# [資料]

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- 2. 調査日程
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1. 調査団員氏名、所属

# 1. 調査団員氏名、所属

1.	佐藤公平	総括	国際協力事業団	
	Mr. Kohei SATO	Team Leader	無償資金協力部業務第一課	
			First Project Management	
			Division, Grant Aid Management	
			Department, JICA	
2.	中込 修	業務主任/給水計画1	株式会社東京設計事務所	
	Mr. Osamu NAKAGOME	Chief Consultant/ Water	Tokyo Engineering Consultants	
		Supply Engineer 1	Co., Ltd.	
3.	髙杉 正治	給水計画2	株式会社東京設計事務所	
	Mr. Masaharu TAKASUGI	Water Supply Engineer 2	Tokyo Engineering Consultants	
			Co., Ltd.	
4.	岩崎 克利	施設計画1	株式会社東京設計事務所	
	Mr. Katsutoshi IWASAKI	Facilities Planner 1	Tokyo Engineering Consultants	
			Co., Ltd.	
5.	佐藤 八雷	施設計画2	株式会社パシフィックコンサルタ	
	Mr. Yarai SATO	Facilities Planner 2	ンツインターナショナル	
			Pacific Consultants International	
6.	日高 志満雄	設備計画	株式会社パシフィックコンサルタ	
	Mr. Shimao HIDAKA	Equipment Planner	ンツインターナショナル	
			Pacific Consultants Internationa	
7.	高島 秀明	運 営 維 持 管 理	株式会社東京設計事務所	
	Mr. Takashima HIDEAKI	Operational Program	Tokyo Engineering Consultants	
		Specialist	Co., Ltd.	
8.	奥津 幸雄	施工調達計画/積算	株式会社東京設計事務所	
	Mr. Yukio OKUTSU	Procurement and	Tokyo Engineering Consultants	
		Execution Program	Co., Ltd.	
		Specialist/Cost - Estimator		

2. 調査日程

# 2. 調査日程

工程	日付	JICA 団員	コンサルタント団員		
Day	Date	JICA Officers	Consultants		
1	Mar. 22 (Sat)	日本発:Leave Japan ) by JL720 (Narita 16:50 -Bali 22:50			
2	Mar. 23 (Sun)	東ティモール着: Arrive Timor-Leste ) by MZ8480 (Bali 09:40—Dili 12:20			
3	Mar. 24 (Mon)	> JICA 及び日本大使館表敬訪問: Courtesy call to EOJ and JICA			
3	Mai. 24 (Moli)		-		
			問:Courtesy call to with Ministry of		
		Transport, Communication and Public V			
		▶ WSS との調査打ち合わせ会議: Mo	eeting with Water and Sanitation		
		Services(WSS)			
4	Mar. 25 (Tue)	交通 / 通信 / 公共事業省との打ち合わ	せ会議: Meeting with Ministry of Transport,		
		Communication and Public Works			
5	Mar. 26 Wed)	現場調査: Site survey			
6	Mar. 27 (Thu)	議事録署名:Signing of M/D			
7	Mar. 28 (Fri)	▶ 日本大使館への報告: Report to	▶ 日本大使館への報告: Report to EOJ		
		EOJ	▶ JICA への報告 : Report to JICA		
		➤ JICA への報告∶Report to JICA			
		東ティモール出発:Leave Timor-Leste			
8	Mar. 29 (Sat)	日本着: Arrival to Japan	現場調査/資料/情報収集:Site survey,		
		a i a i a i a i a i a i a i a i a i a i	Collection of data & Information		
9	Mar. 30 (Sun)		現場調查/資料/情報収集:Site survey,		
			Collection of data & Information		
10	Mar.31 (Mon)		現場調査/資料/情報収集:Site survey, Collection of data & Information		
11	April 1 (Tue)		現場調查/資料/情報収集:Site survey,		
11	7 April 1 (1 de)		Collection of data & Information		
12	April 2 (Wed)		現場調查/資料/情報収集:Site survey,		
			Collection of data & Information		
13	April 3 (Thu)		現場調査/資料/情報収集:Site survey, Collection of data & Information		
14	April 4 (Fri)		現場調查/資料/情報収集:Site survey,		
17	7 tpin + (1 ii)		Collection of data & Information		
15	April 5 (Sat)		現場調查/資料/情報収集:Site survey,		
			Collection of data & Information 現場調査/資料/情報収集: Site survey,		
16	April 6 (Sun)		現场調査/貝科/同報収集.Site survey, Collection of data & Information		
17	April 7 (Mon)		調査団第2陣東ティモール着:Survey		
17	ripin / (Mon)		Team 2 <sup>nd</sup> Group Arrive Timor-Leste		
18	April 8 (Tue)		現場調査/資料/情報収集:Site survey,		
10	April 8 (Tue)		Collection of data & Information		
19	April 9 (Wed)		現場調査/資料/情報収集:Site survey,		
			Collection of data & Information		
20	April 10 (Thu)		現場調查/資料/情報収集:Site survey,		
21	April 11 (E-i)		Collection of data & Information 現場調査/資料/情報収集: Site survey,		
21	April 11 (Fri)		Collection of data & Information		
22	April 12 (Sat)		現場調査/資料/情報収集:Site survey,		
	1 (2232)		Collection of data & Information		
23	April 13 (Sun)		現場調查/資料/情報収集:Site survey,		
2.4	A 114.05 \		Collection of data & Information 現場調査/資料/情報収集: Site survey,		
24	April 14 (Mon)		成场嗣直/ 貝科/ 消報収集 Site survey, Collection of data & Information		
	L		Concenon of data & Information		

25	April 15 (Tue)	現場調査/資料/情報収集∶Site survey, Collection of data & Information
26	April 16 (Wed)	現場調査/資料/情報収集:Site survey,
		Collection of data & Information
27	April 17 (Thu)	現場調査/資料/情報収集:Site survey,
		Collection of data & Information
28	April 18 (Fri)	現場調査/資料/情報収集:Site survey,
		Collection of data & Information
29	April 19 (Sat)	現場調査/資料/情報収集:Site survey,
		Collection of data & Information
30	April 20 (Sun)	現場調査/資料/情報収集∶Site survey,
	<u> </u>	Collection of data & Information
31	April 21 (Mon)	現場調查/資料/情報収集:Site survey,
		Collection of data & Information
32	April 22 (Tue)	現場調査/資料/情報収集:Site survey,
		Collection of data & Information
33	April 23 (Wed)	現場調査/資料/情報収集∶Site survey,
55	Tipin 25 (vieu)	Collection of data & Information
34	April 24 (Thu)	現場調査/資料/情報収集: Site survey,
J <b>-</b> T	April 24 (Tilu)	Collection of data & Information
35	April 25 (Fri)	現場調査/資料/情報収集:Site survey,
33	April 23 (141)	Collection of data & Information
36	April 26 (Sat)	現場調査/資料/情報収集:Site survey,
30	April 20 (Sat)	Collection of data & Information
37	April 27 (Sun)	現場調査/資料/情報収集:Site survey,
31	April 27 (Sull)	Collection of data & Information
38	April 28(Mon)	T/N の署名: Signing of Technical
30	April 28(Woll)	
		Notes(T/N)
39	April 29 (Tue)	現場調査/資料/情報収集:Site survey,
		Collection of data & Information
40	April 30 (Wed)	現場調査/資料/情報収集∶Site survey,
		Collection of data & Information
41	May 1 (Thu)	現場調查/資料/情報収集:Site survey,
	1.239 2 (2.33)	Collection of data & Information
42	May 2 (Fri)	日本大使館及び JICA への報告:Report
	11111/2 (111)	to EOJ and JICA
43	May 3 (Sat)	現場調査/資料/情報収集:Site survey,
73	Way 3 (Sat)	Collection of data & Information
44	May 4 (Sun)	東ティモール出発:Leave Timor-Leste by
++	wiay 4 (Suii)	
		MZ8490 (Dili 12:30 – 14:05Bali)
45	May 5 (Mon)	日本着: Arrive Japan by JL 716 (Bali
		22:10:May4 – 9:10 Narita)

日順	月	日	曜日	JICA 調査団員およびコンサルタント調査団員	備考
1	7	26	土	11:05-20:25 成田発~デンパサール着	コンサルタントのみ
2		27	日	09:15-12:05 デンパサール発~ディリ着	同上
				JICA 東ティモール事務所 表敬訪問	
3		28	月	財務計画省(MPF)表敬訪問	
				運輸·通信·公共事業省(MTCPW)表敬訪問	
4		29	火	上下水道局(WSS)、基本設計概要書説明·協議	
-		23		日本大使館表敬訪問	
5		30	水	WSS、基本設計概要書説明·協議	
6		31	木	WSS、基本設計概要書説明·協議	
0		31	<i>/</i> \	JICA 東ティモール事務所、M/D 協議	
7	8	1	金	WSS 職員と現場調査	
,	O	1		WSS、M/D 協議	
8		2	土	団内会議	
9		3	日	同上	
10		4	月	M/D 調印(MTCPW 大臣室)	
10			73	JICA 東ティモール事務所とディリの 4 浄水場調査	
11		5	火	基本設計関連の調査	
12		6	水	基本設計関連の調査、現地報告書作成	
13		7	木	JICA 東ティモール事務所 報告書提出 2 部(大使館分含む)およ	
13		,	<b>/</b> \	び報告	
14		8	金	13:00-13:50 ディリ発~デンパサール着	コンサルタントのみ
14				22:10 デンパサール発	
15		9	土	09:10 成田着	同上

