



Technical Assistance Report

Project Number: 41071
May 2008

Socialist Republic of Viet Nam: Preparing the Hue Water Supply Project (Financed by the Netherlands Trust Fund for the Water Financing Partnership Facility)

CURRENCY EQUIVALENTS

(as of 31 March 2008)

Currency Unit	–	dong (D)
D1.00	=	\$0.00006
\$1.00	=	D15,935

ABBREVIATIONS

ADB	–	Asian Development Bank
cmd	–	cubic meters per day
EA	–	executing agency
GIS	–	geographic information system
ISO	–	International Organization for Standardization
JBIC	–	Japan Bank for International Cooperation
PPP	–	public–private partnership
PPTA	–	project preparatory technical assistance
SCADA	–	supervisory control and data acquisition
TTHWSC	–	Thua Thien Hue Water Supply Company

TECHNICAL ASSISTANCE CLASSIFICATION

Targeting Classification	–	General intervention
Sector	–	Water supply, sanitation, and waste management
Subsector	–	Water supply and sanitation
Themes	–	Sustainable economic growth, private sector development, capacity development
Subthemes	–	Developing urban areas, public–private partnerships, institutional development

NOTE

In this report, "\$" refers to US dollars.

Vice President	C. Lawrence Greenwood, Jr., Operations 2
Director General	A. Thapan, Southeast Asia Department (SERD)
Director	J. Cooney, Infrastructure Division, SERD
Team leader	H. Jenny, Senior Urban Development Specialist, SERD
Team members	E. Cudilla, Senior Project Assistant, SERD
	R. Frauendorfer, Senior Urban Development Specialist, SERD
	M. Huddleston, Senior Social Development/Resettlement Specialist, SERD
	S. Kawazu, Counsel, OGC
	A. Kunth, Young Professional, SERD
	A. Mehta, Financial Management Specialist, South Asia Department
	H. Nhat Do, Project Implementation Officer, Viet Nam Resident Mission, SERD
	M. Sultana, Social Development Specialist, SERD
	Y. Tsujiki, Financial Analyst Specialist, SERD

I. INTRODUCTION

1. During the 2007 Country Review Programming Mission and water financing conferences held in September 2006 and March 2007, the Government of Viet Nam requested the Asian Development Bank (ADB)'s assistance in preparing the Hue Water Supply Project, which was first identified during a reconnaissance mission for potential public-private partnerships (PPPs) in 2005. Viet Nam is one of the five target countries for ADB's Water Financing Program 2006-2010, which aims to double ADB lending in the water and sanitation sector by 2010. The proposed project will address the provision of a sustainable supply of potable water in the short and medium term for Thua Thien Hue Province in the Central Region. The proposed project is directly linked to the agenda of supporting infrastructure development and PPPs in infrastructure in the Central Region to alleviate migration pressure on Hanoi and Ho Chi Minh City, as set out in the country strategy and program for 2007-2010.¹ The proposed project also contributes to Goal 7 of the Millennium Development Goals (to ensure environmental sustainability), Target 10 (to reduce the proportion of people without sustainable access to safe drinking water), and the corresponding Viet Nam Development Goals.

2. A fact-finding mission visited Thua Thien Hue Province in May 2007 for project preparatory technical assistance (PPTA). Agreement between the mission and the Province was reached on the impact, outcome, outputs, implementation arrangements, cost, financing arrangements, and terms of reference for the PPTA. The design and monitoring framework² is provided in Appendix 1.

II. ISSUES

3. Despite a relatively low level of urban population compared to other Asian countries,³ Viet Nam is facing important urban challenges, and water and sanitation issues figure prominently. About 26 million people live in urban and peri-urban areas, and the total urban population is expected to double by 2020. In 2006, only 60% of urban residents had access to piped water that met national standards.⁴ Although cities and towns account for more than 70% of total economic output, the development of water services has not kept pace with economic growth. Moreover, in 2002, water coverage was only 11% in small towns, compared to 67% in large cities.

4. Following enactment of Decree No. 117/2007/ND-CP of 11 July 2007, the water and sanitation⁵ sector in Viet Nam is undergoing a significant transition. This new legislation changes the definition of water as a social good to water as a commercial good. The Government is enforcing equitization⁶ of water companies into joint stock entities, which will be incorporated as fully commercial operations. Some companies are expected to be listed on the stock exchange as initial public offerings. Full cost recovery is also a key component of the legislation, and water tariffs have been rising since its introduction.

¹ ADB. 2006. *Country Strategy and Program, Viet Nam, 2007-2010*. Manila.

² The technical assistance first appeared in the business opportunities section of ADB's website on 4 April 2008.

³ In Viet Nam, the urban population was only 25%, compared with 37% in the People's Republic of China and 42% in Indonesia.

⁴ World Bank. 2005. *World Bank Infrastructure Strategy 2005*. Washington, DC.

⁵ Similar legislation exists in wastewater, drainage, and solid waste.

