Town: No. & Facility: Year of Construction Financed by: Dili 01- Bemos Intake 1986 **Existing Condition:** Photograph: Structure: concrete weir Shape: Dimension: Capacity: 60L/sec intake rate Function: raw water intake Ground level: Accessories: Collecting chamber with two inlets laid at the upper basin Grit chamber at 50m downstream (Date: Nov 2000) Evaluation: Working but due to flood, concrete apron is damaged. Rehabilitation Plan: 1) Basic Calculation Minor repair is required. It is in urgent need to avoid foreign matters such as silts, sand and leaves from entering into the collection chamber and to protect the inlets from the flood. Stones and gravels with sufficient size should be laid surrounding the inlet perforated pipes. 2) Civil Work: Repair of weir and concrete apron Excavation 3m x 3m x 2m depth and filled by stones and gravel 3) Piping work: none 4) Mechanical work: none 5) Electrical work: none 6) Miscellaneous: none Construction schedule: Estimated cost: Priority: US\$16,532 A-2

Town:	No. & Facility:	Y	ear of Construction	Financed by:
Dili	02 - Bemori	Intake		
Existing Condit	tion:	P	Photograph:	
Structure: concrete	Э			
Shape:				
Dimension:				Bemori 1 Intake
Capacity: Function:				
runction.				
Ground level:		-4	A STATE OF THE STA	
Accessories:				在1000 000000000000000000000000000000000
			Bemori 2 intak	
				123 1000
				(Date: May 2000)
Evaluation:				,
	t requiring rehabilita			
		ission mains a	re repaired by JICA Stud	dy Team in June-
December, 2	2000			
Rehabilitation F	Plan·			
1) Basic Calculation				
	ation is required.			
	·			
2) Civil Works non				
2) Civil Work: non	е			
3) Piping work: no	ne			
4) Mechanical wor	·k· none			
i) meenamear ner	Hono			
_, _,				
5) Electrical work:	none			
6) Miscellaneous: none				
Estimated cost.	:	Constructio	n schedule:	Priority:
No	one			_
INC				

Town: No. & Facility: Year of Construction Financed by: Dili 03 - Benemauk Intake Existing Condition: Photograph: Structure: Concrete made Shape: Dimension: Capacity: Function: Ground level: Accessories: Intake chamber (Date: May 2000) Evaluation: Working but requires rehabilitation. Rehabilitation Plan: 1) Basic Calculation Silts and sands are entering into the intake chamber because of openings of the upper slab of the intake conduit 2) Civil Work: Excavation of upper basin of the intake weir (7m x 4m x 1.5m depth) Concrete pouring on the openings to close conduits Backfill by gravel and stones 3) Piping work Installation of perforated GS pipes in the upper basin 3m x 3 lines 4) Mechanical work: none 5) Electrical work: none 6) Miscellaneous: none Estimated cost: Construction schedule: **Priority:** US\$2,595 A-2

Town: No. & Facility: Year of Construction Financed by: Dili 04 - Kuluhun A Photograph:

Existing Condition:

Function: Deep well pumped to Taibesi Reservoir.

Capacity: 30L/sec x 26kw

Drilled depth: 60 m

Ground level: Accessories:

Delivery main: 200mm



(Date: May 2000)

Evaluation:

Working but requires rehabilitation.

Rehabilitation Plan:

1) Basic Calculation

Rehabilitation of pump and generator sets are required.

2) Civil Work: none

3) Piping work

Pipe replacement: 250mm GS x 50m

4) Mechanical work:

Submersible pump should be replaced by new one.

Type: submersible pump

Capacity: 1.0m3/min x 10.0kg/cm2

5) Electrical work:

Watt-hour Meter Box x1 Fuel Tank x1

Main Power Switch Panel x1 Pump Control Board x1

Generator Set x1

Estimated cost:	Construction schedule:	Priority:
US\$12,000		A-1

Town:	No. & Facility:		Year of Construction	n Financed by:
Dili	05- Kuluh	un B	1998	
Existing Condi	tion:		Photograph:	
	ell pumped to Beco c x 38kw	ra Res.		
Drillea аертн: 130	m			
Ground level: Accessories:				
Delivery ma	in: 150mm			
				(Date: May 2000)
Evaluation: Working no	rmally.			
Rehabilitation I 1) Basic Calculation No rehabilita				
2) Civil Work: non	ne			
3) Piping work no	ne			
4) Mechanical wo	rk: none			
5) Electrical work:	none			
6) Miscellaneous:	none			
Estimated cost	<u>.</u>	Construct	ion schedule:	Priority:
No	one			-

Town: No. & Facility: Year of Construction Financed by:

Dili 06-Comoro A & B 1988

Existing Condition: Function: Deep wells

Capacity: 35L/sec x 36kw (A)

50L/sec x 56kw (B)

Drilled depth: 74m (A), 78m (B)

Ground level: Accessories:

Delivery main: 250mm (A), 200mm (B)

Photograph:



Comoro A

Comoro B



Evaluation:

Comoro A working normally but requires rehabilitation.