3. 相手国関係者リスト

## 3. 相手国関係者リスト

Ministry of Transport, Communication and Public Works (MTCPW)

Mr. Ovidio de Jesus Amaral Minister

Mr. Egidio de Jesus Secretary of State for Power and Water Mr. Joao Alves Secretary of State for Public Works

Mr. Jose V. Martins Fontes Architect, Public Works Department (PWD)
Mr. Damien Mate UN Mission of Support in East Timor, PWD

Water and Sanitation Service Department (WSS)

Mr. Joao Pereira Jeronimo Director

Dr. V. Haraprasad UN Advisor, Water and Sanitation Service

Mr. Jose P Mestre Chief of Urban Sanitation
Mr. Gregorio de Araujo Chief of Urban Water Supply

Mr. Rui de Sousa Principal Engineering Operation and Maintenance

Mr. Juaquin Ximenes Manager of Dili Water Supply Operation & Maintenance

Mr. Cerso A Pereira Manager of District Water Supply Operation & Maintenance

Mr. Eduardo Ximenes Support Service

Mr. Gustaro da Cruze Senior Finance Officer

Mr. Francisco Xavier Pereira Manager of Development & Rehabilitation

Mr. Mario Abel Sequira Manager of Planning & Design

Mr. Bentido Samento

Mr. Quintino D Santos

Mr. Julio A Alves

Bemos WTP Operator

Lahane WTP Operator

Benemauk WTP Operator

Ministry of Finance and Planning (MFP)

Ms. Aicha Bassarewan Vice-Minister
Mr. Euseblo e. Jeronimo Director

Mr. Gastão Francisco de Sousa Director, Planning and Project Assessment Unit, MPF

Mr. Jose F. Abilio Deputy Director

Ms. Maria de Jesus Sarureufo Senior Treasury Accountant

Ms. Emilia Pires UNIMSET Advisor

Mr. Francis M. Sskandi Legal Advisor

Ms. Fabiola Noranha Melo Planning & External Assistance Management Division

Mr. Covin Matthews Budget Office

Ministry of Development and Environment

Mr. Vicente da Costa Pinto Director of Mining Energy & Mineral Resources Dept.

Mr. Amandio Director of Mining Energy & Mineral Resources Dept.

Mr. Barid Manna UN Advisor

Electricity Development Timor Leste
Mr. Virgilio Guterres
Director

Mr. Helio Renato Xemenes Project Manager (Comoro Power Station)

Project Management Unit East Timor Water & Sanitation Rehabilitation Project Phase 2

Mr. Alvaro S. Abrantes Project Manager

Mr. Malcolm Ehrlich Chief Technical Adviser

Community Water Supply and Sanitation Program (CWSSP)

Mr. Alan Smith Team Leader

Community Empowerment Project (CEP)

Ms. Rosa Amaral Vong Project Director CEP

Asian Development Bank (ADB)

Mr. Zacarias da Costa Inter-Agency Coordinator
Mr. Jessie B. Arnuco Project Administration Officer

The World Bank (WB)

Mr. Ronald Isaacson Deputy Chief of Mission, World Bank Mission

Embassy of Japan (EOJ)

Mr. Hideo Fukushima Charged' Affairs

Mr. Akinori Wada Councilor

Mr. Toshimichi Koga Second Secretary

JICA Timor-Leste Office (JICA)

Mr. Katsuo Shoji Former Resident Representative

Mr. Toshiaki Tanaka Resident Representative

Mr. Katsuhiko Ohara Assistant Resident Representative
Mr. Masayoshi Takehara Assistant Resident Representative



資料 4 当該国の社会経済状況

国名	東ティモール民主共和国
	Timor-Leste

我が国における ODA の	(単位:億円)				
年度 項目	1996	1997	1998	1999	2000
技術協力					10.70
無償資金協力					31.40
有償資金協力					
総額					42.10

当該国に対する我が国の ODA の実績 (支出純額、単位:百万ドル)					
暦年 項目	1996	1997	1998	1999	2000
技術協力					
無償資金協力					31.40
有償資金協力					
総額					31.40

OECD 諸国の経済協力	]実績(2000年)	(支出純額、単位:百万ドル)			
	贈与(1)	有償資金協力	政府開発援助	その他政府資	経済協力総額
	(無償資金協		(ODA)	金及び民間資	(3) + (4)
	力·技術協力)	(2)	(1)+(2)=(3)	金(4)	
二国間援助	212.3	0.0	212.3	417.8	630.1
(主要供与国)					
1. Australia	82.4	0.0	82.4	417.9	500.3
2. Portugal	52.6	0.0	52.6	0.0	52.6
3. Japan	29.1	0.0	29.1	0.0	29.1
4. United Kingdom	16.4	0.0	16.4	0.0	16.4
多国間援助	20.6	0.0	20.6	0.0	20.6
(主要援助機関)					
1. EC			17.5	0.0	17.5
2. UNICEF			0.7	0.0	0.7
その他					
合 計	232.9	0.0	232.9	417.8	650.7

援助受入窓口機関		

国名	東ティモール民主共和国
	Timor-Leste

一般指標			
政 体	共和制	首都	ディリ
元 首	大統領/シャナナ・グスマン	主要都市名	
独立年月日	2002年5月20日	労働力総計	千人(年)
主要民族 / 部族名	メラネシア系が中心	義務教育年数	年間(年)
主要言語	テトゥン語、ポルトガル語	初等教育就学率	%( 年)
宗 教	カトリック(約 90.1%)、イスラム	中等養育就学率	%( 年)
	(3.8%)	成人非識字率	%( 年)
国連加盟年	2002年9月27日	人口密度	人/km <sup>2</sup> ( 年)
世銀加盟年	2002年7月23日	人口増加率	%( 年)
IMF 加盟年	2002年7月23日	平均寿命	平均 男 女
国土面積	14.60	5 歳児未満死亡率	/1000( 年)
総人口	千人(年)	カロリー供給量	(年)

経済指標			
通貨単位	米ドルが公式通貨	貿易量	( 年)
為替レート	1US\$=1.00(2002年12月)	商品輸出	百万ドル
会計年度	( 年)	商品輸入	百万ドル
国家予算		輸入カバー率	(月) (年)
歳入総額		主要輸出品目	コーヒー
歳出総額		主要輸入品目	燃料、コメ、中古車
総合収支	百万ドル(年)	日本への輸出	百万ドル(年)
ODA 受取額	232.9 百万ドル(2000 年)	日本からの輸入	百万ドル(年)
国内総生産(GDP)	百万ドル( 年)		
一人当たりの GNP	ドル( 年)	総国際準備	百万ドル( 年)
分野別 GDP	農業%(年)	対外債務残高	百万ドル( 年)
	鉱工業 %( 年)	対外債務返済率	%( 年)
	サービス業 %( 年)	(DSR)	
産業別雇用	農業	インフレ率(消費者	%( 年)
	男 % 女 %(年)	価格物価上昇率)	
	鉱工業 %( 年)		
	サービス業 %( 年)	国家開発計画	国家開発計画(2002-2007)
実質 GDP 成長率	%( 年)		

気象 (	年~	年平均	匀)										
月	1	2	3	4	5	6	7	8	9	10	11	12	平均/計
降水量													mm
平均気温													

# 5. 討議議事録

(Minutes of Discussion & Technical Notes)

# Minutes of Discussions on The Basic Design Study on

# The Project for Improvement of Water Supply in Dili and Rural Districts

in

# The Democratic Republic of Timor-Leste

In response to the request from the Government of the Democratic Republic of Timor-Leste (hereinafter referred to as 'Timor-Leste'), the Government of Japan decided to conduct a Basic Design Study on the Project for Improvement of Water Supply in Dili and Rural Districts (hereinafter referred to as "the Project"), and entrusted the study to Japan International Cooperation Agency (hereinafter referred to as 'JICA').

JICA sent to Timor-Leste the Basic Design Study Team (hereinafter referred to as 'the Team'), which was headed by Mr. Kohei Sato, staff, First Project Management Division, Grant Aid Management Department, JICA, and was scheduled to stay in the country from March 24th to 28th, 2003.

The Team held a series of discussions with the concerned officials of the Government of Timor-Leste and conducted a field survey in the study area.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further work and prepare the Basic Design Study Report.

Dili, March 27th, 2003

Mr. Kohei Sato

Leader

Basic Design Study Team

Japan International Cooperation Agency

Japan

Ms. Aicha Bassarewan

Vice-Minister

Ministry of Planning and Finance

Timor-Leste

Mr. Ovidio de Jesus Amaral

Minister

Ministry for Transport, Communications and

Public Works

Timor-Leste

Mr. Egidio de Jesus

Secretary of State

Secretary of State for Power and Water

Ministry for Transport, Communications and

Public Works

Timor-Leste

## ATTACHMENT

# 1. Objective of the Project

The objective of the Project is to improve the water supply services in Dili, Ermera, Same, Ainaro and Maubisse in order to make safe and stable water supply for the residents.