⁶ A privatization process, in which provincial state-owned water companies are corporatized and incorporated into companies with shares.

5. Under the Water Financing Program 2006–2010, ADB is preparing several urban water supply projects—like the proposed project—which will: (i) draw lessons from project preparation and implementation to define a capacity-building program to strengthen operations and improve service delivery; and, (ii) in consultation with the Government, develop and adopt a model for sustainable lending to the water and sanitation sector. Simultaneously, ADB is coordinating with other donors active in Viet Nam’s water supply and sanitation sector. In Hanoi and Ho Chi Minh City, the World Bank is preparing and implementing water projects in parallel with ADB. In other operations, the World Bank is shifting its focus from project lending to sector lending through local government investment funds. In Da Nang, where ADB is also developing a water supply project, and also in Ho Chi Minh City, the Government of the Netherlands is financing service contracts and twinning arrangements with Dutch operators. The World Bank and the Japan Bank for International Cooperation (JBIC) are also implementing several urban environment projects, which include wastewater and sanitation components. Finally, Agence Française de Développement is working through a sector approach with the Viet Nam Development Bank for its Mekong Water Supply and Sanitation Project.

6. Thua Thien Hue Province has an area of 5,054 square kilometers and a population of 1,136,400 distributed over seven districts and one city, which are further split into 150 communes and wards. Thua Thien Hue Water Supply Company (TTHWSC), one of the best performing water companies in Viet Nam, was established in 1909 and is responsible for water supply to Hue City and other districts. As of 2005,⁷ TTHWSC had about 523 persons working in water operations, corresponding to an average of 8.2 staff per 1,000 connections. TTHWSC manages 12 water production and treatment companies,⁸ with a total capacity of over 105,000 cubic meters per day (cmd) and over 63,000 connections—all metered. The water supply coverage reaches 97% of Hue City, but is only between 3% and 40% for all the other districts, due to low population density in mountainous areas, resulting in an average provincial water supply coverage of below 45%. TTHWSC has annual revenues of about \$3.5 million, and its average water tariff of \$0.20 per cubic meter is well below the national average. With an excellent operating ratio of 0.47, demonstrating the high operational efficiency, the low level of operation expense, and the impressive nonrevenue water at only 15%, TTHWSC operates in a positive cashflow environment. It has recently accelerated its collection program, with the result that the collection ratio is above 100%, indicating a collection of arrears. TTHWSC now needs to provide more water to its consumers and expand coverage to unserved households.

7. TTHWSC plans to double water supply coverage by 2015 through a modern operation and to deliver water in a sustainable manner. To achieve these objectives, TTHWSC is seeking assistance to finance two physical components: (i) additional production capacity of 125,000 cmd, and (ii) strengthening and extension of the primary transmission and secondary distribution network to increase provincial water supply coverage from 45% to over 75%. The estimated cost of these investments is about \$43 million. In addition, TTHWSC has requested assistance with defining a comprehensive institutional strengthening program to (i) develop a framework for PPPs and private sector participation to assist TTHWSC in its equitization process; (ii) enhance quality assurance through certification under the International Organization for Standardization (ISO), resulting in a strengthening of operations and improved service delivery; and (iii) define a policy for water conservancy and energy efficiency that will supplement the Government’s focus and assist TTHWSC in preparing investments that will address these issues.

⁷ Data extracted from the Continuous Improvement Benchmarking from 2005 (ADB. 2007. *Data Book of Southeast Asian Water Utilities*. Manila).

⁸ Vạn Niên raw water company, and water production plants at A Lưới, Quảng Tế 1, Quảng Tế 2, Dã Viên, Tứ Hạ, Nam Đông, Phú Bài, Chân Mây, Bạch Mã, Hoà Bình Chương, Bình Thành, and Bến Ván.

8. Hue City suffers from annual flooding and emerging domestic pollution in city canals and the Huong River, which passes through the city. Outside Hue City, households rely on onsite sanitation systems. JBIC is starting a feasibility study for sanitation and drainage in Hue City and will implement a centralized sewerage system, with the construction of combined sewers and a secondary treatment plant. Its proposed project will also develop a city drainage facility and include dredging canals in the city's southern area, which is most prone to flooding. In the other part of the Province, households mostly rely on communal or onsite sanitation.

III. THE PROPOSED TECHNICAL ASSISTANCE

A. Impact and Outcome

9. The impact of the proposed project will be improved urban livability in Thua Thien Hue Province through development of water supply infrastructure and the sustainable provision of potable water.

10. The PPTA will examine the constraints that impact service delivery and the sustainability of water operations in Thua Thien Hue Province and will make recommendations on addressing them. The outcome of the PPTA will be the agreed design of a project that will increase the level and sustainability of water service through a combination of new investments in production capacity, strengthening, and extension of the distribution network, as well as an institutional strengthening program. An initial poverty reduction and social analysis for the project is provided in Appendix 2.

