Ministry of Communication, Transport, Post and Construction (MCTPC) to regulate and coordinate activities in urban water supply, including water quality control, and (ii) decentralizing urban WSS management from the central to provincial governments. Nam Papa Lao was divided into Nam Papa Vientiane and provincial nam papas (PNPs), each becoming an autonomous state-owned enterprise under the provincial Department of Communication, Transport, Post, and Construction (DCTPC). The Water Supply Division (WSD) of the Department of Housing and Urban Planning (DHUP) is responsible for

⁶ The estimated cost was KN10,000–KN15,000 per cubic meter (compared with KN1,700 from regulated providers). See Water Supply Authority and Department of Housing and Urban Planning. 2004. *Building Consensus for Small Towns Water Supply Management Models in the Lao People's Democratic Republic*. Vientiane.

⁷ Sanitation data collected during project preparation of the NCRWSSSP-I.

⁸ Ministry of Health manages urban environmental hygiene, and each provincial government develops its own program.

⁹ Based on Instruction No. 010/PM, 72 districts are classified as poor, of which 47 are classified as the poorest.

¹⁰ Total investment needs are about \$267 million. The balance is for Vientiane and secondary and provincial towns.

strategic planning and the long-term management of the sector. Decree No. 191/PM (2005) strengthens the institutional framework for urban WSS by defining the legal foundation of WASA and specifying its institutional responsibilities as a regulatory agency.¹¹ While ADB and other development partners have supported the institutional strengthening of WASA, WSD, and PNPs,¹² developing an action plan, based on an assessment of past programs, would help guide future capacity development.

8. A recent evaluation of water supply systems developed earlier indicates a need for minor rehabilitation works to restore and improve their functionality.¹³ Further evaluation of earlier systems is required to ensure that they have not fallen into disuse for lack of O&M. The National Water Supply Tariff Policy¹⁴ aims to strengthen the financial sustainability of PNPs. WASA assists the PNPs establish tariffs to support operations and adopt appropriate water supply service levels. The NCRWSSSP-I supports building PNPs' financial capacity to generate funds for capital repairs. The NCRWSSSP-I introduces subproject-specific progressive tariffs with three consumption blocks recovering full O&M costs plus 30% of capital investment costs. A further assessment of the financial management capacities of PNPs and a review to analyze the design and performance of different tariff structures will support ongoing NCRWSSSP-I activities. Collecting time series data on water quality and quantity testing will also prevent future rehabilitation needs.

9. Lessons identified from the past experiences of ADB and other development partners include (i) strengthening human and institutional capacity in the provinces and districts; (ii) improving system sustainability and reducing excessive capital costs; (iii) devoting sufficient resources to raw water assessments to minimize water treatment costs and the risk of water shortages; (iv) strengthening the capacity and management skills of PNPs; and (v) preparing comprehensive WSS projects that support drainage and sanitation measures, community participation, health awareness, and training and operating manuals in the local language.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

10. The impact of the TA is to contribute to the Government's goal of providing 24-hour access to safe drinking water for 80% of the urban population by 2020. The outcome is an agreed sector investment project designed to develop water supply systems and improve sanitation conditions in about 20 priority small towns in designated poor and poorest districts of the Lao PDR.¹⁵ It aims to reduce poverty and improve access, quality, reliability, and sustainability of water supply services and sanitation conditions for residents. An initial poverty and social analysis is in Appendix 2.

11. The TA will have the following outputs:

- (i) A project preparation and feasibility study of a sector investment project for water supply systems and improved sanitation covering about 20 small towns. Two or three sample subprojects designed to be financially, economically, environmentally, and socially sustainable will be prepared for appraisal during the TA. The project will include water supply improvements, public awareness for water use and hygiene, action to enhance community and female participation in WSS, and investigations of raw water sources and the collection of time-series data.

¹¹ WASA was established as a sector regulatory agency by Decree No. 66/PM, dated 20 May 1999, and was amended by Decree No. 191/PM, dated 1 July 2005, on the regulation of urban water supply operations.

¹² The Norwegian Agency for Development Cooperation provides support for WASA and WSD under the NCRWSSSP-I.

¹³ ADB. 2006. *Country Assessment Program Evaluation for the Lao People's Democratic Republic*. Manila.

¹⁴ Lao PDR, No. 5336/MCTPC, 26 April 2004.

¹⁵ The final number of towns depends on the total project amount, subject to ADB financing and co-financiers.

- (ii) Recommendations to include rehabilitation works of earlier water supply systems in the sector investment project design and feasibility study. Based on a comprehensive review and evaluation of water supply systems developed in previous projects, about one or two rehabilitation works for existing water supply systems will be prepared as sample subprojects.
- (iii) Assessment of past and planned capacity-development activities in urban WSS and development of a capacity development action plan for delivery of urban WSS services. The action plan will include recommendations to strengthen capacity (a) for water supply sector regulation, planning, and management in WASA and WSD; (b) to manage sustainable urban WSS services in provincial and branch nam papas and DCTPCs and OCTPCs; and (c) to conduct participatory local planning and development in MCTPC, community action teams, and village water supply and sanitation units.
- (iv) Identification of SSIPs for potential public-private partnership initiatives in the proposed subproject towns under the ensuing project.