# 2. Responsible and Implementing Organization

Ministry for Transport, Communications and Public Works, Water and Sanitation Services Department

#### 3. Study area

The study area of the Project is as shown in Annex-1.

4. Items requested by the Government of Timor-Leste

After discussions with the Team, the items described in Annex-2 were finally requested by Timor-Leste side. JICA will assess the appropriateness of the request and will report the findings to the Government of Japan.

#### 5. Japan's Grant Aid Programme

Timor-Leste side was briefed on the system and characteristics of Japan's Grant Aid Programme as described in Annex-3. It was emphasized by the Japanese side that necessary measures, as described in Annex-4 are required for smooth implementation of the Project provided that the Grant Aid Programme is extended.

6. Necessary measures to be taken by the Timor-Leste side

Timor-Leste side understood the need for providing the services and extending the tax exemptions referred to in Annex 4 and will take the necessary measures to appropriate the required funds for the works and services and extend the tax exemptions in accordance with such agreements as will be concluded between the Government of Timor-Leste and the Government of Japan.

#### Further Schedule of the Study

- 7-1. The consultant members of the Team will proceed with further studies in Timor-Leste until May 4th, 2003.
- 7-2. Based on the Minutes of Discussion, the Technical Note and technical examination of study results, JICA will prepare the draft of Basic Design Study Report in English and dispatch a mission in order to explain its contents in (or around) July 2003.

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7-3. In case the contents of the report are accepted in principle by the Government of Timor-Leste, JICA will complete the final report and send it to the Timor-Leste side by August 2003.

#### 8. Other relevant issues

### 8-1. Number of districts and components

Both sides agreed that the four requested districts and one requested sub-district, and components for the implementation of the Projects may not be fully covered by the Project.

## 8-2. Priority order for the five requested districts

The Timor-Leste side agreed to put priority order for the five requested districts to the Team by the end of April 2003.

#### 8-3. Service connections

The Timor-Leste side agreed that service connection is out of the scope of this Study (this Study covers up to distribution pipes as shown in Annex-2). The service connections (saddle, service pipe and water meter) are fully responsible work of the Timor-Leste side.

#### 8-4. Submission of the Questionnaire

The Timor-Leste side shall submit the Questionnaire-1 and 2 to the Team by April 10th, 2003.

#### 8-5. Water charge system

Water charge system is now planning to be introduced, Timor-Leste side agreed to report the detail plans (schedule, water tariff, collecting system and so on) for Dili, Ermera, Same, Ainaro and Maubisse to the Team by April 22nd, 2003.

#### 8-6. Proposion of the possible sites

Timor-Leste side shall propose the possible sites for water treatment plants, water intake structures and water reservoirs to the Team for topographic survey and soil investigation by April 5th, 2003 at the latest.

#### 8-7. Land for the Project

The Timor-Leste side agreed to provide the Japanese side by early July 2003, a certification from the Ministry of Justice (Land and Property Office) that the Government owns the sites for the water supply facilities.

#### 8-8. Level and reclaim the sites

Timor-Leste side shall allocate budgetary appropriation to clear, level and reclaim the sites for water treatment plants, water intake structures and water reservoirs prior to

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commencement of work on condition that Grant Aid is extended.

# 8-9. Enough and necessary counterpart

The Timor-Leste side agreed to provide enough and necessary counterparts to the Team during the study period. The details of the necessity will be finalized by the end of March, 2003 among the related organizations.

## 8-10. Operation and maintenance

Timor-Leste side shall allocate budgetary appropriation and assign the necessary staff for proper and effective operation and maintenance for the water supply facilities covered by the Project through Water and Sanitation Services Department.

## 8-11. Safety of Japanese personnel

The Timor-Leste side fully understood the importance of assurance of safety of Japanese personnel concerned with the Project during the implementation of the Project.

## 8-12. Necessary Undertakings

Japanese side strongly emphasized that the necessary undertakings, described in Annex-4, are standard mandatory requirements by the Japanese Government for the smooth implementation of the Project by the Timor-Leste side, without which the Project cannot proceed.

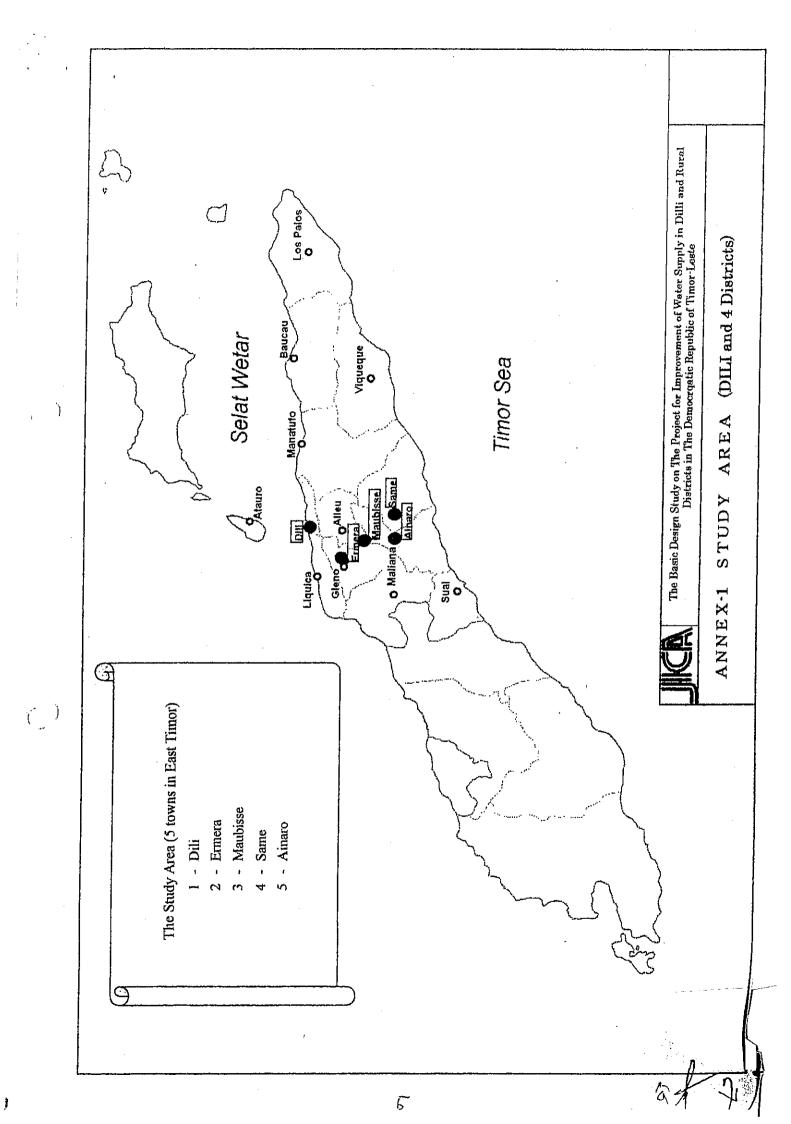
#### 1) Explanation from the Timor-Leste side

The Timor-Leste side explained that certain commitments in Annex-4, such as item 7(4), will require budgetary appropriation which will be requested in the context of the bi-annual budget review. Items 9(2), 10 and 11 of Annex-4, are currently the subject of negotiation between the Government of Japan and the Government of Timor-Leste, in the context of the Cooperation Agreement between the two countries, since such exemptions require the approval of the Council of Ministers and legislative action by Parliament.

# 2) Agreed points by both sides

Both parties agreed on the other items in Annex-4, and further agreed to exert effort to get mutual consent of the every item by early July 2003.

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## Annex-2 The Requested Component

Basically, the followings are the target facilities for this Study.

- (1) Dili
  - ➢ Water Treatment Plant (existing)
  - Existing Distribution Network (Zone 1, 5,6,7 and 8)
- (2) Ermera
  - > Intake
  - Raw Water Transmission Main
  - Water Treatment Plant (plan)
  - Service Reservoir
  - Existing Distribution Network
- (3) Same
  - ➤ Intake
  - > Raw Water Transmission Main
  - Service Reservoir
  - > Existing Distribution Network
- (4) Ainaro
  - ➢ Intake
  - > Raw Water Transmission Main
  - Water Treatment Plant (existing)
  - Service Reservoir
  - Existing Distribution Network
- (5) Maubisse
  - Intake
  - Raw Water Transmission Main
  - Service Reservoir
  - Existing Distribution Network

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# Annex-3 The Japan's Grant Aid Scheme

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

(1) Grant Aid Procedure

1) Japan's Grant Aid Program is executed through the following procedures.

Application

(Request made by a recipient country)

Study

(Basic Design Study conducted by JICA)

Appraisal & Approval

(Appraisal by the Government of Japan and Approval by Cabinet)

Determination of Implementation

(The Notes exchanged between the Governments of Japan and the recipient country)

2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined—by the Government of Japan (Ministry of Foreign Affairs)—to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct a study on the request. If necessary, JICA send a Preliminary Study Mission to the recipient country to confirm the contents of the request.

Secondly, JICA conducts the study (Basic Design Study), using Japanese consulting furns.