Comoro B used exclusively for the PKF with water truck refilling station

Rehabilitation Plan:

1) Basic Calculation

Comoro B should be used for the public after PKF left.

Comoro A rehabilitation includes replacement of the existing pump and pipework.

2) Civil Work: none

3) Piping work:

Pipe replacement at Comoro A: 300mm GS x 50m

4) Mechanical work:

Comoro A: Submersible pump should be replaced by new one:

Type: submersible pump

Capacity: 2.3m3/min x 2.0kg/cm2

5) Electrical work:

Rehabilitation of Comoro A well include the following: Watt-hour Meter Box x1 Fuel Tank x1

Main Power Switch Panel x1 Pump Control Board x1

Generator Set x1

Estimated cost:	Construction schedule:	Priority:
US\$12,000		A-1

Town:	No. & Facility:	Year of Construction	Financed by:
Dili	07 - Como	oro C 1995	
Existing Condi	ition:	Photograph:	
Function: Deep w	/ell		
Capacity:			
Drilled depth:		MARIA PROPERTY AND ADDRESS OF THE PARTY AND AD	
			The second of th
Ground level:		The state of the s	1 1 1
Accessories:		CANONIA CONTRACTOR	
		The second second	
			(Date: May 2000)
Evaluation:			
		low production rate, and pumps are re	
_	•	n of old Comoro C well was carried ou	it with the result far less
man me de	signed production ra	ale (20/LSec).	
Rehabilitation	Plan:		
1) Basic Calculati	ion		
		ells (A, B, D, E) exceeds the water de	mand in the supply
zone, this w	vell will be abandone	ed.	
2) Civil Work: nor	ne		
2) 61111 11611. 1161			
3) Piping work: no	one		
4) Mechanical wo	ork: none		
, meenamear we			
_, _,			
5) Electrical work	: none		
6) Miscellaneous:	none		
Estimated cost	t:	Construction schedule:	Priority:
N	one		-

Town: No. & Facility: Year

08 - Comoro D & E

Year of Construction Financed by: 1996 (E)

Existing Condition:

Dili

Function: Deep wells pumped to Comoro Res.

Capacity: 30L/sec x 35kw (D & E)
Drilled depth: 93m (D), 91m (E)

Photograph:



Comoro D

Ground level:

Accessories:

Delivery main: 200mm (D), 200mm (E)

Comoro E



(Date: May 2000)

Evaluation:

Comoro D, equipped with new generator for emergency operation. Comoro E, working but requires rehabilitation.

Rehabilitation Plan:

1) Basic Calculation

Rehabilitation of Comoro E is required.

2) Civil Work: none

3) Piping work

Comoro E: Existing pipeworks are undersized and need replacement 300mm GS x 50m

4) Mechanical work:

Comoro E: Submersible pump installation

Type: submersible

Capacity: unknown, but more than 2.0m3/min

5) Electrical work:

Comoro E:

Watt-hour Meter Box x1 Fuel Tank x1

Main Power Switch Panel x1 Pump Control Board x1

Generator Set x1 6) Miscellaneous: none

Estimated cost: Construction schedule: Priority:

US\$37,000 A-1

Town: No. & Facility: Year of Construction Financed by: 09 - Bidau 1 Dili Existing Condition: Photograph: Function: Deep well pumped to Bidaumasau Res. Capacity: 5.5L/sec x 8kw Drilled depth: 78m Ground level: Accessories: Delivery main: 150mm (Date: May 2000) Evaluation: Abandoned with the pump installation removed Rehabilitation Plan: 1) Basic Calculation Rehabilitation of this well was planned to be carried out in the 2000JICA project. Because of the problem related to land acquisition, the rehabilitation was canceled. Instead, new deep well was constructed close to the existing. It is expected to start operation on January 2001. 2) Civil Work: none 3) Piping work: none 4) Mechanical work: none 5) Electrical work: none 6) Miscellaneous: none Estimated cost: Construction schedule: **Priority:** None