B. Methodology and Key Activities

12. The TA supports the preparation of a sector investment project and will incorporate lessons from projects supported by ADB and other development partners. The TA will be implemented in two parts. Part 1 includes identifying priority small towns for WSS, including recommendations on priority rehabilitation works. Prior to the fielding of the consultant team, the executing agency (EA) shall submit a list of candidate towns and works. Small towns will be evaluated considering the updated Sector Investment Plan 1999–2020, the initial screening criteria established under the NCRWSSSP-I, Government priorities, presence in the 47 poorest districts, ongoing support by development partners in the WSS sector, stakeholder consultations, and the results of site inspections. The review of tariff structures and performance management of PNPs will be undertaken early in TA implementation. The inception report will include (i) a list of about 20 subproject towns, including recommendations for rehabilitation works, that will be included in the design and feasibility study of the sector investment project; (ii) identification of 2–3 sample subproject towns and 1–2 sample rehabilitation works representative of the remaining subproject towns, for preparation during the TA; and (iii) initial findings from the review of tariff structures and performance management of PNPs. The final list of subprojects will be geographically clustered to minimize costs and enhance implementation efficiency.

13. Part 2 includes preparing a sector investment project and studying feasibility for about 20 towns, including a maximum of three sample subproject towns and rehabilitation works. It will include appropriate social assessments and plans, raw water assessments, environmental examinations, resettlement plans, financial and economic analyses, institutional assessment, and detailed preparation for each sample subproject. It will also include components on water supply development and improvement, institutional strengthening, capacity building, and public awareness and community action. Past public awareness and sanitation initiatives in urban WSS projects will be evaluated to determine the effectiveness of programs in changing hygiene behavior and generating public demand for sanitation facilities. New initiatives will incorporate ongoing programs of the Ministry of Health and other development partners.

14. Consultants' key activities will include required reviews and assessments for delivering specified TA outputs, a series of stakeholder consultations and TA workshops to disseminate information and seek consensus on project design, and the preparation of required TA reports. Participatory planning and appraisal techniques will be used to understand community priorities and perceptions regarding urban WSS. ADB will continue dialogue with the Government during

the TA on policy and institutional changes proposed under the NCRWSSSP-I, and with development partners to avoid overlap and duplication in WSS investments.

C. Cost and Financing

15. The TA is estimated to cost \$600,000 equivalent, of which ADB will provide \$500,000. The TA will be financed on a grant basis from the Japan Special Fund, funded by the Government of Japan. The Government will finance the remaining \$100,000 in kind, covering office accommodation and utilities, remuneration of counterpart staff, and training and workshop facilities. The Government has been informed that approval of the TA does not commit ADB to finance any ensuing project. The cost estimates and financing arrangements are in Appendix 3.

D. Implementation Arrangements

16. MCTPC will be the EA for the TA as it has overall responsibility for facilitating and coordinating the development of national water supply and wastewater management systems. The EA has assigned the project coordination unit (PCU)¹⁶ to be the implementing agency for the TA and ensure continuity, integration of activities, and the benefits of experience gained. The PCU will be responsible for the day-to-day coordination and monitoring of TA activities and will provide guidance to consultants, facilitate stakeholder workshops, and supervise surveys. To ensure continuity of guidance in the water and sanitation sector, the steering committee established for the NCRWSSSP-I will also serve for this TA.

17. A team of consultants will be recruited for 39 person-months (16 international person-months and 23 national person-months) in accordance with ADB's *Guidelines on the Use of Consultants* (April 2006, as amended from time to time) following the quality- and cost-based selection method and using a simplified technical proposal. Consulting services include expertise in water supply engineering, sector policy and institutional reforms, public utilities regulation, project economic and financial analyses, poverty and social analyses including gender and ethnic issues, resettlement, environment, and water supply systems management. An indicative outline terms of reference is in Appendix 4. Equipment for the TA will be procured in accordance with ADB's *Procurement Guidelines* (April 2006, as amended from time to time) and given to the EA after the TA.

18. The TA will be implemented over 8 months from February to September 2007. TA consultants will submit an inception report within 1 month of TA start-up, which will propose the methodology for carrying out activities for the full duration of the TA. An interim report will incorporate survey findings and be submitted within 2 months of TA implementation. A draft final report will be submitted within 5 months of TA implementation. The final report will incorporate comments from the Government and ADB, and will be submitted at the end of TA implementation. Meetings will be held among the Government, ADB, and the consultant team during inception, interim, and completion of the TA. The ensuing project will follow the same modality as the Water Supply and Sanitation Sector Project and the NCRWSSSP-I.

IV. THE PRESIDENT'S DECISION

19. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$500,000 on a grant basis to the Government of the Lao People's Democratic Republic for preparing the Small Towns Water Supply and Sanitation Sector Project, and hereby reports this action to the Board.