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Programme, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

#### (2) Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereinafter referred to as "the Study"), conducted by JICA on a requested project (hereinafter referred to as "the Project"), is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

a) confirmation of the background, objectives and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the

Project's implementation;

b) evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from the technical, social and economic points of view;

c) confirmation of items agreed on by both parties concerning the basic concept of the Project;

d) preparation of a basic design of the Project; and

e) estimation of costs of the Project.

The contents of the original request are not necessarily approved in their initial form as the

That

contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even through they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For the smooth implementation of the Study, JICA uses a consulting firm selected through its own procedure (competitive proposal). The selected firm participates in the Study and prepares for a report based upon the terms of reference set by JICA.

At the beginning of implementation after the Exchange of Notes, for the services of the Detailed Design and Construction Supervision of the Project, JICA recommends the same consulting firm which participated in the Study to the recipient country in order to maintain the technical consistency.

# (3) Japan's Grant Aid Scheme

1) Exchange of Notes (E/N)
Japan's Grant Aid is extended in accordance with the Notes exchanged by the two
Governments concerned, in which the objectives of the project, period of execution,
conditions and amount of the Grant Aid, etc., are confirmed.

2) "The period of the Grant" means the one fiscal year which the Cabinet approves the project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding contracts with consulting firms and contractors and final payment to them must be completed.

However, in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

3) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However, the prime contractors, namely consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

5) Undertakings required to the Government of the recipient country

a) to secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction;

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b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites;

c) to ensure all expenses and prompt execution for unloading and customs clearance at ports of disembarkation in the recipient country and internal transportation therein of the products purchased under the Grant Aid;

d) to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts;

- e) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts such as facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work;
- 6) "Proper Use"

  The recipient country is required to operate and maintain the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.
- 7) "Re-export"

  The products purchased under the Grant Aid shall not be re-exported from the recipient country.
- 8) Banking Arrangement (B/A)
  a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the verified contracts.
  - b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay (A/P) issued by the Government of recipient country or its designated authority.
- 9) Authorization to Pay (A/P)
  The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions to the Bank.

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Annex-4 Necessary Undertakings to be Taken by Each Government

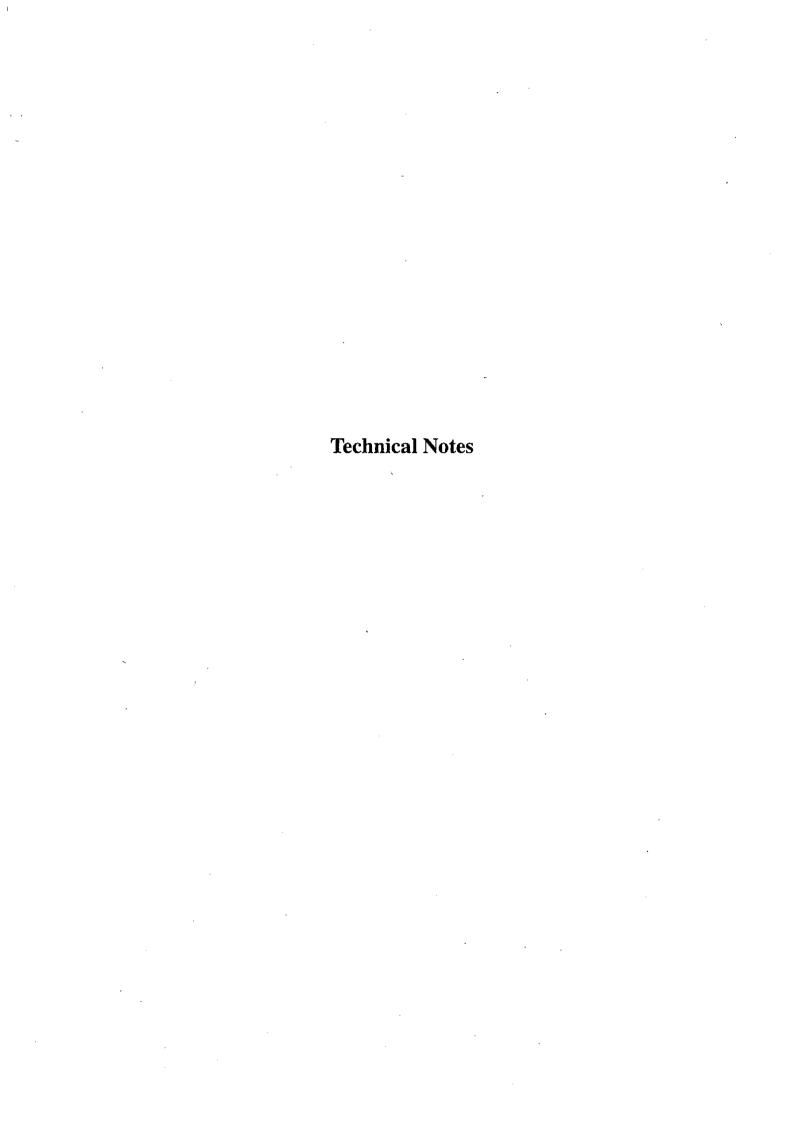
No	liems	To be covered	To be covered
140	11	by Grant Aid	by Recipient
			side
1	To secure land		•
2	To clear, level and reclaim the site when needed		•
3	To construct gates and fences in and around the site		•
4	To construct the parking lot	•	
	To construct roads		
5.	1) Within the site	•	
	2) Outside the site	· <del></del>	•
6_	To construct the building	•	
	To provide facilities for the distribution of electricity, water supply, drainage	and other incides	ntal facilities
	1) Electricity		
	a. The distributing line to the watt hour meter provided by East Timor	<del>_</del>	•
	b. The wiring between buildings by the Grant and the watt hour meter	•	
	c. The main circuit breaker and transformer		
	2) Water Supply		
,	a. The connection of city water or well water to eistern tank provided by		•
	the Grant		
	b. The cistern tank and water supply system within the site	•	
	3) Drainage		
	a. The city drainage main ( for storm, sewer and others ) to the site		•
<u> </u>	b. The drainage system ( for toilet sewer, ordinary waste, storm drainage	•	
7	and others) within the site		
	4) Furniture and Equipment	<u> </u>	<u> </u>
	a. General furniture		•
	b. Project equipment	•	
	To bear the following fees to a bank of Japan for the banking services based up	on the B/A	
	1) Advising fee of A/P		•
8	2) Payment fcc		•
	To ensure prompt unloading and customs clearance at the port of disembarkation	on in recipient co	untry
	1) Marine(Air) transportation of the products from Japan to the recipient	•	
	country		
9	2) Tax exemption and customs clearance of the products at the port of		{ •
}	disembarkation		
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)

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10	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contact such facilities as may be necessary for their entry into the recipient country
	and stay therein for the performance of their work
11	To exempt Japanese nationals from customs duties, internal taxes and other
	fiscal levies which may be imposed in the recipient country with respect to
	the supply of the products and services under the verified contracts
12	To maintain and use properly and effectively the facilities constructed and
	equipment provided under the Grant
13	To bear all the expenses, other than those to be borne by the Grant, necessary
	for construction of the facilities as well as for transportation and installation
1	of the equipment

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# Technical Notes

on

## The Basic Design Study

on

# The Project for Improvement of Water Supply in Dili and Rural Districts in The Democratic Republic of Timor-Leste

Based on the Minutes of Discussions singed on March 27, 2003 between the Basic Design Study Team (hereinafter referred to as 'the Team') of Japan International Cooperation Agency (hereinafter referred to as 'JICA') and the Government of the Democratic Republic of Timor-Leste (hereinafter referred to as 'Timor-Leste'), the consultant members of the Team conducted intensive site surveys, field investigations of the study area, and a series of consultations and discussions with the national counterparts.

As a result of the discussions and the surveys, both parties confirmed the target facilities of the Study as described on the attached sheets. The Team will proceed to further work and prepare Basic Design Study Report in Japan.

Dili, April 28, 2003

Mr. Osamu Nakagome

Chief Consultant

Basic Design Study Team

Japan International Cooperation Agency

Japan

Mr. Ovidio de Jesus Amaral

mana

Minister

Ministry for Transport, Communications

and Public Works

Timor-Leste

Mr. Egidio de Jesus

Secretary of State

Secretary of State for Power and Water

Ministry of Transport, Communications and

Public Works

Timor-Leste

# Target Facilities

The following facilities will be considered in this Study.

