



Technical Assistance Report

Project Number: 41456
October 2008

Socialist Republic of Viet Nam: Preparing the Da Nang Water Supply Project (Financed by the Multi-Donor Trust Fund under the Water Financing Partnership Facility)

CURRENCY EQUIVALENTS

(as of 2 October 2008)

Currency Unit	–	dong (D)
D1.00	=	\$0.000060295
\$1.00	=	D16,585

ABBREVIATIONS

ADB	–	Asian Development Bank
DAWACO	–	Da Nang Water Supply Company
DNWSP	–	Da Nang Water Supply Project
EA	–	executing agency
ISO	–	International Organization for Standardization
PMU	–	project management unit
PPTA	–	project preparatory technical assistance

WEIGHTS AND MEASURES

m ³ /day	–	cubic meter per day
km	–	kilometer
km ²	–	square kilometer

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.

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I. INTRODUCTION

1. During the 2007 Country Review Programming Mission and the water financing conferences held in September 2006 in Manila and March 2007 in Hanoi, the Government of Viet Nam requested the Asian Development Bank (ADB) for assistance to prepare the Da Nang Water Supply Project. Viet Nam is one of five target countries for ADB's Water Financing Program, which aims to double ADB lending in the water and sanitation sector by 2010. The project is proposed for financing under the Water Financing Partnership Facility managed by ADB. It addresses the provision of a sustainable supply of potable water in the short and medium terms for the city of Da Nang. The project is directly linked to the agenda of supporting infrastructure development and public-private partnerships in infrastructure as set out in the country strategy and program for Viet Nam (2007–2010).¹ It contributes to achieving Millennium Development Goal 7 (“Ensure environmental sustainability”), specifically to Target 10 (“Halve by 2015 the proportion of people without sustainable access to safe drinking and basic sanitation”),² and to the corresponding Viet Nam Development Goals.³

2. An ADB mission visited Da Nang in August 2007 to undertake fact-finding for project preparatory technical assistance (PPTA) for the proposed project. Agreement was reached on the impact, outcome, outputs, implementation arrangements, cost, and financing arrangements for the PPTA. The design and monitoring framework for the PPTA⁴ is in Appendix 1.

II. ISSUES

3. Da Nang is a class I city and is one of the largest in Viet Nam. The city had a population of about 800,000 in 2006, and this is expected to grow to 968,000 in 2010 and 1,415,000 in 2020. In recent years, Da Nang has made rapid socioeconomic development gains. While Viet Nam's economy is growing at more than 8% per annum, Da Nang's economy is growing substantially faster. At around 13%⁵ per annum in 2006, it had the highest growth rate in Viet Nam. This growth rate places a very serious strain on the city's already inadequate infrastructure, and not least on its water supply system. The Master Plan 1996–2010 was modified in 1999 to take into consideration this rapid growth. The new Master Plan 2010, approved in 2002 by the Prime Minister, reorients investment towards infrastructure. Over the past few years, Da Nang has constructed several industrial zones, residential estates, and special areas for the development of cultural and educational activities. Real estate construction continues apace, sparked by the growing interest of both local and international investors.

4. Increasing water demand coupled with insufficient investment in water supply service management and water supply infrastructure has exacerbated important constraints on the water supply system, as outlined below. Da Nang Water Supply Company (DAWACO) currently produces about 120,000 cubic meters of water per day (m³/day) from surface water. The level of unaccounted for water⁶ is about 40%, even though most connections are operating with water meters.

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

² Source: *UNDP website* at www.undp.org/mdg/.

³ Source: *UNDP Viet Nam website* at www.undp.org.vn/undpLive/Content/What-We-Do/Focus-Areas/Energy-and-Environment.

⁴ The TA first appeared in the business opportunities section of ADB's website on 6 December 2007.

⁵ Source: *Viet Nam Economic News Online* at www.ven.org.vn.

⁶ Unaccounted for water represents all the water produced that is not sold, minus identified losses and identified water supplied free of charge. In comparison, nonrevenue water corresponds to all water produced that is not sold (whether losses are identified or not).

5. The low service coverage of about 58%⁷ of the population in six urban districts is mainly resulting from prolonged underinvestment in asset management and water losses reduction, and insufficient water production and treatment capacity, compounded by rapid urban growth. Today, water demand is increasing quickly in line with the brisk economic growth and the requirements of the newly constructed industrial zones and special development areas. However, coverage and access to water supply still lags at 80% of actual demand.

6. In addition, the main source of surface water, which is treated by three water treatment plants, is threatened by high levels of turbidity, and by saline water intrusion during the dry season. Water tariffs are not yet at cost recovery level, with adverse impact on operation and maintenance, service quality, and self financing capacity. DAWACO is still a state-owned enterprise, but is to be equitized in 2009. It employs about 460 employees with a staff-connection ratio of 7 staff per thousand connections. Its annual revenues total about \$3 million and it has fixed assets valued at over \$20 million.