¹⁶ The PCU consists of a full-time project director, a deputy director, an accountant, and other relevant staff. The EA agreed to appoint, if necessary, additional staff to oversee TA implementation in the PCU.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>Impact Contribution to the Government's sector goal of providing safe drinking water to 80% of urban residents by 2020.</p>	<p>Increased percentage of urban residents that have access to safe piped water</p> <p>Increased percentage of urban residents that have better sanitation facilities and improved hygiene</p> <p>Decreased dependence of urban residents in target towns on unsafe water sources</p> <p>Increased access for poor and vulnerable households to piped water</p>	<p>Water Sector Policy Statement (1999) and Sector Investment Plan (1998–2020)</p> <p>National statistics</p> <p>Baseline and follow-up socioeconomic survey disaggregated by gender and ethnic group</p> <p>TA report and recommendations</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • MCTPC's commitment to policy reform and institutional strengthening • Final TA outputs meet the requirements of the Government and ADB. • Effective project design coordination and management
<p>Outcome An agreed sector investment project designed to develop water supply systems and improve sanitation conditions in about 20 priority small towns aiming to improve the access, quality, reliability, and sustainability of water supply services</p>	<p>TA recommendations are agreed and included in a sector project for approval in 2008.</p> <p>Signed memorandum of understanding between ADB and the Government</p>	<p>TA report, including feasibility study of investments in sample subproject towns</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • Strong Government commitment to the sector and support for the TA • TA produces appropriate feasibility options, comprehensive sector project design and components, and suitable recommendations to support institutional strengthening and reform. • Available counterpart staff and effective collaboration among agencies
<p>Outputs (i) Project preparation and feasibility study of a sector investment project for water supply systems and improved sanitation in about 20 small towns, and for 2–3 sample subprojects</p>	<p>About 20 small towns are identified and meet the agreed set of criteria for the ensuing sector investment project.</p> <p>Investigations of raw water sources and the collection of time series data for all candidate towns are initiated.</p> <p>LAR framework and core subproject LAR plans are submitted</p> <p>Design includes a water supply scheme, public health awareness, engineering, social safeguard measures, and incremental administration and contingencies arrangements.</p>	<p>TA progress report and recommendations</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • Small towns are prioritized and selected without delay • Conditions are conducive to enabling access for the poor • Systems are financially, economically, environmentally, and socially feasible <p>Risks</p> <ul style="list-style-type: none"> • Poor performance by consultants • Lack of support from stakeholders

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
	Each sample subproject town prepared is financially, economically, socially environmentally, and sustainable.		
(ii) Recommendations on the rehabilitation of prioritized water supply systems and the feasibility of 1–2 sample rehabilitation subprojects	<p>Evaluation of water supply systems that require minor rehabilitation</p> <p>Core subproject LAR plans are submitted.</p> <p>Each sample subproject selected for rehabilitation is financially, economically, environmentally, and socially sustainable.</p>	TA progress report and recommendations	<p>Assumptions</p> <ul style="list-style-type: none"> • The reason for system failure and/or disuse is not lack of O&M. • Water supply systems are prioritized and selected on time. • Agreed evaluation criteria for including rehabilitation works • Rehabilitation works are minor and costs are kept to a minimum.
(iii) Recommendations for capacity building activities based on an assessment and action plan to strengthen (a) overall water supply sector regulation, planning, and management; (b) capacity to manage urban WSS services in a sustainable manner; and (c) capacity to conduct participatory local planning and development	<p>Review and assess the operational performance and financial management of PNPs in the Lao PDR.</p> <p>Assess the design and performance of existing tariff structures in the Lao PDR.</p> <p>Assess past capacity-building activities in the urban WSS sector and development of a capacity-development action plan.</p> <p>Identify key recommendations for WASA, WSD, provincial and branch nam papas, DCTPCs, OCTPCs, CATs, and WATSANs.</p> <p>Identify key recommendations for improving collaboration between MCTPC and MOH in the area of sanitation.</p>	<p>TA progress report and recommendations</p> <p>Progress reports of NCRWSSSP-I</p> <p>Training reports of development partners (e.g., AFD, JICA)</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • Recent regulations clearly delineate roles and responsibilities between WASA and WSD. • MCTPC departments and offices are established in each district. • WATSANs are established and functional in candidate subproject towns.
(iv) Review the role and level of involvement of SSIPs in WSS in selected subproject towns.	Identify possible public-private partnership initiatives for demonstration in selected sample subproject towns.	<p>TA progress report and recommendations</p> <p>Progress reports of NCRWSSSP-I</p> <p>WSP and other development partner reports and recommendations</p>	<p>Assumption</p> <ul style="list-style-type: none"> • SSIPs (e.g., private water vendors and/or operators) are found in candidate subproject towns.

