### Timor-Leste: Dili Urban Water Supply Sector Project

**Project Name**: Dili Urban Water Supply Sector Project  
**Project Number**: 38189-022  
**Country**: Timor-Leste  
**Project Status**: Closed  
**Project Type / Modality of Assistance**: Grant  
**Source of Funding / Amount**: Grant 0100-TIM: Dili Urban Water Supply Sector Project, concessional ordinary capital resources lending / Asian Development Fund, US$ 6.00 million

### Strategic Agendas
- Environmentally sustainable growth
- Inclusive economic growth

### Drivers of Change
- Governance and capacity development

### Sector / Subsector
- Water and other urban infrastructure and services - Urban policy, institutional and capacity development - Urban water supply

### Gender Equity and Mainstreaming

### Description

The Project will (i) check, and refurbish, replace and install (as required) up to 35 primary and secondary distribution master meters; (ii) check and replace, as necessary, up to 51 kilometers of tertiary distribution (reticulation) water pipes; (iii) check and replace, as necessary, up to 2,950 household meters and 240 commercial and bulk meters; (iv) check and normalize, as necessary, up to 5,100 household connections and up to 170 commercial connections; (v) relocate up to 1,700 existing water service connections to allow the disconnection of up to 7,000 linear meters of old asbestos cement and other water mains; (vi) install up to 88 new stop valves; (vii) refurbish or replace nine chlorination dosing units at deep bores; (viii) undertake practical minor repairs to support operational efficiency and safety; (ix) train and support a Dili water demand management task force; (x) establish and give in-field mentoring for three leak detection teams; and (xi) train six subzone caretakers. The Project is being proposed under a sector modality.

### Project Rationale and Linkage to Country/Regional Strategy

Timor-Leste is one of the least developed countries in the world. Per capita gross domestic product (non-oil) was estimated at $370 in 2006 and has fallen in most years since 2001. Timor-Leste’s human development index remains the lowest amongst Southeast Asian countries. The Millennium Development Goal (MDG) target for water supply in Timor-Leste is to increase the proportion of people with improved access to water from 44% to 78%. Coverage of 24-hour safe water supply in Dili city remains low at 23-30%. About 50% of the water that is produced and distributed to Dili is lost through leaks and pilferage. Nonrevenue water is about 85%. The Government’s draft water supply and sanitation sector investment plan for 2008-2012, will guide national budget decisions. Dili is a priority district in the investment plan. The Dili water supply system has good water production and good main distribution infrastructure. With reasonable investments in tertiary distribution and more attention to customer service, the system could achieve technical and financial self-sustainability. The proposed sector Project is the first step. The proposed Project will use a zonal approach to totally rehabilitate the tertiary network and connections in six subzones, each with 1,000 connections. The Government will use its own finances to implement the zonal approach in the remainder of the Dili service area, and then the second city, Baucau, followed by other district towns. The Asian Development Bank (ADB) Dili Water Supply Performance Improvement technical assistance (TA) will build capacity in the National Directorate for Water Supply and Sanitation (DNSAS) for demand management; unaccounted-for-water reduction; and better business planning, management and reporting. Another ADB TA, Infrastructure Project Management, will build project management capacity in DNSAS, including for managing environmental and social risks.

### Impact

Improved water supply services for households, businessess and institutions in Dili City

### Project Outcome

**Description of Outcome**: DNSAS improves water supply tertiary distribution in the city of Dili  
**Progress Toward Outcome**: Audit of project accounts is ongoing. All other physical activities have been completed.

