7.2 Berth Length

Table 7.2.1 Calculation of Required Berth Length

	Type of Vessel	Legth (meter)	Width (meter)	Nec. L (m) (a)	No of call (b)	Landing Hr (c)	Fish Lhr (d)	r=(a)/(b) : (e)	Cal. N = (b)/(e)	Req. N : (f)	Req. L = (a)x(f) (g)	Exis. Length (g)	Extension (f)-(g)	Remarks
SFPC	Com Ave 20GT		12	18	4.37	5	5	1.00	4.37	5	90	172	60.6	Length of pier extension 60.6/2= 30m
	N-Fish Ave 300GT	40		46	0.36	24	48	0.50	0.72	1	46			
	MC	14		16.1	49.01	9	1	9.00	5.45	6	96.6			
LFPC	Com Ave 100 GT	30		34.5	8.2	7	5	1.40	5.86	6	207	204	49	pier extension 49/2= 25m
	N-Fish Ave 300GT	40		46	0.33	24	37	0.65	0.51	1	46			
DFPC	Com Ave 25 GT	25		28.75	2.72	7	5	1.40	1.94	2	57.5	0	57.5	60 m Berth
BFPC	Carrier Ave 125GT	32		36.8	11.4	12	6	2.00	5.70	6	220.8	0	220.8	110 Pier
	Com Ave 30 GT		13	19.5	2.64	2	2	1.00	2.64	3	58.5	0	58.5	60 m Berth
	Catcher Ave 55GT		4.5	6.75	1.73			6 day stay	10.38	11	74.25	0	164.25	Lay-by berth 170 m
	Carrier Ave 125GT		5	7.5	1.9			6 day stay	11.40	12	90			
Conception	Com 7GT		9	13.5	26.8	3	1	3.00	8.93	9	121.5	30	91.5	Ext. 90 m
San. Jose	Com 7GT		9	13.5	13	3	1	3.00	4.33	5	67.5	5	62.5	Ext. 60 m
Dagupan	Com 20GT		12	18	15.2	3	1	3.00	5.07	5	90	0	90	Ext. 90 m
Sta. Elena	Com L=25m		15	22.5	14	8	1	8.00	1.75	2	45	0	45	Ext. 45 m
Calabanga	Com L=10m		6	9	47.1	4	0.5	8.00	5.89	6	54	0	54	Ext. 60 m
Balatan	Com L=18m	18		20.7	12.8	3	1	3.00	4.27	5	103.5	0	103.5	Ext. 105m
Sta. Cruz	Com L=18m		9	13.5	2.9	3	1	3.00	0.97	1	13.5	0	19.25	Ext. 20 m
	Com L=5m	5		5.75	10.5	9	0.75	12.00	0.88	1	5.75	0		
Mati	Com L=5m		9	13.5	6.1	3	1	3.00	2.03	2	27	0	27	Ext. 30 m

Com : Commercial vessel, N- Fish : Non fishing vessel, MC : Milk fish carrier
Nec. L : Necessary length for 1 berth (1.15L or 1.5B)
Calculated No of Berth (Cal. N)= N/r
Required No of berth (Req. N)= More than Cal. N
Required length of berth (Req. L)= Req. N x Nec. L

7.3 Area for Market Hall

Table 7.3.1 Required Area for Market Hall

MARKET HALL

Present Situation

	No. of Fish Brokers	No. of Bays	Area per bay (m2)	Total Area (m2)	Breakdown of numbers of brokers by leasing bays						
					0.5 Bay	1 bay	1.5 Bay	2 bay	2.5 bay	3 bay	Total
IFPC	20	28	50	1,400	5	7	3	2	2	1	20
LFPC	25	29	66	1,914	4	17	0	2	0	2	25

Note: 2 bays of IFPC are not leased.

Fish Handling Volume at Market Hall per day at peak month (MT)

	At Present						Future			Unloading time		
	2005	2006	2007	2008	2009	Average	Increment	2025	Trading time	Overland	CFB	MFB
IFPC	84.30	80.92	88.18	80.77	81.10	83.05	1.12	93.02	00:00 - 06:00	start at 21:00		
LFPC	59.34	77.14	67.46	69.14	81.49	70.91	1.06	75.17	05:00 - 10:00	start at 22:0	start at 4:00	start at 6:00
DFPC	2.72	2.13	2.83	2.27	2.89	2.41	3.02	7.28	07:00 - 12:00			
BFPC								7.70	15:00 - 17:00			

Note: Future volume in DFPC includes the part of non-exportable tuna rejected by fresh tuna exporter.

Required Floor Area (m2)

	Handling volume per m2 (kg/day)	No. of rotations per day	Auction Area (m2) calculated based on 15 kg/m2 x rotations/day				Icing/Packing Area (m2)	Sub-Total (m2)	Loading Area (m2)	Unloading Area (m2)	Other Area (m2)	Sub-Total (m2)	Market Hall Total (m2)	Market Hall (inside column) (m3)
			Required Are	No. of Bays	Area per Bay	Total Area								
IFPC	15	3	2,067	31	65	2,015	1,085	3,100	388	388		775	3,875	3,100
LFPC	15	2.5	2,005	31	65	2,015	1,008	3,023	403	403		806	3,829	3,023
DFPC	15	2.5	194	3	65	195	98	293	39	39		78	315	195
BFPC	15	2	257	2	125	250	125	375	26	26		52	427	375

Note: Unloading area include space for casher booth of fish brokers. Fish container storages are allocated at the loading area.
Fish broker's offices are allocated on mezzanine at each bay (2.5 x 5m each, unloading side).
Harbor and market Division Office is allocated on the 2nd floor.
Fish broker's cashers are allocated on ground floor at each bay (2.5 x 2m each, unloading side)
Market hall of BFPC will serve for fish unloaded by local commercial fishing boats (handline/hook & line).

Municipal Fish Ports

	Current fish handling volume (MT)			Future fish handling volume (MT)			No. of Brokers	Market Hall Area (m2)						MH (inside column)
	Annual	Peak month	Daily at peak	Annual	Peak month	Daily at peak		Auction	Icing/Packing	Loading	Offices	Total	Trading Time	
Concepcion	2,438	246	8.2	2,458	248	8.3	15	165	83	41		392	05:00 - 08:00	248
Dumangas	344	35	1.2	382	39	1.3	8	26	15	8		72	Day time	75
San Jose	2,703	383	12.8	(same as current volume)			6	255	128	64		392	06:00 - 09:00	383
Dagupan	14,270	1,469	49.0	17,509	1,802	60.1	75	1,202	601	300		2,266	24 hours	1,802
Subic	7,890	766	25.5	8,868	861	28.7	18	574	287	143		1,032	02:00 - 06:00	861
Atimonan	3,247	411	13.7	3,253	412	13.7	13	275	137	69		882	04:00 - 09:00	412
Calauag	4,600	582	19.4	4,954	627	20.9	3	418	209	104		742	03:00 - 10:00	627
Sta. Elena	1,969	249	8.3	4,308	272	9.1	0	181	80	40		342	Day time	261
Calabanga	5,660	636	21.2	5,773	649	21.6	12	324	162	81		567	05:00 & 13:0	487
Pasacao	1,659	161	5.4	(same as current volume)			3	107	54	27		207	Day time	161
Balatan	2,815	273	9.1	(same as current volume)			3	182	91	46		342	06:00 - 09:00	273
Oas	610	59	2.0	(same as current volume)			0	39	20	10		72	Day time	75
Sta. Cruz	2,719	227	7.6	3,257	271	9.0	3	181	85	43		322	Day time	266
Panabo	2,272	189	6.3	3,255	271	9.0	2	181	95	48		342	Day time	276
Mati	600	102	3.4	1,708	194	6.5	4	130	65	32		252	Day time	195

7.4 Area for Ice Storage

Table 7.4.1 Required Area for Ice Storage

ICE STORAGE

Municipal Fish Port Site	Ave. fish unloading vol. (MT/day)	Ratio to average at peak month	Fish unloading at peak	Ice to be kept (MT/day)	Existing ice retailers at fish port	Necessacity of ice storage	Dimension of ice storage	No. of ice storage	Remarks
Concepcion	6.8	1.21	8.2	8.2	2	No	-		The existing ice retailer has own ice storage.
Dumangas	1.1	1.21	1.3	1.3	0	Yes	1.8 x 1.8m	1 unit	Volume not including milkfish.
San Jose	7.5	1.70	12.7	12.7	0	Yes	3.6 x 1.8m	2 units	
Dagupan	48.6	1.24	60.3	60.3	3	No	-		The existing ice retailer has own ice storage.
Subic	24.6	1.39	34.2	34.2	3	No	-		The existing ice retailer has own ice storage.
Atimonan	9.0	1.52	13.7	13.7	5	No	-		The existing ice retailer has own ice storage.
Calauag	13.8	1.52	20.9	20.9	3	No	-		The existing ice retailer has own ice storage.
Sta. Elena	12.0	1.52	18.2	18.2	0	Yes	3.6 x 2.7m	2 units	
Calabanga	16.0	1.52	24.3	24.3	0	Yes	3.6 x 3.6m	2 units	
Pasacao	4.6	1.16	5.4	5.4	0	No			No construction because there is existing
Balatan	7.8	1.16	9.1	9.1	0	Yes	3.6 x 2.7m	1 unit	
Oas	1.7	1.16	2.0	2.0	0	Yes	2.7 x 1.8m	1 unit	
Sta. Cruz	9.0	1.10	10.0	10.0	0	Yes	3.6 x 2.7m	1 unit	Most of fish unloaded are milkfish.
Panabo	9.0	1.00	9.0	9.0	0	Yes	3.6 x2.7m	1 unit	100% milkfish unloading.
Mati	4.7	2.04	9.7	9.7	0	Yes	3.6 x 2.7m	1 unit	

Note: Ice to be kept (MT/day) covers those necessary for municipal fishing boats and fish distribution.
It is assumed that commercial fishing boats and fish cage operators will procure ice directly from ice plant because of large quantity.
Ice storage 1.8m x 1.8m is a minimum scale.

7.5 Office Space

Table 7.5.1 Office Space Allocations (Bislig Administration Building)

	Division	N0. of Personnel	Floor Area Reqd.
1.	Management		
	Port Manager	1	36m^2
	Secretary/Waiting	1	18 m^2
	Conference Room	Load occupancy computed on 55 filled positions.	66 m^2
		Total of 1	120 m^2
2.	Amin. & Finance Services Division		
	Admin. Officer	1	9.0 m^2
	Finance Officer	1	9.0 m^2
	Staff	18	126 m^2
		Total of 2	144 m^2
3.	Harbor & Market Operations Division		
	Harbor Master	1	9.0 m^2
	Staff	7	49.0 m^2
		Total of 3	58 m2
4.	Port Maintenance & Refrigeration Division		
	Head Engineer	1	9.0 m2
	Staff	20	140 m2
		Total of 4	149 m2
		Total (1-4) *Plus* Support facilities, i.e., toilets, corridors, storage Stairs, etc.	471 m2 649 m^2 **Say 700 m2**

Table 7.5.2 Office Space Allocations (Lucena Administration Building)

	Division	N0. of Personnel	Floor Area Reqd.
1.	Management		
	Port Manager	1	36 m^2
	Secretary/Waiting	1	18 m^2
	Conference Room	Load Occupancy computed on 48 filled positions.	57.6 m^2
		Total of 1	111.6 m^2
2.	Admin. & Finance Services Division		
	Admin. Officer	1	9.0 m^2
	Finance Officer	1	9.0 m^2
	Staff	22	154 m^2
		Total of 2	172 m^2
3.	Harbor & Market Operations Div.		
	Harbor Master	1	9.0 m^2
	Staff	13	91 m^2
		Total of 3	100 m^2
4.	Port Maintenance & Refrigeration Division		
	Head Engineer	1	9.0 m^2
	Staff	17	119m^2
		Total of 4	128 m^2
		Total (1-4) *Plus:* Support facilities, i.e., Toilets, stairs, corridors, Storage areas etc.	511.6 m^2 727.65 m^2 Say: 780 m^2

7.6 Finish Schedule for Building Structures

Table 7.6.1 Finish Schedule of Regional and Municipal Fish Port Building Structures

External and Internal Outline Finish Schedule.

No.	Description	Market Hall	Retail Market	Temp. Market	Proce. Bldg	Adm Bldg.	Ref. Bldg	Fab. Bldg	Ice Stor. Bldg.	Remarks
A	Part of Structure.									
1	Reinforced concrete footing, columns, floor slab on grade, suspended slab and beams, for Floor Framing	○	○	Footing only	○	○		○	○	
2	Reinforced concrete deck roof, beams, parapet, gutters and eaves for roof framing.	○	○	-	○	○		-	○	Corrugated roofing sheets on steel roof framing with spandrel fascia, gutters etc., for temporary market hall.
B	External Building Elements									
a.	Roof.									
1	Roof deck with sloped to drain concrete cover, membrane w/waterproofing and insulation boards.	○	○	-	○	○	-	-	○	Steel roofing sheets on steel framing for temp. market hall
2	Modified polymer precoated Ga.24 LS aluminum roofing sheets on steel roof framing.						○	○		With 2" single faced aluminum insulation blanket with wire backing.
3	Aluminum spandrel fascia on metal frames.	○	○	-	-	-	-	-	-	
C	Wall									
1	Concrete m with acrylic emulsion paint, masonry, cement rendered	○	○	-	○	-	-	○	-	Load bearing masonry units.