7. With full cost recovery, corporatization, and equitization now mandatory under the new Water Supply Decree 117/2007/ND-CP of 11 July 2007, DAWACO is under pressure to meet the growing demand and improve its service by modernizing operations, broadening private sector participation, and delivering water to the city in a sustainable manner. The Da Nang People's Committee is examining the implications of the new decree and is requesting that ADB provide assistance in strengthening the water operations of DAWACO in order to improve service delivery, and to facilitate the pending corporatization of the utility.

8. In order to help overcome the above issues the Da Nang Water Supply Project will address in particular (i) exploring potential new water sources for future development, (ii) improving water production and treatment capacity, (iii) rehabilitation and expansion of the existing distribution network including reducing unaccounted for water, and (iv) strengthening DAWACO's institutional capacity.

9. The proposed technical assistance will focus primarily on water supply, as wastewater and drainage issues are being addressed under projects funded by the World Bank and the Japan Bank for International Cooperation. The World Bank, in particular, has been successfully implementing an extensive drainage and sanitation project in Da Nang over the last few years. This project addresses risks to the environment and public health of urban communities caused by the old, fragmented, and deteriorated drainage and sewerage systems.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

10. The project's impact will be to improve urban livability and economic competitiveness of Da Nang through developing water supply infrastructure and sustainable provision of safe water.

11. The PPTA will examine the constraints that most crucially affect the sustainability of water operations in the city of Da Nang and its peri-urban areas, and will make recommendations on the best way to address these. 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 into production capacity, extension and rehabilitation of the distribution network, and an institutional strengthening program that could be implemented

⁷ The company had about 382 kilometers (km) of main distribution pipe and 435 km in water connection pipes as of 2002–2003.

during a subsequent loan project. An initial poverty reduction and social analysis for the project is provided in Appendix 2.

B. Methodology and Key Activities

12. The PPTA, which will be implemented in three parts, will prepare a project following the Prime Minister's Resolution 59/2007/NQ-CP.⁸ The Project will be prepared in a consultative process, and provide measures for improved access of poor households and vulnerable groups to water supply services.

- (i) **Part I: Water resources.** A pre-feasibility study will include an initial assessment of potential water sources for future development, including but not limited to upgrading of existing water treatment plants and allocating water from irrigation facilities. The pre-feasibility study will be based on existing reports, studies, and data.
- (ii) **Part II: Water supply.** A feasibility study and basic design⁹ for (a) constructing a new water treatment plant (Cu De) with capacity of 120,000 m³/day including transmission main of about 16km length to connect to a planned hydro power station on the Cu De River;¹⁰ (b) strengthening and expanding the distribution network (including primary, secondary, and tertiary networks with 50,000 house connections); (c) ancillary network equipment, including for system control and data acquisition, a geographic information system, hydraulic modeling, and unaccounted for water; (d) strengthening water quality testing and laboratory installations; and (e) infrastructure for resettlement areas of the project (if required). As part of this feasibility study, there will be an assessment of water demand planning, including a review and update on the water demand and production forecast up to 2025 over six districts,¹¹ and also the residential estates and industrial zones in eight communes.¹² Peri-urban areas will be identified within the municipality boundary that are not serviced by DAWACO. Further, the study will propose localized or centralized solutions for water supply and sanitation, as appropriate.
- (iii) **Part III: Institutional development program.** As part of the institutional development program, the following activities will be conducted: (a) review and assess the current organizational structure and regulatory aspects for the water sector in Da Nang and make recommendations for institutional reform; (b) provide options for equitization and define a framework for public-private partnerships, and private sector participation (especially regarding the delegated management or lease of the water company's operation and maintenance activities); (c) define a policy for water conservation through demand management and review of water rights; (d) define a strategy for energy efficiency after completing an energy audit; and (e) define a framework for

⁸ The resolution states that local approval will be based on the feasibility studies' prepared under the PPTA.

⁹ Preparation of the feasibility study has to comply with relevant national laws, regulations, and standards, including the Prime Minister's Decision No. 48/2008/QĐ-TTg *Decision on Issuance of Common General Guidelines on Feasibility Study Preparation for Official Development Assistance (ODA) Projects Funded by the Five Banks (ADB, AFD, JBIC, KfW, World Bank). Hanoi. 2008.* Detailed design is not part of this TA and will be prepared under separate arrangements during implementation of the ensuing loan project.

¹⁰ Development of the hydropower station is not part of the proposed Da Nang Water Supply Project.

¹¹ Cam Le, Hai Chau, Lien Chieu, Ngu Hanh Son, Sown Tra, and Thanh Khe (City Center).