Activities	Inputs
<p>1.1 Review policy and institutional framework for urban WSS, including the sector policy statement and the SIP, and the implementation modality of the NCRWSSSP-I.</p> <p>1.2 Evaluate list of small towns against the NCRWSSSP-I criteria and procedures for town selection. Conduct initial site visits to verify evaluation and collect basic socioeconomic data.</p> <p>1.3 Prioritize about 20 small towns for new WSS investments and associated WSS infrastructure improvements (e.g., road drainage), including 2–3 sample subproject towns.</p> <p>1.4. Prepare a sector investment project and feasibility study covering about 20 subproject towns, with 2–3 sample subprojects that are representative of the candidate subproject towns in terms of access, size of towns, and complexity of systems. Design includes a water supply scheme, public health awareness, engineering, social safeguards, and incremental administration and contingencies arrangements.</p> <p>1.5. After the evaluation is done in output (i), include a provision for rehabilitating water supply systems, including the feasibility of 1–2 sample rehabilitation works.</p> <p>1.6. Conduct field visits, interviews, focus group discussions, and surveys, including investigating raw water sources and collecting time series data.</p> <p>2.1 Review and evaluate water supply systems nominated for rehabilitation. Develop criteria and procedures for selection, discussion, and agreement.</p> <p>2.2. Conduct initial site visits to verify conditions and collect basic socioeconomic data.</p> <p>2.3 Recommend 1–2 sample rehabilitation works for inclusion in the sector investment project and feasibility study. Follow preparation and feasibility activities as indicated under output (i).</p> <p>2.4. Conduct field visits, interviews, focus group discussions, consultations, and surveys.</p> <p>3.1. Review government regulations on urban WSS, past WSS projects, and progress reports including the ones from WSSSP and NCRWSSSP-I.</p> <p>3.2. Review past tariff structures, analyze the deficiencies in the design of the different tariff structures, and provide recommendations that would provide input into the Water Supply Tariff Policy review, as part of the NCRWSSSP-I.</p> <p>3.3. Review past capacity building activities and assess the progress of regulatory management of WASA, WSD, PNPs, DCTPCs, OCTPCs, CATs, and WATSANs, including the operational performance and financial management capacities of PNPs.</p> <p>3.4. Review the capacity of WATSANs and their role in managing community-based WSS systems.</p> <p>3.5. Review the current collaborative framework between MCTPC and MOH in the areas of urban sanitation and hygiene awareness.</p> <p>3.6. Review and assess past capacity-building activities. Develop a capacity-development action plan for future activities in urban WSS. Recommend capacity-building activities for inclusion under the sector investment project.</p> <p>3.7. Conduct consultations with different stakeholders to share findings and obtain feedback.</p> <p>4.1. Review literature and experiences in the Lao PDR and the region that support public-private partnership.</p> <p>4.2. Discuss experiences with development partners, etc.</p> <p>4.3. Assess the role of SSIPs in each subproject town.</p> <p>4.4. Determine the nature of partnership for inclusion in project feasibility and design.</p>	<ul style="list-style-type: none"> • ADB: \$500,000 • Government: \$100,000

ADB = Asian Development Bank, AFD = Agence Française de Développement, CAT = community action team, DCTPC = Department of Communication, Transport, Post, and Construction, JICA = Japan International Cooperation Agency, LAR = land acquisition and resettlement, MCTPC = Ministry of Communication, Transport, Post, and Construction, MOH = Ministry of Health, NCRWSSSP-I = Northern and Central Regions Water Supply and Sanitation Sector Project (Phase I), OCTPC = District Office of Communication, Transport, Post, and Construction, O&M = operation and maintenance, PDR = people's democratic republic, PNP = provincial nam papa, SIP = sector investment plan, SSIP = small-scale independent providers, TA = technical assistance, WASA = Water Supply Authority, WATSAN = water supply and sanitation unit, WSD = Water Supply Division, WSP = Water and Sanitation Program, WSS = water supply and sanitation.

INITIAL POVERTY AND SOCIAL ANALYSIS

A. Linkages to the Country Poverty Analysis

Is the sector identified as a national priority in country poverty analysis?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the sector identified as a national priority in country poverty partnership agreement?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Contribution of the sector or subsector to reduce poverty in the Lao People's Democratic Republic (Lao PDR):			
<p>Water supply and sanitation (WSS) play significant roles in reducing poverty. Access to safe and reliable water is a fundamental human need, and the lack of clean water affects both the physical and social health of individuals. Improved WSS helps reduce poverty, especially for women by (i) reducing the time and money spent on purchasing, collecting, treating, and storing water and (ii) improving hygiene and health of families and communities. Water-related and environmental diseases have high economic and social consequences for individuals and households (e.g., the high medical expenses required to treat diseases and lost working days to recover from illness). Poor and vulnerable households face a greater risk of impoverishment and marginalization. Project preparatory technical assistance (TA) will develop a sector investment project that contributes to the Government efforts to provide safe and reliable water supply to 80% of urban residents by 2020. The Government's Water Supply Sector Policy Statement (1999) sets the target of providing 24-hour access to safe drinking water to 80% of its urban population by 2020, and the Sector Investment Plan lists the water supply needs for urban centers in the order of priority for rehabilitation, expansion, or development. The National Growth and Poverty Eradication Strategy (2004) identifies 47 priority districts to further facilitate poverty reduction and more rapid improvement in other Millennium Development Goal targets. The Sixth National Socioeconomic Development Plan 2006-2010 outlines the Government's commitment to increasing the distribution of sanitized water to the population in urban and suburban areas for poverty reduction, including increased access to clean water supply and latrines in schools and households.</p>			