B. Methodology and Key Activities

11. The PPTA will prepare a project to be implemented in three parts, as set out below.

- (i) **Part I: Production.** The PPTA will examine the current and near-future water demand in the province's seven districts and one city and confirm the requirement for additional capacity. The output will be a feasibility study that identifies and prepares project components suitable for ADB financing, including a water production plant of 125,000 cmd capacity. The PPTA will also prepare options for water supply for remote or isolated communities in the province.
- (ii) **Part II: Transmission and distribution network.** Based on the objective to achieve 75% water supply coverage in the province, the PPTA will prepare a feasibility study for about 326 kilometers (km) of transmission network and about 950 km of distribution and service network. The PPTA will also develop cost effective solutions that promote autonomous water supply for these communities with associated sanitation.
- (iii) **Part III: Institutional strengthening.** The PPTA will: (a) define a framework for PPPs and private sector participation, especially regarding the equitization and the delegated management or lease of the operation and maintenance activities of TTHWSC; (b) finalize the financing plan and the funding requirement and define TTHWSC's financing baseline and its capacity to borrow; (c) define a policy for water conservation through demand management and review the scheduling of water production projects; (d) design a strategy for energy efficiency through an energy audit and a prioritized investment plan based on cost recovery for possible ADB financing; and (e) define the framework for

optimizing the provision and the delivery of water supply services during the ensuing project of ISO certification.⁹

C. Cost and Financing

12. The cost of the PPTA is estimated at \$1,700,000 equivalent. The PPTA will be financed on a grant basis by the Netherlands Trust Fund for the Water Financing Partnership Facility and administered by ADB in the amount of \$1,500,000. The Government will fund the remaining \$200,000 equivalent through in-kind contributions of (i) office space for a maximum of 20 consultants and access to international telephone and internet services;¹⁰ (ii) logistical support; and (iii) counterpart staff to support the consultants and benefit from practical experience and knowledge transfer, including support for surveys to confirm resettlement data and any other essential information that may be identified during the PPTA. The Government has been informed that approval of the PPTA does not commit ADB to finance any ensuing project. A detailed cost estimate is provided in Appendix 3.

D. Implementation Arrangements

13. According to Decree No. 131/2006/ND-TTg, Thua Thien Hue Provincial People's Committee will be the Executing Agency (EA) for the PPTA with overall project responsibility. The EA will establish a project management unit, which will be suitably staffed for the duration of the PPTA implementation with a full-time director, an English-speaking coordinator, and two to five counterpart personnel. The project management unit will be responsible for the day-to-day collaboration with the PPTA consultants, other government agencies, and TTHWSC, and will coordinate with the private sector, civil society, water users, and other stakeholders. A steering committee composed of representatives from relevant agencies of the Thua Thien Hue Provincial People's Committee and other stakeholders will meet at least every 3 months to (i) review the progress of the PPTA, and (ii) provide strategic direction for the selection of investment proposals and the related financing plans.

14. The PPTA will be implemented over a period of 9 months from July 2008 to March 2009. Total consulting inputs will be about 95 person-months, consisting of 13 international consultants for 31 person-months and 13 national consultants for 64 person-months. The scope of work is broadly as follows (outline terms of reference are provided in Appendix 4).

- (i) **Project investment.** This task will be implemented over 9 months, to define and prepare Parts I and II of the PPTA (refer to para.11), including environmental and social safeguards and financial and economic analyses to meet ADB requirements, and two local feasibility studies to meet the Government's approval requirements. It is anticipated that 27 person-months of international and 60 person-months of national consultant services will be required for this part.
- (ii) **Institutional strengthening.** This task will be implemented over the duration of the PPTA and cover Part III of the PPTA (refer to para. 11). The consultants (about 4 person-months international and 4 person-months national) will work closely with TTHWSC in defining the needs and requirements for the institutional strengthening program to be implemented as part of the ensuing project.

⁹ Certification under: (i) ISO 9001 for all design, operation, and maintenance activities; (ii) ISO 14001 for safety and environment; (iii) ISO 18001 for occupational health and safety in the operation; and (iv) the new ISO 24512 for the management of drinking water utilities.

¹⁰ The PPTA consultants will pay for communication costs.

15. The consultants will be engaged by ADB as (i) an international firm in association with a local firm, recruited under fixed budget selection through simplified technical proposals; and (ii) individual consultants, as required, with the contingencies. Fixed budget selection is appropriate since the PPTA is limited to the production of two simple feasibility studies and an institutional strengthening program with detailed terms of reference, input consultant time, and deliverables. The firm and the individual consultants will be recruited in accordance with ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time). Equipment will be procured in accordance with ADB's *Procurement Guidelines* (2007, as amended from time to time). All the equipment purchased under the PPTA will be turned over to the EA at the end of the project.