Town:	No. & Facility:		Year of Construction	Financed by:
Dili	10 - Bida			•
Existing Condit	tion:		Photograph:	
Function: Deep wo Capacity: 9.7L/se Drilled depth: 58m	ell pumped to Dili G ec x 20kw			
Ground level: Accessories: Delivery ma	in: 100mm			(Data: May 2000)
Evaluation:				(Date: May 2000)
Used exclus	sively for the Dili Ge	eneral Hospita	al	
Rehabilitation I				
1) Basic Calculation Rehabilitation	on on is not required.			
2) Civil Work: non	e			
3) Piping work: no	one			
4) Mechanical wor	rk: none			
5) Electrical work:	none			
6) Miscellaneous:	none			
Estimated cost	:	Constructi	ion schedule:	Priority:
No	one			-

Tours	No O Coellina	Vacr of Ca		mand but
Town:	No. & Facility:		nstruction Fina	incea by:
Dili	11 - Bemos Ra Transmiss			
Existing Condit	tion:	Photograp	h:	
Structure:				
Shape:				
Dimension: 8 inch	GS		Be	mos transmission
Capacity:			1500 F	e bridge
Function:		6	Pin Pin	o bridge
Drilled depth:				
Ground level:				
Accessories:				V. T. V.
5 air release	, volvos			
		Banas toons		
two pipe bri	_	Bemos trans	smission	
blow-off val	ves	6 inch GS		The second
			(Dat	e: Oct 2000)
Evaluation:				
Leakage fro	m the main, is obse	rved particularly from the	air release valve	s. Pipelines are
installed on	the riverbed or on t	ne bank slope, vulnerable	to the flood.	
		·		
Rehabilitation I	Plan:			
1) Basic Consider				
,		lood prone area, full scale	rehabilitation is	considered
		e, air release valves will b		Sorisiacica
inenective.	10 millimze leakag	e, all release valves will be	e replaced.	
2) Civil Work: non	е			
3) Piping work:				
,	alfunctioning air rel	ease valves (5)		
		(-,		
4) Mechanical wor	rk: none			
4) Medianical Wol	A. HOHE			
E) Electrical				
5) Electrical work:	none			
6) Miscellaneous:	none			
Estimated cost	•	Construction schedu	le:	Priority:
		- Jiioti dodon Joneda		
US\$2	2,837			A-1
Ī				

Town: No. & Facility: Year of Construction Financed by: 12 - Bemos WTP Dili 1982-84

Existing Condition:

Structure: Package treatment unit

Process: Mixing-Flocculation-Sedimentation-Filtra Chemical in use: Alum, Calcium Hypochlorite, Lim Production Capacity: 19 L/s assessed from the

surface area of filter sand Source of Water: Bemos River

Ground level: Accessories:

> Reservoir (1000m³) Inlet chamber

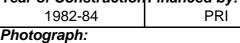
Package-type treatment plant

1.9m x 6.9m x 3.8m x 2sets

Reservoir (500m³, 1000m³)

Chemical flocculation, sedimentation

Chlorinator





(Date: May 2000)

Evaluation:

The existing facilities are overloaded and operated at the rate, 50L/sec, resulting in poor quality of water production. Backwash pumps and chemical pumps are not working. Chemicals are fed manually at present.

Rehabilitation Plan:

1) Basic Consideration

Most of the problems encountered are arising from poor operation practice. Flow control should be practiced to operate at the design rate.

2) Civil Work:

3) Piping work:

Replacement of flow meters: 200mm - one set on the inlet, as the existing meters have decreased accuracy.

4) Mechanical work:

Installation of backwash pumps: 4.8m3/min x 8m head x 11kw - 2 sets Blower for backwash: 0.6m3/min x 0.55fkg/cm2 x 8.5kw - one set as standby

5) Electrical work:

For backwash pump operation,

Watt-hour Meter Box x1 Fuel Tank x1

Main Power Switch Panel x1 Pump, Compressor Control Board x1 Generator Set x1 Pump, Compressor Local Control Board x1

Estimated cost:	Construction schedule:	Priority:
US\$120,027		A-2

Town:	No. & Facility:	Year of Construction	Financed by:
Dili	13 - Benamauk WTP	1993	PRI
Existing Condit	tion:	Photograph:	

Existing Condition:

Structure: Package treatment unit made of steel Process: Mixing-Flocculation-Sedimentation-Filtra Chemical in use: Alum, Calcium Hypochlorite, Lim

Production Capacity: 4 L/s assessed from the

surface area of filter sand

Source of Water: Benamauk intake

Ground level: Accessories:

Packaged-type treatment plant

1.9m x 6.9m x 3.8m x 2sets

Chlorinators

Reservoir No.1 and No.2



(Date: May 2000)

Evaluation:

Although working, mechanical equipment was removed during the post referendum violence. Chemicals are not being dosed on continuous basis.