- (1) Dili
  - > Rehabilitation of three existing Water Treatment Plants

Bemos

Lahane

Benamauk

- Rehabilitation and improvement of existing Distribution Network (Zone 1, 5,6,7 and 8). Our main target will be Portuguese period pipes.
- (2) Ermera
  - New Intake

Haturegas Raitara Stream

> New Raw Water Main

From New Intake to the proposed Water Treatment Plant site

New Water Treatment Plant

Near the Church Environs

New Service Reservoir

Near the Church Environs (at the proposed Water Treatment Plant site)

Rehabilitation of existing Service Reservoirs

Mota Bura

Poetete

- > Rehabilitation of Existing Distribution Network
- (3) Same
  - > Rehabilitation of existing Intakes

Merbati

Darelau

> New Raw Water Mains

Darelau Intake to Hularua Service Reservoir

Kotalala Intake to Posto Elevated Tank

> Rehabilitation of existing Service Reservoirs

Merbati

Hularua

Posto Elevated Tank

- > Rehabilitation and Improvement of Existing Distribution Network
- (4) Ainaro
  - > Rehabilitation of existing Intake

Sarai River

Rehabilitation of Raw Water Main

From Sarai Intake to Nugupo Water Treatment Plant

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> Rehabilitation and Improvement of existing Water Treatment Plant Nugupo

> Rehabilitation of existing Service Reservoir

Kamilaran No.1

- New Transmission Line from Nugupo WTP to Kamilaran No.1 Service Reservoir
- > Rehabilitation and Improvement of existing Distribution Network
- (5) Maubisse
  - > Rehabilitation of existing Intakes

Bucana

Raikuak Ulun

Erulu

New Raw Water Mains

From Bucana Intake to Pousada Service Reservoir

From Raikuak Ulun Intake to Leputo Service Reservoir

From Erulu Intake to Erulu Service Reservoir

Rehabilitation of existing Service Reservoir

Pousada

Leputo

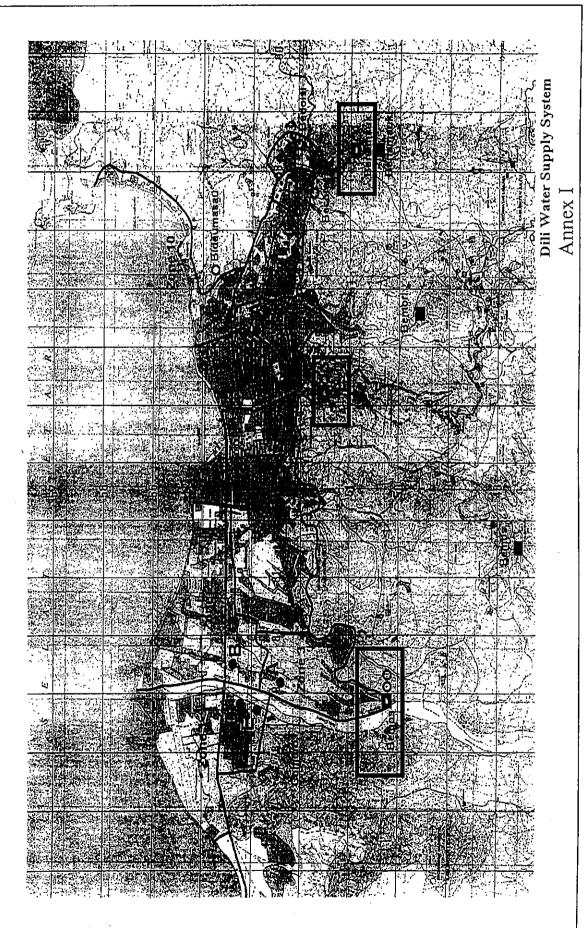
Erulu

> Rehabilitation of existing Distribution Network, if the necessity is confirmed

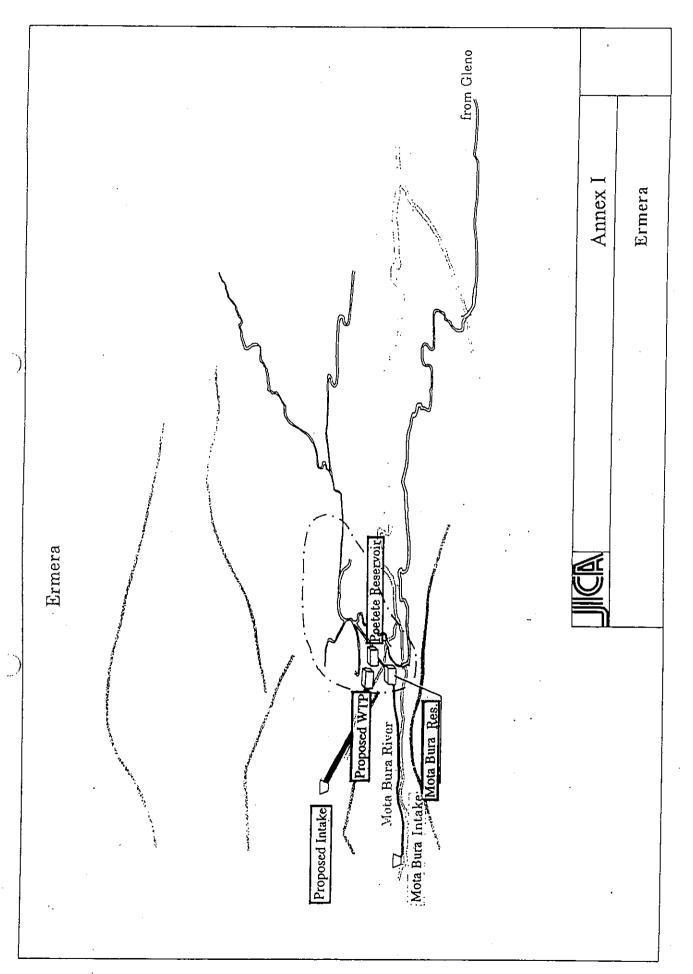
#### Note:

- The scopes of distribution main rehabilitation and improvement will be decided in Japan after analyzing the field data. Since network maps were hardly available for most of the cities, it is difficult to decide the scopes at this stage.
- 2) The sites of above-mentioned facilities are shown in accompanying Annex 1.

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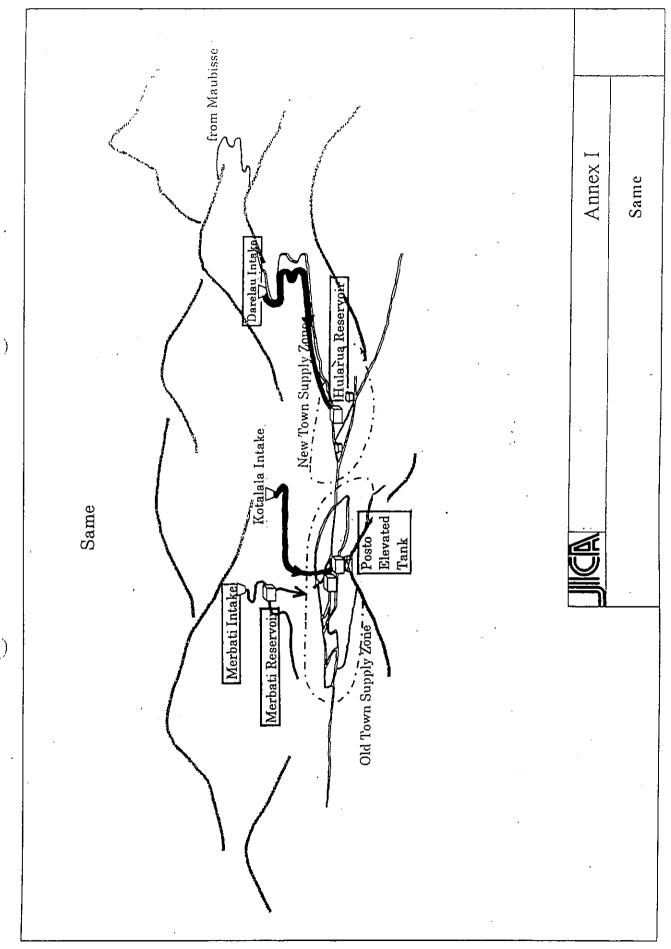