### Implementation Progress

**Description of Project Outputs**:  
- Water losses reduced and controlled in Dili.  
- Hydraulic Management of Dili water supply system more efficient  
- Skills of DNSAS technical and O&M staff upgraded in leak detection, leak reduction, and subzone management

**Status of Implementation Progress (Outputs, Activities, and Issues)**:  
- Civil works in subzones 1.2.3 complete.  
- Additional civil works to be already undertaken and completed in 2014.  
- Work in subzones 1.2 and 3 complete.  
- Additional connections installed in 2014.  
- Actual civil works for subzones 1.2.3 have been completed.  
- 100% of customers with legal connections in Subzones 1.2, and 3 are registered.  
- Tariffs introduced in 2013.  
- Civil works are complete in Subzones 1-3 to enable households in these target areas to receive a 24-hour water supply. In order to ensure that water meets required quality standards, a chlorination unit has been installed in Zone 1.  
- Completed.  
- Parlyy achieved.

### Geographical Location

Comoro, Comoro, Dili, Dili, Dom Aleixo, East Timor

### Safeguard Categories
The civil works will be divided into three packages—one to be procured using international competitive bidding and two using national competitive bidding. The package for project implementation support will engage international and national consultants for (i) project management; (ii) in-field mentoring of leak detection teams and subzone caretakers; (iii) socio-economic monitoring and evaluation; and (iv) project financial management, reporting, and auditing. The second package will engage international and national consultants to prepare detailed engineering design and documentation, and construction supervision services. The project is rated as Category C for indigenous peoples.

### Stakeholder Communication, Participation, and Consultation

**During Project Design**
Consultation during project preparation included a household socioeconomic survey of 300 households in water supply zones where the subprojects will be implemented, formal and informal meetings with suco chiefs, women, and youth members of the suco councils, and relevant government departments and nongovernment organizations working with communities in Dili. A program of focus group meetings on specific issues of relevance to involving communities in the long-term sustainability of the Dili city water system was also carried out. During this consultation process, some issues essential to project design were discussed, such as (i) role of subzone caretakers; (ii) approaches to promote responsible water use behavior; and (iii) strategies to reduce the incidence of illegal behavior affecting the piped water system. Other issues such as the type of facilities (communal taps, tanks, etc.) to be provided for households with no direct access to streets, did not produce a response, despite probing; specifically affected households will need to be given the opportunity to comment during project implementation, once proposals have been developed. Three types of community consultation and participation are being / have been established during project implementation: (i) A complaints system and process for regularly assessing consumer satisfaction and accurately monitoring complaints has been established under the community and customer relations program component of the associated Dili Water Supply Performance Improvement technical assistance. Processes developed support DNSAS improvements in community and customer relations including feedback mechanisms. (ii) Community consultation will be undertaken in relation to certain aspects of the project design as implementation proceeds, such as the arrangements for bill paying and provision of water for houses without direct street access. For the most part, community involvement in such decisions will require information sharing and consultation. (iii) Community-based advocacy for conservation of treated water and the water infrastructure, and to build willingness of households to pay for the water they consume will be undertaken through the project implementation and facilitated through suco (small suburb) and aldeia (neighborhood) council members and other groups in the community.

**During Project Implementation**
During all phases of subproject implementation, management will be the responsibility of DNSAS with overall site monitoring of the subproject the responsibility of the Environmental and Social Unit (ESU). Monitoring will include regular community meetings to monitor community concerns, thus identifying and mitigating these concerns as early as possible in the process to ensure community actions do not prevent access or incur damage to the subproject sites. DNSAS will prepare quarterly mitigation progress and monitoring reports. At the end of subproject implementation, the ESU will prepare a summary report and verification that mitigation actions were completed and forwarded it to Secretary of State for Environment with a copy to ADB.

### Business Opportunities

**Consulting Services**
The package for project implementation support will engage international and national consultants for (i) project management; (ii) in-field mentoring of leak detection teams and subzone caretakers; (iii) socio-economic monitoring and evaluation; and (iv) project financial management, reporting, and auditing. The second package will engage international and national consultants to prepare detailed engineering design and documentation, and construction supervision services. The project will fund a total of 36 person-months of international and 68 person-months of domestic consulting services. The project will fund a total of 36 person-months of international and 68 person-months of domestic consulting services.