No.	Description	Market Hall	Retail Market	Temp. Market	Proce. Bldg	Adm Bldg.	Ref. Bldg	Fab. Bldg	Ice Stor. Bldg.	Remarks
2	Concrete masonry with rendered cement finish with internal insulation.	-	-	-	-	-	-	-	○	
3	Aluminum cladding on metal furrings with field seal gap.	-	-	-	○	-	-	-	-	
4	Aluminum sunscreen louvers.	○	-	-		-	-	-	-	
5	Laminated glass with S/S handrails on zocalo wall		-	-	○	-	-	-	-	
D	Floor									
1	Flamed granite tiles on mortar under bed	-	-	-	○	○	-	-	-	For external lobby.
2	Epoxy paint on non-metallic floor hardener.	○	○	○	-	-	-	-	-	
E	Internal Building Elements									
(1)	Floor Finish									
1	Granite tiles on cement under bed.	-	-	-	○	○	-	-	-	
2	Carpet tiles with underlay	-	-	-	-	○	-	-	-	PMO office area, conference room.
3	Unglazed ceramic tiles on cement under bed.	-	-	-	○	○	○	○		For toilet floors.
4	Vinyl tiles, heavy traffic type	-	-	-	-	○	-	-	-	Municipal Admin. Bldg.
5	Epoxy paint on non-metallic floor hardener.	○	○	○	○	-	○	○	○	Processing area, fabrication building. market halls. retail markets, refrigerant bldg., temp. market hall.
(2)	Wall									
1	Concrete masonry, cement rendered with acrylic emulsion paint.	-	-	-	○	○	○	○	-	Load bearing masonry units.
2	Colored glazed tiles on cement under bed.	-	-	-	○	○	○	○	-	For toilet walls.
(3)	Ceiling									
1	Acoustical panels on metal grid system.	-	-	-	○	○	○	○	-	Regional admin. bldg. office areas,toilets
2	Waterproof sheetrock ceiling panels, Acrylic emulsion paint finish.	-	-	-	○	○	○	○	-	Fish processing areas,municipal administration buildings,toilets.

7.7 Water Demand

Table 7.7.1 Water Demand for Fish Port Facilities

Market Hall

Fish Port	Floor area (m2) except offices	Volume of fish (MT/day)	Drain water volume (m3/day)			
			Fish cleaning	Floor cleaning	Toilets,etc.	Total
IFPC	3,875	93.0	27.9	31.0		58.9
LFPC	3,829	75.2	22.6	30.6		53.2
DFPC	315	7.3	2.2	2.5		4.7
BFPC	427	7.7	2.3	3.4		5.7
Concepcion	392	8.3	2.5	3.1		5.6
Dumangas	72	1.3	0.4	0.6		1.0
San Jose	392	12.8	3.8	3.1		7.0
Dagupan	2,266	60.1	18.0	18.1		36.2
Subic	1,032	28.7	8.6	8.3		16.9
Atimonan	882	13.7	4.1	7.1		11.2
Calauag	742	20.9	6.3	5.9		12.2
Sta. Elena	342	9.1	2.7	2.7		5.5
Calabanga	567	21.6	6.5	4.5		11.0
Pasacao	207	5.4	1.6	1.7		3.3
Balatan	342	9.1	2.7	2.7		5.5
Oas	72	2.0	0.6	0.6		1.2
Sta. Cruz	322	9.0	2.7	2.6		5.3
Panabo	342	9.0	2.7	2.7		5.4
Mati	252	6.5	1.9	2.0		4.0

BOD (ppm)			2,700	2,400	200

Note:

1) Drain water for fish cleaning is calculated 30% of volume of fish including water contained in tubs transported from outside.
2) Drain water for floor cleaning is calculated based on 8L/m2.

Refrigeration Building (Fish Processing)

Fish Port	Processing space floor area (m2)	Volume of fish (MT/day)	Drain water volume (m3/day)				
			Fish cleaning	Floor cleaning	Ice making	Toilets,etc.	Total
IFPC	1,200	5.1	41.1	9.6	90.0		140.7
SFPC	300	2.0	16.0	2.4	45.0		63.4
LFPC	100	0.5	4.0	0.8	45.0		49.8
CFPC	0	0.0	0.0	0.0	54.0		54.0
DFPC	0	0.0	0.0	0.0	54.0		54.0
BFPC	0	0.0	0.0	0.0	90.0		90.0

BOD (ppm)			2,700	2,400	200

HACCP Fish Processing Facilties

Fish Port	Processing room floor area (m2)	Volume of raw material (MT/day)	Drain water volume (m3/day)				
			Fish cleaning	Floor cleaning	Ice making	Toilets,etc.	Total
IFPC	1,000	6.0	48.0	8.0	8.8		64.8
SFPC	500	3.0	24.0	4.0	4.4		32.4
CFPC	1,000	6.0	48.0	8.0	8.8		64.8
DFPC	500	3.0	24.0	4.0	4.4		32.4

BOD (ppm)			2,700	2,400	-	200

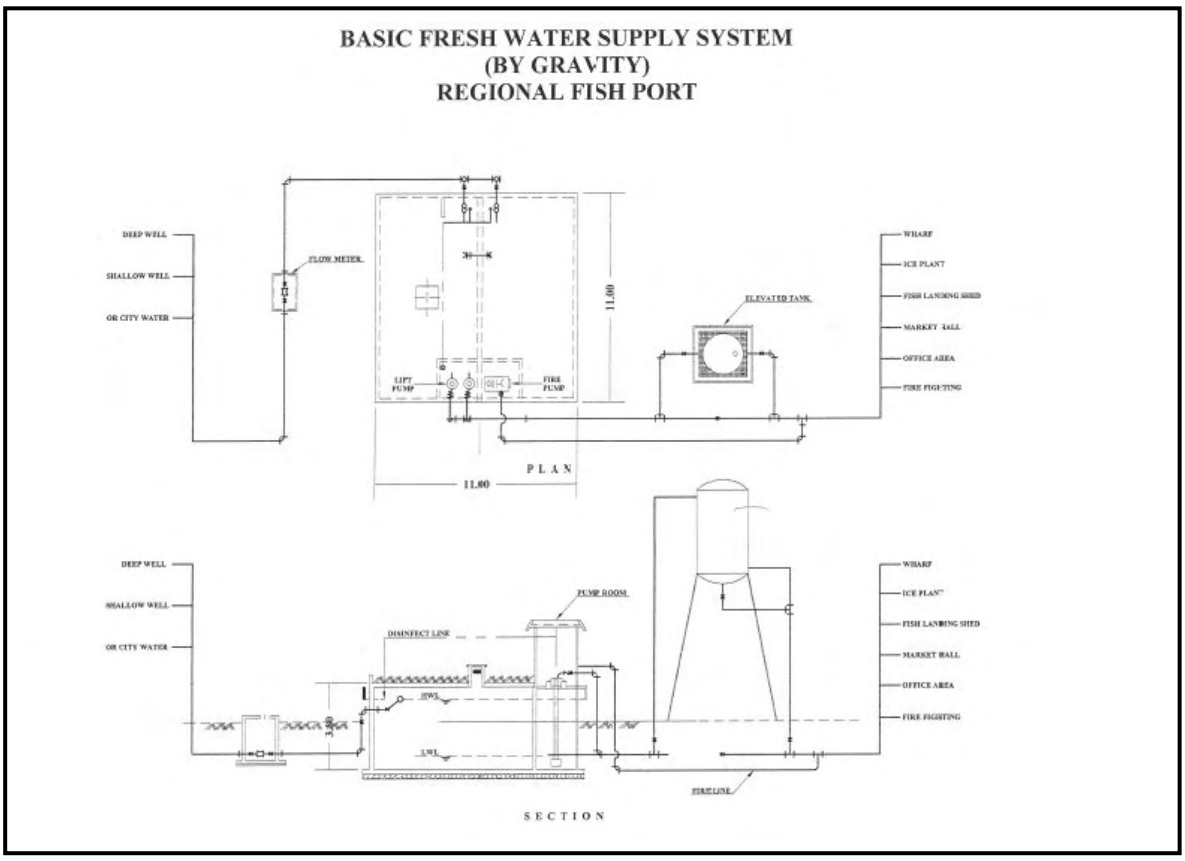


Fig. 7.7.1 Water Supply System A-1 for Iloilo, Sual, Lucena, Camaligan and Bislig

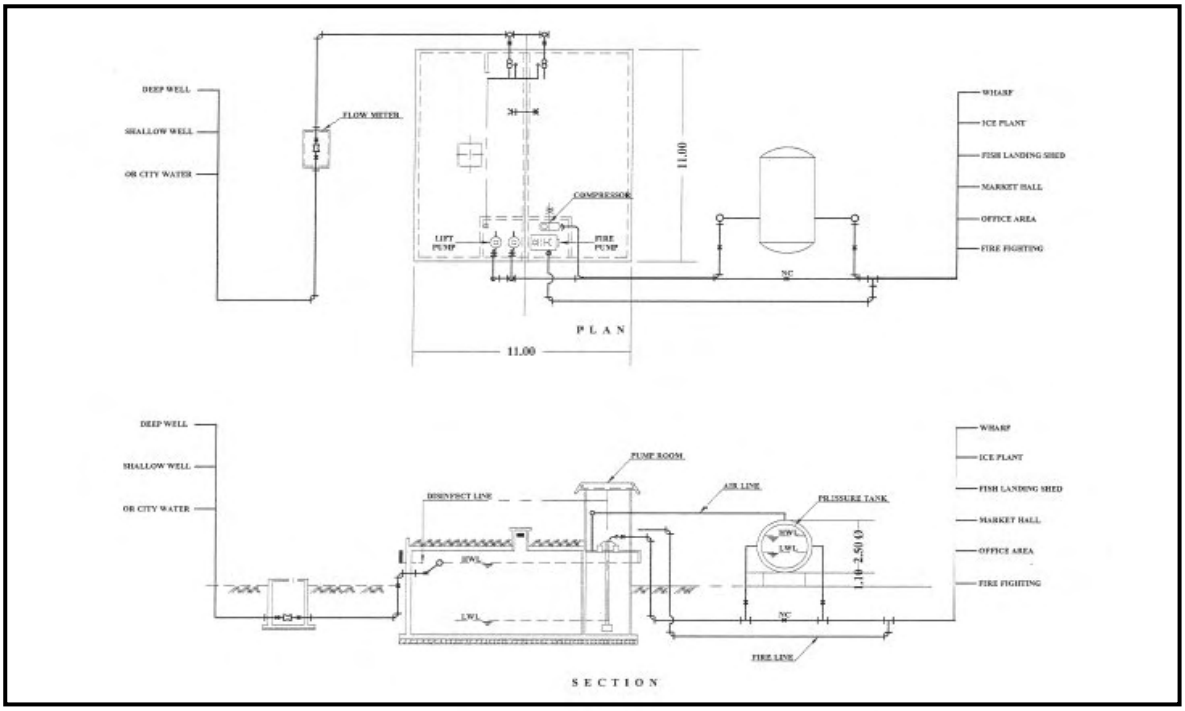


Fig. 7.7.2 Water Supply System A-2 for Davao

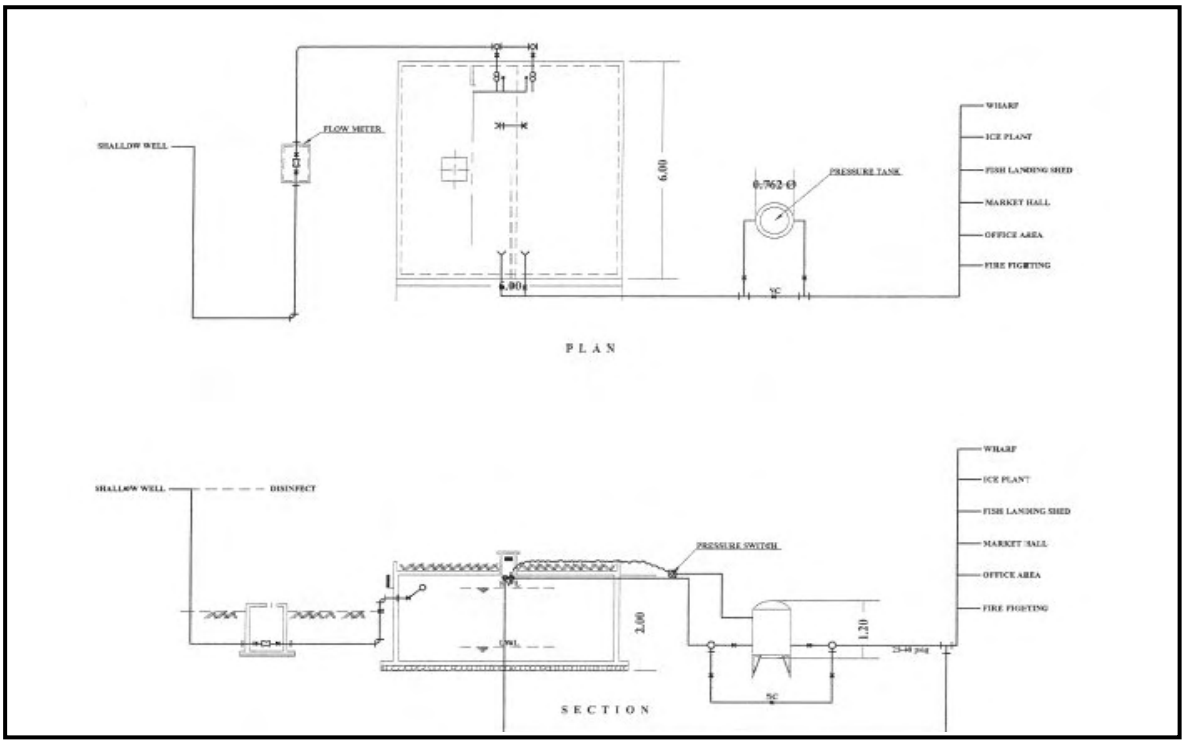


Fig. 7.7.3 Water Supply System A-3: Concepcion, San Jose, Dagupan, Subic, Atimonan, Calauag, Calabanga and Balatan