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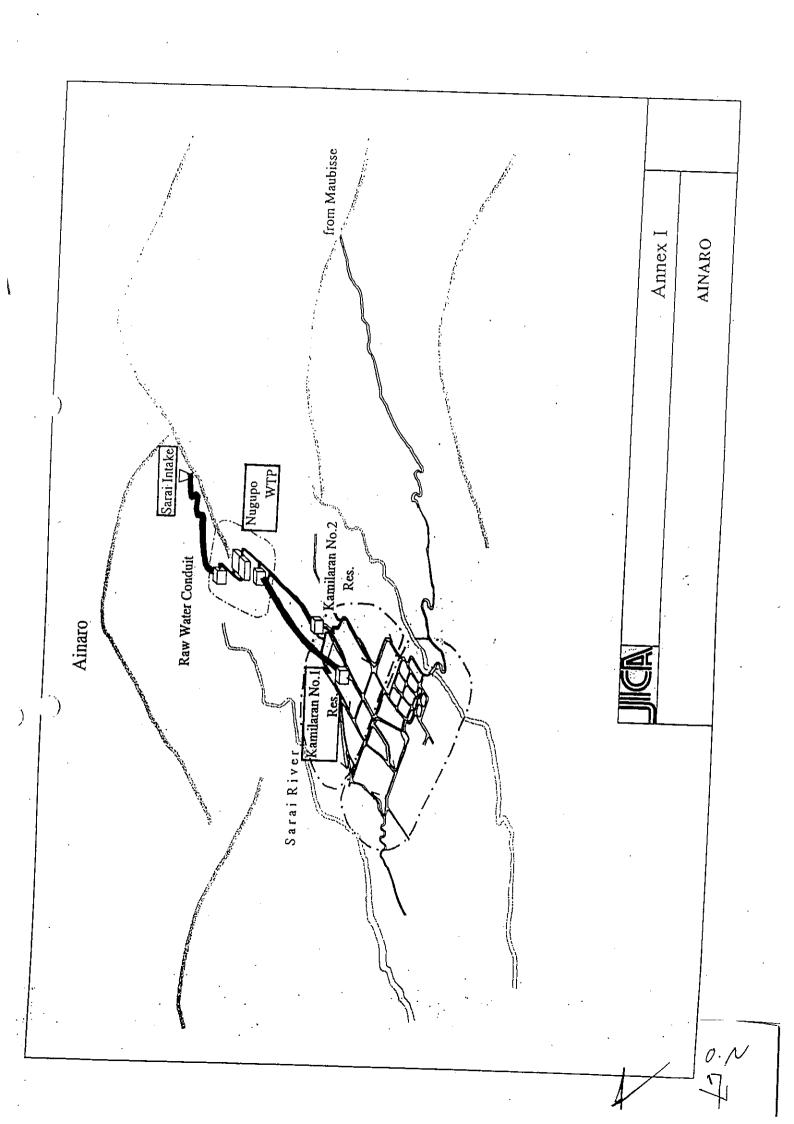
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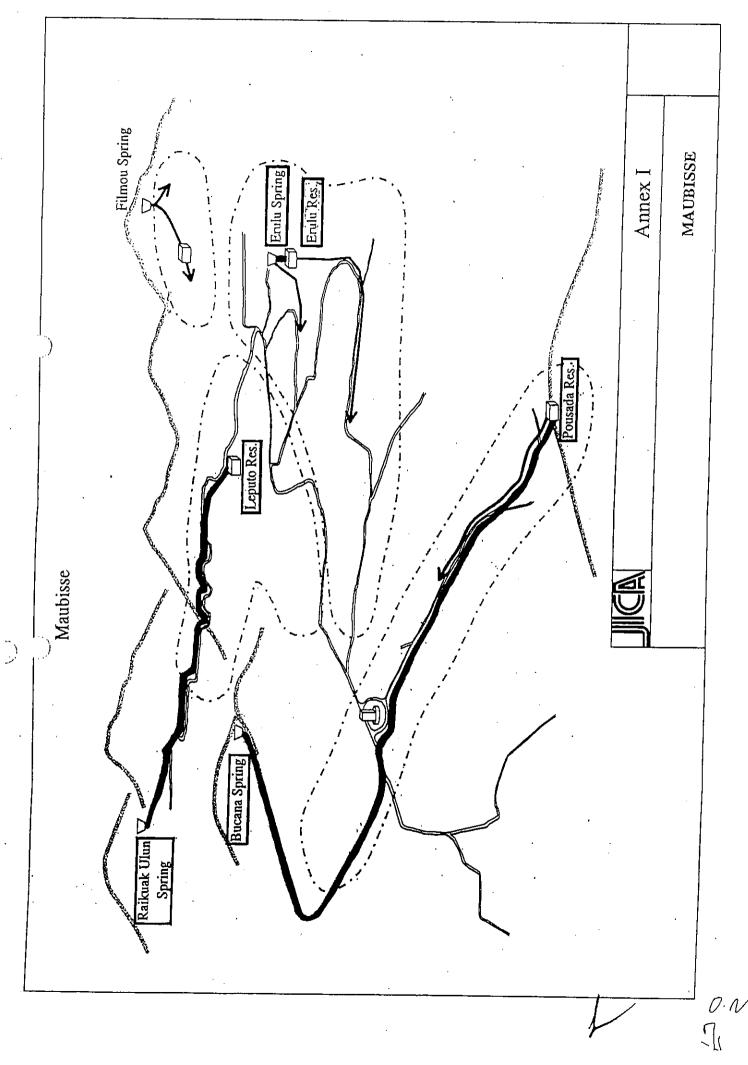
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Letter from the Minister for the

Ministry of Transport, Communication and Public Works
日付3月27日,2003年のM/Dに関するコメント



# REPÚBLICA DEMOCRÁTICA DE TIMOR – LESTE MINISTÉRIO DOS TRANSPORTES, COMUNICAÇÕES E OBRAS PÚBLICAS

NO: MTCOP/0075/GM/04/03

piL1, 28 March 2003

Mr. Kohei Sato Leader Basic Design Study Team Japan International Cooperation Agency Japan

Dear Mr. Sato,

With reference to the Minutes of Discussions documented on March 27, 2003, we wish to convey our Technical note and comments on some of the matters discussed therein.

#### Para 8-2: Priority order for the five requested sites

The priority order of the five requested districts will be: 1) Dili 2) Same 3) Ainaro 4) Maubisse 5) Ermera

#### Para 8-5: Water Charge System

- A billing system to charge for water supplied in Dili, is under development, and is expected to become operational by end of June 2003.
- The water tariffs for various categories of customers are in an advanced stage of finalization in consultation with the Council of Ministers (copy enclosed).
- After finalization, the tariffs will have to be notified in Newspapers, for comments from the general public for 30 days before they are adopted.
- The billing system for Water supplied in District towns of Ermera, Same, Ainaro, and Maubisse, are expected to be operational by the time the project in these towns is completed.
- Customers in the above district towns are expected to pay the water charges into the District Treasury office, under a separate account for WSS. The moneys thus collected would go into the central pool, and possibly later allocated for WSS budget.

#### Para 8-7: Land for the Project

 WSS will make all efforts to provide the Japanese side by early July 2003, a declaration from the Ministry of Justice (Land and Property Office) that the government owns the sites for the water supply facilities.

#### Para 8-10: Operation and maintenance

• Timor-Leste side will allocate budgetary appropriation after the study team comes up with an indicative figure for this, and assign the necessary staff for proper and effective operation and maintenance for the water supply facilities covered by the Project through the WSS department.

Our comments in respect of other matters detailed in Annexes 3 and 4, (with minutes of discussions signed on March 27, 2003) are appended herewith for your kind perusal.

With best wishes,

Sincerely

Mr. Ovidio de Jesus Amaral

Minister for Transport, Communications and Public Works

#### WATER SERVICES DECREE

#### NOTIFICATION OF WATER SERVICE TARIFFS

Under the powers conferred by **Section 18** of the Water Services Decree and on the recommendation of the Water Supply and Sanitation Service the Minister for Transport, Communications and Public Works issues the following Notification of Water Services Tariffs.

Minister

Transport, Communications and Public Works Date:

Date of Operation:

This Notification comes into effect on (Date) 2003

### Section 1: Definitions

"Damaged Meter" means a meter that has been damaged by the deliberate or accidental action of a person.

"Domestic" means premises principally used for long-term residential accommodation. (Hotels and boarding houses where a fee is paid for use of the accommodation on a commercial basis are categorized as non-domestic).

"Faulty meter" means a meter that has ceased to register the flow of water or is inaccurate but has not been damaged by the deliberate or accidental action of a person.

"Non-domestic" means all other premises including government, businesses, institutional premises, foreign missions, humanitarian organizations, hotels, restaurants, boarding houses and public utilities and services.

"O&M" means operation and maintenance.

"Social" means premises used as churches, mosques, hospitals and schools and a public tap servicing a village or small community.

"WSS" means Water Supply and Sanitation Service.

### Section 2: Scope of Tariffs

2.1 Water service tariffs apply to the Urban Area of Dili and in relation to:

- a) Water services for the supply of water to domestic, social and non-domestic consumers;
- b) Connections to the water supply system;
- c) Reconnections to the water supply system;
- d) Damage to WSS assets;
- e) Metered and non-metered premises.

### Section 3: Tariffs

3.1 Water service supply tariffs shall be levied on a monthly basis in accordance with the following table:

CUSTOMER TYPE	CONSUMPTION	TARIFF (US\$ per 1000
		litres per month)
	Metered Premises	
Domestic	First 14,000	USD\$ 0.20
Domestic	More than 14,000	USD\$ 0.40
Social (Public Tap)	All consumption	USD\$ 0.10
Social	All consumption	USD\$ 0.40
(Church/Mosque/hospital/school.)		
Non-domestic	Ali consumption	USD\$ 0.60
Non Metered	Premises or Damaged	Vieter 3. A Section 1.
CUSTOMER TYPE	CONSUMPTION意象數例	**TARIFE PER MONTH
Pomestic	All:consumption	USD\$10.00
Social (public tap)	All consumption ARRES	W USD\$75.00
Social		
Hospital	Alkeonsumption	USD\$2.50 per bed
School of the second	All consumption	USD\$1:00 per student
Church/Mosque	All consumption	### USD\$ 10.00
Non-domestica.	All consumption	### USD\$100.00
。	Faulty Meters	
CUSTOMER TYPE ***	CONSUMPTION	TARIFF PER MONTH
Domestic	All consumptions	**** USD\$2.800 //
Social (public tap)	All consumption	USD\$55
Social Action and the Company of the		THE RESERVE OF THE STATE OF THE
Hospital	All consumption	USD\$1.80 per bed
School	All consumption	© USD\$0.75 per student
Church/Mosque 4 4	All consumption	5√6-54 USD\$7.50
Non-domestic	All consumption	USD\$75

3.2 Water service connection tariffs shall be levied in accordance with the following table:

CUSTOMER TYPE	PIPE SIZE	CONNECTION TARIFF USD\$
Domestic	DN 15	USD\$ 55
Domestic	DN 20 or greater	USD\$100
Social	DN 15	USD\$ 55
Social	DN 20 or greater	USD\$100
Non-domestic	DN 20	USD\$ 100