¹² Hoa Chau, Hoa Khuong, Hoa Lien, Hoa Nhon, Hoa Phong, Hoa Phuoc (Hoa Vang District), Hoa Son, and Hoa Tien.

optimizing the provision and delivery of water supply with International Organization for Standardization (ISO) certification.¹³

C. Cost and Financing

13. The PPTA's total cost is estimated at \$1,700,000. It will be financed on a grant basis in the amount of \$1,500,000 by the Multi-Donor Trust Fund¹⁴ under the Water Financing Partnership Facility, and administered by ADB. The Government will fund the remaining \$200,000¹⁵ through in-kind contribution of (i) office space (for a maximum of 20 consultants) with access to international telephone and internet (with the PPTA consultant paying communications costs); (ii) vehicles for site visits; and (iii) counterpart staff of about 80 person-months to support the PPTA consultant (including to provide support for topographic surveys, confirming resettlement data, and collecting any other essential information the need for which 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. Details of the cost estimates and financing plan are in Appendix 3.

D. Implementation Arrangements

14. Da Nang City People's Committee will be the Executing Agency (EA) with overall responsibility for the PPTA, and will establish a project management unit (PMU) within DAWACO. The PMU will be responsible for organizing the technical and administrative aspects of the PPTA, and day-to-day decisions affecting its conduct. The PMU will include suitably qualified and experienced counterpart staff to work alongside the PPTA consultants. PMU staff will include a PMU director from DAWACO, an English speaking coordinator, and 4–5 counterpart personnel for engineering, institutional, and financial matters. The PPTA consultant will provide full support to the PMU, and will work in close collaboration with the counterpart team. A steering committee chaired by Da Nang City People's Committee comprising senior officials from Da Nang City People's Committee agencies and other relevant stakeholders will be established to provide guidance and oversee the PPTA implementation. The steering committee will meet at least every 2 months.

15. The PPTA will require 130 person-months of consulting services (33 international and 97 national). This includes 8 person-months of unallocated consulting services, including three international and five national consultants. ADB will engage the consultants in accordance with the ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time) through (i) a firm, using the quality- and cost-based selection method with a quality-cost ratio of 80:20, and preparation of a simplified technical proposal; and (ii) as individual consultants for the unallocated portion of the person-months. DAWACO will be responsible for providing the agreed-upon counterpart resources. The consultant firm will provide international expertise in (i) water supply and civil engineering (14 person-months); (ii) water utility management (2 person-months); (iii) financial and economic analyses (4 person-months); (iv) institutional development (2 person-months); (v) social development and resettlement (3 person-months); (vi) environment (3 person-months); (vii) private sector participation (1 person-months); and (viii) ISO certification (1 person-months); and national expertise in (i) water supply and civil engineering (50 person-months); (ii) mechanical and electrical engineering (4 person-months); (iii) financial and economic analyses (8 person-months); (iv) institutional development (10

¹³ Certification under (i) ISO 9001 for design, operation, and maintenance; (ii) ISO 14001 for safety and environment; (iii) ISO 18001 for occupational health and safety; and (iv) ISO 24512 for management of drinking water utilities.

¹⁴ Contributors: the governments of Australia, Austria, and Norway.

¹⁵ Corresponding to 11% counterpart funding.

person-months); (v) social development and resettlement (10 person-months); (vi) environment (5 person-months); and (vii) energy efficiency (5 person-months). Unallocated consultant person-months (3 person-months international, and 5 person-months national) will serve to strengthen activities as needed. The outline terms of reference for the consultants are in Appendix 4.

16. The PPTA is expected to be implemented over 12 months, commencing in November 2008 and completing in October 2009. The consultants will prepare (i) an inception report by the end of month 1, (ii) an interim report by the end of month 4, (iii) a draft final report by the end of month 10, (iv) a final report 1 month after receiving comments, (v) monthly progress reports (2–3 pages), and (vi) other reports as may be required. Tripartite review meetings will be held after inception, at the interim report stage, and at the draft final report stage. The consultants will provide all reports (i) to the EA in 9 copies in English and 20 copies in Vietnamese, (ii) to ADB Manila 7 copies in English and 1 copy in Vietnamese, and (iii) to ADB (Hanoi, Vietnam Resident Mission) 2 copies in English and 2 copies in Vietnamese, all in printed and electronic form (MS Excel, MS Word, PDF-format, and other electronic format as required). Interim, draft final, and final report will include a separate report in English only using the standard ADB format for the report and recommendation of the President. Equipment will be procured in accordance with ADB's *Procurement Guidelines* (2007, as amended from time to time), and handed over to the EA upon completion of the PPTA.

17. The EA will provide the consultant with suitable office space, office furniture (including a sufficient number of standard desks, chairs, shelves, and closets), lighting, electricity, air conditioning, and access to phone lines. The consultant will cover costs for phone lines and internet access, while the EA will cover electricity costs. The EA will provide the consultant with free access to relevant information, studies, reports, and data as applicable.