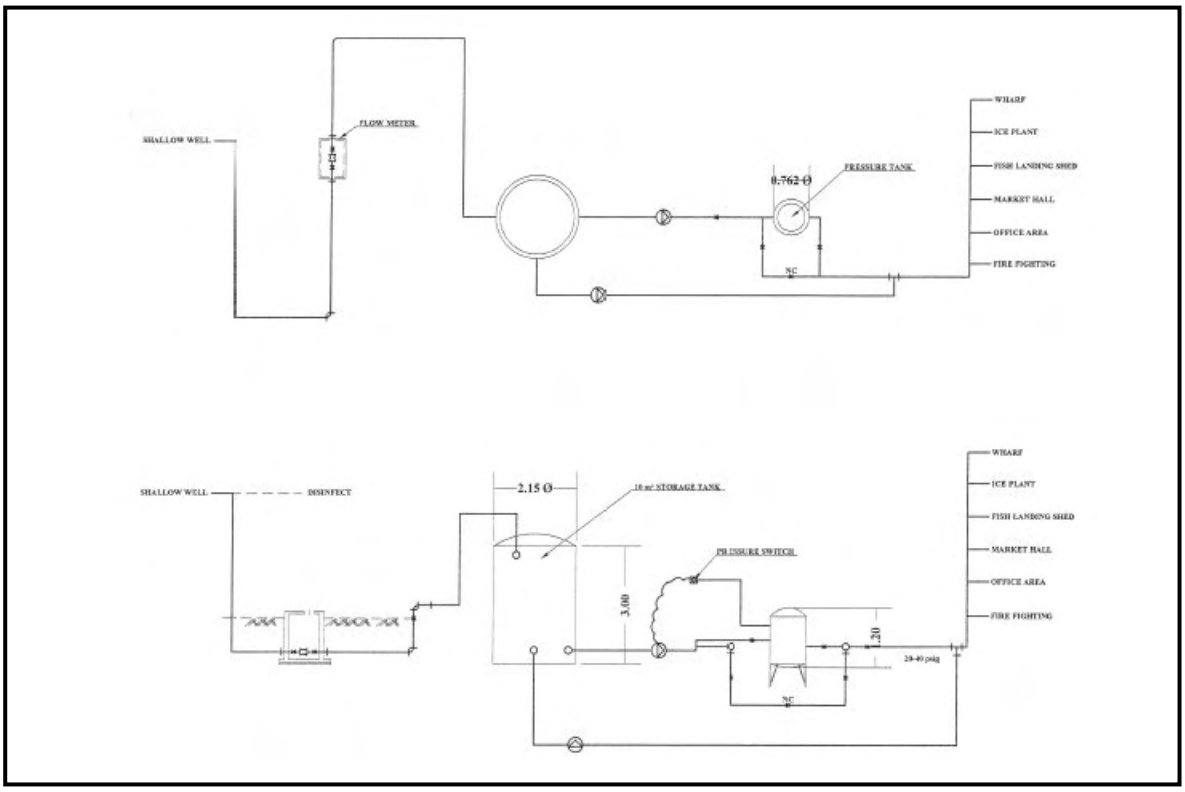


Fig. 7.7.4 Water Supply System A-4: Dumangas, Calauag, Calabanga, Oas, Panabo, Sta. Cruz and Mati

Table 7.7.2 Condition of Existing Wastewater System

PORT	EXISTING FACILITY	CONDITION	PROPOSAL
IFPC	Wastewater Treatment Plant (Activated Sludge Process) with volumetric flow rates of 300 cu.m/day or 300 tons/day	Constructed in 1995/Not yet operational	Rehabilitation Works 1. Structural assessment on the basins foundation integrity. 2. Cleaning and removal of sediments on the existing basins. 3. Replacement of existing piping, including gate and check valves 4. Replacement of mechanical equipments such as submersible pumps, aerator pumps, sludge pumps and blower/compressors. 5. Replacement of MCC & Electrical Control Panel 6. Testing and Commissioning
DFPC	Wastewater Treatment Plant (Activated Sludge Process) with volumetric flow rates of 600 cu.m/day or 600 tons/day	1. Fully Operational /Issued Environmental Compliance Certificate (ECC) & Discharge Permit by the Department of Environmental & Natural Resources (DENR)-Davao 2. Existing sludge drying bed not functioning	Rehabilitation Works 1. Replacement of existing catwalk already deteriorated and corroded. 2. Replacement of existing gate and check valves at Lift Pump Station. 3. Reactivation of existing sludge drying beds 4. Cleaning and removal of sediments at drying beds

Table 7.7.3 Detailed Volume of Sewage System

ADM Septic tank

	persons	l/capita	total	**Design Volume**
Lucena	65	0.075	4.875	**5**
Bislig	55	0.075	4.125	**5**

Fabrication Bldg septic tank

	persons	l/capita	total	**Design Volume**
IFPC	15	0.075	1.125	**1**
SFPC	15	0.075	1.125	**1**
BFPC	15	0.075	1.125	**1**

MKH septic tank

	No of Broker	No of persons (5/broker)	No of persons (3/broker)	l/capita	total	**Design Volume**
IFPC	31	155		0.075	11.625	**10**
LFPC	31	155		0.075	11.625	**10**
DFPC	3	15		0.075	1.125	**1**
BFPC	2	10		0.075	0.75	**1**
Concepcion	15		45	0.075	3.375	**3**
Dumangas	8		24	0.075	1.8	**3**
San Jose	6		18	0.075	1.35	**1**
Dagupan	75		225	0.075	16.875	**17**
Subic	18		54	0.075	4.05	**4**
Atimonan	13		39	0.075	2.925	**3**
Calauag	3		9	0.075	0.675	**1**
Sta. Elena	0		0	0.075	0	**0**
Calabanga	12		36	0.075	2.7	**3**
Pasacao	3		9	0.075	0.675	**1**

Balatan	3		9	0.075	0.675	**1**
Oas	0		0	0.075	0	**0**
Sta. Cruz	3		9	0.075	0.675	**1**
Panabo	2		6	0.075	0.45	**1**
Mati	4		12	0.075	0.9	**1**

HACCP septic tank

	No of unit	No of person/unit	No of person	l/capita	total	**Design Volume**
IFPC	4	50	200	0.075	15	**15**
SFPC	2	50	100	0.075	7.5	**7.5**
CFPC	4	50	200	0.075	15	**15**
DFPC	2	50	100	0.075	7.5	**7.5**

Table 7.7.4 Total Volume of Septic Tank

	ADM	Fabrication shop	MH	HACCP	Total	Design
IFPC		1.125	11.625	15	27.75	30
SFPC		1.125		7.5	8.63	10
LFPC	4.875		11.625		16.50	20
CFPC				15	15.00	15
DFPC			1.125	7.5	8.63	9
BFPC	4.125	1.125	0.75		6.00	6
Concepcion			3.375		3.38	4
Dumangas	0.375		1.8		2.18	3
San Jose	0.375		1.35		1.73	2
Dagupan	1.875		16.875		18.75	19
Subic			4.05		4.05	5
Atimonan			2.925		2.93	3
Calauag	0.375		0.675		1.05	2
Sta. Elena	0.375		0		0.38	1
Calabanga	0.375		2.7		3.08	4
Pasacao			0.675		0.68	1
Balatan	0.375		0.675		1.05	2
Oas	0.375		0		0.38	1
Sta. Cruz	0.375		0.675		1.05	2
Panabo	0.375		0.45		0.83	1
Mati	0.375		0.9		1.28	2

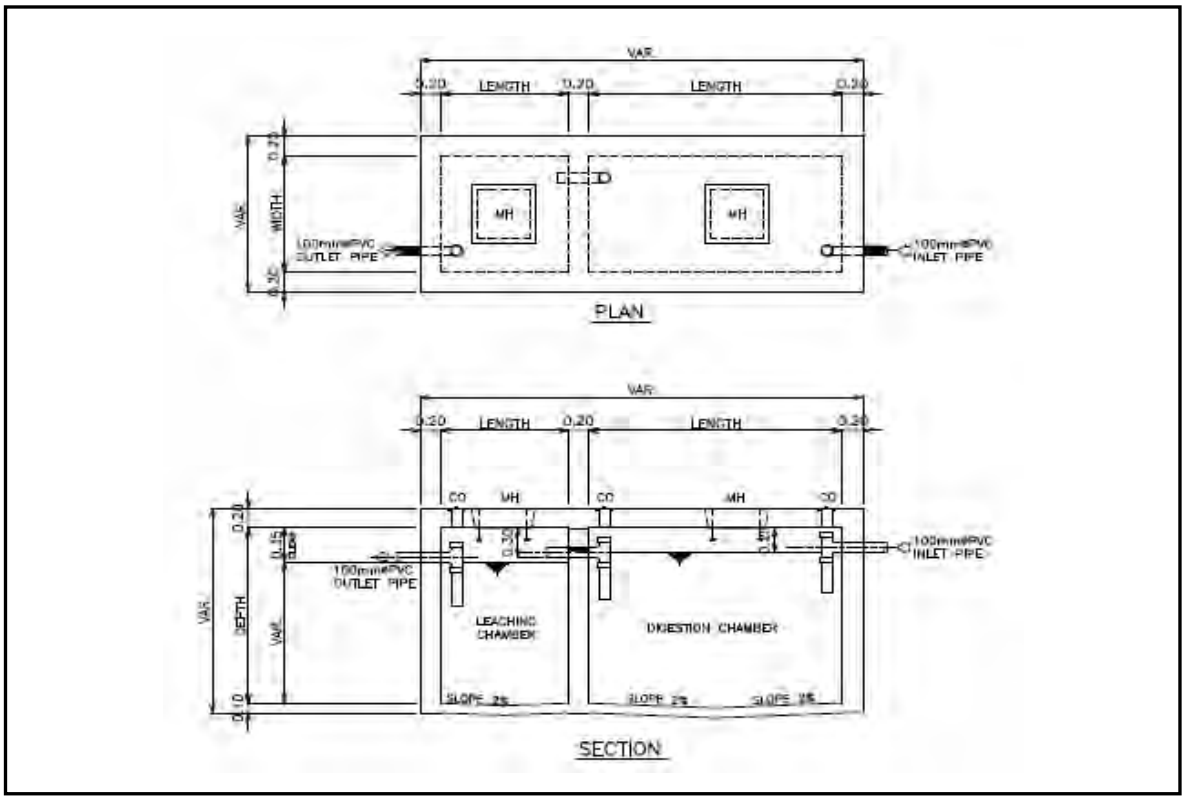


Fig. 7.7.5 Typical Plan and Section of Septic Tank

7.8 Structural Comparison of Breakwater

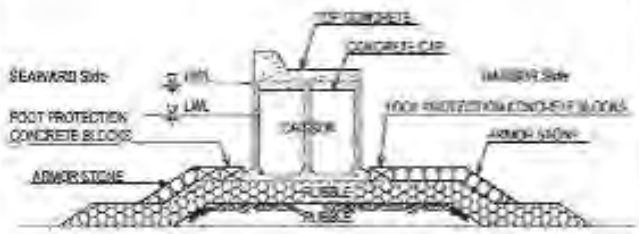
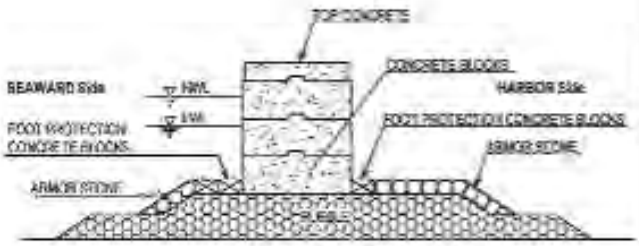
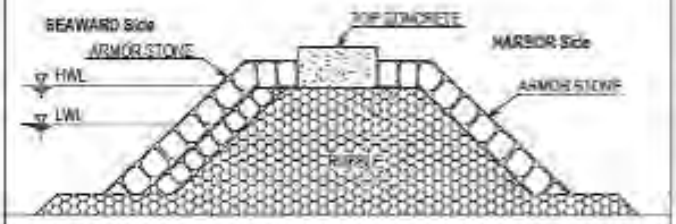
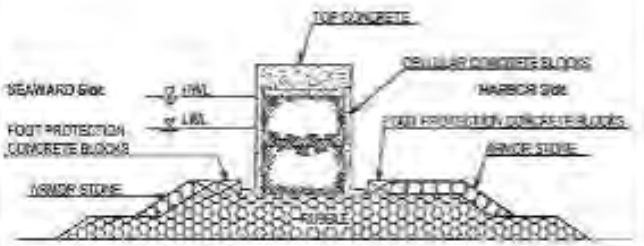
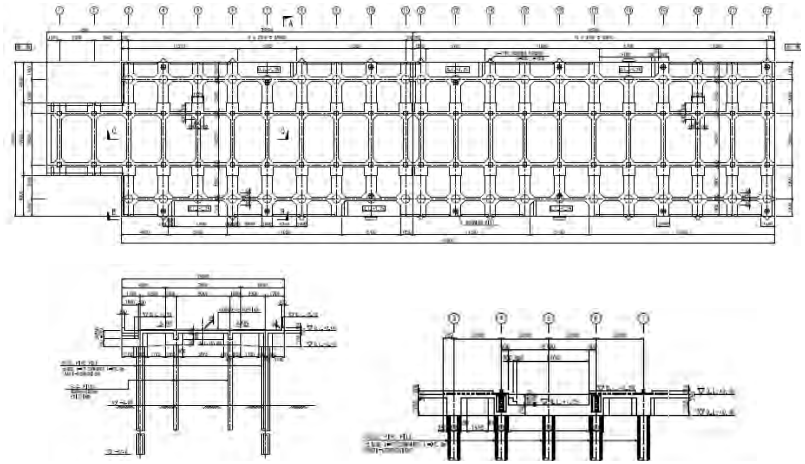
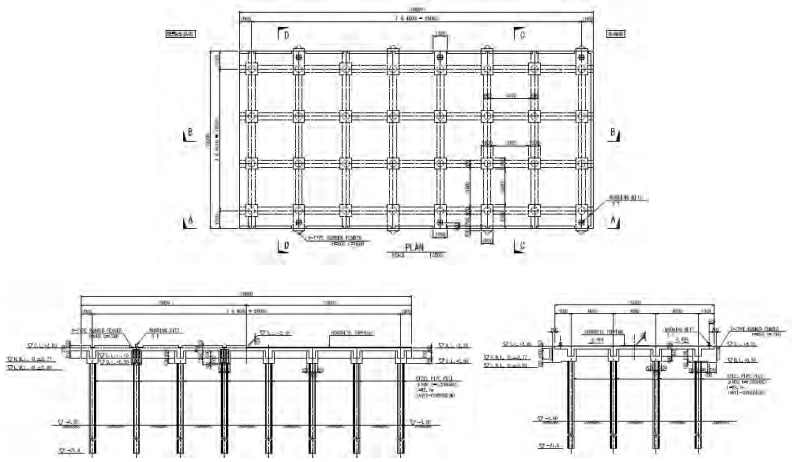
TYPE		CONSTRUCTION FEATURE
CAISSON TYPE		• ECONOMICAL IN A RELATIVELY DEEP SEA. • FLOATING BARGE OR BEACH LANDING AREA IS NECESSARY. • MAINTENANCE IS RELATIVELY DIFFICULT. • CONSTRUCTION MATERIALS ARE AVAILABLE LOCALLY. • CONSTRUCTION SHALL BE LIMITED ON STABLE SOIL.
CONCRETE BLOCK		• ECONOMICAL IN A RELATIVELY DEEP SEA. • CONSTRUCTION EQUIPMENT CAN BE SMALLER THAN CAISSON TYPE. • MAINTENANCE IS RELATIVELY DIFFICULT. • CONSTRUCTION MATERIALS ARE AVAILABLE LOCALLY. • SUITABLE FOR HARD SOIL.
RUBBLE MOUND		• ECONOMICAL IN SHALLOW WATER. • CONSTRUCTION EQUIPMENT CAN BE SMALL. • CONSTRUCTION IS EASY. • MAINTENANCE IS EASY. • CONSTRUCTION MATERIALS ARE AVAILABLE LOCALLY. • MORE FLEXIBLE ON SOFT SOIL THAN OTHER TYPES.
CELLULAR CONCRETE BLOCK		• ECONOMICAL IN A RELATIVELY DEEP SEA. • CONSTRUCTION EQUIPMENT CAN BE SMALLER THAN CAISSON TYPE. • MAINTENANCE IS RELATIVELY DIFFICULT. • CONSTRUCTION MATERIALS ARE AVAILABLE LOCALLY. • SUITABLE FOR HARD SOIL.