16. The PPTA will include three workshops in Hue City to increase stakeholders' participation in discussing the investment proposals and ensure good dissemination of the proposed project components. The first workshop will be the kick-off workshop, the second workshop will be during the PPTA's midterm review, and the last workshop will be held at the submission of the draft final report.

17. Reporting requirements for the consultants will include: an inception report, three progress reports, and a final report. In addition, the consultants will prepare a feasibility study report for the investment component of the project, and a series of reports for each of the items under the institutional strengthening program. All documents, including administrative reports, will be produced in English and in Vietnamese.

IV. THE PRESIDENT'S RECOMMENDATION

18. The President recommends that the Board approve ADB administering technical assistance not exceeding the equivalent of \$1,500,000 to the Government of Viet Nam to be financed on a grant basis by the Netherlands Trust Fund for the Water Financing Partnership Facility for preparing the Hue Water Supply Project.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators ^a	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<p>Impact</p> <p>To provide better water supply infrastructure and sustainable provision of potable water in Thua Thien Hue Province</p>	<p>Provincial water supply coverage increases from 45% to over 75%.</p> <p>Water service is continuous, of drinking water quality (based on Viet Nam water quality national standards), and is financially sustainable (debt service ratio greater than 1).</p> <p>Customer complaints are recorded and reduced by 10% per year over the project's duration.</p>	<p>Benchmarking report from South East Asian Water Utilities Network and Ministry of Construction</p> <p>Yearly audited financial statements</p> <p>Public feedback and citizen report card</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • General political and socioeconomic conditions are stable or favorable. • The Government, TTHWSC, and other concerned agencies sustain best practices in water supply delivery beyond project completion. <p>Risks</p> <ul style="list-style-type: none"> • Natural disasters or other catastrophes deplete fresh water resources. • Factors other than water supply severely affect the economic situation or health of the population in the project area. • Political interference prevents successful implementation of the institutional strengthening program and threatens the financial sustainability and competitiveness of the water supply system.
<p>Outcome</p> <p>Agreed design of new investments and an institutional strengthening program</p>	<p>Counterpart endorses feasibility studies on new production capacity and strengthening and expansion of the distribution network.</p> <p>The Government and water company agree on the content of proposed institutional strengthening program.</p>	<p>ADB PPTA completion report</p> <p>Official reports and feedback from TTHWSC, Ministry of Planning and Investment, and Ministry of Construction</p>	<p>Assumption</p> <ul style="list-style-type: none"> • The Government, TTHWSC, and other concerned agencies are committed to timely and successful completion of the project. <p>Risk</p> <ul style="list-style-type: none"> • Differences between central and local governments, or between local governments and

	Recommended frameworks for different aspects of the program are adopted by TTHWSC, and early steps are taken toward implementation.		TTHWSC, significantly delay approval process of the feasibility study and institutional strengthening program.
<p>Outputs</p> <p>Investment plan in additional production capacity, strengthening, and extension of primary and secondary distribution</p>	<p>Assessment of water resources in the province, including surface water, aquifers, reservoirs, and existing water supply systems for each district</p> <p>Completion of new feasibility and project components for additional production capacity of 125,000 cmd</p> <p>Completion of feasibility study and project components for 326 km of pipes (diameter 100–1,000 mm) and 950 km of pipes (diameter 100 mm and under) including preliminary design, safeguard reports, and drawings (for each district and Hue)</p>	<p>Consultant working papers and reports, including feasibility study and progress reports</p> <p>Workshops and stakeholder feedback from consultation activities and surveys</p> <p>ADB PPTA review missions and back-to-office reports</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • The Government successfully mobilizes various stakeholders and secures counterpart contributions. • The new decree on water supply is enforced to allow for sustainable operations. <p>Risk</p> <ul style="list-style-type: none"> • Information and water sector data necessary to undertake feasibility studies are not made available to the PPTA consultants.
Design of an institutional strengthening program	Design of the various aspects of the institutional strengthening program are appropriate, timely, coherent and compatible	Government and TTHWSC policy papers	

