

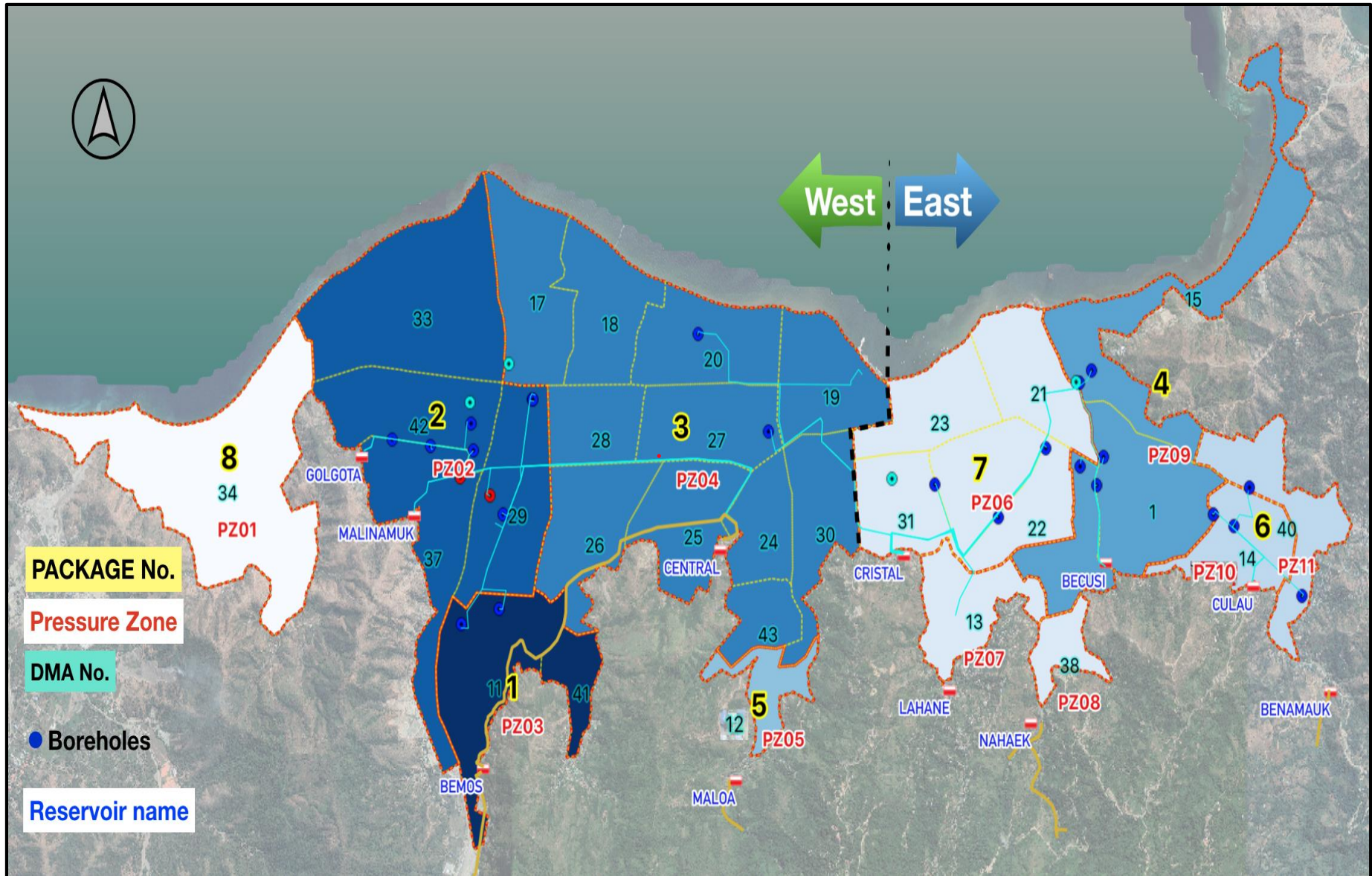


BEE TIMOR-LESTE, EMPRESA PÚBLICA  
BTL, E.P.


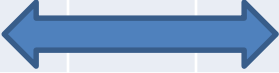
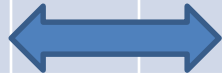
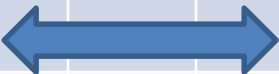