B. Poverty Analysis

Targeting Classification: General intervention

What type of poverty analysis is needed?
<p>A poverty and social analysis (PSA) is required to support and enhance the overall project design and feasibility study of sample subproject towns. The analysis will situate the Lao PDR within the region using country-level socioeconomic indicators, and the individual subproject towns within the province and district. The PSA will then assess the poverty and social conditions of individual populations in (i) about 20 small towns that will be selected for sector investment project design and feasibility in the 47 poorest districts and (ii) priority towns that will be eligible for WSS rehabilitation works. As early as possible, basic poverty and social data will be collected through secondary sources and key informant interviews in districts, before determining population projections. Socioeconomic surveys of the sample subproject towns will be conducted after the sample subproject towns are selected. The PSA will (i) determine the types of poverty and social impacts—positive or negative—on different population groups, (ii) identify measures to mitigate the increased risk of negative effects on population groups from land acquisition and resettlement (LAR) and the environment, and (iii) identify enhancement measures that support ongoing government programs and/or specific project activities for more equitable project outcomes. The analysis will build on lessons from the Northern and Central Regions Water Supply and Sanitation Project, Phase I (NCRWSSSP-I) and other WSS and urban development projects in the Lao People's Democratic Republic (Lao PDR). For instance, the village area improvements component of the Vientiane Integrated Urban Development Project identifies the following key lessons: (i) enhance community ownership by recognizing and quantifying individual voluntary contributions and (ii) increase local governance and transparency by posting individual and community contributions on a board in the village. The PSA will address the impact of water-related diseases on household expenditure and provide suggestions on ways in which the project contributes to reduced medical costs incurred from waterborne diseases. Data will be disaggregated by poverty level, sex, and ethnic group where feasible.</p>

C. Participation Process

Is there a stakeholder analysis?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<p>A stakeholder analysis will be undertaken to identify key project stakeholders, their project-related interests, and their role in determining project feasibility and success. A wide range of stakeholders and beneficiaries will be consulted during project preparation, including Government officials from the ongoing Water Supply and Sanitation Sector Project and the NCRWSSSP-I. Other stakeholders include government agencies, international and bilateral agencies, nongovernment organizations, mass organizations (e.g., Lao Women's Union and Lao Front), provincial and district authorities, civil society, private water vendors, and project-affected people and communities. The stakeholder analysis will be disaggregated by gender and ethnic group where possible.</p>		
Is there a participation strategy?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<p>A participation strategy for the ensuing project will be prepared based on (i) an expanded stakeholder analysis</p>		

undertaken during project preparation and (ii) records of consultations noted in the PSA. Disclosure of documents on the environment, ethnic groups, and resettlement will be in accordance with ADB's *Public Communications Policy* (2005). The overall participation strategy will also include participation plans outlined in social safeguard plans.

D. Gender Development

Strategy to maximize impacts on women:

Lao women are responsible for a variety of tasks related to water, sanitation, and hygiene in their households and communities. Based on the gender analysis conducted for the NCRWSSSP-I, women and children spend as much as 1–2 hours daily collecting water from distant sources. Unsafe water (i.e., high in iron or calcium or contaminated with wastewater) adversely affects the health of individuals and families, causing water-related diseases and reproductive health problems.

Has an output been prepared? Yes No

A gender analysis will be undertaken during project preparation. The gender strategy for the project will include a gender action plan and will build on the one prepared for the NCRWSSSP-I. The analysis will be part of the overall PSA. Gender activities will be included that make the ensuing project more responsive to women's water supply needs. Actions will also be applied to individual subproject design with measurable indicators. In addition, specific gender concerns facing women in land acquisition and resettlement also will be addressed.

E. Social Safeguards and Other Social Risks

Item	Significant/ Not Significant/ None	Strategy to Address Issues	Plan Required
Resettlement	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	LAR in each subproject shall not be significant (category B) and will be avoided or minimized whenever possible. A LAR framework was prepared for the NCRWSSSP-I and will be reviewed and updated for the sector project. A short LAR plan will be prepared for each subproject town that has feasibility preparation in accordance with Lao PDR regulations and ADB's <i>Policy on Involuntary Resettlement</i> . In cases where more than one subproject town is within the same province, a single plan will be prepared with individual subproject town assessment. LAR documents will aim to ensure that affected people are compensated at replacement cost and are able to regain and improve upon their pre-project living standards.	<input type="checkbox"/> Full <input checked="" type="checkbox"/> Short for each subproject town <input type="checkbox"/> None
Affordability	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	During project preparation, tariffs for water supply services (including connection and metering fees) and sanitation systems will consider household income, willingness to pay, affordability, and the water usage patterns of different user groups, especially the poor and low-income households. The Water Supply Tariff Policy and the tariff structure adopted for the NCRWSSSP-I (i.e., project-specific progressive tariff and a deferred payment system for connection charge) will also be reviewed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Labor	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	Construction, operation, and maintenance of the proposed sector project will generate new employment opportunities in the subproject towns. Job or income losses are not expected. Skills training will be considered during project preparation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Indigenous Peoples	<input checked="" type="checkbox"/> Significant <input type="checkbox"/> Not significant <input type="checkbox"/> None	The Lao PDR is home to 49 officially recognized ethnic groups. The PSA for the TA will include an analysis of the different ethnic groups in the proposed subproject towns. An ethnic groups development framework (EGDF) was prepared for the NCRWSSSP-I according to Government regulations and ADB's <i>Indigenous Peoples Policy</i> . The EGDF guides the preparation of each ethnic groups development plan (EGDP) to assess potential impacts on ethnic groups during feasibility. The EGDF will be updated and an EDGP will be prepared for each sample subproject town.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Other Risks and/or Vulnerabilities	<input type="checkbox"/> Significant <input type="checkbox"/> Not significant <input checked="" type="checkbox"/> None	None.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Total Cost
A. Asian Development Bank Financing^a	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	312.0
ii. National Consultants	46.0
b. International Travel	30.0
c. Local Travel (including local transport)	5.0
d. Reports and Communications	12.0
2. Equipment ^b	10.0
3. Workshops, Seminars, Reports, Translation, etc.	12.0
4. Surveys	8.0
5. Miscellaneous Administration and Support Costs	10.0
6. Representative for Contract Negotiations	5.0
7. Contingencies	50.0
Subtotal (A)	500.0
B. Government Financing	
1. Office Accommodation and Transport	35.0
2. Remuneration and Per Diem of Counterpart Staff	50.0
3. Others	15.0
Subtotal (B)	100.0
Total	600.0

^a Financed by the Japan Special Fund, funded by the Government of Japan.