Fig. 7.8.1 Structural Comparison of Breakwater for Iloilo and Bislig FPC

7.9 Comparative Study of Pier Structure for Sual Fish Port

Comparative Study for Sual Pier

Location	Renovation of existing Pier	Extension Area
Standard Section		

Renovation of existing Pier — Stability And Evaluation

Pile Material			RC	Steel	Steel
No. of Batter Pile			None	None	None
Pile Dimension			40cm x 40cm Existing Pile	φ800 t=12 SKK400	φ800 t=12 SKK400
Condition			Seismic	Berthing	Seismic
Sectional Force	Moment (kN・m)		65.0	88.06	369.17
	Axial Force (kN)	Trusting	350.0	453.49	460.10
		Pull off			
Ultimate Bearing Capacity of Soil		Trusting(kN)	930.8	1190.8	1190.8
		Pull off(kN)	570.8	766.7	766.7
Stability		Trusting	2.65>1.50	2.63>2.50	2.59>1.50
		Pull off			
Stress (N/mm2)	Moment		σc = 10.0	18.4	77.0
	Axial Force		σs =137.1	18.4	18.6
Allowable Stress (N/mm2)	Moment		σc = 12.0	134.1	134.1
	Axial Force		σs =270.0	140.0	140.0
Safety of Pile (Stress Ratio)				0.268	0.472
Evaluation			○	○	○

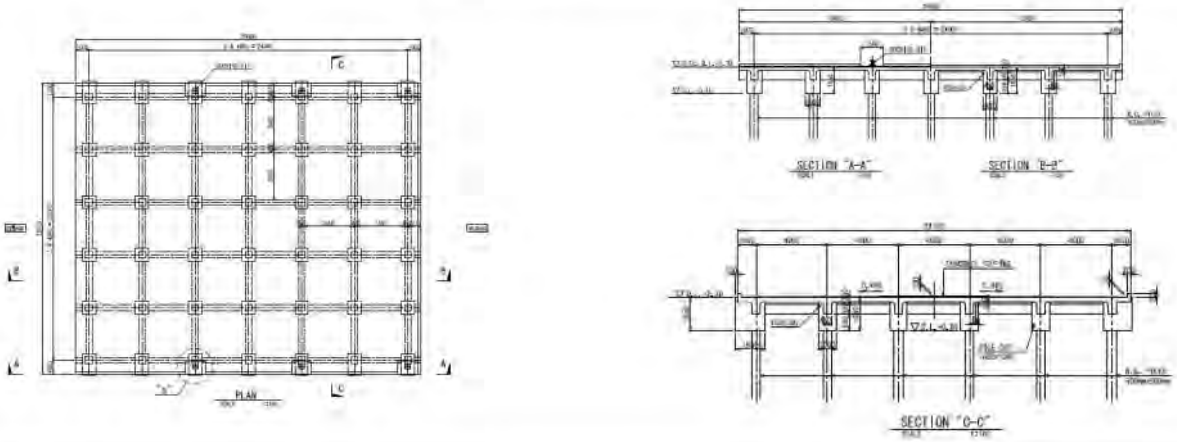
Extension Area — Stability And Evaluation

Pile Material			RC	Steel	Steel
No. of Batter Pile			None	None	6 sets
Pile Dimension			50cm x 50cm	φ600 t=9 SKK490	φ600 t=9 SKK490
Condition			Seismic	Berthing	Seismic
Sectional Force	Moment (kN・m)			386.87	382.36
	Axial Force (kN)	Trusting		54.74	334.61
		Pull off			
Ultimate Bearing Capacity of Soil		Trusting(kN)	955.0	956.6	956.6
		Pull off(kN)	505.0	532.5	532.5
Stability		Trusting		2.47≒2.50	2.50>1.50
		Pull off			
Stress (N/mm2)	Moment		σc = 22.9	22.4	177.5
	Axial Force		σs =458.5	29.0	21.8
Allowable Stress (N/mm2)	Moment		σc = 13.5	163.9	245.8
	Axial Force		σs =210.0	185.0	277.5
Safety of Pile (Stress Ratio)				0.298	0.801
Evaluation			φ32 6pcs/side	○	○

Comment	In order to retain the safety of existing RC pile, it is needed enough size of the additional pile to resist the lateral force.	Maximum Axial force and maximum bending moment arise at the different pile. Safety of pile is checked both maximum Axial force pile and maximum moment pile respectively.

7.10 Comparative Study of Pier Structure for Lucena Fish Port

Comparative Study for Lucena Pier

Location	Extension Area
Standard Section	

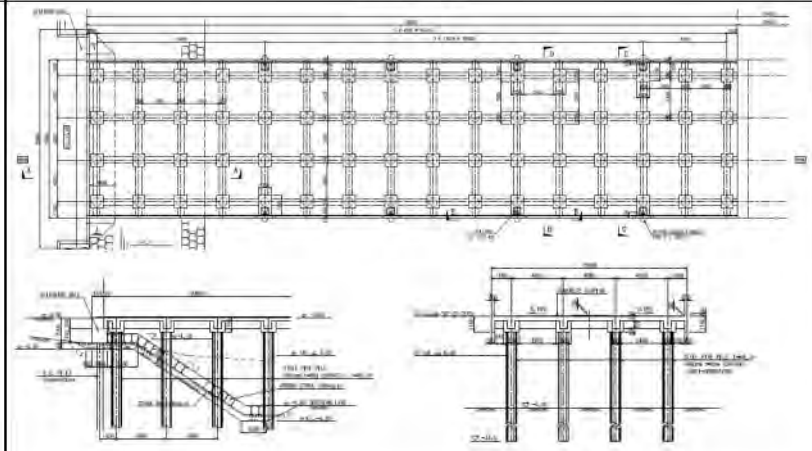
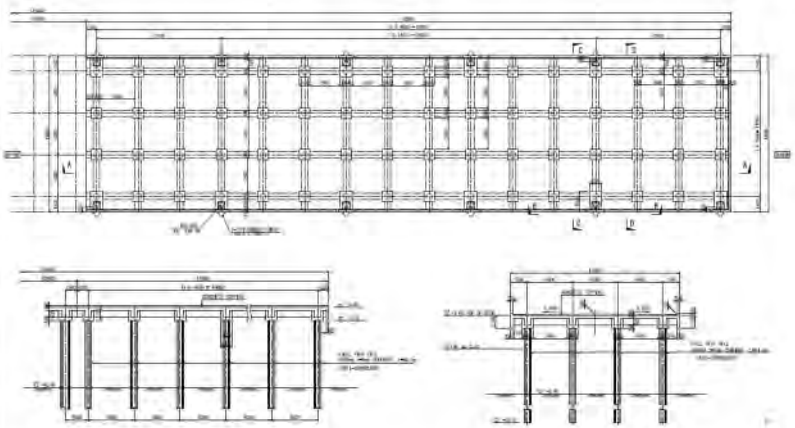
Stability And Evaluation

Pile Material			RC	RC	Steel	Steel
No. of Batter Pile			None	None	None	None
Pile Dimension			50cm x 50cm	50cm x 50cm	φ600 t=9 SKK490	φ600 t=9 SKK490
Condition			Berthing	Seismic	Berthing	Seismic
Sectional Force	Moment (kN・m)		115.70	160.27	118.94	223.44
	Axial Force (kN)	Trusting	370.58	309.85	346.92	380.46
		Pull off				
Ultimate Bearing Capacity of Soil		Trusting(kN)	2189.6	2189.5	2065.9	2065.9
		Pull off(kN)				
Stability		Trusting	5.91>2.50	7.61>1.50	5.95>2.50	5.43>1.50
		Pull off				
Stress (N/mm2)	Moment		σc=7.4	σc=10.2	63.1	118.5
	Axial Force		σs=115.8	σs=195.5	20.0	21.2
Allowable Stress (N/mm2)	Moment		σca=9.0	σca=13.5	140.0	210.0
	Axial Force		σsa=180.0	σsa=270.0	124.4	186.7
Safety of Pile (Stress Ratio)					0.650	0.736
Evaluation			○	○	○	○

Comment	Maximum Axial force and maximum bending moment arise at the different pile. Safety of pile is checked both maximum Axial force pile and maximum moment pile respectively

7.11 Comparative Study of Pier Structure for Bislig Fish Port

Comparative Study for Bislig Pier

Location	Land Side Pier	Seaside Pier
Standard Section		

Land Side Pier

Pile Material			RC	Steel	Steel
No. of Batter Pile			None	None	None
Pile Dimension			50cm x 50cm	φ800 t=9 SKK400	φ800 t=9 SKK400
Condition			Seismic	Berthing	Seismic
Sectional Force	Moment (kN·m)		521.77	115.84	545.19
	Axial Force (kN)	Trusting	484.57	346.88	513.01
		Pull off			
Ultimate Bearing Capacity of Soil		Trusting(kN)	1662.8	1680.2	1680.2
		Pull off(kN)	1212.8	1256.1	1256.1
Stability		Trusting	3.19>1.50	4.84>2.50	3.28>1.50
		Pull off			
Stress (N/mm2)	Moment		σc = 22.2	34.1	160.7
	Axial Force		σs =446.2	20.0	17.5
Allowable Stress (N/mm2)	Moment		σc = 9.0	140.0	199.2
	Axial Force		σs =180.0	132.8	210.0
Safety of Pile (Stress Ratio)				0.400	0.890
Evaluation			φ32 6pcs/side	○	○

Seaside Pier

Pile Material			RC	Steel	Steel
No. of Batter Pile			None	None	None
Pile Dimension			50cm x 50cm	φ600 t=9 SKK400	φ600 t=9 SKK400
Condition			Seismic	Berthing	Seismic
Sectional Force	Moment (kN·m)			122.42	207.79
	Axial Force (kN)	Trusting		344.82	272.55
		Pull off			
Ultimate Bearing Capacity of Soil		Trusting(kN)	1662.8	1680.2	1680.2
		Pull off(kN)	1212.8	1256.1	1256.1
Stability		Trusting	7.63>1.50	4.87>2.5	6.16>1.50
		Pull off			
Stress (N/mm2)	Moment		σc = 9.3	64.9	110.2
	Axial Force		σs =180.0	26.6	21.0
Allowable Stress (N/mm2)	Moment		σc = 9.0	125.4	188.1
	Axial Force		σs =180.0	140.0	210.0
Safety of Pile (Stress Ratio)				0.708	0.686
Evaluation			×	○	○

Comment	Maximum Axial force and maximum bending moment arise at the different pile. Safety of pile is checked both maximum Axial force pile and maximum moment pile respectively.	As minimum requirement of the dimension of Steel piled pile, diameter and thickness of pile are applied 600mm and 9mm respectively. Safety and stability of foundation Pile has no problem.