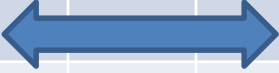

# DILI URBAN WATER SUPPLY PROJECT DUWSP

JANUARY 2022



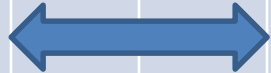



# WORK PACKAGE – PREZURE ZONE & DMAs MAP - DUWSP



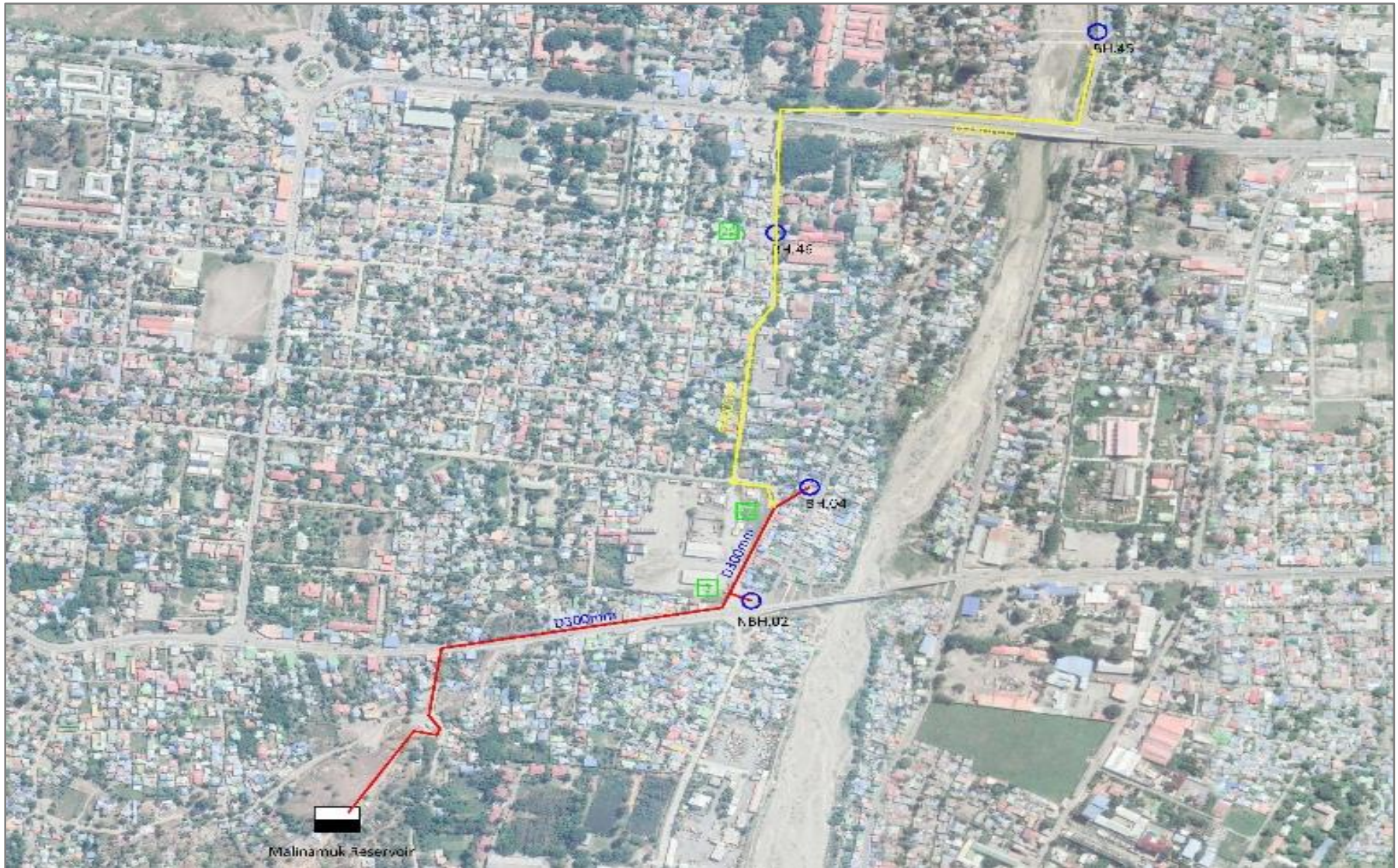
# PACKAGE 01- BEMOS PZ03 (DMA : 11 & 41)

COMPONENTS/ACTIVITIES	QTY	Unit	2022	2023	2024	2025	2026
<b>Component 1</b> WTP : 4,200 m <sup>3</sup> pd & Mechanical Dehydration	1	Unit					
<b>Component 2</b> Reservoir 2,700 m <sup>3</sup>	1	Unit					
<b>Component 3</b> Booster Pumping Station	1	Unit					
<b>Component 4</b>							
❖ Primary Distribution Pipe	1300	m					
❖ Secondary Distribution Pipe	7000	m					
❖ Tertiary Distribution Pipe	14.500	m					
<b>Component 5</b>							
Service tap Connection, estimated and target are :							
			Estimate 2,024-2,815 from 2026 - 2030				
❖ 2,024 in 2026	2,265	No.					
❖ 2,815 in 2030							

## WORK PACKAGE 02- MALINAMUK PZO2 (DMA : 29, 33, 37 & 42)

COMPONENTS/ACTIVITIES	QTY	Unit	2022	2023	2024	2025	2026
<b>Component 1</b> Mechanical & Electrical works Boreholes 4 boreholes (existing BH-4, 45, 46 and existing BH-2) to pump directly Malinamuk Reservoir	1	Ls					
<b>Component 2</b> Transmission Pipe	1,900	m					
<b>Component 3</b> Reservoir 6,400m <sup>3</sup>	1	Unit					
<b>Component 4</b>							
❖ Primary Distribution Pipe	3,518	m					
❖ Secondary Distribution Pipe	21,734	m					
❖ Tertiary Distribution Pipe	56,642	m					
<b>Component 5</b>							
Service tap Connection in 2030	6,353	Unit					