^b Equipment includes items such as computers, fax, printers, and copy machine.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Overall Approach

1. A team of consultants will be recruited to provide services, estimated at 39 person-months (16 international person-months and 23 national person-months), in water supply engineering, sector policy and institutional reforms, public utility regulation, project economic and financial analyses, poverty and social analyses including gender and ethnic group assessments, land acquisition and resettlement, environment, private sector participation, and water supply systems management. The suggested composition is indicated below. The team will be engaged by the Asian Development Bank (ADB) in accordance with its *Guidelines on the Use of Consultants* (April 2006, as amended from time to time) following the quality and cost-based selection method, and using a simplified technical proposal. The project preparation and feasibility study of the sector investment project will be phased.

- (i) Part 1 includes identifying priority small towns for water supply and sanitation (WSS), including recommendations on priority rehabilitation works. The team leader will evaluate about 25 prioritized small towns considering the updated Sector Investment Plan (SIP) 1999–2020, the initial screening criteria established under the NCRWSSSP-I, Government priorities, support by development partners in the WSS sector, location in the 47 poorest districts, stakeholder consultations, and the results of site inspections. The review of tariff structures and performance management of provincial nam papa (PNPs) will be undertaken early during implementation. The inception report will include (a) a list of about 20 subproject towns, including recommendations for rehabilitation works, to be included in the design and feasibility study of the sector investment project; (b) identification of 2–3 sample subproject towns and 1–2 sample rehabilitation works for preparation that are representative of the remaining subproject towns; and (c) initial findings from the review of tariff structures and performance management of PNPs.
- (ii) Part 2 includes preparing a sector investment project design and feasibility study for about 20 towns, including a maximum of three sample subproject towns and rehabilitation works. It will include appropriate social assessments and plans, raw water assessments, environmental examinations, resettlement plans, financial and economic analyses, and institutional assessment, with detailed preparation for each sample subproject. It will also include components on water supply development and improvements, institutional strengthening, capacity building, and public awareness and community action.

B. International Consultants (16.0 person-months)

2. **Team Leader and Water Supply Engineer** (5.5 person-months). The engineer will coordinate the work of all team members and manage the technical assistance (TA) budget. She or he will be responsible for overall TA outputs, including a fully costed sector investment project, and for submitting required reports in a format that is satisfactory to ADB (e.g., inception, interim, and final report). The final report will incorporate comments received on the draft final report. In addition to the specific tasks in part 1, specific tasks and outputs include the following:

- (i) Review government WSS documents and regulations (e.g., the Government's SIP, the Policy Statement), and past ADB WSS project documents for lessons.
- (ii) Review the criteria and procedures for town participation and selection developed under the NCRWSSSP-I, including procedures for identifying and appraising subprojects and subproject screening, evaluation, and approval

- criteria. Recommend improvements for the ensuing project. Develop criteria and procedures for town participation and selection in the case of rehabilitation works.
- (iii) Organize key stakeholder workshops (e.g., for provinces and districts), to discuss project proposal and appraisal reports, and TA workshops to share information and seek consensus on project design at inception, interim, and final review.
 - (iv) Explore the possibility of including small-scale associated WSS infrastructure improvements (e.g., drainage). Review and improve implementation arrangements for the Water Supply and Sanitation Sector Project and the NCRWSSSP-I.
 - (v) With the social development specialist, assess the needs, appropriate technology, and affordability of community and household sanitation in the subprojects.
 - (vi) Review the role and involvement of small-scale independent providers in the WSS sector and subprojects for potential public-private partnership initiatives.
 - (vii) Prepare sector performance targets and indicators; external assistance to the sector and lessons learned; a problem tree and a project design and monitoring framework for the project; project components; detailed project cost estimates; implementation arrangements and schedule; indicative procurement packaging and draft procurement plans; terms of reference for consulting services; project impacts, benefits, and risks; and a project performance monitoring system.

3. **Social Development Specialist** (3.0 person-months). The specialist will be responsible for assisting the Executing Agency (EA) prepare (i) poverty and social analyses and appropriate plans (e.g., a gender strategy and action plan and an ethnic groups development framework and plans) for the project and sample subprojects; (ii) the participation strategy; and (iii) land acquisition and resettlement (LAR) documents. The specialist shall provide timely inputs to the team leader for the required reports. Specific tasks include the following:

- (i) Review ADB's *Handbook on Poverty and Social Analysis; Handbook on Resettlement: A Guide to Good Practice; Handbook on Strengthening Participation for Development Results: A Staff Guide to Consultation and Participation; Policy on Gender and Development* and relevant ADB gender checklists; and operational manuals on involuntary resettlement, indigenous peoples, and other topics.
- (ii) With the social survey specialist, plan surveys, including elements of gender and development, resettlement, ethnic groups, and community development. Prepare a socioeconomic profile for each small town included in the sector project, with data disaggregated by sex, ethnicity, and income where possible.
- (iii) Review for adoption NCRWSSSP-I implementation arrangements, subproject selection, approval procedures, and criteria from a poverty and social perspective.
- (iv) Review and update NCRWSSSP-I social documents and frameworks (e.g., LAR framework, gender strategy, ethnic groups development framework [EGDF]).
- (v) With the resettlement expert, assist the EA prepare a LAR plan for each sample subproject town following the basic principles of the LAR framework prepared for the NCRWSSSP-I. Integrate gender and ethnic aspects into the project design.
- (vi) With the team leader, assess the needs, appropriate technology, and affordability of community and household sanitation systems in the selected subproject towns.
- (vii) Review the community component on public awareness and community improvements in the NCRWSSSP-I and refine for the ensuing project; and existing programs and approaches to enhance cooperation with the Ministry of Health.

4. **Economist and Financial Specialist** (3.0 person-months). The specialist will be responsible for the overall project and sample subproject economic and financial analyses and cost estimates. She or he will work with the team leader and review macroeconomic settings

and sector financing based on available documentation. The specialist shall provide timely inputs to the team leader for the required reports. Specific tasks include the following:

- (i) Review ADB's guidelines to incorporate into the project *Guidelines for the Economic Analysis of Projects, Handbook for Integrating Poverty Impact Assessment in the Economic Analysis of Projects, Handbook Guidelines for the Economic Analysis of Water Supply Projects, Handbook for Integrating Risk Analysis in the Economic Analysis of Projects, Framework for the Economic and Financial Appraisal of Urban Development Sector Projects, and ADB's Guidelines for Financial Governance and Management of Investment Projects and Criteria for Subsidies.*
- (ii) Identify effective, efficient, and equitable financing mechanisms for cost recovery for each sample subproject, with consideration to differential tariffs and other alternatives to enable access for the poor. Provide survey questions to the social survey specialist regarding affordability and people's willingness to pay.
- (iii) Prepare the project economic analyses in forms and substance agreeable to ADB, covering demand forecast, least economic cost analysis, economic cost and benefit analysis, economic internal rates of return and average incremental economic costs, sensitivity analysis, benefit distributional analysis, and subsidies.
- (iv) Assess the operational performance and financial management capabilities of PNPs using benchmarking indicators and financial management assessments.
- (v) With the institutional specialist, review the tariff policy, tariff determination guidelines and other policies, and standards in the urban and water supply sectors. Assess the performance of past WSS tariffs to identify improvements.
- (vi) Prepare the financial analyses for the project and sample subprojects in form and substance agreeable to ADB, covering financial cost and benefit analysis, financial internal rates of return and average incremental financial costs, sensitivity analysis with respect to major project design and implementation risks, water tariff recommendations, willingness to pay assessment, affordability analysis, performance and indicators of the PNPs, and financial projections of the PNPs.
- (vii) Review the fund-flow arrangements and disbursement experience under the NCRWSSSP-I and recommend improvements for the ensuing project.
- (viii) Review related accounting standards and policies and institutional financial management arrangements. Assess the financial management and control over the use of project funds in past projects. Assess the adequacy of auditor's report with respect to meeting ADB's requirements and make recommendations.

5. **Institutional Specialist** (1.5 person-months). The specialist shall provide timely inputs to the team leader for the required reports. Specific tasks include the following:

- (i) Identify lessons from ADB and other funding agency-supported urban WSS projects. Review implementation of the NCRWSSSP-I; institutional frameworks in the urban water supply sector, including the legal and policy environment, water quality standards, and institutional responsibilities of key sector institutions; and the regulatory functions of the Water Supply Authority (WASA). Recommend policy, institutional, and organizational improvements. Identify areas for further capacity building for effective sector regulation following Decree No. 191/PM (1 July 2005).
- (ii) With the financial analyst, review the tariff policy, tariff determination guidelines and other policies, and standards in the urban water supply sector. Analyze deficiencies in the design of different tariff structures in the country, to help strengthen and disseminate the principles of a good tariff policy. This will assist the Government in revising its tariff policy (agreed under the NCRWSSSP-I).

- (iii) Collect and analyze information on local administration structures, personnel management, budget, and staff for administration, service quality control, budget control systems, decision-making process, and public relations. Identify human and other resource constraints. Review administrative and financial structures at the provincial and local level for selected subproject towns.
- (iv) Review and assess existing training programs for PNPs, WASA, and Water Supply Division; develop a capacity-development action plan to guide future activities; and recommend improvements to existing training (e.g., modalities).