Appendix 8. Natural Conditions

8.1 Soil Conditions

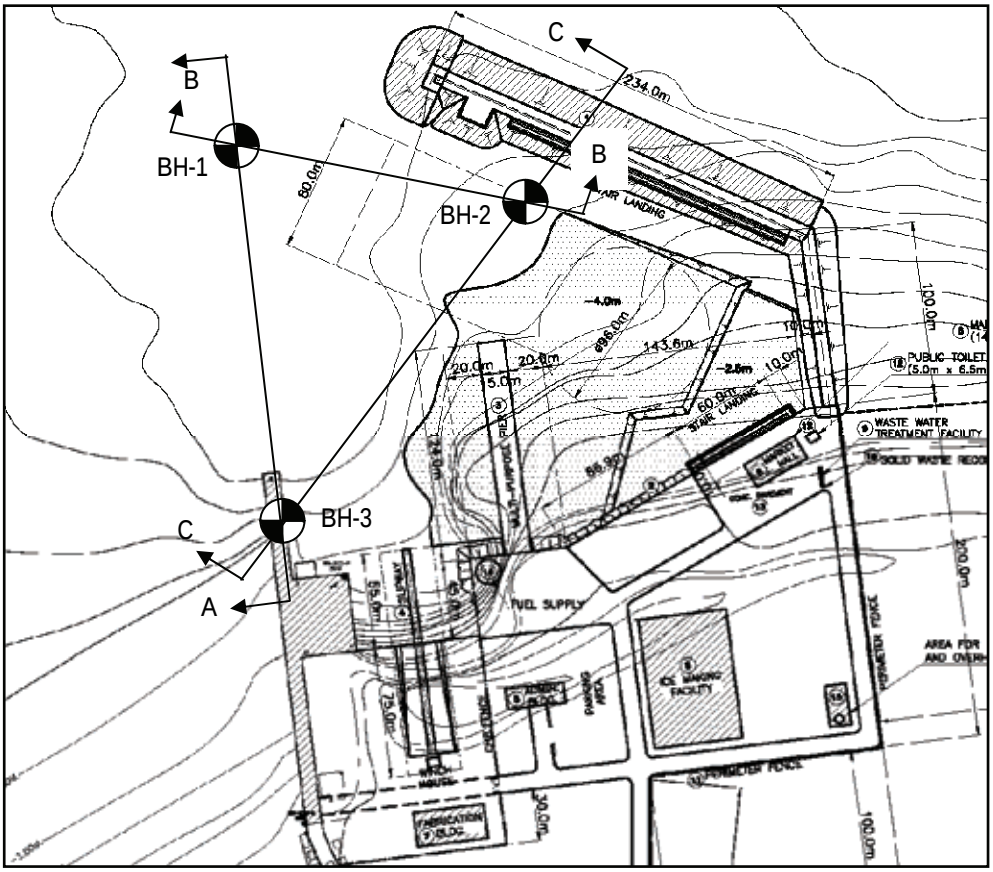


Fig. 8.1.1 Borehole Location at Bislig

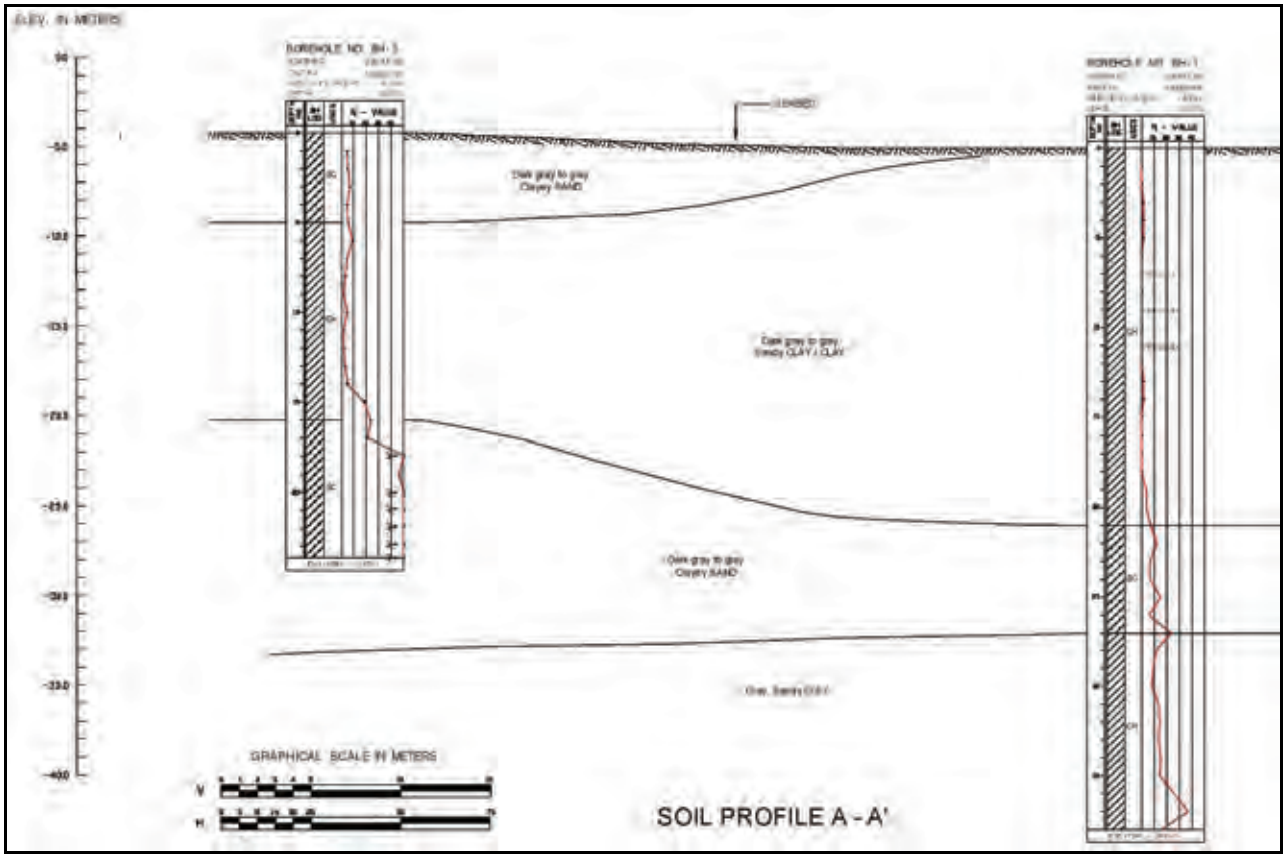


Fig. 8.1.2 A-A Section

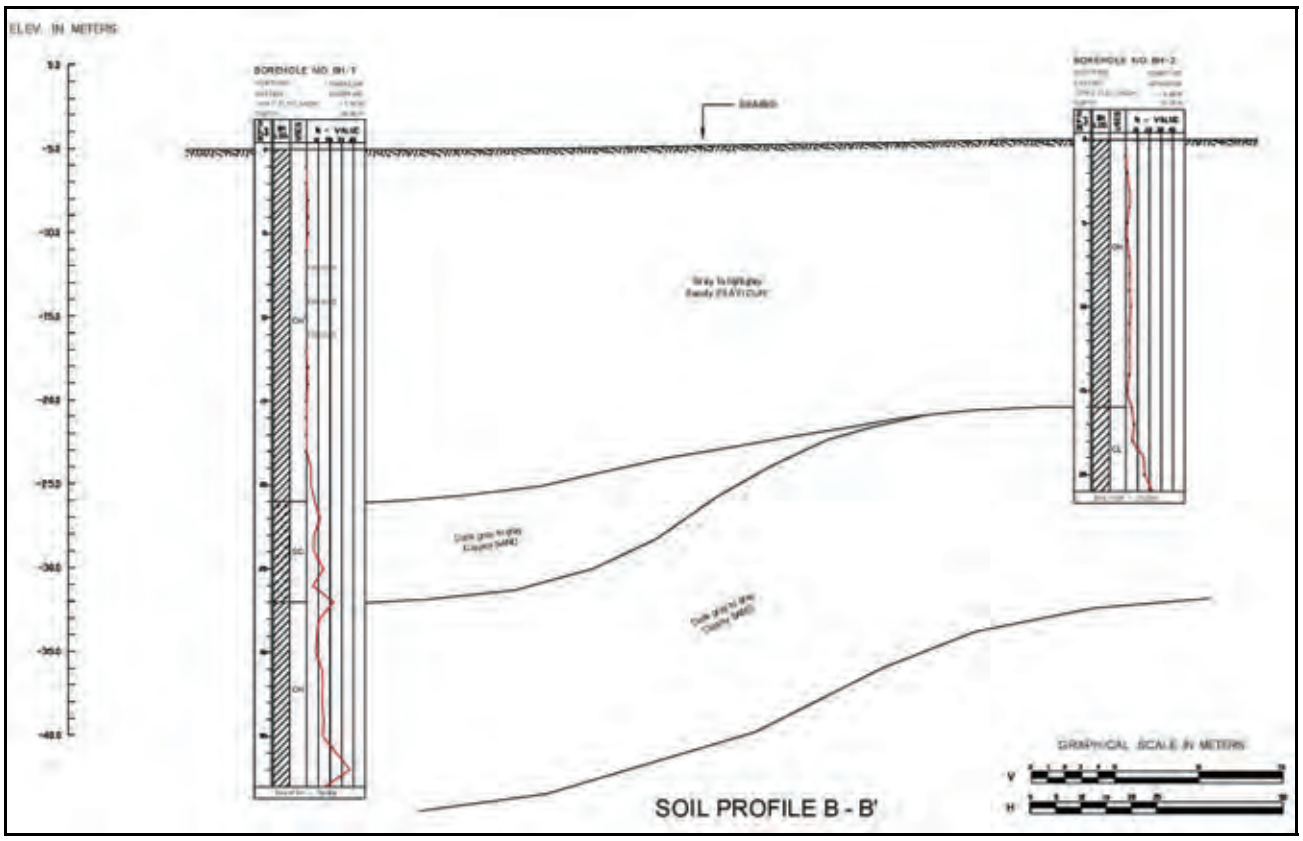


Fig. 8.1.3 B-B Section

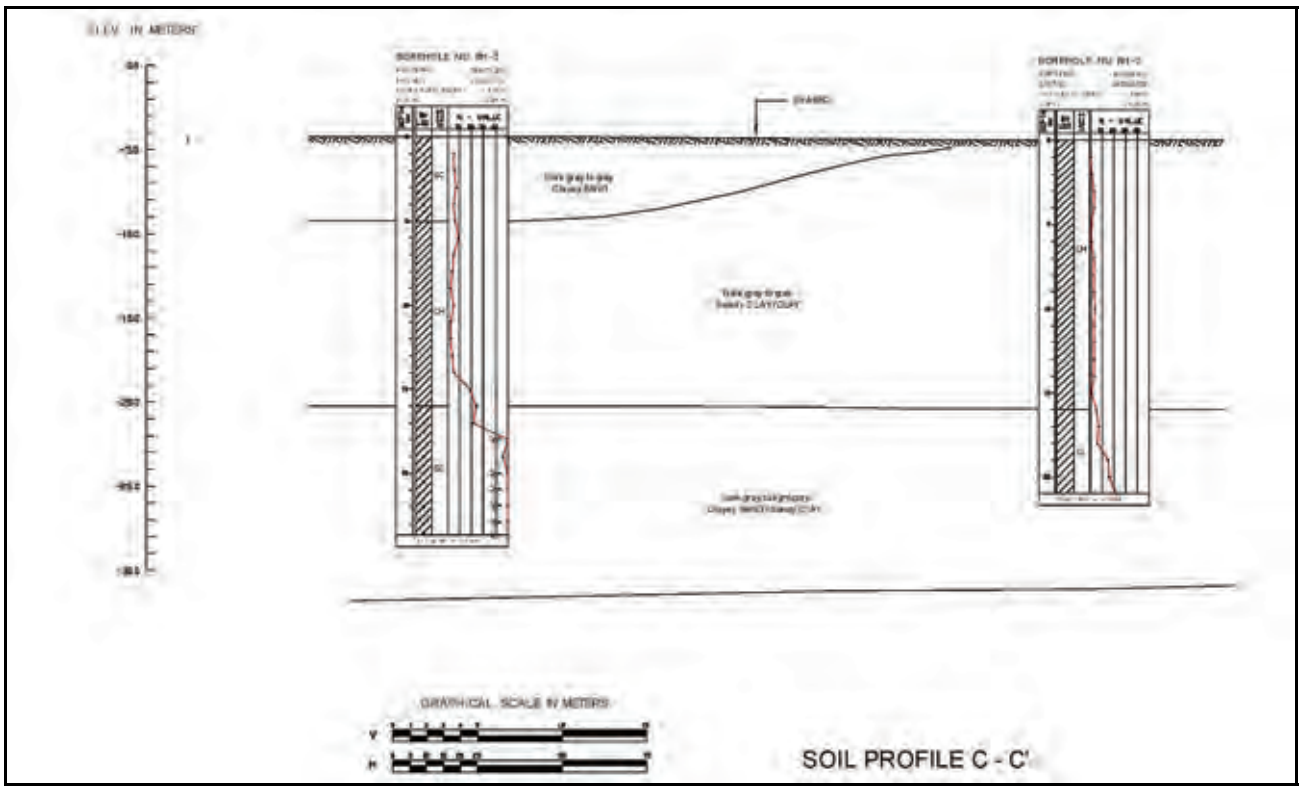


Fig. 8.1.4 C-C Section

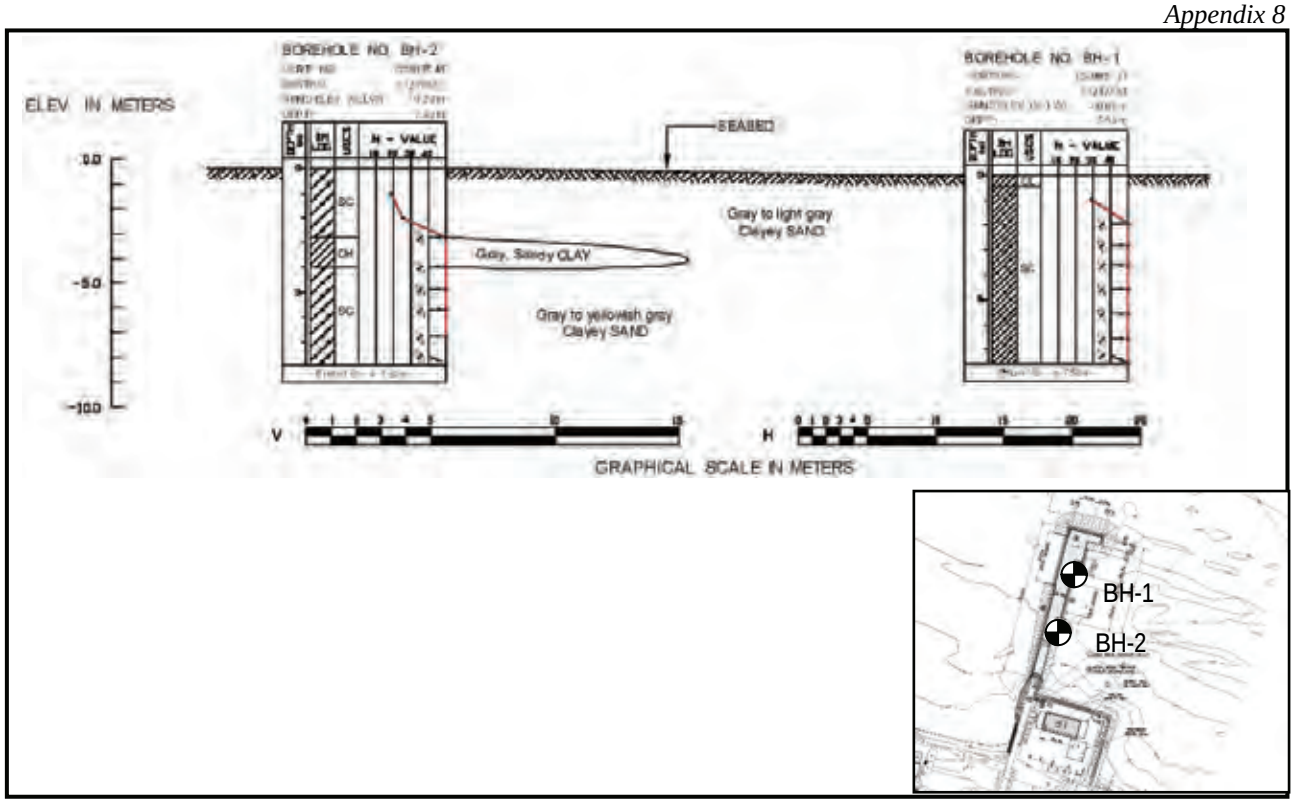


Fig. 8.1.5 Soil Investigation at Concepcion

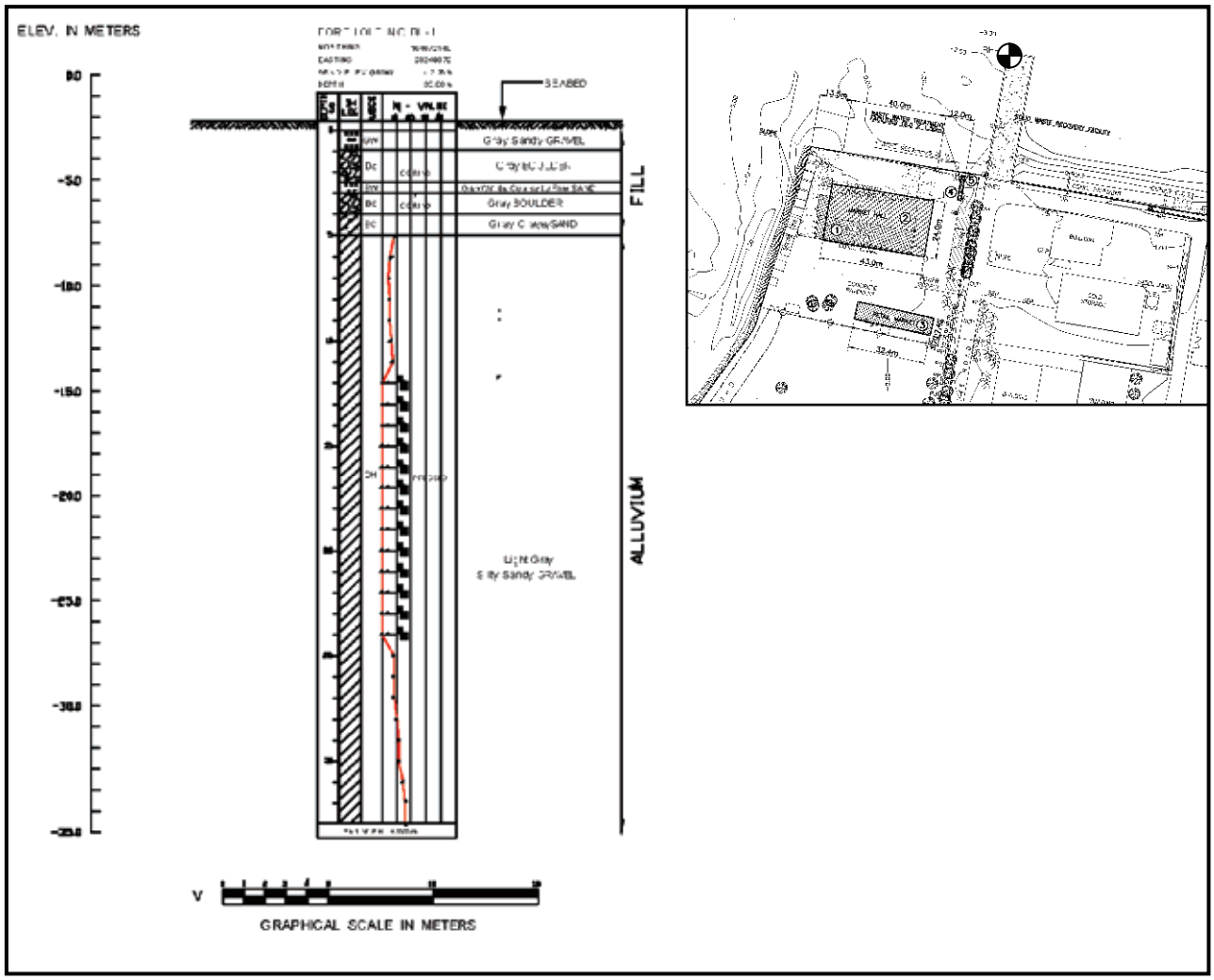


Fig. 8.1.6 Soil Investigation at Subic

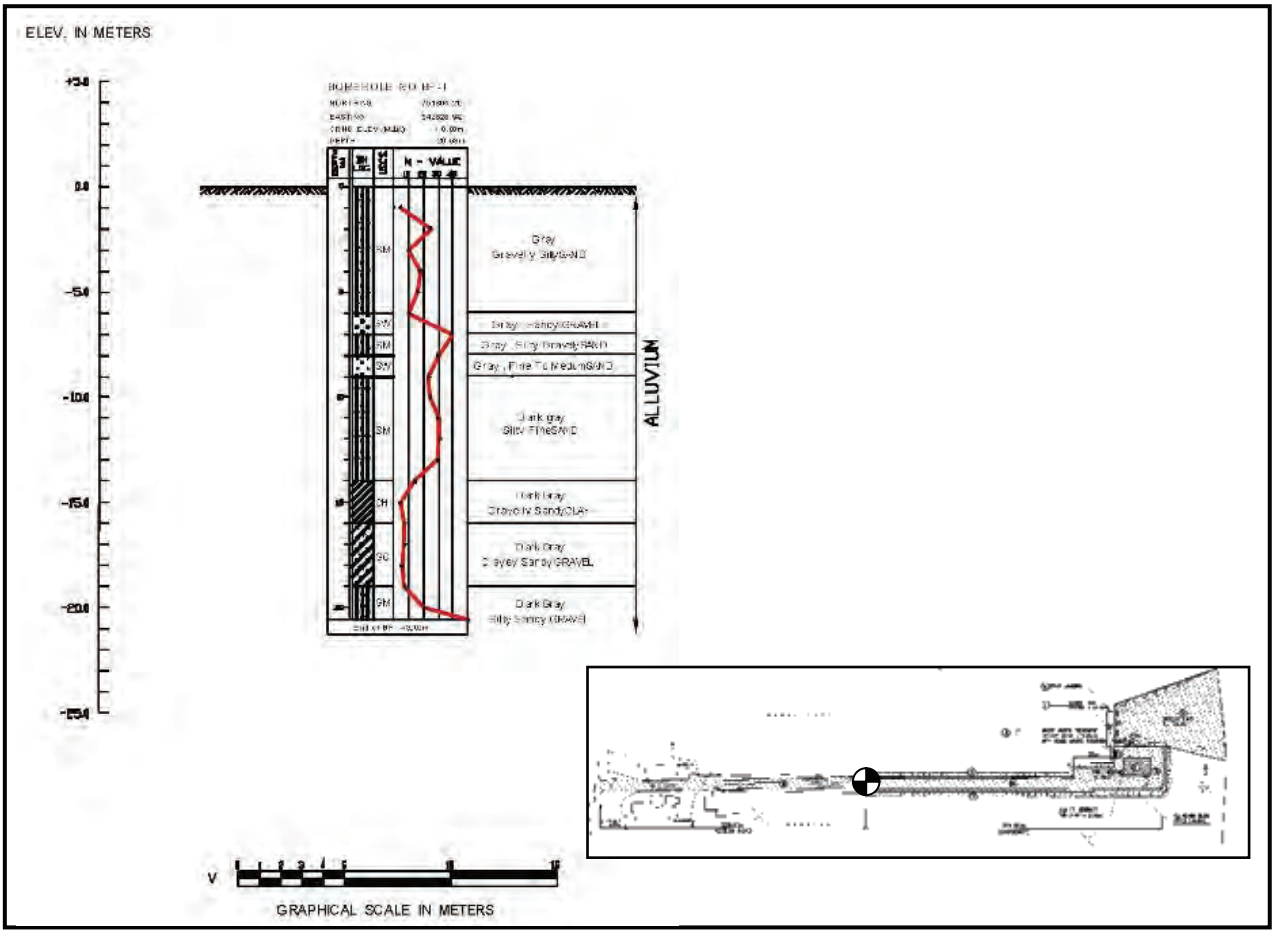


Fig. 8.1.7 Soil Investigation at Sta. Cruz

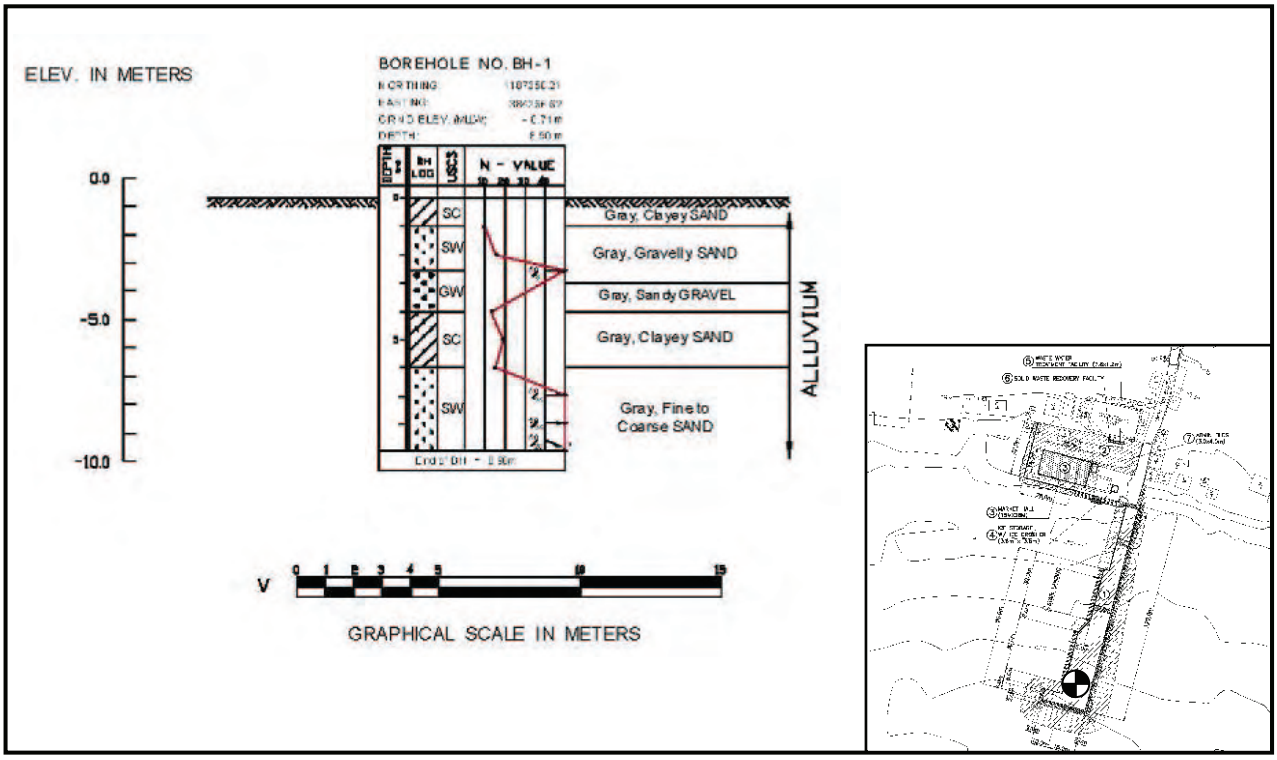


Fig. 8.1.8 Soil Investigation at San Jose De Buenabista

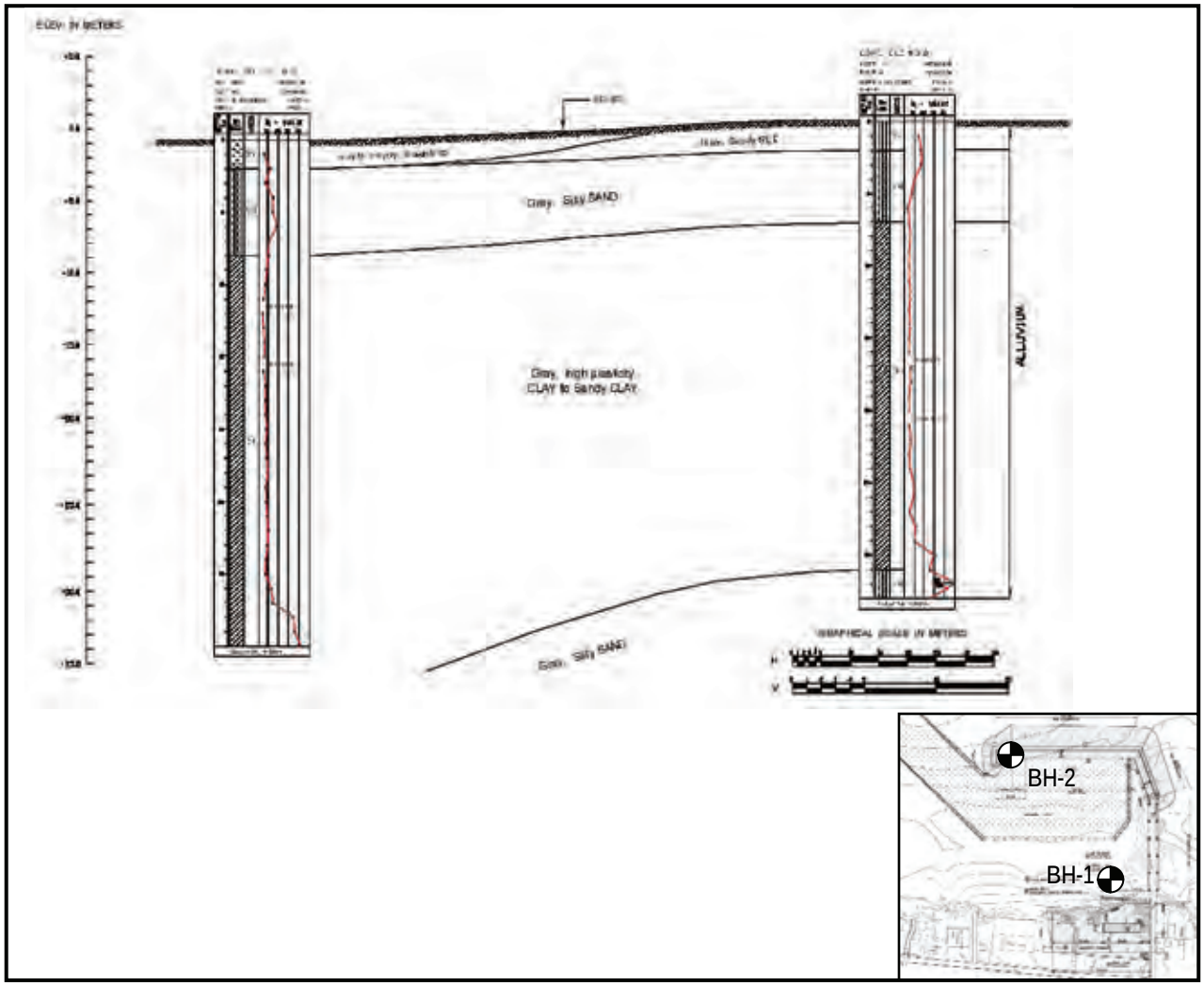


Fig. 8.1.9 Soil Investigation at Balatan

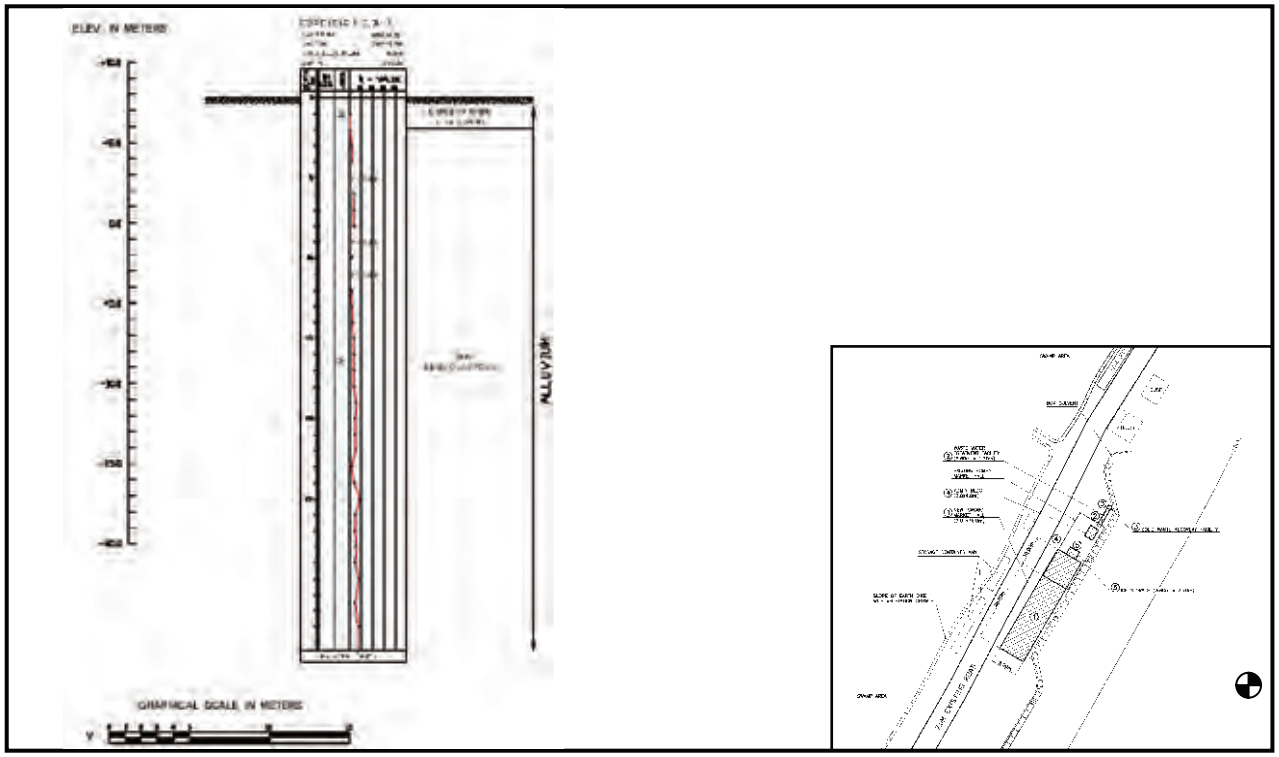
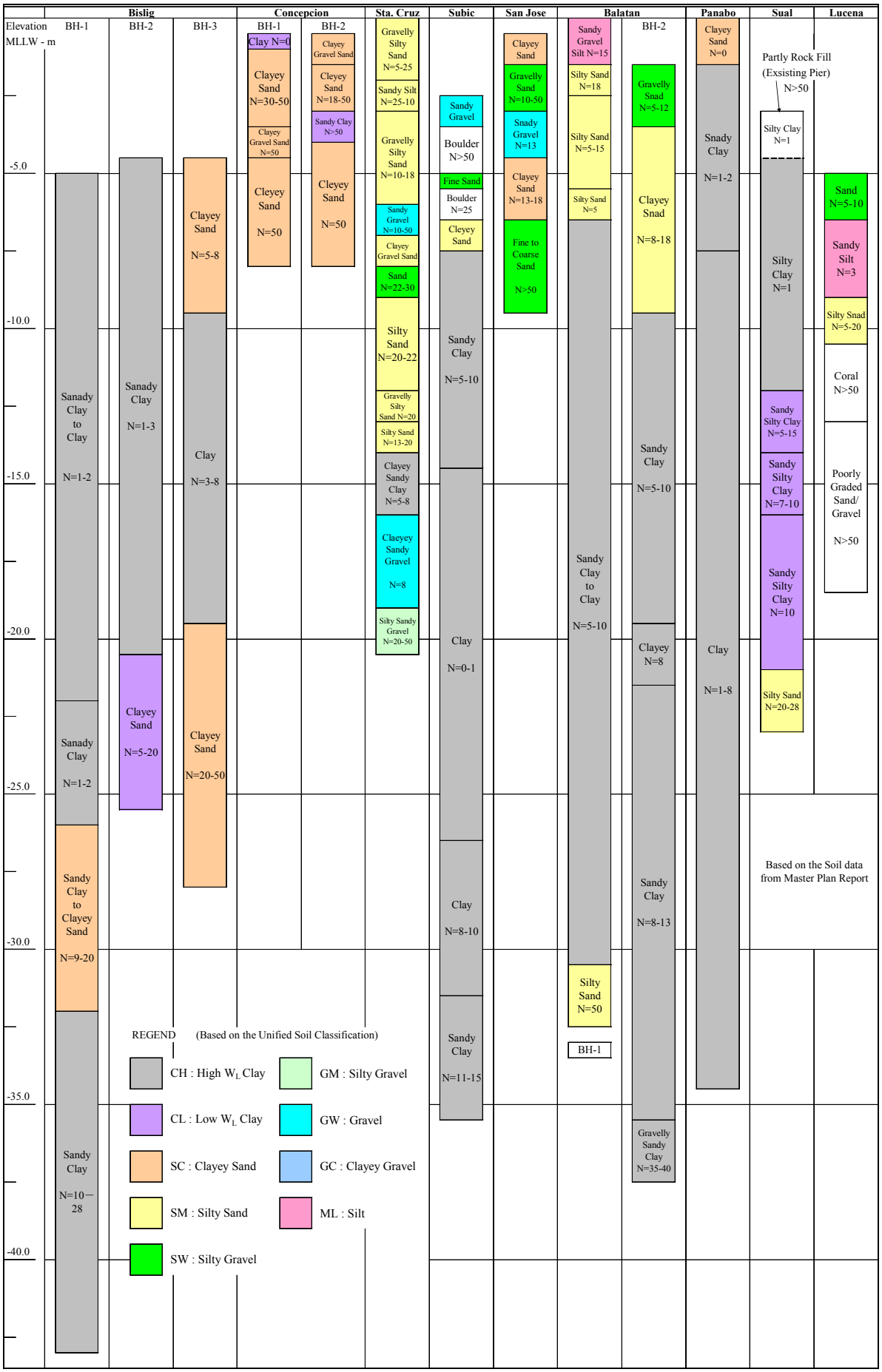


Fig. 8.1.10 Soil Investigation at Panabo



Note: Soil boring tests are conducted from March 3 to March 31, 2010.

Fig. 8.1.11 Soil Investigation Output

8.2 Tide Conditions

Harmonic analysis of Tide Level

Explanation hereunder is the relationship of Tide datum decided by the harmonic analysis for the 8 project sites where Tide observation were carried out.

1. The noise removal of data

   The first step is to make the figure of chronological change of tide elevation.
   After that, judged the noises by the chronological curve and excluded it from data.

2. Harmonic Analysis

   Harmonic Analyses were carried out using noise deducting data for the 8 project site. Duration of the Tide observation was 15 night and day for each project site.