# WATER SOURCE TO MALINAMUK RESERVOIR





# WATER SOURCE TO CENTRAL RESERVOIR

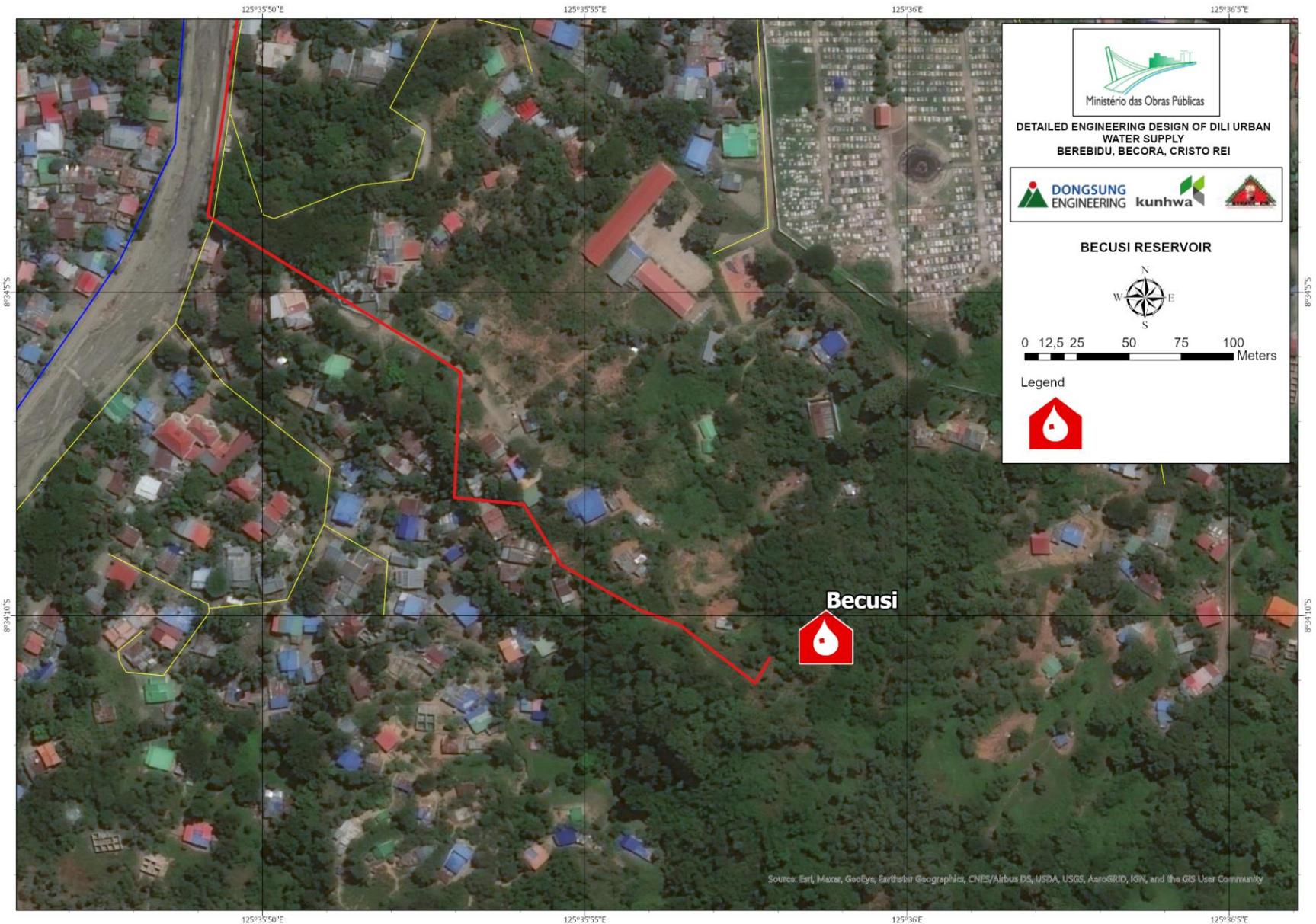


# WORK PACKAGE 04 - BECUSI PZ09 (DMA :1, 15 & 39)




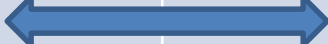

COMPONENTS/ACTIVITIES	QTY	Unit	2022	2023	2024	2025	2026
<b>Component 1</b> Mechanical & Electrical works Boreholes 3 boreholes (BH22 Kuluhun-A, BH24-Becora2 Maufelo and BH25- Mercado Becora ) to pump directly Becusi reservoir	11	Site					
<b>Component 2</b> Transmission Pipe	1,511	m					
<b>Component 3</b> Reservoir 5,300 m <sup>3</sup>	1	Unit					
<b>Component 4</b>							
❖ Primary Distribution Pipe	1,353	m					
❖ Secondary Distribution Pipe	13,961	m					
❖ Tertiary Distribution Pipe	19,629	m					
<b>Component 5</b>							
Service tap Connection in 2030	3903	Unit					



# Water Source to Becusi Reservoir



# WORK PACKAGE 05- MALOA PZ05 (DMA : 12)

COMPONENTS/ACTIVITIES	QTY	Unit	2022	2023	2024	2025	2026
<b>Component 1</b> WTP 1,000 m <sup>3</sup>	11	Site					
<b>Component 2</b> Reservoir 700 m <sup>3</sup>	1	Unit					
<b>Component 3</b> Distribution Pipe							
❖ Primary Distribution Pipe	358	m					
❖ Secondary Distribution Pipe	1,119	m					
❖ Tertiary Distribution Pipe	2,685	m					
<b>Component 5</b>							
Service tap Connection in 2030	673	Unit					