Rehabilitation Plan:

1) Basic Calculation

As chemical facilities were completely demolished during the last violence, focus should be laid on rehabilitation of mechanical and electrical equipment for chemical dosage.

2) Civil Work:

Protection of WTP from possible landslide due to flood at the Benemauk river Gabion and rivetment at the left bank of the river (60m length)

3) Piping work: none

4) Mechanical work:

Chemical mixing tank with 0.5m3 storage. All existing tanks, 4 in number, to be reconstructed.

Feeder pumps: 6L/hr x 150w - 6 sets Motorized mixers: 0.5m3x0.75kw x 4 sets

5) Electrical work:

Generator Set x2 Fuel Tank x2

Pump, Mixer Control Board x1

Estimated cost:	Construction schedule:	Priority:
US\$101,102		A-1

Town:	No. & Facility:	Year of Construction	Financed by:
Dili	14 - Lahane WTP	1954	Portugal

Photograph:

Existing Condition:

Structure: Reinforced concrete

Process: Mixing-Sedimentation-Filtration by gravity Chemical in use: Alum, Calcium Hypochlorite, Lime Production Capacity: 43 L/s assessed from the surface area of filter sand, including standby filter Source of Water: Bemori intake and Benemauk

intake

Ground level: Accessories:

> Contact chamber Mixing chamber

Up flow type sedimentation - one basin

3 basins for filtration Clear water reservoir

Laboratory



(Date: May 2000)

Evaluation:

In general, the plant is well-maintained but minor repair and rehabilitation is required..

Rehabilitation Plan:

- 1) Basic Calculation
 - Broken flow meters should be replaced.
- 2) Civil Work:
- 3) Piping work
- 4) Mechanical work:

Replacement of flow meters mounted on inlet and outlet

Type: referential type Diameter: 6 inch

No.: three sets, one for inlet and the other two for outlets

5) Electrical work:

No action is required.

Estimated cost:	Construction schedule:	Priority:
US\$13,404		A-2

Town: No. & Facility: Year of Construction Financed by: Dili 15 - Bemos I Resevoir Existing Condition: Photograph: Structure: Reinforced Concrete Shape: Rectangular Dimension: 14.8m x 14.1m x 2.9m Capacity: 500m³ Function: Source of Water: Bemos WTP, Bemos II, Comoro Ground level: Accessories: flow meter ventilation overflow (Date: May 2000) Evaluation: Turbid water coming from Bemos II is mixed with clean treated water. Rehabilitation Plan: 1) Basic Calculation: Minor repair is required at the malfunctioning flow meters. 2) Civil Work: none 3) Piping work Replacement of flow meters: 150mm - two sets, referential type on the outlets 4) Mechanical work: none 5) Electrical work: none 6) Miscellaneous: none Construction schedule: Estimated cost: **Priority:** US\$8,936 A-2

Town:	No. & Facility:	Voar (of Construction	Financed by:			
Dili	16 - Bemos II		n construction	i manced by.			
Existing Condition:			graph:				
Structure: Reinfor		1 11010	grapii.				
Shape: Rectangu							
Dimension: 17.7m							
Capacity: 1,000m		4404					
Function:		Sinci.	A STATE OF THE PARTY OF THE PAR	建工业 工具 不是一种。			
Source of Water:	moro B		多 第二次				
Ground level:	, , , , , , , , , , , , , , , , , , , ,			器产品。 第一名			
Accessories:			-	THE RESERVE OF THE PARTY OF THE			
flow meter			The state of the s				
ventilation							
overflow			W 11				
				ART LANGE PROPERTY.			
				以下以及2000年的1900年的1900年			
				(Date: May 2000)			
Evaluation:		1					
No supply from Comoro B since water is used by UNTAET. Thick layer of deposits in the tank due to absence of maintenance since commissioned.							
Rehabilitation I	Plan:						
1) Basic Calculation	on						
As the stora	age capacity in the s	supply zone exceeds	the requirement,	no rehabiilitation is			
proposed.			•				
2) Civil Work: none							
3) Piping work: none							
4) Mechanical work: none							
<u></u>							
5) Electrical work: none							
6) Miscellaneous: none							
Estimated cost	·.	Construction sc	hodulo:	Priority			
Lounaled Cost	-	Construction SC	ieuuie.	Priority:			
No	one			-			