**Procurement**
The civil works will be divided into three packages—one to be procured using international competitive bidding and two using national competitive bidding. Supply of goods contracts will be divided into four contracts-three using international competitive bidding and one using national competitive bidding.

### Environment

Public consultations were undertaken during the IEE preparation, in addition to social surveys, and specifically about possible environmental risks and mitigation measures related to project implementation and after. The consultations comprised one-to-one interviews with representative residents, business operators and others who may be affected by environmental nuisance from Project works. A Chefe de suco (head of neighborhood) and other community representatives were also interviewed. Interviewees were told that environmental nuisance during project implementation could include (i) noise, dust, mud, soil stockpiling, vibration and safety hazards from minor trenching and backfilling, (ii) disruption to traffic and access, and (iii) disruption of telecommunication and electricity services if trench excavation severed service lines. Respondents in general understood the nature of possible environmental nuisances, and added (i) rain could fill and obscure trenches, making them a driving hazard; (ii) additional dust would be created by cars driving around works areas and so water should be available for cleaning vegetables and other produce offered for sale by roadside vendors; and (iii) extra 'socialization' will be needed in higher density, unplanned areas. Some respondents also said that more water pipes in the neighborhood might lead to more leaks and therefore more ponding and mosquitoes (the Project is actually designed to reduce ponding and improve vector control). Respondents identified the following necessary mitigation measures: (i) prompt backfilling of trenches and resurfacing of disturbed streets and pathways; and (ii) using water spray to suppress dust. The respondents said that all affected persons should be kept fully informed of project implementation plans, be informed of possible environmental impacts, and participate and agree on mitigation measures. All of these concerns are addressed by the EMM.

### Indigeneous Peoples

The project is rated as Category C for involuntary resettlement, as a result no resettlement plans have been developed for the subprojects.

### Stakeholder Communication, Participation, and Consultation

- **During Project Design**
  - Consultation during project preparation included:
    - Household socioeconomic survey of 300 households in water supply zones.
    - Formal and informal meetings with suco chiefs, women, and youth members of the suco councils.
    - Meetings with relevant government departments and nongovernment organizations.
    - Focus group meetings on specific issues.
- **During Project Implementation**
  - Monitoring and site management.
  - Community meetings.
  - Advocacy for water conservation.
  - Community consultation.
  - Monitoring through SU and ALD.

### Business Opportunities

- **Consulting Services**
  - Package for project implementation support.
  - International and national consultants.
- **Procurement**
  - Civil works.
  - Three packages.
  - International competitive bidding.
  - Domestic consulting services.

### Environment

- **Consultations**
  - Interviews with residents.
  - Engineering design and documentation.
  - Social surveys.
- **Mitigation Measures**
  - Trench filling.
  - Dust control.
  - Noise reduction.

### Indigenous Peoples

- **Category Rating**
  - Category C.
- **Consultation**
  - Involuntary resettlement.
  - No resettlement plans.

### Stakeholder Communication

- **Consultation**
  - Project design.
  - Project implementation.
  - Community consultation.
  - Mitigation measures.
- **Participation**
  - Community involvement.
  - Mitigation actions.
- **Consultation**
  - Project design.
  - Project implementation.
  - Community consultation.
  - Mitigation measures.

### Environment

- **Consultations**
  - One-to-one interviews.
  - General understanding.
- **Mitigation Measures**
  - Prompt backfilling.
  - Water spray.
  - Dust control.

### Indigenous Peoples

- **Category Rating**
  - Category C.
- **Consultation**
  - Involuntary resettlement.
  - No resettlement plans.

### Stakeholder Communication

- **Consultation**
  - Project design.
  - Project implementation.
  - Community consultation.
  - Mitigation measures.
- **Participation**
  - Community involvement.
  - Mitigation actions.
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  - Community consultation.
  - Mitigation measures.
Grant 0100-TIM

### Milestones

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