# WORK PACKAGE 06

## PZ10- CULAU (DMA : 14) & PZ11 – BENAMAUK (DMA : 10)

COMPONENTS/ACTIVITIES	QTY	Unit	2022	2023	2024	2025	2026
PZ10 Comp. 1: M&E 4 boreholes (BH-26,27,28,29 ) to pump directly Culau reservoir	4	Sites		←→			
PZ10 Comp. 2: Transmission	2,432	m		←→			
PZ10 Comp. 3: Reservoir, 1,500m <sup>3</sup>	1	Unit		←→			
<b>Component 3 : Pipeline</b>							
Primary Distribution	656	m	}	←→			
Secondary Distribution Pipe	2,167	m					
Tertiary Distribution Pipe	6,252	m					
PZ10 Comp.4 Customers in 2030	1,408	Conn		←→			
PZ11 Comp. 1: WTP , 2,500 m <sup>3</sup>	1	Unit		←→			
PZ11 Comp. 2: Reservoir, 1,400 m <sup>3</sup>				←→			
<b>PZ11 Comp. 3.</b>							
Primary Distribution	509	m	}	←→			
Secondary Distribution Pipe	2,380	m					
Tertiary Distribution Pipe	2,654	m					
PZ11 Comp.4 Customers in 2030	1,600	Conn		←→			