Town: No. & Facility: Year of Construction Financed by: Dili 17 - Lahane Resevoir Portugal **Existing Condition:** Photograph: Structure: Reinforced Concrete Shape: Rectangular Dimension: 22m x 14.6m x 3.5m Capacity: 800m³ Function: Source of Water: Lahane WTP Ground level: Accessories: 2 flow meters ventilation (Date: June 2000) Evaluation: Never cleaned since 1995. Washout (2 x 2") not adequately designed as compared to inlet 2 x 6" Rehabilitation Plan: 1) Basic Consideration: Major problem is related to low skill of operational staff assigned. On-the job training is required. 2) Civil Work: none 3) Piping work Replacement of washouts by sufficient size of GSP (6 inch x 5m - 2 lines) 4) Mechanical work: none 5) Electrical work: none 6) Miscellaneous: none Estimated cost: Construction schedule: **Priority:** US\$744 A-2

Town:	No. & Facility:		Year of Construction	Finar	nced by:				
Dili	18 - Benemauk	I Resevoir	1963		Portugal				
Existing Condition:			Photograph:						
Structure: Reinford	ced Concrete								
Shape: Rectangul									
Dimension: 3.3m	x 3.3m x 2.5m								
Capacity: 25m ³									
Function: Storage									
Source of Water: Benemauk Intake									
Ground level:									
Accessories:									
Ventilator Overflow									
Washout									
Chlorinator									
Laboratory									
Laboratory									
				(Date	:				
Evaluation:									
Thick layer of	Thick layer of deposit in the tank due to absence of maintenance since the violence.								
Currently rav	w water from the B	enemauk int	ake is being supplied via t	this res	servoir without				
Rehabilitation F	Diam.								
Basic Calculation From the production capacity of the Benamauk WTP, required storage of the service									
-			/day x 8hrs/24hrs = 288m	-	10 001 1100				
			ve not sufficient storage c		y to meet water				
	demand of the supply zone, this reservoir will be utlized in the future as well.								
2) Civil Work: none									
0) Dining a consular									
3) Piping work:	aconvoir that intere	annosta Pan	omauk intaka ahauld ha a	handa	anad				
Inlet to the reservoir that interconnects Benemauk intake should be abandoned.									
Interconnection with the outlet from the filters, 4 inch GS pipe x 25m Installation of flow meter and controller on the outlets									
motanation of now meter and controller on the outlets									
4) Mechanical work: none									
,									
_, _,									
5) Electrical work: none									
6) Miscellaneous: none									
				-					
Estimated cost.		Construct	ion schedule:		Priority:				
US\$1	3,404				A-2				
0000	, ··· ·				/ \ <u>_</u>				

No. & Facility: Town: Year of Construction Financed by: Dili 19 - Benemauk II Resevoir 1993 Existing Condition: Photograph: Structure: Reinforced Concrete Shape: Rectangular Dimension: 9.1m x 8.0m x 2.7m Capacity: 100m³ Function: Source of Water: Benemauk WTP Ground level: Accessories: Chlorinator Ventilation Flow meters on the outlets (Date: May 2000) Evaluation: Maintenance carried out monthly. One chlorinator is not used regularly. Rehabilitation Plan: 1) Basic Calculation Repair and rehabilitation of WTP was recently carried out but minor rehabilitation of the reservoirs will be further required. 2) Civil Work: none 3) Piping work Replacement of malfunctioning flow meters: referential type, 100m in diameter x 2 sets to be installed on the outlets 4) Mechanical work: none 5) Electrical work: none 6) Miscellaneous: none Estimated cost: Construction schedule: Priority:

A-2

US\$4,642

Town: No. & Facility: Year of Construction Financed by: Dili 20 - Comoro Resevoir 1995 Existing Condition: Photograph: Structure: Steel with Vinyl Coating Shape: Circular Dimension: Ø17.2m x 4.3m height Capacity: 1,000m³ Function: Source of Water: Comoro D, Comoro E Ground level: Accessories: level gauge flow meter overflow pipes ventilation washouts (Date: June 2000) Evaluation: Flow meter in the outlet No serious problems were noted during the field survey. Rehabilitation Plan: 1) Basic Calculation 2) Civil Work: none 3) Piping work: none 4) Mechanical work: none 5) Electrical work: none 6) Miscellaneous: none Estimated cost: Construction schedule: **Priority:** None