   Harmonic constant of major 10 component Tides and mean sea levels were calculated by least squares method.

3. The making of a tide level-related list and the tide level-related figure

   The calculation methods of each item are as follows. In addition, the datum elevation of each water level is reference tide datum.

   ① Mean sea level: The average water level calculated by Harmonic Analysis.
   ② Zo: Sum of the amplitude of the main four component Tide M2,S2,K1,O1) calculated by the Harmonic Analysis.
   ③ D.L: The water level that deducted Zo from mean sea level
   ④ Calculation of H.W.L (High Water Level) and L.W.L (Low water Level)

   With the harmonic constant (ten component tide) and the mean water level that was analyzed by the harmonic analysis, prediction of the chronological change of the Tide elevation was calculated for one year started 2010 Jan.1.

   HWL and LWL were picked up from the annual tide prediction and calculated as an average during the 2days before and 4 days after of the first and fifteenth days of the lunar month. In general, HWL and LWL should be calculated based on the one year long observation record. In this time, data is limited only for 15 days, so that, predicted Tide changes composed by harmonic constants was utilized instead of annual survey data.

   In addition, as for the SUBIC, M2 and S2 were too small to be the largest Tide datum at the time of the first day and the fifteenth day in a lunar month. Therefore, computation of the HWL and LWL was carried out with using the extracted tide level of the time when a tide range was big.

   ⑤ An actual survey high tide level, actual survey low water level: The highest water level and the lowest water level in 15 night and day during an observation period.