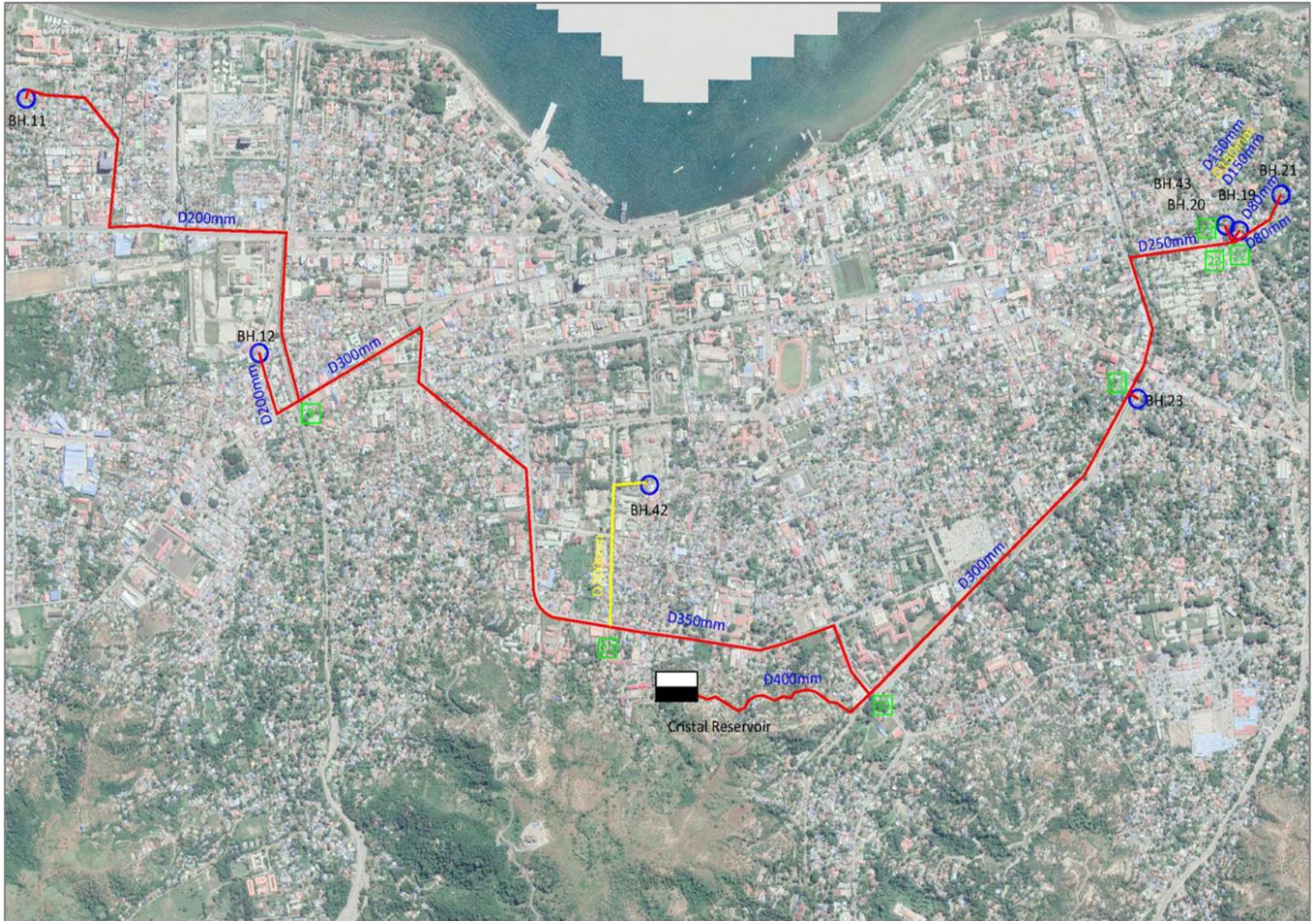
# Water Source to Culau Reservoir



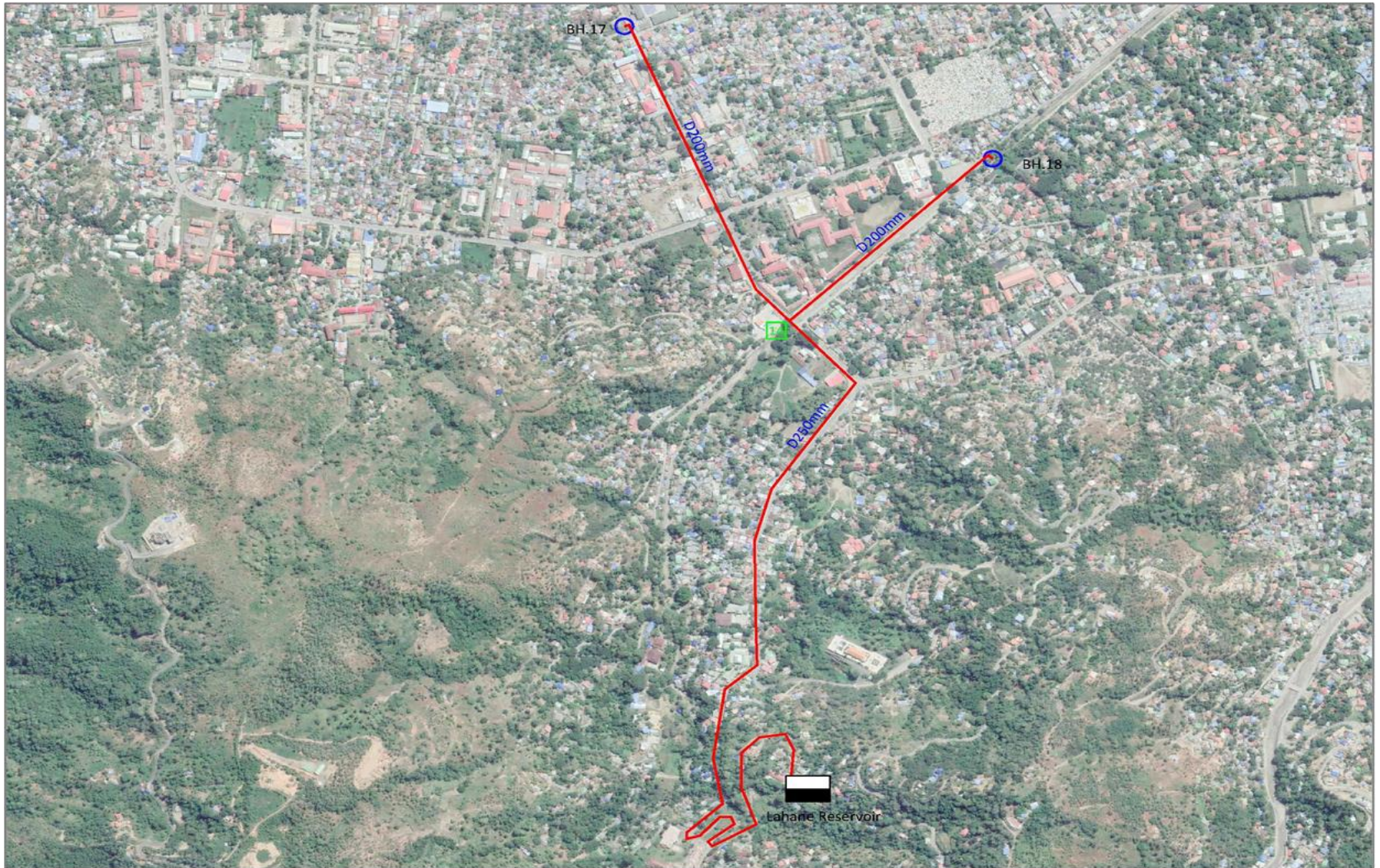
**WORK PACKAGE 07- (CRISTAL PZ06 (DMA : 21, 22, 23, 31 & 32), LAHANE PZ07 (DMA : 13) & NAHAEK PZ08 (DMA : 38))**

COMPONENTS/ACTIVITIES	QTY	Unit	2022	2023	2024	2025	2026
<b>PZ06-Cristal</b>							
PZ06 Comp 1: M&E Boreholes to Cristal Reservoir Borehole (BH) 11, 12, 19, 20 21,23, 42 & 43	8	unit					
PZ06 Comp. 2: Transmission	10,268	m					
PZ06. Comp.3 Reservoir	6,100	m <sup>3</sup>					
PZ06 Comp. 4. DMAs Primary Distribution Secondary Distribution Pipe Tertiary Distribution Pipe	5,636 18,621 49,035	m					
PZ06 Comp.5 Service Connections 2030	5,949	Conn.					
<b>PZ07-Lahane</b>							
PZ07 Comp. 1: M&E : Borehole (BH) 17 & 18	2	unit					
PZ07 Comp. 2: Transmission	3,117	m					
PZ07 Comp.3 Booster Pump Stations	2	Sites					
PZ07 Comp.4 Reservoir	1,000	m <sup>3</sup>					
PZ07 Comp.5 DMAs Primary Distribution Secondary Distribution Pipe Tertiary Distribution Pipe	388 3,241 5,622	m m m					
PZ07 Comp.6 Service Connections 2030	1,460	Conn.					
<b>PZ08-Nahaek</b>							
PZ08 Comp.1 Intakes& Transmission Main	655	m					
PZ08 Comp.2 WTP	1,000	CMD					
PZ08 Comp.3 Reservoir	700	m <sup>3</sup>					
PZ08 Comp.4 DMAs Primary Distribution Secondary Distribution Pipe Tertiary Distribution Pipe	736 941 1,869	m					
PZ08 Comp.5 Service Connections 2030	708	Conn.					