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l Non-domestic	DN 25 or greater	USD\$ 200
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- 3.3 Water service reconnection tariffs for each customer type shall be the same as in clause 3.2.
- 3.4 Water service connection tariffs specified in clause 3.2 shall be payable in accordance with the following table:

CUSTOMER TYPE	PAYMENT SCHEDULE
Domestic and Social	Option 1: 100% payable upon application for a new connection.  Option 2: 50% payable on application for a new connection and 50% payable over the next 6 months in equal installments plus USD\$1.00.  Option 3: 100% payable in equal installments over 6 months plus USD\$5.00 commencing upon application for a new connection
Non-domestic	4000/
14011-doinestic	connection connection

- Options 2 and 3 in the payment schedule in clause 3.4 do not apply to the reconnection of disconnected service connections.
- 3.6 Water service repair tariffs for damage to WSS assets at the consumer's premises shall be levied in accordance with the following table:

<b>CUSTOMER TYPE</b>	PIPE SIZE	REPAIR TARIFF
Domestic	DN 15	Minimum of US\$ 160
Domestic	DN 20 or greater	Minimum of US\$200
Social	DN 15	Minimum of US\$ 160
Social	DN 20 or greater	Minimu of US\$200
Non-domestic	All sizes	Minimum of US\$ 400

### Section 4: Calculation of Tariffs

- 4.1 Water service tariffs are calculated based on the following factors:
  - a) An affordable tariff for the first 14,000 litres as lifeline block for domestic consumers;
  - An affordable tariff for villages and small communities which have access to water only through a public tap;
  - c) A reasonable tariff for consumption beyond the lifeline block to discourage unnecessary usage or wastage of water; and
  - d) An average tariff required for the current year to recover WSS estimated O&M cost.

- 4.2 Water service connection and reconnection tariffs are calculated based on the estimated cost to recover the cost of materials, labor and overhead to install individual connections at no profit to WSS;
- 4.3 Water service repair tariffs are calculated based on the estimated cost to recover cost of materials, labor and overhead to repair damage to WSS assets at the consumer's premises plus a penalty.

### Section 5 Comoro B and E

5.1 A person taking water from the overhead tank at the Water Points known as Comoro B and Comoro E shall be liable to the non domestic tariff set out in Clause 3.1 (no threshold shall apply).

### Section 6 Previous Notification

6.1 This Notification supersedes all prior Schedules and Notifications relating to water services, including the Schedule attached to the Notification dated 26 July 2000.

# **Minutes of Discussions** on The Basic Design Study

The Project for Improvement of Water Supply in Dili and Rural Districts

The Democratic Republic of Timor-Leste (Explanation on Draft Final Report)

In March 2003, Japan International Cooperation Agency (hereinafter referred to as 'JICA') dispatched a Basic Design Study Team on the Project for Improvement of Water Supply in Dili and Rural District (hereinafter referred to as "the Project") to the Democratic Republic of Timor-Leste (hereinafter referred to as 'Timor-Leste'), and through discussion, field survey, and technical examination of the results in Japan, JICA prepared a draft final report of the study.

In order to explain and to consult with the Timor-Leste side on the contents of the draft final report, JICA sent to Timor-Leste the Draft Final Report Explanation Team (hereinafter referred to as 'the Team'), which was headed by Mr. Tanaka Toshiaki, Resident Representative, JICA East Timor Office, and was scheduled to stay in the country from July 27th to August 8th, 2003.

As a result of discussion, both parties confirmed the main items described on the attached sheets.

Dili, August 44t, 2003

Mr. Tanaka Toshiaki

Leader

Basic Design Study Team

Japan International Cooperation Agency

Japan

Ms. Aicha Bassarewan

Vice-Minister

Ministry of Planning and Finance

Timor-Leste

Mr. Ovidio de Jesus Amaral

Minister

Ministry for Transport, Communications and

Public Works

Timor-Lestel

Mr. Egidio de Jesus

Secretary of State

Secretary of State for Power and Water

Ministry for Transport, Communications and

Public Works

Timor-Leste

### ATTACHMENT

### 1. Components of the Project

The Timor-Leste side agreed and accepted in principle the components of the draft final report explained by the Team. After discussions with the Team, the Timor-Leste side confirmed the components which will be constructed under the Japanese Grant Aid listed in Annex-I (Phase 1).

Basic Design Study was carried out for five cities' water supply systems and implementation plan was divided into three (3) Phases in the Study,

Phase 1: Dili Water Supply System Improvement

Phase 2: Same and Ainaro Water Supply Systems Improvement

Phase 3: Ermera and Maubisse Water Supply Systems Improvement

At this stage, Phase 1 will be implemented, however the possibility of implementation for Phase 2 & 3 will be examined considering the finances of Japanese side.

### 2. Japan's Grant Aid scheme

The Timor-Leste side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Timor-Leste as explained by the Team and described in Annex-3 and Annex-4 of the Minutes of Discussions signed by both sides on Marh 27th, 2003.

### 3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and will send it to Timor-Leste around September 2003.

### 4. Other relevant issues

## (1) Land Acquisition and Level the sites

The Timor-Leste side shall allocate budgetary appropriation to secure the land and to level the sites for Bemos water treatment plant and Benamauk water treatment plant, prior to commencement of work on condition that Grant Aid is extended.

### (2) Proper Use and Maintenance

Timor-Leste side shall allocate budgetary appropriation, collect the water rate, and assign the necessary staff for proper and effective operation and maintenance for the water supply facilities covered by the Project through Water and Sanitation Services Department.

### (3) Water Charge System

Water Charge System of Dili is now in final stage of norms. Timor-Leste

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side said that water charge system for Dili shall be started definitely by the end of this year (2003).

### (4) Privatization Issue

At this stage, Government of Timor-Leste and WSS (Water and Sanitation Service Department) have no plan for privatization of Water Supply system.

## (5) No Duplication

WSS has no plan as of now to install the pipelines which are planned in the Basic Design, namely, main pipelines in Zone 1, 5, 6, 7, and 8 (details in the report). WSS will not duplicate the planned pipelines under the Basic Design among other donors.

## (6) Necessary Undertakings

Japanese side strongly emphasized that the necessary undertakings, described in Annex-4 in the Minutes of Discussions signed by both side on the March 27th, 2003, are standard mandatory requirements for the smooth implementation of the Project by the Timor-Leste side, without which the Project cannot proceed.

The Timor-Leste side explained that certain commitments in said Annex-4, items 9(2), 10 and 11, are currently the subject of negotiation between the Government of Japan and the Government of Timor-Leste, in the context of the Agreement to be signed by the two parties on Technical Cooperation and the Japan Overseas Cooperation Volunteers.

Both sides agreed on the other items in said Annex-4, and further agreed to exert effort to get mutual consent of the whole items by early September 2003.

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## Annex-1 The Project Components

## (Phase 1: Dili Water Supply System Improvement Project)

## 1) Bemos Water Treatment Plant

Category of Work	Facilities & Equipment	Remarks
1. Civil Work	Distribution well -1 unit	New
}	Mixing Flume -2 units	New
	Wash-water Tank -1 tank	New
2. Architectural Work	Office House (Rehabilitation)-1 house	Rehabilitation
	Generator House (Rehabilitation)-1 house	Rehabilitation
3. Mechanical Work	Water Treatment Unit -4 units	Replacement
	Chemical Dosing Equipment1 system	Replacement
	Disinfecting Equipment -1 system	Replacement
4. Electrical Work	Power Distribution System -1 system	Replacement
	Monitoring Equipment -1 system	New
	Standby Generator Unit -1 unit	Replacement

## 2) Lahane Water Treatment Plant

Category of Work	Facilities & Equipment	Remarks
1. Civil Work	Raw Water Mains -2 pipelines (Bemori and	New Line
	Benamouk lines, about 7.3 km)	`
	Receiving Tank-1 tank	Replacement
2. Architectural Work	Office House –1 house	Rehabilitation
3. Mechanical Work	Suspended Solid Contact Clarifier -1 tank	Rehabilitation
	Rapid Sand Filters -3 filters	Rehabilitation
	Chemical Dosing Equipment -1 system	Replacement
	Disinfection Equipment1 system	Replacement
4. Electrical Work	Incoming Power Receiving Sys1 system	Replacement
	Power Distribution System -1 system	Replacement
	Monitoring Equipment -1 system	New
	Standby Generator -1 unit	Replacement

## 3) Benamauk Water Treatment Plant

Category of Work	Facilities & Equipment	Remarks
1. Civil Work	Distribution Well –1 unit	New
	Wash-water Elevated Water Tank -1 tank	New
2. Architectural Work	Operation House-1 house	Rehabilitation



	Staff House - Thouse	New
3. Mechanical Work	Water Treatment Unit -2 units	Replacement
	Chemical Dosing Equipment -1 system	Replacement
	Disinfection Equipment-1 system	Replacement
4. Electrical Work	Incoming Power Receiving Sys1 system	Replacement
	Power Distribution System –1 system	Replacement
	Monitoring Equipment -1 system	New
. •	Standby Generator Unit -1 unit	Replacement