   ⑥ The lowest Tide: The lowest Tide level was computed by subtraction the amplitude of the major ten Tide components from mean sea level.

Table 8.2.1 See Water Level

【Sea Water level】 Unit：m

Location		Atimonan	Sta, Elena	Subic	Concepcion	San Jose	Bislig	Sta. Cruz	Panabo
Z_0 (Sum of the major 4 Component Tide)		1.21	1.14	0.75	1.64	1.18	1.14	1.15	1.16
Water Level	H.W.L	2.36	2.52	1.69	2.69	1.98	1.75	1.98	2.83
	Surveyed H.W.L	2.40	2.55	1.64	2.58	1.85	1.79	1.86	2.80
	Mean Sea Level	1.39	1.61	0.99	1.21	0.94	0.89	0.90	1.74
	D.L	0.18	0.47	0.24	-0.44	-0.24	-0.25	-0.25	0.58
	Surveyed L.W.L	0.43	0.75	0.43	0.01	0.15	0.00	-0.02	0.74
	L.W.L	0.27	0.55	0.40	-0.19	0.00	-0.19	-0.12	0.72
	Lowest Tide	0.00	0.32	0.04	-0.79	-0.53	-0.39	-0.51	0.33

1)Water level is water level from local reference datum of each spot.
2)Zo is the sum of major 4 component tide (K1,O1,M2, S2). D.L. is the water level that deducted Zo from mean sea level.
3)Mean Sea levels are the average of the water level surveyed in the field for 15 night and day.
4)H.W.L, L.W.L are annual average water level for High Tide and Low Tide at the Spring Tide time based on the Predicted Tide Level.
5)Surveyed High Water Level and Low Water Level are the values observed during 15 night and day.
6)Lowest Tide is the water level which is calculated as (Mean Sea level) - (Amplitude of the sum of major 10 component Tide).
7) Water depth in the drawings of this report shall be adjusted that e.g. actual water depth is 0.27m lower than indicated depth for Atimonan, 0.55m lower for Sta. Elena, 0.19m higher for Concepcion, etc.