# Water Source to Cristal Reservoir

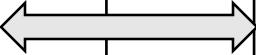
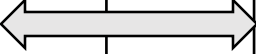
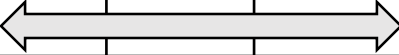
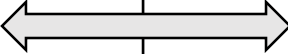



# Water Source to Lahane Reservoir



# WORK PACKAGE 08- GOLGOTA PZ01

## (DMA : 34)

COMPONENTS/ACTIVITIES	QTY	Unit	2022	2023	2024	2025	2026
<b>PZ01 Comp. 1: M&amp;E</b> 3 boreholes (BH-1,2,3) to pump directly Golgota Reservoir	3	Sites					
<b>PZ01 Comp. 2: Transmission</b>	1,602	m					
<b>PZ01 Comp. 3: Reservoir</b>	3,000	M <sup>3</sup>					
<b>PZ01 Comp. 4:</b> Primary Distribution Pipe Secondary Distribution Pipe Tertiary Distribution Pipe	5 8,109 14,946	m					
<b>PZ01 Comp. 5: Customers 2030</b>	2,050						



# WATER SOURCE TO GOLGOTA RESERVOIR



# East Dili DUWSP

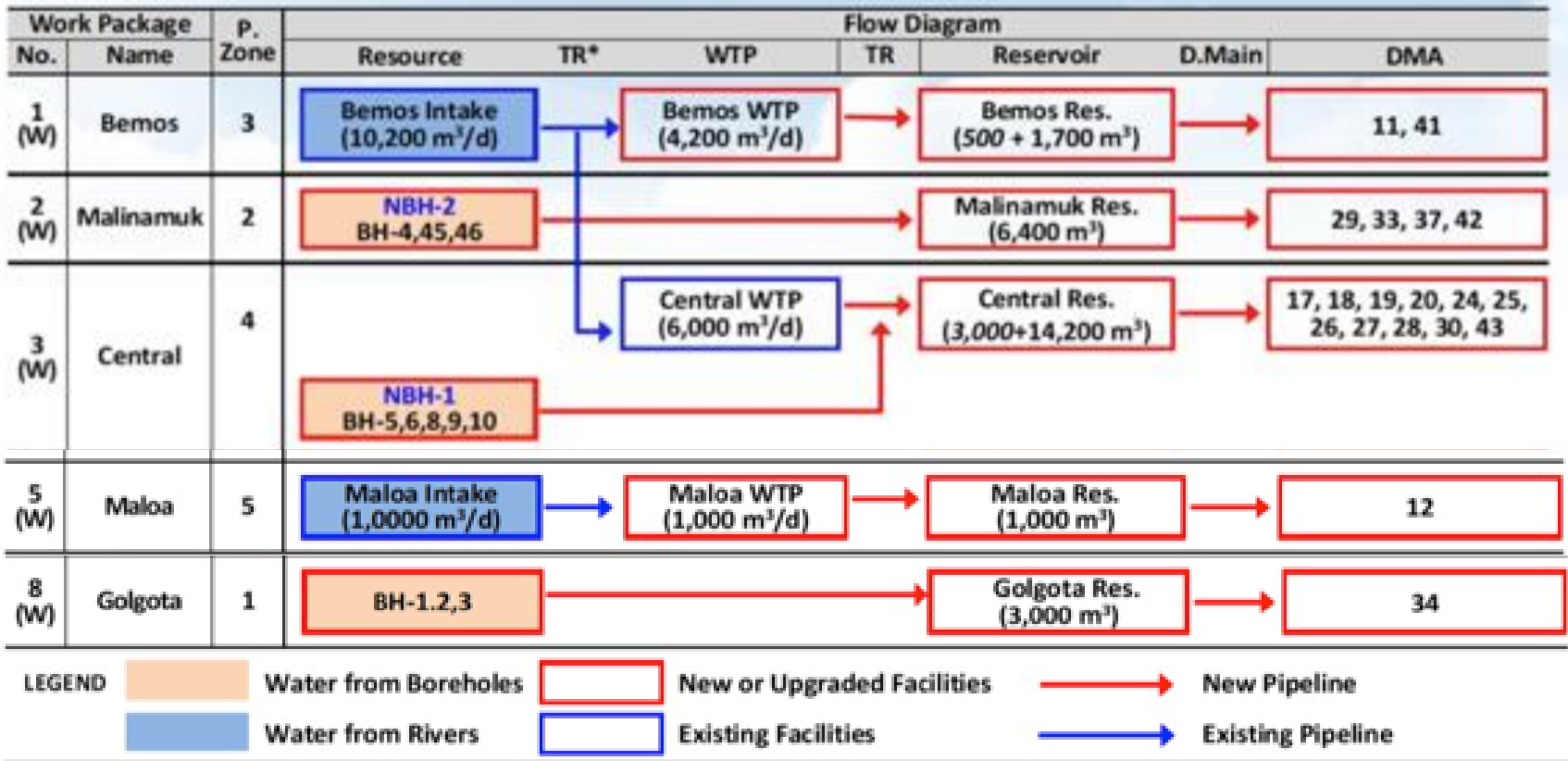
Work Package		P. Zone	Flow Diagram						
No.	Name		Resource	TR*	WTP	TR	Reservoir	D. Mair	DMA
4 (E)	Becusi	9	BH-22,24,25				Becusi Res. (5,300 m <sup>3</sup> )		1, 15
6 (E)	Benamauk & Culau	11	Benamauk Intake (2,500 m <sup>3</sup> /d)		Benamauk WTP (2,500 m <sup>3</sup> /d)		Benamauk Res. (1,400 m <sup>3</sup> )		40
		10	BH-26,27,28,29				Culau Res. (1,500 m <sup>3</sup> )		14
7 (E)	Cristal	6	BH-11,12,19,20, 21,23, 42, 43				Cristal Res. (6,100 m <sup>3</sup> )		21, 22, 23, 31, 32, 39
	Nahaek	8	Bemori Intake (1,000 m <sup>3</sup> /d)		Nahaek WTP (1,000 m <sup>3</sup> /d)		Nahaek Res. (700 m <sup>3</sup> )		38
	Lahane	7	BH-17,18		BPS No. 2, 3		Lahane Res. (1,700 m <sup>3</sup> )		13