Activities with Milestones	Inputs
<p>1. Feasibility study (months 1–9)</p> <p>1.1 Information on existing situation and services provided (month 1)</p> <p>1.2 Planning and demand forecasting for future development (month 3)</p> <p>1.3 Technical requirements for future development, water supply (month 6)</p> <p>1.4 Technical requirements for future development, wastewater (month 6)</p> <p>1.5 Institutional assessment (month 6)</p> <p>1.6 Financial and fiscal assessment (month 6)</p> <p>1.7 Assessment of tariffs (month 6)</p> <p>1.8 Economic analysis (month 9)</p> <p>1.9 Other issues to address, e.g., procurement, risk analysis, water supply metering, environmental protection, labor health and safety, socioeconomic surveys including indigenous people (month 9)</p> <p>1.10 Project implementation plan (month 9)</p> <p>2. Institutional strengthening program (months 1–9)</p> <p>2.1 Energy audits conducted for each operational site and recommendations made for energy savings and energy efficiency (month 6)</p> <p>2.2 Review of current policies of Thua Thien Hue Province for water conservancy and ensuing recommendations (month 6)</p> <p>2.3 Review current certification obtained by TTHWSC, assess readiness to comply with ISO 14001 (environment protection and safety), ISO 24512 (management of water utilities), and, propose a certification program with budget and schedule (month 9)</p> <p>2.4 Prepare options for the Thua Thien Hue People's Committee and for the water company on how to be equitized and publicly listed as a joint stock company under a PPP, review the asset inventory and asset management system in place, and propose a program to implement asset management as part of the project (month 9)</p>	<p>Netherlands Trust Fund for the Water Financing Partnership Facility, administered by ADB: \$1.50 million</p> <ul style="list-style-type: none"> • Consulting services (31 person-months of international consultant services and 64 person-months of national consultant services): \$1.05 million • Travel, equipment, administrative, and other costs: \$0.45 million <p>The Government: \$0.20 million</p> <ul style="list-style-type: none"> • Counterpart staff: \$0.12 million • Other in-kind contribution: \$0.08 million

ADB = Asian Development Bank, cmd = cubic meters per day, ISO = International Organization for Standardization, km = kilometer, mm = millimeter, PPP = public-private partnership, PPTA = project preparatory technical assistance, TTHWSC = Thua Thien Hue Water Supply Company.

^a Specific target figures and deadlines for quantifiable indicators are not yet established and will be determined during the project preparatory technical assistance.

INITIAL POVERTY AND SOCIAL ANALYSIS

Country/Project Title: Viet Nam/Hue Water Supply Project

Lending/Financing Modality: Project/Preparatory Technical Assistance Department/ Division: Southeast Asia Department/ Infrastructure Division

I. POVERTY ISSUES

A. Linkages to the National Poverty Reduction Strategy and Country Partnership Strategy

1. Based on the country poverty assessment, the country partnership strategy, and the sector analysis, describe how the Project would directly or indirectly contribute to poverty reduction and how it is linked to the poverty reduction strategy of the partner country.

The country strategy and program for 2007–2010 stresses the importance of maintaining sustainable equitable economic growth to achieve further reductions in poverty. Viet Nam's success in reducing the share of the population living below the poverty line (from 70% in 1990 to 27% in 2005) was based on rapid but equitable economic growth. The proposed project addresses the sustainable water supply for the short and medium term for Thua Thien Hue Province in the Central Region. The proposed project is directly linked to the agenda of assisting and supporting infrastructure development and public–private partnerships (PPPs) in infrastructure in the Central Region to alleviate migration pressure on Hanoi and Ho Chi Minh City, from the country strategy and program for 2007–2010. In addition, the proposed project will include an institutional strengthening program to assist TTHWSC to improve its efficiency and service. These measures will ultimately improve the quality of life, working environment, ability to attract investment into the city, and access to services, and will therefore help to reduce poverty. The Government's poverty reduction strategy will be reviewed to identify the impact of such large-scale infrastructure projects on poverty reduction in Viet Nam.

B. Targeting Classification

1. Select the targeting classification of the project:

General Intervention; Individual or Household (TI-H); Geographic (TI-G); Non-Income MDGs (TI-M1, M2, etc.)

2. Explain the basis for the targeting classification:

The proposed project will look at improving service delivery and expanding coverage in Thua Thien Hue Province, which does not meet the criteria for TI-G classification set in the *Handbook on Poverty and Social Analysis* (2001), which is to have a significantly higher poverty incidence than the national average.

C. Poverty Analysis

1. If the project is classified as TI-H, or if it is policy-based, what type of poverty impact analysis is needed?

N/A

2. What resources are allocated in the PPTA/due diligence?

A total of 6 person-months of international and national consultant services and a provisional sum of \$20,000 for the social assessment survey.

3. If GI, is there any opportunity for pro-poor design (e.g., social inclusion subcomponents, cross subsidy, pro-poor governance, and pro-poor growth)?

The water tariff structure will be pro-poor and focus on providing the urban poor, vulnerable, and disadvantaged populations with access to services and will use a citizen report card to measure the services.

II. SOCIAL DEVELOPMENT ISSUES

A. Initial Social Analysis

Based on existing information:

1. Who are the potential primary beneficiaries of the project? How do the poor and the socially excluded benefit from the project?

The objective of the proposed project is to enable TTHWSC to increase coverage for water supply from 45% to over 75%. The project will directly benefit people living in the province and improve the level of service to all users. The tariff includes a subsidized "lifeline" of 4 cubic meters of water per person per month, including the connection cost, to promote access and the use of the service by vulnerable and disadvantaged groups in the province.

2. What are the potential needs of beneficiaries in relation to the proposed project?

The project will provide affordable and clean water to prospective users, such as households, industries, commerce, and institutions (e.g., hospitals and public buildings).

3. What are the potential constraints in accessing the proposed benefits and services, and how will the project address them?