18. The PPTA will include four workshops in Da Nang for representatives from the public agencies and other departments of the Da Nang People's Committee, DAWACO, central government agencies, civil society, and the private sector.

IV. THE PRESIDENT'S DECISION

19. The President, acting under the authority delegated by the Board, has approved ADB administering technical assistance not exceeding the equivalent of \$1,500,000 to the Government of the Socialist Republic of Viet Nam to be financed on a grant basis by the Multi-Donor Trust Fund under the Water Financing Partnership Facility for preparing the Da Nang Water Supply Project, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators^a	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>Impact Urban livability, economic competitiveness, and access to safe water are improved for the population of Da Nang.</p>	<p>A new water treatment plant, and a rehabilitated and expanded distribution network help address water scarcity in the dry season and help expand service coverage to 100% in 2020.</p> <p>Water supply service is continuous, is of drinking water quality, meets demand, and is financially sustainable.</p> <p>Positive change in the perception of the level of water supply service in the project area</p>	<p>Asian Development Bank (ADB) loan review mission back-to-office reports and aide memoires</p> <p>Investment project completion report</p> <p>Government demographic, economic, and water sector statistics</p> <p>Public feedback, public opinion surveys, and citizen report card</p> <p>ADB monitoring of baseline indicators</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • General political and socioeconomic conditions are stable and favorable. • The Government, the water company, and other agencies concerned sustain best practices in water supply delivery beyond completion of the project. <p>Risks</p> <ul style="list-style-type: none"> • Natural disasters or other catastrophes deplete fresh water resources. • Political interference prevents the successful implementation of the institutional strengthening program and threatens the financial sustainability and competitiveness of the water supply system.
<p>Outcome Agreed design of new investments in production capacity, extension and rehabilitation of the distribution network, and agreed design of an institutional strengthening program to be implemented during the subsequent loan project</p>	<p>Endorsement by counterpart of pre-feasibility study of potential future water source projects (end of month 12)</p> <p>Endorsement by counterpart of feasibility study and design of a new water treatment plant and of the strengthening and expansion of the distribution network (end of month 12)</p> <p>Government and water company agree to implement the proposed institutional strengthening program (end of month 12).</p>	<p>ADB project preparatory technical assistance (PPTA) completion report</p> <p>Official reports and feedback from the Da Nang Water Supply Company and other agencies</p> <p>Da Nang government and water company policy papers</p>	<p>Assumption</p> <ul style="list-style-type: none"> • Da Nang People's Committee, Da Nang Water Supply Company, and government agencies committed to timely and successful PPTA completion. <p>Risk</p> <ul style="list-style-type: none"> • External events delay completion and approval of the PPTA.
<p>Outputs 1. Plan for investment in additional water resources</p>	<p>Completion of pre-feasibility study for potential new water sources</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 missions and back-to-office reports</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • Effective participation of all project stakeholders • New decree on water supply is enforced <p>Risks</p> <ul style="list-style-type: none"> • Availability of sector data • Continued commitment of project stakeholders

Design Summary	Performance Targets/Indicators^a	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>2. Plan for investment in additional production capacity and distribution network expansion and rehabilitation that includes reducing unaccounted for water</p> <p>3. Design of an institutional strengthening program</p>	<p>Completion of feasibility study and basic design (including safeguard reports) for a new water treatment plant, transmission main, strengthening and expansion of the distribution network, and ancillary network equipment (end of month 12)</p> <p>Design of the various aspects of the institutional strengthening program is appropriate, timely, coherent, and compatible (end of month 12).</p>	<p>Technical assistance completion report</p> <p>Da Nang government and water company policy papers</p>	
<p>Activities with Milestones</p> <p>1. Water resources (end of month 12)</p> <p>1.1 Prepare a pre-feasibility study for initial assessment of additional water sources for future consideration.</p> <p>2. Water supply (end of month 12)</p> <p>2.1 Water demand planning.</p> <p>2.2 Prepare a feasibility study, basic design, and safeguard reports for constructing a new water treatment plant (Cu De) of 120,000 cubic meters per day, transmission main, distribution network, house connections, and ancillary equipment.</p> <p>3. Institutional strengthening program (end of month 12)</p> <p>3.1 Define a framework for private sector participation</p> <p>3.2 Review water conservation policies and recommend measures for improvement.</p> <p>3.3 Conduct an energy audit and prepare strategies and recommendations for energy efficiency improvement.</p> <p>3.4 Define a framework for optimizing the provision and delivery of water supply with International Organization for Standardization (ISO) certification.</p>			<p>Inputs</p> <p>Total PPTA budget: \$1.70 million</p> <p>Multi-Donor Trust Fund under the Water Financing Partnership Facility administered by ADB: \$1.50 million</p> <ul style="list-style-type: none"> • Consulting services (33 person-months of international and 97 person-months of national consultant services): \$1.04 million • Equipment, administrative, travel, and other costs: \$0.46 million <p>Government of Viet Nam: \$0.20 million</p> <ul style="list-style-type: none"> • Counterpart staff (about 80 person-months): \$0.1 million • Other in-kind contributions: (office space and logistics.): \$0.1 million

^a Specific target figures for quantifiable indicators as well as timelines for impact indicators are not yet established and will be determined during the PPTA.