**Legend**

	Water from Boreholes		New Facilities		New Pipeline
	Water from Rivers		Existing Facilities		Existing Pipeline

# West Dili DUWSP

## 3. Scope



Source: Dongsung Engineering, 26 January 2022

*Table 4 WTs in East Side*

No	Area	Name	Package No	Capacity	Status	Scope of Project Development
1	East	Becusi	9	5,300m <sup>3</sup>	Existing	Decommissioning/ Replacement/
2	East	Nahaek <sup>WTP</sup>	8	1,000m <sup>3</sup>	Existing	Replacement/ Expansion
3	East	Benamauk <sup>WTP</sup>	11	1,400m <sup>3</sup>	Existing	Replacement/ Expansion
4	East	Culau	10	1,500m <sup>3</sup>	Existing	Replacement/ Expansion
5	East	Cristal	6	6,100m <sup>3</sup>		New
6	East	Lahane	7	1,700m <sup>3</sup>		New

# NAHAEK - BENEMAUK

## NAHAEK



The land requirement for the expansion and improvement of the Nahaek WTP is 3,258.77 m<sup>2</sup>

## BENEMAUK



The land requirement for the expansion and improvement of the Benamauk WTP is 4,059.49 m<sup>2</sup>

# KRISTAL - LAHANE

## KRISTAL



The Water Reservoir in Cristal will have a land requirement of 3,333.13 m<sup>2</sup>

## LAHANE



The Water Reservoir in Lahane will have a land requirement of 2,045.52 m<sup>2</sup>

# BEKUSI - KULAU

## BEKUSI



The Water Reservoir in Becusi will have a land requirement of 6,122.76 m<sup>2</sup> and it is located in a public land

## KULAU



The expansion of the WT in Culau will have a land requirement of 1,074.43 m<sup>2</sup>

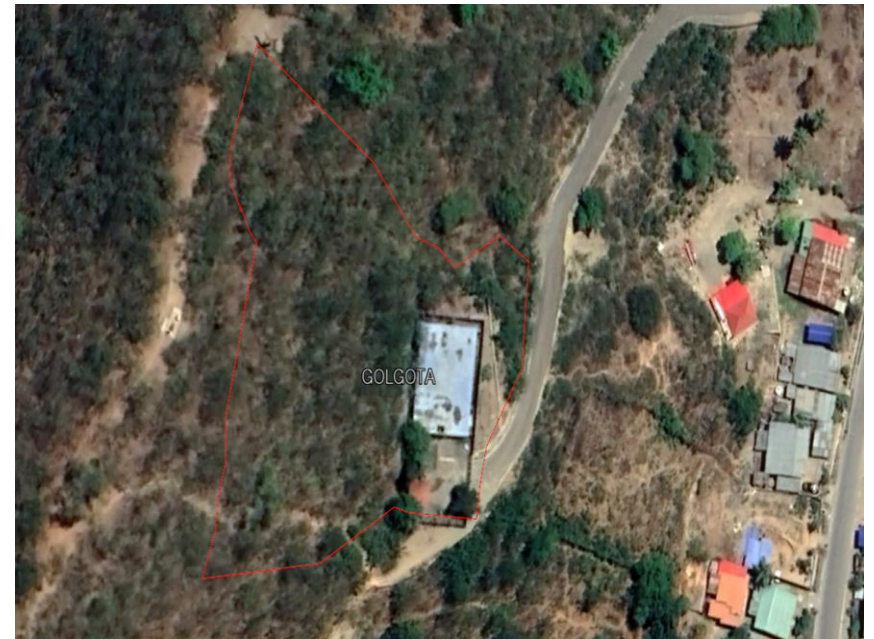
# GOLGOTA - MALINAMUK

MALINAMUK



PZ 01 MALinamuk (1629.53 m<sup>2</sup>)

GOLGOTA



PZ 02 Golgota (2706.23 m<sup>2</sup>)



# BEMOS - CENTRAL

## BEMOS



PZ 03 BEMOS (3654.66 m<sup>2</sup>)

## CENTRAL



PZ 04 CENTRAL (7369.91 m<sup>2</sup>)