Block tariffs and access to service are known to be counterproductive with the poorest segment of the urban population. The

project team will work with TTHWSC and the people's committee to incorporate the one-off cost of accessing the service into the water tariff. Miscellaneous programs, such as output-based aid and "small pipe networks", will be examined and considered for inclusion in the proposed project.

B. Consultation and Participation

1. Indicate the potential initial stakeholders.

Stakeholders include the water users, TTHWSC, and the local government.

2. What type of C&P is required during the PPTA or project processing (e.g., workshops, community mobilization, involvement of nongovernment organizations and community-based organizations, etc.)?

There will be several public consultation meetings over the course of project preparation, including three workshops, a resettlement town hall meeting, willingness to pay and affordability surveys, and a water tariff public consultation. The proposed project would strengthen TTHWSC's customer service department and its management of user complaints, and develop a plan addressing communication between TTHWSC and users.

3. What level of participation is envisaged for project design?

- Information sharing Consultation Collaborative decision making Empowerment

4. Will a C&P plan be prepared?

- Yes No Please explain.

A C&P plan will be prepared by the PPTA consultant during the social assessment survey and focus groups discussions to seek the views from the project population. The C&P plan will be used in formulating a communication plan for disseminating information between TTHWSC and the users and in defining performance indicators to measure the level of service through the citizen report card.

C. Gender and Development

1. What are the key gender issues in the sector/subsector⁸ that are likely to be relevant to this project/program?

The consultants will conduct a detailed gender assessment for the households affected by resettlements. A gender plan for addressing gender concerns in the proposed project related to resettlement, HIV/AIDS, safety measures, and capacity building of the EA and relevant stakeholders will be prepared. The communication plan will be gender focus to promote and build awareness.

2. Does the proposed project/program have the potential to promote gender equality and/or women's empowerment by improving women's access to and use of opportunities, services, resources, assets, and participation in decision making?

- Yes No Please explain.

The proposed Project will not directly lead to women's empowerment; however, the improved services and the expansion of the distribution network will benefit women through improved access to a potable water supply.

3. Could the proposed Project have an adverse impact on women and/or girls or to widen gender inequality?

- Yes No Please explain. NA.

III. SOCIAL SAFEGUARD ISSUES AND OTHER SOCIAL RISKS

Issue	Nature of Social Issue	Significant/Limited/ No Impact/Not Known	Plan or Other Action Required
Involuntary Resettlement	Relocation (temporary and permanent) will be required along the construction route of the transmission network.	A significant resettlement impact is expected.	<input checked="" type="checkbox"/> Full Plan <input type="checkbox"/> Short Plan Resettlement Framework <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Indigenous Peoples	Some sites could be located within ethnic minority areas.	The project team expects limited impact on indigenous people living in the project area, to be determined during the course of the PPTA and the social assessment survey.	<input checked="" type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action Indigenous Peoples Framework <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Total Cost
A. Netherlands Trust Fund for the Water Financing Partnership Facility^a	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	780.0
ii. National Consultants	270.0
b. International and Local Travel	100.0
2. Equipment ^b	20.0
3. Training, Seminars, and Conferences	30.0
4. Surveys and Energy Audits	100.0
5. Miscellaneous Administration and Support ^c	40.0
6. Representatives for Contract Negotiations	10.0
7. Contingencies	150.0
Subtotal (A)	1,500.0
B. Government Financing	
1. Office Accommodation	120.0
2. Remuneration and Per Diem of Counterpart Staff	80.0
Subtotal (B)	200.0
Total	1,700.0

^a Administered by the Asian Development Bank.

^b Purchase of information technology equipment, such as photocopier, computers, printers, and plotters.

^c Includes translation.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Introduction

1. The proposed project includes the provision of water to seven districts and one city in Thua Thien Hue Province. The Thua Thien Hue People's Committee is the Executing Agency and chair of the project steering committee. The project management unit is located at the Thua Thien Hue Water Supply Company (TTHWSC), which is responsible for water supply in the province except in the district of A Luoi.

2. The project preparatory technical assistance (PPTA) will use an international firm in association with a local firm (hereinafter referred to as "the consultants") recruited under fixed budget selection using short technical proposals to define the institutional strengthening program and to carry out a feasibility study for water supply production and distribution. A total of 31 person-months of international and 64 person-months of national consultant services will be required, distributed as shown in Table A4.