INITIAL POVERTY AND SOCIAL ANALYSIS

Country/Project Title: Viet Nam/Da Nang Water Supply Project

Lending/Financing Modality: Project preparatory technical assistance (PPTA) 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 Viet Nam country strategy and program, 2007–2010¹ stresses the importance of maintaining sustainable and equitable economic growth to achieve further reductions in poverty. Viet Nam's success in reducing the proportion of its 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 sustainable water supply for the city of Da Nang over the short and medium terms. The project is directly linked to the agenda of supporting infrastructure development and public-private partnerships in infrastructure as set out in the country strategy and program for Viet Nam (2007–2010) (footnote 1). In addition, the project will include an institutional strengthening program to assist the Da Nang Water Supply Company in improving its efficiency and service. Inasmuch as these measures will ultimately improve the quality of life, working environment, ability to attract investment into the city, and access to services, they will indirectly help 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 project will seek to improve water service delivery and expand coverage in the city of Da Nang.

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?
Not applicable.

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

A total of 6 person-months of international and national social development consultant services and a provisional sum of \$20,000 for the social assessment survey. In addition, 2 person-months of international and 7 person-months of national consultant have been allocated for resettlement.

3. If general intervention, 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, as well as vulnerable and disadvantaged people access to service. It will use a citizen report card mechanism to measure the service performance.

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 project will directly benefit people living in urban and peri-urban areas and improve the level of service to all users.

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?

High upfront connection charges are often preventing access to pipe water supply for the urban poor. The project team will work with Da Nang Water Supply Company and the People's Committee to overcome hurdles and to ensure an affordable tariff structure.

B. Consultation and Participation

1. Indicate the potential initial stakeholders.

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

2. What type of consultation and participation (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 the project preparation (e.g. workshops, seminars). The project will include household surveys, focus group discussions, and hearings on resettlement and environmental issues as required.

3. What level of participation is envisaged for project design?
 Information sharing Consultation Collaborative decision making Empowerment⁷

4. Will a C&P plan be prepared? Yes No Please explain.
 A C&P will be prepared by the PPTA consultant during the social assessment survey and focus groups discussion to seek the views from the population on the project. The C&P plan will then assist to formulate a communication plan between the water companies and the users.

C. Gender and Development

1. What are the key gender issues in the sector/subsector that are likely to be relevant to this project/program?
 A detailed gender assessment for households affected by resettlements will be prepared if required. A gender plan for addressing gender concerns in the project related to resettlement, HIV/AIDS, safety measures, and capacity building of the Executing Agency and relevant stakeholders will be prepared for the proposed project.

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 project will not directly lead to women's empowerment. Nevertheless, the improved services and expansion of the distribution network will benefit women through improved access to 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. Not applicable.

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 probably be required at the water treatment plant site, and along the construction route of the transmission network.	Potentially significant resettlement impact.	<input checked="" type="checkbox"/> Full Plan <input type="checkbox"/> Short Plan <input type="checkbox"/> Resettlement Framework <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Indigenous Peoples	The social assessment survey will confirm if there are affected indigenous people in the project area.	Not known at this stage, but presence of Indigenous Peoples in urban area very unlikely. Will be assessed during project preparation.	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input type="checkbox"/> Indigenous Peoples Framework <input type="checkbox"/> No Action <input checked="" type="checkbox"/> Uncertain
Labor <input checked="" type="checkbox"/> Employment Opportunities <input type="checkbox"/> Labor Retrenchment <input checked="" type="checkbox"/> Core Labor Standards	Employment opportunities will result from construction activities financed by the project; as well as from economic growth facilitated by improved water supply. Clauses on core labor standards will be included in all bidding documents.	Significant (indirectly) Limited	<input type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Affordability	Project design will be based on affordable water tariffs and connection charges.	Limited	<input checked="" type="checkbox"/> Action <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain

Issue	Nature of Social Issue	Significant/Limited/ No Impact/Not Known	Plan or Other Action Required
Other Risks and/or Vulnerabilities <input checked="" type="checkbox"/> HIV/AIDS <input checked="" type="checkbox"/> Human Trafficking <input type="checkbox"/> Others (conflict, political instability, etc.), please specify	An awareness campaign will be conducted on preventing HIV/AIDS. The construction sites will have an influx of workers and might increase the risk of HIV/AIDS and trafficking of girls and women.	Limited	<input type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
IV. PPTA/DUE DILIGENCE RESOURCE REQUIREMENT			
<p>1. Do the terms of reference for the PPTA (or other due diligence) include poverty, social and gender analysis and the relevant specialist/s? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why.</p> <p>2. Are resources (consultants, survey budget, and workshop) allocated for conducting poverty, social and/or gender analysis, and C&P during the PPTA/due diligence? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why.</p>			