# MALOA

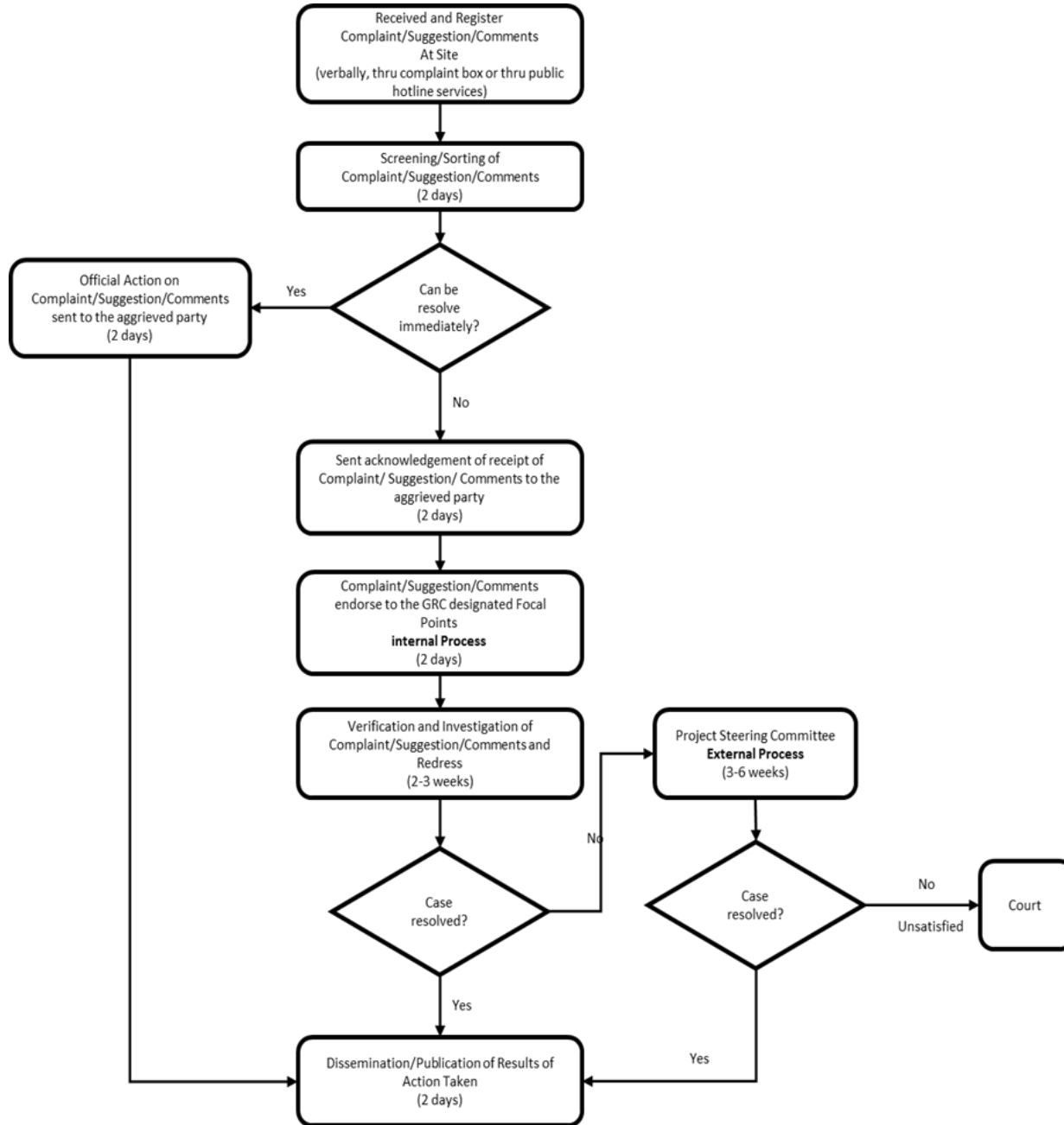


PZ 05 MALOA (1874.34 m<sup>2</sup>)

# Nain ba propriedades

No.	Pressure Zone	Work Package	Site Plan				Nu. Affetadu (Chefe da Familia)			
			Lokalizasaun	Postu	Suco	Aldeia	Rai (Parsela)	Uma	Aihoris	Seluk
1	PZ-01	Work Package 08	Golgota	Dom Aleixo	Comoro	Golgota	1 (Diocese)	-		
2	PZ-02	Work Package 02	Malinamuk		Comoro	30 de Agostu	2			1 (Rate)
3	PZ-03	Work Package 01	Bemos		Manleuana	Lisbutac	4	4		
4	PZ-04	Work Package 03	Central		Bairopite	Moris ba Dame & Fuslan	31	26		
5	PZ-05	Work Package 05	Maloa		Dare	Lemorana	4	4		
6	PZ-06	Work Package 07	Cristal		Vera Cruz	Mascarenhas	Alto Balide	4	4	
7	PZ-07		Lahane	Lahane Ocidental		Ainitas Hun	5	2		
8	PZ-08		Nahaek	Nain Feto	Lahane Oriental	Suhu Rama	2	2		
9	PZ-09	Work Package 04	Becussi	Cristo Rei	Becora	Becussi Kraik	7	2		
10	PZ-10	Work Package 06	Culau		Ailok	Culau Laletek	4	2		3 (Rate)
11	PZ-11		Benemauk		Becora	Mota Ulun	8	6		

# GRM



OBRIGADO