## 4) Water Distribution Network for Zone 1, 5, 6, 7, and 8

Size	Length (m)
( mm )	Approx.
φ 80	2,618
φ 100	6,841
φ 150	8,415
φ 200	1,792
Total	19,603

## 5) Equipment Supply

Basic Water Quality Analysis Sets Jar-Tester

Saddles and Drills

## 6) Software Component

Technical Support for service pipes planning Technical Support for water quality analysis technique



6. 事前評価表

### 事前評価表

### 1. 協力対象事業名

東ティモール民主共和国 ディリ及び地方都市上水道整備計画

- 2. 我が国が援助することの必要性・妥当性
- (1) 我が国が当該国に対し援助することの必要性・妥当性

我が国は、東ティモール問題の平和的な解決はアジア太平洋地域の安定と平和のために極めて重要 であるとの認識の下、同問題解決のためできる限り支援を行う旨表明してきている。このことを受け、東 ティモール国の復興に対し国際援助機関との協調のもとに、同国の政治的・経済的安定に積極的に協 力し、周辺地域の平和に貢献している。現在東ティモール国は国連の暫定統治を経て本年 5 月で独立 1周年を迎えたが社会基盤整備、法整備が遅れ、まだ経済開発の目覚しい発展はない。 昨年 12 月に はディリでの暴動などがあり治安の悪化で PKF の縮小時期が延期されることとなったが、経済発展によ る国民所得向上により経済的不満を解消することで治安の安定が期待できる。 そのためには社会基盤 施設の充実が必要であり、国際社会全体が東ティモール国を支援する必要性がいっそう高まっているこ と、民主化及び経済改革に関し積極的に努力していること等を踏まえ、援助を実施する。

(2) 当該プロジェクトを実施することの必要性・妥当性

東ティモール国の上水道施設による水供給はそのほとんどが簡易的またはコミュニティー(地域)水道 的なもので、水量、水質の面から満足なシステムとは言えない。施設は破壊・老朽化・維持管理の不備 により住民への安定的水供給ができない状況となっている。また、インドネシア人の退去により水道事業 の運営、維持管理、経営の面で人材が不足する状況ともなっている。 同国初の国家開発計画(2002 年 5 月)では都市及びコミュニティー(地域)での給水率 80%を目標として復旧・施設整備を行うことが 最重点目標となっている。 かかる状況のなか本件対象のディリ、エルメラ、サメ、アイナロ及びマウビセ は東ティモールのなかでも緊急性を要する都市であり、首都ディリ以外の4都市は現在でもドナー国の 援助が行われていない。早急な施設改修・改善により、安全で安定的な水供給、また、経済発展に寄与 することが望まれている。

### 3. 協力対象事業の目的等(プロジェクト目標)

プロジェクト対象地域の給水施設を整備することにより、住民に安全な水が安定的に供給されることを 目的とする。

## 4. 協力対象事業の内容

(1) 対象地域

東ティモール民主共和国 ディリ、エルメラ、サメ、アイナロ、マウビセ

プロジェクト対象地域の給水施設が整備される。

(3) インプット

【日本側】

ディリ

3 つの浄水場、導水管(約 7.3km)及びディリ給水区域の配水ゾーン 1,5,6,7,8 における配水管(約 19.6km)の整備

エルメラ

取水場、浄水場、導水管(約2.5km)及び配水管(約5.8km)の整備

取水場、配水池、導水管(約 6.7km)及び配水管(約 15.5km)の整備 アイナロ

取水場、浄水場、導水管(約0.8km)及び配水管(約8.3km)の整備 マウビセ

取水場、配水池、導水管(約 5.2km)及び配水管(約 1.5km)の整備 (ソフトコンポーネント)

- 給水管整備計画のための技術指導
- ・ 顧客台帳整備の技術指導
- 水質分析技術向上のための技術指導
- ・ 緩速ろ過システム及び維持管理の講習

### 【東ティモール国側】

- ・配水管より顧客敷地内までの給水管(延長 6m)及び水道メータの設置
- ・ 運転維持管理の要員の確保

#### (4) 総事業費

概算事業費 31.36 億円(日本側負担分 30.75 億円、東ティモール側負担分 0.61 億円)

### (5) スケジュール

【日本側による施設建設】

詳細設計期間を含め約80ヶ月の工期を予定

【相手国側負担による施設建設】

約9.0ヶ月の工期を予定

### (6) 実施体制

監督機関:運輸·通信·公共事業省上下水道衛生局(WSS)

ディリ: WSS ディリ本部、エルメラ: WSS グレノ支局、サメ: WSS サメ支局、アイナロ及びマウビセ: WSS アイナロ支局

#### 5. プロジェクトの成果

### (1) プロジェクトの裨益対象の範囲及び規模

ディリ : 80,700 人 エルメラ : 4,300 人 サメ : 11,800 人 アイナロ : 4,900 人 マウビセ : 2,700 人 裨益人口合計 : 104,400 人

### (2) 事業の目的(プロジェクトの目標)を示す成果指標

ディリにおいては、プロジェクト対象が給水区域の一部の改修であることから給水率の算出ができない。このことにより、浄水処理水量及び不明水率を成果指標とする。

### ディリの浄水処理水量

浄水場	実施前(2003年)	実施後(2007年)
ベモス浄水場	0m³/⊟	2,000m³/⊟
ラハネ浄水場	1,955m³/⊟	2,600m <sup>3</sup> /⊟
ベナマウク浄水場	0m <sup>3</sup> /⊟	600m³/⊟
合 計	1,955m <sup>3</sup> /日	5,200m³/日

### ディリの不明水率(配水ゾーン 1,5,6,7,8)

給水区域 (配水ゾーン 1,5,6,7,8)	実施前(2003年)	実施後(2007年)
不明水率(漏水、盗水など)	40%	28%

### 地方都市の給水率

項目	単位	実施前(2003年)			実施後(2008年及び2010年)				
块 日		エルメラ	サメ	アイナロ	マウビセ	エルメラ	サメ	アイナロ	マウビセ
行政人口	人	4,300	11,800	4,900	2,700	4,300	11,800	4,900	2,700
給水人口	人	730	3,208	3,265	864	1,505	5,546	3,577	1,269
給水率	%	17	27	66	32	35	47	73	47

### (3) その他の成果指標

水因性疾病罹患率、女性と子どもの水汲み労働時間

## 6. 外部要因リスク

- (1) 東ティモール側負担事項の予算化
- (2) 持続的水道事業運営のための適切な水道料金の徴収
- (3) 持続的な運営維持管理の実施

- 7. 今後の評価計画
- (1) 事後評価に用いる成果指標
  - 1) 浄水場処理水量(m³/日)
  - 2) 不明水率(%)
  - 3) 給水率(%)
- (2) 評価のタイミング 施設運用開始(2010年)以降

7. 収集資料リスト

# 収集資料リスト

## 調査名 東ティモール国ディリ及び地方都市上水道整備計画基本設計調査

番号	名 称	形態 図書・ビデオ 地図・写真等	オリジナル・コピー	発行機関	発行年
1	Water Service Decree Water Tariff Policy	A4版 P4	コピー	WSS	
2	Urban Wastewater Strategy (Draft)	A4版	コピー	WSS	
3	Water Decree	A4版 P14	コピー	WSS	
4	水道法草案(Water Services Decree)	書類 A4版 P15	コピー	WSS	
5	水道料金の公示(Natification of Water Service Tariffs)	書類 A4版 P4	コピー	WSS	
6	第5回進捗報告書:ティモール・レステ (Fifth Progress Report on Timor-Leste)	報告書 A4版 P114	オリジナル	ADB	
7	プロジェクト審査書類 (Project Appraisal Document - CEP )	書類 A4版 P84	コピー	WB - CEP	
8	2001年SUCO調査報告書 (The 2001 Survey of SUCOs)	報告書 A4版 P121	コピー	Statistic and Planning Dept	
9	資機材在庫リスト	書類 A4版 P28	コピー	WSS	
10	廃棄物処理基本計画:初期版 (East Timor Solid Waste Master Plan - Preliminary Version)	報告書 A4版 P39	コピー	WSS	
11	WSS 5ヶ年計画 (WSS 5 Years Plan)	CD	コピー	WSS	
12	気象データ(2002年8月~2003年4月)	書類 A4版 P12	コピー	気象部	
13	組織図(政府全体)	シート A3版 P1		WSS Finance DPT	
14	CFET Expenditure	シート A4版 P5		WSS Finance DPT	
15	TFET Expenditure	シート A4版 P2		WSS Finance DPT	
16	地方都市上下水道予算(2003 / 2004)	シート A4版 P5		WSS Eriasu	
17	水道栓の取付け数(Dili)	シート A4版		WSS Joaquine	

# 収集資料リスト

## 調査名 東ティモール国ディリ及び地方都市上水道整備計画基本設計調査

		形態			
番号	名	図書・ビデオ	   オリジナル・コピー	発行機関	発行年
留写	白 柳			光1] [茂]美]	光打牛
		地図・写真等			
18	ADB Revenve	製本 A4版 P39		ADB Jessie Amuco	
19	Lahane 浄水場単線結線図	図面 A4版 P1	コピー	WSS	
20	東ティモール全国図(ガイドマップ)	地図 変A1版 P1	印刷		
21	サメ区域見とり図	地図 A2版 P1	コピー	WSS(Same)	