¹ ADB. 2006. *Viet Nam: Country Strategy and Program (2007–2010)*. Manila.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Total Cost
A. Multi-Donor Trust Fund under the Water Financing Partnership Facility^a	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	720.0
ii. National Consultants	320.0
b. International and Local Travel ^b	150.0
c. Reports and Communications	20.0
2. Equipment ^c	20.0
3. Training, Seminars, and Conferences	20.0
4. Surveys ^d	50.0
5. Miscellaneous Administration and Support Costs ^e	40.0
6. Representative for Contract Negotiations	10.0
7. Contingencies	150.0
Subtotal (A)	1,500.0
B. Government Financing	
1. Office Accommodation	50.0
2. Remuneration and Per Diem of Counterpart Staff	100.0
3. Others	50.0
Subtotal (B)	200.0
Total	1,700.0

^a Contributors: the governments of Australia, Austria, and Norway. Administered by the Asian Development Bank.

^b Including \$25,000 for local car purchase and/or rental.

^c Provisional sum for purchase and/or rent of information technology equipment, such as photocopier, computers, printers, scanners, and plotters.

^d Provisional sum for surveys (e.g. social, geological, water testing; etc.).

^e Including provisional sum for translation.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Background and Objectives

1. The objective of the project preparatory technical assistance (PPTA) is to design the Da Nang Water Supply Project (DNWSP) comprising a project loan agreed upon by Da Nang People's Committee, Da Nang Water Supply Company (DAWACO), the Government, and Asian Development Bank (ADB). The DNWSP will help improving living conditions and health of the population in urban and peri-urban areas due to enhanced water supply infrastructure and the sustainable provision of safe water supply.

2. The PPTA will (i) prepare components for Da Nang water supply system improvement and performance enhancement, (ii) develop the DNWSP to a level of detail suitable for consideration by the ADB for funding, and (iii) prepare implementation support and institutional development programs addressing sector reform, governance, and public awareness.

B. Scope of Work

3. The consultant will develop the DNWSP following a consultative process. The project will be prepared in accordance with relevant national legal requirements and standards, and ADB requirements, policies, and guidelines. The PPTA, which is expected to be implemented over 12 months, is structured in three parts including (i) water resources, (ii) water supply, and (iii) institutional development.

4. **Part I: Water Resources.** A pre-feasibility study will include an initial assessment of potential water sources for future consideration, including but not limited to upgrading of existing water sources and treatment plants and sharing water sources from irrigation facilities. The pre-feasibility study will be based on existing reports, studies, and data. The consultant will carry out the following tasks:

- (i) Review and assess reports, studies, and other documentation relevant and readily available for water resources development; addressing quality, preparedness, and viability.
- (ii) Provide an overview and initial assessment of potential water source components including suitability, technical, environmental, and social information, preparedness, and other relevant data.
- (iii) Provide estimate on potential area inundated by dam and reservoir components, including alternative locations and dam heights, current land use, tentative number of households and commercial property affected, ownership, ecological sensitive areas, and water rights.
- (iv) For suitable water source components (a) prepare initial cost estimates, financing plans, implementation schedules, (b) identify hindrances, risks, bottlenecks, and related mitigation measures, and (c) assess potential for private sector participation.
- (v) Review relevant programs for financing and technical assistance for water source development in Da Nang under implementation or planned by other donors.
- (vi) Provide outline of next steps for project development, and terms of reference and cost estimate for potential follow-up project preparatory technical assistance (feasibility study).

5. **Part II: Water Supply.** The consultant will carry out the following tasks:
- (i) Prepare a water supply audit, including surveys of connected households and the unserved, for information on water source, access, availability, quality, quantity, and price. Assess the current status of water supply services, identify issues, and assess the demand for improved water supply. Collect and analyze relevant data and undertake measurements, surveys, and water quality analysis, if required.
 - (ii) Develop a model that will allow forecasting water demand and production for the city until year 2025, and how demand can be met from various water sources. The model will help to develop scenarios for investment planning including for nonrevenue water reduction, water conservation, and development of new water sources. The forecast will cover six districts,¹ as well as residential estates and industrial zones in eight communes.² Peri-urban areas will be identified within the municipality boundary not serviced by the water company and will propose localized or centralized solutions for water services.
 - (iii) Review available management information systems, and recommend improvements as required, including the application of a supervisory control and data acquisition system.
 - (iv) Prepare energy audits for about 15 locations (e.g., pumping stations, treatment plants, headquarters office), then finalize a strategy and make recommendations for energy savings and efficiency. These shall include a prioritized investment plan based on cost recovery for possible ADB financing.
 - (v) Assess practices and standards for monitoring water quality, and recommend and prepare a related investment and training program for strengthening water quality testing and laboratory installations.
 - (vi) Assess in detail DAWACO's (a) financial management capacity, and (b) financial state including income statements, balance sheet and cash flow statements, and existing loan repayments. Analyze major constraints to its financial sustainability, and the degree of operational subsidies if applicable.
 - (vii) Prepare a feasibility study and basic design³ for (a) constructing a new water treatment plant (Cu De) with capacity of 120,000 m³/day including transmission main of about 16km length to connect to a planned hydro power station on the Cu De River;⁴ (b) strengthening and expanding the distribution network (including primary, secondary, and tertiary networks with 50,000 house connections); (c) ancillary network equipment, including for system control and data acquisition, a geographic information system, hydraulic modeling, and unaccounted for water; and (d) infrastructure for resettlement areas of the project (if required). Additional water supply components are under review that may replace one or more of the above items or complement the project scope subject to available technical assistance budget. The Consultant will review and update existing studies and design as applicable. Proposed water supply components and figures provided