Table A4: Summary of Consultants Required
(person-months)

Consultants	International	National	Total
A. Feasibility Studies			
Team Leader	9.0	9.0	18.0
Civil Engineer	5.0	9.0	14.0
Mechanical and Electrical/Process Engineer	3.0	9.0	12.0
Draftsman (2 positions)	0.0	12.0	12.0
SCADA Specialist	1.0	0.0	1.0
GIS Specialist	1.0	0.0	1.0
Environment Specialist	2.0	5.0	7.0
Resettlement Specialist	2.0	5.0	7.0
Social Development Specialist	2.0	3.0	5.0
Gender Specialist	0.0	3.0	3.0
Financial Analyst	1.0	3.0	4.0
Economist	1.0	2.0	3.0
Subtotal (A)	27.0	60.0	87.0
B. Institutional Strengthening			
Energy Savings Specialist	1.0	0.0	1.0
Water Conservancy Specialist	1.0	1.0	2.0
ISO Certification Specialist	1.0	1.0	2.0
PPP/Water Operation Specialist	1.0	2.0	3.0
Subtotal (B)	4.0	4.0	8.0
Total	31.0	64.0	95.0

GIS = geographic information system, ISO = International Organization for Standardization, PPP = public-private partnership, SCADA = supervisory control and data acquisition.

Source: Asian Development Bank estimates.

B. Feasibility Study

3. The consultants will implement a feasibility study over 9 months to (i) design the project components for increased water production and coverage of the transmission, distribution, and service network in the province; and (ii) prepare a support matrix for the provision of autonomous water supply and sanitation systems for remote locations. The consultants will also prepare all the necessary safeguard documents, including social assessment, financial and economic analyses, project implementation plan, and procurement plan. The estimated inputs for the feasibility study are 27 person-months of international consultants and about 60 person-months of national consultants.

4. The study's scope will include the activities listed as follows.

- (i) Information on the existing situation and services provided will be detailed, including:
 - (a) existing services, e.g., the water supply, wastewater, and drainage;
 - (b) the current situation with regard to population and services available;
 - (c) site conditions, focusing on those likely to impact project construction, such as soil condition and flooding potential;
 - (d) the scope of the proposed project and the total investment; and
 - (e) project rationale, showing the increase in coverage and access to water supply.
- (ii) Planning and demand forecasting for future development will be conducted, including:
 - (a) reviewing and commenting on the existing water supply master plan;
 - (b) developing a demand forecast model for a 10-year period with links to 2 years of historical information, and ensuring consistency with the financial model (refer to para. 6); and
 - (c) establishing current and future water supply demand figures for each district and Hue City. The consultants will investigate how the supply to all consumers can be separately metered, and how consumers will be billed for water consumed.
- (iii) Technical requirements for future development in wastewater and water supply will be outlined, including:
 - (a) how staging of the treatment plant can be achieved to correspond with the demand forecast and how treated water from the plant will comply with Vietnamese national standards;
 - (b) how the design of the network system will suit demand projections for staged development;
 - (c) a process flow chart and full details on control system implementation;
 - (d) a list of all major equipment and construction materials required for the water supply system, which will form the basis for the preparation of the construction cost estimate; and
 - (e) liaising with the Japan Bank for International Cooperation (JBIC)-financed wastewater project to examine provision of wastewater management in areas not covered by the JBIC project.

5. **Institutional Assessment.** The consultants will prepare a detailed description of the proposed project's city, districts, and communes. This will include descriptions of current and/or planned future organizational setups and regulatory responsibilities, focusing on fiscal policies and municipal finance, municipal and urban planning, development of urban infrastructure, construction oversight, water resource management, water companies, environmental regulations relevant to urban infrastructure, and pricing regulations. Other matters to be considered will be tariffs, connection fees and subsidy policies, corporate charters and bylaws, and ownership of TTHWSC and financial relations with supervising authorities (e.g., transfer of bills collected or profit and/or loss sharing arrangements).

6. **Financial and Fiscal Assessment.** The consultants will describe the current and near-future fiscal situation of TTHWSC and the province, including breakdown of revenues, financing, and expenditures, highlighting key policy issues such as priority investment areas or special purpose vehicles. The consultants will conduct a financial management capacity assessment of TTHWSC and propose a financial management system. The consultants will also finalize financial and economic analyses of the proposed project components, according to the Asian Development Bank's (ADB) latest guidelines for the financial management and analysis of projects.¹ To facilitate the analysis of the water company, the consultants will develop a financial model that produces the needed forecasts over a 12-year operational period, with links to a minimum of 3 years of historical information. The financial model will separate assumptions, calculations, and outputs (i.e., reports) and will be presented as a separate paper and a computerized model, with all major assumptions and calculations documented and discussed. The financial analysis will address a 10-year operational period; considerations will include the cost of chemicals, power consumption, and the design life of equipment used, as well as any associated financial costs.

7. **Assessment of Tariffs.** The water supply tariffs and tariff structure will be reviewed and analyzed. Detailed tariff assumptions will be a part of the financial model and include tariffs for water and wastewater.