6. **Environmental Specialist** (2.0 person-months). The specialist shall provide timely inputs to the team leader for the required reports. Specific tasks include the following:

- (i) Assess the environmental impacts of the proposed project to include WSS, drainage, and other necessary infrastructure works and awareness components, including individual and cumulative direct and/or indirect impacts during construction and operation.
- (ii) Collect data on environmental conditions in candidate subproject towns, including an inventory of natural and man-made resources. Identify topographical, climatic, hydrological, and ecological patterns that may affect outcomes or be affected.
- (iii) Conduct an initial unexploded ordnance survey for subproject towns.
- (iv) Assist the EA prepare environmental reports: (a) initial environmental examination (IEE) for the overall project, (b) IEE for each subproject town, (c) summary initial environmental examination, and (d) and environmental assessment and review framework to cover the overall project and sample subprojects. The environmental documents will build on the ones prepared under the NCRWSSSP-I and will be in accordance with ADB's *Environment Policy* (2002) and *Environmental Assessment Guidelines* (2003), and the Government's environmental requirements.
- (v) Recommend (a) measures to safeguard the environment before, during, and after implementation of the project; (b) mitigation and enhancement measures and the monitoring program, including cost implications and an institutional setup for undertaking the program; (c) capacity-building needs; and (d) the responsible agency for environmental monitoring during project implementation.
- (vi) Assist the EA conduct public consultations to obtain and incorporate views from stakeholders on potential impacts and mitigation measures proposed in the IEEs.
- (vii) Assist the EA in securing environmental clearance certificates for each subproject. Prepare information to comply with ADB and government guidelines.

7. **Social Survey Specialist** (1.0 person-month). The social survey specialist will (i) determine the purpose and size of any social surveys for the project, and (ii) develop social surveys to capture issues of affordability and willingness to pay for WSS systems, impact of WSS on people's improved health status and reduced health expenditure, socioeconomic profiles of small towns, and LAR impacts. The specialist will coordinate the surveys, develop a database, clean data, supervise data entry, and provide simple frequencies and cross-tabulations. The specialist, with the national social survey and data collection expert, will provide timely submissions to the team leader for the required reports.

C. **National Consultants** (23.0 person-months)

8. **Deputy Team Leader and Water Supply Expert** (6.0 person-months). The expert will help the team leader implement the TA. The expert will provide timely inputs to the team leader for the required reports and assist in designing a comprehensive WSS project that includes support

for drainage and sanitation measures, a community participation and health awareness component, and making available Lao-language training and operating manuals. She or he will help (i) prepare the projected maximum and minimum demand for WSS and associated infrastructure for selected small towns in the ensuing project; (ii) recommend appropriate WSS technologies, taking into consideration economic development status, urban scale, population density, affordability, standards, etc.; and (iii) participate in discussions with the Department of Housing and Urban Planning (DHUP), PNPs, and provincial governments.

9. **Water Supply Engineers** (2 engineers totaling 6.0 person-months). The engineers will assist in preparing (i) general feasibility assessments of engineering designs for about 20 short-listed subproject towns and (ii) detailed feasibility assessments of WSS, including associated WSS infrastructure improvements in the selected sample subproject towns. The engineers shall provide timely inputs to the team leader for the required reports. Specifically, they will (i) conduct field surveys to assess service levels, physical and environmental conditions, and operation and maintenance of existing urban water infrastructure for rehabilitation; (ii) conduct raw water assessments and analyze topography, natural drainage flows, the layout of water supply systems, etc.; (iii) review and assess recommended design standards, unit water consumption levels, and water supply technologies; (iv) review the designs of previously built water supply systems and recommend the most cost-effective and appropriate technology; (v) discuss WSS investment needs with DHUP, PNPs, and provincial governments; (vi) prepare a preliminary design and costing for basic WSS, prioritizing activities, and time-bound sequencing of WSS improvement and associated infrastructure (e.g., drainage); and (vii) help assess LAR and environmental impacts.

10. **Gender and Social Development Expert** (4.0 person-months). The expert, with the social development specialist, will assist the EA (i) prepare poverty and social assessments of sample subprojects; (ii) hold consultations with governments, beneficiaries, affected people, and other stakeholders using participatory planning techniques to seek opinions and gain agreement on project design (consultations will be held separately by sex and ethnic group); (iii) prepare relevant social plans, including the gender action plan, ethnic group plans, and participation plan; and (iv) develop the public awareness and community actions component. She or he will build on the previous gender strategy and the EGDF prepared for the NCRWSSSP-I. The expert will work with the social survey specialist and expert to ensure relevant questions are included.

11. **Resettlement Expert** (4.0 person-months). The expert, with the social development specialist, will assist the EA assess the potential LAR impacts of the sector investment project and subprojects in each sample subproject town. Exploring alternatives to avoid or minimize the scope of LAR will include (i) reviewing and updating the NCRWSSSP-I LAR framework; (ii) helping the EA prepare a LAR plan in accordance with Government regulations, ADB's *Involuntary Resettlement Policy* (1995) and *Operations Manual F2 on Involuntary Resettlement* (2006) (the expert may also use ADB's *Handbook on Resettlement* [1998] as a guide); and (iii) assist the EA conduct and document consultations with affected people to ensure ADB's disclosure requirements for resettlement planning are met. Each LAR plan will include a socioeconomic profile of affected people, the scope of LAR by component, specific impacts on women and vulnerable groups, an entitlement matrix, a detailed budget with unit costs estimates based on replacement costs for lost assets, implementation schedules, management arrangements, and arrangements for internal and external monitoring and evaluation. She or he will ensure that resettlement implementation arrangements are integrated into the overall project design.

12. **Environmental Expert** (1.0 person-month). The expert will work with the environmental specialist in undertaking environmental assessments, conducting consultations, gathering data and information, and reviewing regulations and the framework for obtaining environmental clearance certificates, or their equivalent, for each subproject.

13. **Social Survey and Data Collection Expert** (2.0 person-months). The expert will work with the social survey specialist to design, pilot, implement, and code the social surveys.