¹ Cam Le, Hai Chau, Lien Chieu, Ngu Hanh Son, Sown Tra, and Thanh Khe (City Center).

² Hoa Chau, Hoa Khuong, Hoa Lien, Hoa Nhon, Hoa Phong, Hoa Phuoc (Hoa Vang District), Hoa Son, and Hoa Tien.

³ Preparation of the feasibility study has to comply with relevant national laws, regulations, and standards, including the Prime Minister's Decision No. 48/2008/QĐ-TTg *Decision on Issuance of Common General Guidelines on Feasibility Study Preparation for Official Development Assistance (ODA) Projects Funded by the Five Banks (ADB, AFD, JBIC, KfW, World Bank). Hanoi. 2008.* Detailed design is not part of this TA and will be prepared under separate arrangements during implementation of the ensuing loan project.

⁴ Development of the hydropower station is not part of the proposed Da Nang Water Supply Project.

are indicative only, and will be reviewed and confirmed by the technical assistance.

- (viii) Review water supply tariffs, identify any deficiencies, and suggest improvements in line with ADB's position on tariffs, as summarized in ERD Technical Note #9. Analyze the effective collection rates for various consumer types, including collection in cash and in kind (if any) as well as their existing collection rates and ways to improve collection of current bills and arrears.
- (ix) Review the impact and affordability of cost recovery tariffs, and willingness to pay. Assess demand on the basis of price, income, and access to alternative supplies. Review the impact of connection charges for water supply and recommend options for improved affordability (e.g., payment in installments). Review and assess options for (revolving) funds for financing water supply connection charges.
- (x) Conduct comprehensive economic and financial analyses for each subproject and the overall project, using relevant ADB guidelines, and handbooks. Prepare financial projections including revenues, operating and capital expenditures, and debt repayment. Based on past and projected financial statements, compute relevant financial indicators, including, but not limited to, debt service coverage ratios, and operating ratios. Compute for each subproject and the overall project financial internal rates of return, weighted average cost of capital, and economic internal rates of return. Analyze the impact of the Project on poverty reduction. Review in detail the distribution of project benefits, net economic benefits, and poverty impact ratio.
- (xi) Investigate innovative financing schemes for improving urban water supply, including for example local currency financing, municipal bonds, and public-private partnerships.
- (xii) Identify key stakeholders (poor and vulnerable groups in particular) and their project-related interests, identify the likely barriers to their participation in and benefiting from project resources, and suggest possible strategies for addressing their concerns. Identify factors affecting project risk and viability. Prepare an initial stakeholder analysis and a draft participation plan, according to Appendix 4.4 of ADB's *Handbook on Poverty and Social Analysis* (2001).
- (xiii) Undertake focus group discussions with beneficiaries and affected people in the subproject areas to identify key constraints to, and related economic costs of, access of the poor to sanitation services. Assess the role of nongovernment organizations (NGOs) and other groups of civil society and how they should be involved in project design and implementation.
- (xiv) Using ADB's *Handbook on Poverty and Social Analysis*, carry out household surveys in collaboration with other consultant team members, and prepare a socioeconomic profile of the target population, including an assessment of its requirements and preferences in sanitation services, social customs and practices relevant to the proposed project design, specifically their ability and willingness to pay for the services. Pay particular attention to mitigating any adverse impacts of the subprojects and the overall Project on specific communities or groups, particularly the poor.
- (xv) Prepare a gender analysis of the Project according to the guidelines in Appendix 5.1 of ADB's *Handbook on Poverty and Social Analysis*, and identify project design elements (policy, investment, or implementation) that (a) will enable women to participate in and benefit from the Project, and (b) have the potential to exclude women from participating in or benefiting from the Project.