8. **Economic Analysis.** The consultants will prepare an analysis of the economic costs and benefits of the project. Economic analyses will follow ADB's guidelines for the economic analysis of water supply projects.²

9. **Environmental Safeguards.** The proposed project has been classified as category B, since it is expected that most of the project components selected will have minimal impact on the environment. Therefore, the consultants will prepare category B project components and produce an initial environmental examination and summary according to ADB's *Environment Policy* (2002), *Environmental Assessment Guidelines* (2003), and the *Operations Manual* section on the environment.³

10. **Involuntary Resettlement and Indigenous People.** The consultants will review the initial resettlement classification for each of the selected proposed project components and finalize safeguard compliance for resettlement. It is expected that most of the project components selected will be category A, and that a full resettlement plan will be required. The full resettlement plan will follow ADB's *Policy on Involuntary Resettlement* (1995), guided by the *Operations Manual* section on involuntary resettlement,⁴ and other relevant ADB policies and guidelines, e.g., *Handbook on*

¹ ADB. 2005. *Guidelines for the Financial Management and Analysis of Projects*. Manila.

² ADB. 1998. *Guidelines for the Economic Analysis of Water Supply Projects*. Manila.

³ ADB. 2006. *Operations Manual*. Section F1: Environmental Considerations in ADB Operations. Manila.

⁴ ADB. 2006. *Operations Manual*. Section F2: Involuntary Resettlement. Manila.

Poverty and Social Analysis (2001), *Policy on Gender and Development* (1998), *Policy on Indigenous Peoples* (1998), *Accountability Mechanism* (2003), and *Public Communications Policy* (2005). The consultants will manage the field surveys on inventory losses and census as well as a socioeconomic survey to profile the proposed project area and the social and poverty impact, which will serve as the baseline assessment and reference for impact surveys conducted upon completion and after several years of operation. If the social analysis determines that ethnic minorities are present in the proposed project area and (i) are likely to be affected by the project because of land acquisition and/or resettlement, or (ii) are disadvantaged or vulnerable because of their social or cultural identity, a combined ethnic minority development and resettlement plan will be prepared or ethnic minority-specific actions undertaken to address the concerns of ethnic minorities in accordance with ADB's *Policy on Indigenous Peoples*. The social assessment will also address matters such as ethnic minorities, urban poor, disadvantaged and vulnerable persons, and their ability to afford and willingness to pay for the new and improved services. The consultants will take the findings of the report into account in assessing water demand.

11. The consultants will prepare an implementation and procurement plan, which will define the following.

- (i) **Administrative arrangements and financial management capacity.** The consultants will detail the administrative arrangements and assess the financial management capacity of TTHWSC to implement the proposed project.
- (ii) **Organizational structure.** The organizational structure for management and delivery of the proposed project will be outlined, showing responsibilities and reporting guidelines.
- (iii) **Implementation plan.** The consultants will outline a tentative timetable for project implementation. This will show the various stages of implementation, including (a) feasibility study and design, (b) bidding and procurement, and (c) construction of the project. The plan will outline the reporting and approval process at various stages, and the proposed arrangements for monitoring and evaluation of project implementation.

C. Institutional Strengthening Program

12. The institutional strengthening program will be implemented over 6 months, in parallel to the feasibility study, and will require 4 person-months of international consultant services, supported by 4 person-months of national consultant services. The program will define a series of proposals or policy dialogues for discussion and evaluation by TTHWSC and by the project steering committee, to be implemented under the ensuing project. In addition, the private sector participation specialist will have at least 10 years of operation and maintenance expertise at a senior management level in a private or public-private company.

- (i) **Energy efficiency.** An international energy savings specialist (1 person-month) will supervise energy audits for each of up to 15 locations (e.g., pumping stations, treatment plants, and headquarters) and finalize recommendations for energy savings and energy efficiency. The audits will be performed by a national firm with more than 5 years of experience in this type of work, and with the necessary resources, material, and equipment.
- (ii) **Water conservancy:** An international water conservancy specialist (1 person-month) supported by a national consultant (1 person-month) will review the current policies

of TTHWSC and the province pertaining to water conservation and propose a series of measures for water conservation, with a budget and schedule.

- (iii) **Certification.** An International Organization for Standardization (ISO) certification specialist (1 person-month) supported by a national consultant (1 person-month) will:
 - (a) review the ISO 9001 certification already obtained by TTHWSC;
 - (b) assess readiness to comply with ISO 14001 and ISO 18001 for environmental protection and safety and with ISO 24512 for the management of water utilities; and
 - (c) propose a certification program with a budget and schedule.
- (iv) **Private sector participation.** It is expected that according to Decree No. 117/2007/ND-CP, TTHWSC will be listed as a joint stock company under a public–private partnership (PPP). An international PPP consultant (1 person-month) supported by a national consultant (2 person-months) will prepare options for this listing process, focusing on private sector participation. The consultants will also review the asset inventory and management system in place and propose an implementation program for asset management.

D. Deliverables

13. Reports will be prepared in English and translated into Vietnamese to facilitate understanding and decision-making by the Government. Reports will be submitted in both electronic and paper form. All data and analyses will be consolidated and provided in electronic form. There are three workshops planned to present and discuss the status of the study, the scope of the investment, and the proposed institutional and financial arrangements for the project's sustainability.