- (xvi) Develop and recommend mechanisms and procedures for public consultation and community participation in project planning, operation and maintenance, project implementation and management, particularly in relation to levels of service performance, tariffs, and environmental protection. Assess whether or not there is a role for NGOs in project activities. Carry out public consultations, including with NGOs.
- (xvii) Justify the Project from the point of view of social dimensions (social impact, impact on poverty, and gender and development).
- (xviii) Prepare a resettlement plan, if warranted, for a selected subproject in accordance with ADB's policy on resettlement guided by Operations Manual on Involuntary Resettlement (OM/F2, 2006); and other relevant policies and guidelines of ADB, i.e., *Policy on Gender and Development* (1998), *Accountability Mechanism* (2003), and *Public Communications Policy* (2005). Prepare a resettlement framework for the Project in accordance with ADB policies and requirements. Assess capacity development needs of the executing agency and recommend related training program.
- (xix) Assess the need for preparing an indigenous people's development framework, development plan, or specific action in accordance with ADB's policy on indigenous peoples. Prepare the necessary framework, plan, and specific action in accordance with ADB's requirements.
- (xx) Prepare an initial environmental examination or environmental impact assessment, if warranted, for each individual subproject; a summary initial environmental examination or a summary environmental impact assessment for the whole Project; and an environmental assessment and review framework in accordance with ADB's *Environment Policy* (2002) and *Environmental Assessment Guidelines* (2003). The environmental assessments should also be in line with applicable national requirements.
- (xxi) Prepare detailed project implementation and phasing schedules for each component, and investigate options for integrated design-procure-construct packages to improve implementation efficiency, if applicable. Prepare recommendations for overall project implementation, administration, auditing, monitoring and evaluation.
- (xxii) Design fund flow mechanism and identify appropriate ADB disbursement procedure, based on the project needs and executing agency capacity.
- (xxiii) Prepare an effective project performance monitoring system that includes monitoring of the project's performance, benefits, and impact on poverty reduction. Identify the training needs to strengthen capacity.

6. **Part III: Institutional Development Program.** The program will define a series of proposals or policy dialogues for discussion and evaluation by the water company and by the project steering committee. These are to be implemented as part of future technical assistance financed under the ensuing project. The consultant will carry out the following tasks:

- (i) Compile and review available data, studies, programs, existing policies, and strategies for developing the urban water supply sector. Review external assistance to the sector and lessons learned from previous interventions by bilateral and multilateral funding agencies. Review the legal and regulatory framework and sector financing, and assess sector development constraints and potential mitigating measures.
- (ii) Prepare an institutional analysis of DAWACO, identify issues and areas for improvement, and recommend related development activities. Provide a detailed

description of the project city, districts, and wards and/or communes. This will include descriptions of current and/or planned future organizational structure and regulatory responsibilities, focusing on fiscal policies and finance, 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 include tariffs, connection fee and subsidy policies, corporate charters and by-laws with the ownership of the water company, and financial linkages with supervising authorities (e.g., transfer of bills collected or profits).

- (iii) Hold discussions with DAWACO, related local and central government agencies, consumer groups, and other stakeholders to identify key issues and obtain their views on capacity-building needs, and develop concepts for the design of the capacity-building components. Develop a capacity-building program, and outline training programs and recommended interventions that should be included in the Project, and estimated costs.
- (iv) Outline a financial and operational performance improvement program for DAWACO, including terms of reference for consultant support and cost estimates.
- (v) Review the current involvement of the private sector in providing water supply services, and recommend suitable options for private sector participation as applicable. The consultant will define a framework for equitization, public-private partnerships, and private sector participation. This will address the delegated management or lease of the water company's operation and maintenance activities. It will also examine further options for public-private partnerships, including the possibility of their ultimately leading to privatization. The water company has not yet been equitized, but it must do so in accordance with the new Decree 117/2007/ ND/CP. The consultant will prepare options for Da Nang's People's Committee and for the water company on how to facilitate and optimize the involvement of the private sector. The consultant will also review the asset inventory and asset management system in place and propose a program to implement asset management.
- (vi) Define a framework for optimizing the provision and delivery of water supply services through certification during the project, including to (a) review any existing certifications obtained by the water company; (b) assess the readiness to comply with International Organization for Standardization (ISO) 9001 for all design, operation, and maintenance activities, 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 budget and schedule.
- (vii) Review the current policies of DAWACO and the city of Da Nang pertaining to water conservation. Assess the potential for water conservation for all consumer groups, measures required for reducing water consumption, and outline a program for awareness building including budget and schedule.
- (viii) Assist DAWACO in preparing and disseminating project related information to government agencies, consumers, and other stakeholders; and conduct workshops and seminars.
- (ix) Outline information programs that will explain and advocate the benefits and importance of clean water supply and sanitation for health, especially of children and women.
- (x) The PPTA will include four workshops to increase stakeholders' participation in the project design and selection of investment proposals and to ensure appropriate dissemination of project results.