Table 8.2.2 Harmonic Constant

Component Tide	Amplitude (m)								Priming of the Tide (°)							
	ATIMONAN	STA ELENA	SUBIC	CONCEPCION	SAN JOSE	BISLIG	STA CRUZ	PANABO	ATIMONAN	STA ELENA	SUBIC	ONCEPCIO	SAN JOSE	BISLIG	STA CRUZ	PANABO
K_1	0.280	0.284	0.265	0.251	0.319	0.282	0.135	0.140	208.9	215.6	327.3	344.3	320.5	184.1	251.6	253.2
O_1	0.110	0.109	0.281	0.273	0.348	0.105	0.117	0.110	198	192.5	177.7	289.8	302.3	178.5	231.3	233.0
P_1	0.093	0.094	0.088	0.083	0.106	0.093	0.045	0.046	208.9	215.6	327.3	344.3	320.5	184.1	251.6	253.2
Q_1	0.010	0.009	0.056	0.025	0.069	0.009	0.033	0.026	205	348.2	76.7	141.1	249.7	146.0	226.1	230.4
M_2	0.592	0.596	0.155	0.686	0.322	0.595	0.599	0.610	178.6	179.9	209.1	343.9	335.3	180.6	179.0	180.4
S_2	0.231	0.155	0.047	0.432	0.192	0.154	0.300	0.300	197.7	205.8	334.4	33.6	354.0	204.9	211.8	213.7
K_2	0.063	0.042	0.013	0.118	0.052	0.042	0.082	0.082	197.7	205.8	334.4	33.6	354.0	204.9	211.8	213.7
N_2	0.006	0.005	0.030	0.085	0.051	0.003	0.095	0.099	28.7	139.3	116.9	314.3	341.2	9.6	161.4	168.5
M_4	0.000	0.000	0.007	0.007	0.006	0.000	0.001	0.002	9.3	106.2	221.4	231.5	333.6	41.4	147.6	167.7
MS_4	0.000	0.000	0.008	0.035	0.004	0.000	0.002	0.002	78.6	199.1	304.5	278.1	30.8	272.9	230.6	238.3
Mean Sea Level	1.390	1.610	0.990	1.205	0.938	0.889	0.897	1.744								
Z_0	1.213	1.144	0.748	1.642	1.181	1.136	1.151	1.160								
Lowest Tide	0.005	0.316	0.040	−0.790	−0.531	−0.394	−0.512	0.327								

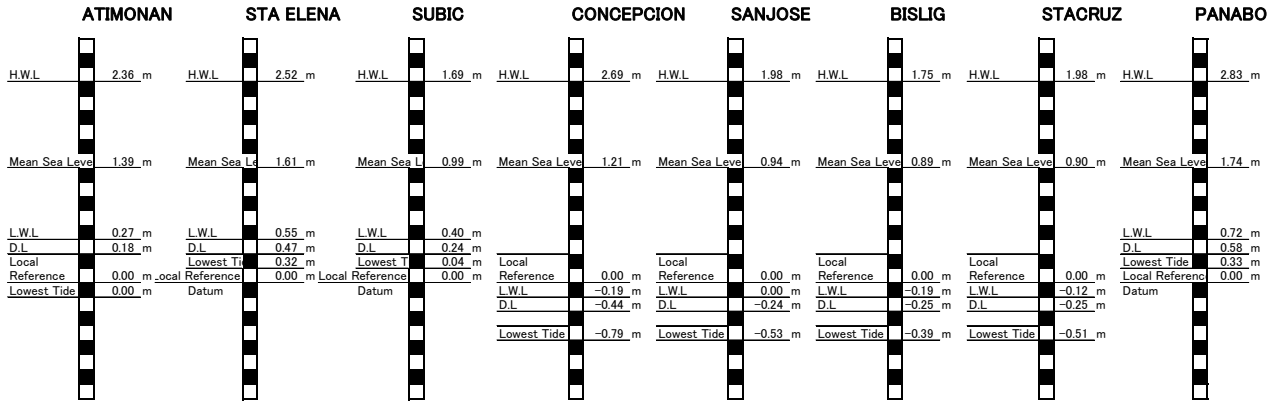


Fig. 8.2.1 See Water Level

Appendix 9. HACCAP Laboratory Equipment

	Items	Specification	Usage	Q'ty	Price per one (Yen)	Total (Yen)	(Pesos in1000)
Equipments	Centrifuge (Hi speed refrigerated)	Refrigeratable, Max speed: 20,000rpm, Max Volume; 500 ml x 6, with centrifuge bottle	Preparation of sample	1	1,000,000	1,000,000	500
	Desiccators	Cabinet size	Stock cabinet for chemicals	1	250,000	250,000	125
	Refrigerator	400 L	Stock of samples and chemicals	2	300,000	600,000	300
	Freezer	200 L (-20°C)	Stock of samples and chemicals	2	2,000,000	4,000,000	2,000
	High Performance Liquid Chromatograp h (HPLC)	Pump, Fluorescence detector, degasser, Auto sampler, Auto injector, manual injector, Temperature control, UV detector, PC, Printer, OS, OVEN, column	Histamine analysis	1	12,000,00 0	12,000,000	6,000
	Multi-probe water analysis system	10-15 probe	Environmental water analysis	1	1,000,000	1,000,000	500
	Balance	Analytical balance (Electric)	Measurements of Bacterial Broth	1	500,000	500,000	250
	Hume Hood (Draft chamber)	With a scrubber	Preparation of samples	1	3,000,000	3,000,000	1,500
	Clean bench	UV lamp /Gas burner	Bacterial identification process	1	1,000,000	1,000,000	500
	Incubator	37°C & 30°C	Incubation of bacteria plate, broth.	2	1,000,000	2,000,000	1,000
	Balance	Chemical analyst grade (electric)	Chemical weight (With Certified Reference Materials)	2	200,000	400,000	200
	Autoclave	Preparation and post analysis	Sterilization of medium, and culture	2	860,000	1,720,000	860
	Biological Microscope	Research grade, Phase contrast lens, Normal contrast lens, with Digital camera	Phase contrast & Normal phase	2	1,200,000	2,400,000	1,200
	Microscope table	Stable table	Stand for Microscope	2	200,000	400,000	200
Furniture	Balance table	Use for Analytical balance	Laboratory work	2	300,000	600,000	300
	SUS table	75 x180 cm	Laboratory work	3	300,000	900,000	450
	Lab table	90 x 240 cm	Laboratory work	3	250,000	750,000	375
	Lab table w/sink	90 x 240 cm, w/sink	Laboratory work	2	280,000	560,000	280
	Chair	Laboratory chairs	Laboratory work	10	30,000	300,000	150
	Lab wear locker	Lab wear UV sterilization system	Laboratory work	1	100,000	100,000	50
	Automatic hand wash system	Alcohol system	Entry system	2	100,000	200,000	100
	Lab table w/sink	75 x 180cm w/sink	Laboratory work	1	220,000	220,000	110
	Lab table	90 x 150cm	Laboratory work	1	210,000	210,000	105
	Lab table	90 x 240cm	Laboratory work	9	250,000	2,250,000	1,125
	SUS table	75 x120cm	Laboratory work	2	200,000	400,000	200
	Apparatus cabinet	180x75 cm	Laboratory work	4	240,000	960,000	480
	Apparatus dryer	Dryer system	Laboratory work	1	160,000	160,000	80

Appendix 10. Water Quality Test Result

A. DAMIAN LABORATORIES

A. DAMIAN LABORATORIES
165 Calamba Street, Quezon City, Philippines
P.O. Box 3730, Manila
Telephone No. 741-7771
FAX# 741-0988 (63)

ATTACHMENT A-6c

TO: BASIC TECHNOLOGY
Iloilo water

Date Analyzed: March 25, 1992
Analyzed by: Mina D. Bote
Marissa N. Mojicarras

Sample Date: March 25, 1992

LABORATORY ANALYSIS REPORT NO. 0101

Items Determined			Sanchez Water Supply	Tan Water Supply	Garson Water Supply	Abellar Water Supply	Go Water Supply	IFFC Water Supply
pH			7.52	7.40	7.35	7.56	7.14	7.50
P Alkalinity	ppm	$CaCO_3$	0	0	0	0	0	0
Total Alkalinity	"	$CaCO_3$	278	488	551	361	571	468
Total Hardness	"	$CaCO_3$	279	876	553	350	734	650
Calcium Hardness	"	$CaCO_3$	164	405	274	197	326	220
Magnesium Hardness	"	$CaCO_3$	115	471	279	153	408	330
Chlorides	"	NaCl	146	318	324	159	576	767
Fluorides	"	F						
Sulfates	"	Na_2SO_4	83	414	186	77	195	196
Phosphates	"	PO_4						
Nitrates	"	NO_3						
Nitrites	"	NO_2						
Silica	"	SiO_2						
Total Iron	"	Fe	24	23	25	34	31	30
Manganese	"	Mn	2.7	0.0175	0.025	0	0	0.06
B.O.D. (5-day) 20°C	"	B.O.D.	1.08	0	0	0	0	0
C.O.D.	"	C.O.D.						
Turbidity	JTU		2.0	0	0	1.25	1.0	0
Color	APHA		0	0	0	0	0	0
Conductance	Micromho/cm		800	1,850	1,650	975	2,000	2,425
Total Dissolved Solids	ppm	$CaCO_3$	500	1,250	1,100	650	1,300	1,600
Suspended Solids	ppm	SS						
Free Carbon Dioxide	ppm	$CaCO_3$						
Sodium	ppm	Na						

REMARKS:

CHEMICAL / BACTERIOLOGICAL ANALYSIS OF WATER
WASTE WATER BOD COD TOC

2-6

Fig. 10.1 Test Result for Iloilo Fish Port

F.A.S.T. LABORATORIES FAX NO. : 913-3084 Apr. 09 2010 09:07AM P3

ATTACHMENT A-7

F.A.S.T. Laboratories

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F.A.S.T. Laboratories – Cubao
No. 62, 20th Avenue, Cubao, Quezon City

Reference No. CQ1003-1129

Page 2 of 3

CLIENT	: PHILIPPINE FISHERIES DEVELOPMENT AUTHORITY
ADDRESS	: 4th Floor (Planning Department) PCA Building, Diliman, Quezon City
SAMPLE SUBMITTED	: WATER FROM DEEPWELL (PANGASINAN)
DATE / TIME OF SAMPLING	: No date(By client)
DATE RECEIVED	: 18 March 2010
DATE ANALYZED	: 19 March – 06 April 2010
DATE REPORTED	: 06 April 2010

ANALYSIS

Parameters	Results	Test Method
Odor	Unobjectionable	APHA-AWWA 2150 Odor
Color, PCU	Less than 5	APHA-AWWA 2120 B. Visual Comparison
Turbidity, NTU	0.8	APHA-AWWA 2130 B. Nephelometry
pH	7.8	APHA-AWWA 4500 H^+ B. Electrometry
Calcium, mg/L*	9	APHA-AWWA 3030 E. Nitric Acid Digestion, 3111 B. Direct Air- Acetylene Flame AAS
Iron, mg/L*	0.07	
Magnesium, mg/L*	5	
Sodium, mg/L*	216	APHA-AWWA 3500 Flame Emission Photometric Method
Chloride, mg/L	153	APHA-AWWA 4500-Cl^- B Argentometry
Silica, mg/L	48	APHA-AWWA 4500-SiO_2 B. Molybdosilicate Method
Sulfate, mg/L	28	APHA-AWWA 4500-SO_4^{2-} E. Turbidimetry
Methyl Orange Alkalinity as $CaCO_3$, mg/L	287	APHA-AWWA 2320 B. Titrimetry
Total Hardness as $CaCO_3$, mg/L	47	APHA-AWWA 2340 C. EDTA Titrimetry
Total Dissolved Solids, mg/L	619	APHA-AWWA 2540 C. Gravimetry

* Subcontracted to F.A.S.T. Laboratories (Calamba).

Ref.: APHA AWWA and WEF, 2005. Standard Methods for the Examination of Water and Wastewater, 21st ed.

Results are those obtained at time of examination and relate only to the sample/s tested.

CERTIFIED BY:

M.K.M.E. JAVIER
Laboratory Chemist
Chem. Reg. No. 10650

APPROVED BY:

C.G.M. SOLIS
OIC – Laboratory Manager
Chem. Reg. No. 08565

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Fig. 10.2 Test Result for Sual Fish Port

FAX NO. 291 38040 Apr. 00 2010 09:06AM P2

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Reference No. CQ1003-1129

Page 1 of 3

CLIENT	: PHILIPPINE FISHERIES DEVELOPMENT AUTHORITY
ADDRESS	: 4th Floor (Planning Department) PCA Building, Diliman, Quezon City
SAMPLE SUBMITTED	: WATER FROM LUCENA
DATE / TIME OF SAMPLING	: 18 March 2010 / 12:00 PM (By client)
DATE RECEIVED	: 18 March 2010
DATE ANALYZED	: 19 March – 06 April 2010
DATE REPORTED	: 06 April 2010

ANALYSIS

Parameters	Results	Test Method
Odor	Unobjectionable	APHA-AWWA 2150 Odor
Color, PCU	40	APHA-AWWA 2120 B. Visual Comparison
Turbidity, NTU	1	APHA-AWWA 2130 B. Nephelometry
pH	8.1	APHA-AWWA 4500 H^+ B. Electrometry
Calcium, mg/L*	8	APHA-AWWA 3030 E. Nitric Acid Digestion, 3111 B. Direct Air- Acetylene Flame AAS
Iron, mg/L*	0.04	
Magnesium, mg/L*	7	
Sodium, mg/L*	372	APHA-AWWA 3500 Flame Emission Photometric Method
Chloride, mg/L	250	APHA-AWWA 4500-Cl^- B. Argentometry
Silica, mg/L	19	APHA-AWWA 4500-SiO_2 B. Molybdosilicate Method
Sulfate, mg/L	197	APHA-AWWA 4500-SO_4^{2-} E. Turbidimetry
Methyl Orange Alkalinity as $CaCO_3$, mg/L	388	APHA-AWWA 2320 B. Titrimetry
Total Hardness as $CaCO_3$, mg/L	41	APHA-AWWA 2340 C. EDTA Titrimetry
Total Dissolved Solids, mg/L	1,177	APHA-AWWA 2540 C. Gravimetry

* Subcontracted to F.A.S.T. Laboratories (Calamba).

Ref.: APHA AWWA and WEF, 2005. Standard Methods for the Examination of Water and Wastewater, 21st ed.

Results are those obtained at time of examination and relate only to the sample/s tested

CERTIFIED BY:

M.K.M.E. JAVIER
Laboratory Chemist
Chem. Reg. No. 10650

APPROVED BY:

C.G.M. SOLIS
OIC – Laboratory Manager
Chem. Reg. No. 08585

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Fig. 10.3 Test Result for Lucena Fish Port

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Reference No. CQ1003-1087

Page 1 of 1

CLIENT : PHILIPPINE FISHERIES DEVELOPMENT AUTHORITY
ADDRESS : 4th Floor (Planning Department) PCA Building, Diliman, Quezon City
SAMPLE SUBMITTED : WATER from well – Camaligan
DATE / TIME OF SAMPLING : 17 March 2010 / No data
DATE RECEIVED : 17 March 2010
DATE ANALYZED : 18 March – 06 April 2010
DATE REPORTED : 06 April 2010

RESULTS OF ANALYSIS

Parameters	Water	Test Method
Odor	Unobjectionable	APHA-AWWA 2150 Odor
Color, PCU	10	APHA-AWWA 2120 B. Visual Comparison
pH	7.6	APHA-AWWA 4500 H+ B. Electrometry
Calcium, mg/L*	11	APHA-AWWA 3030 E. Nitric Acid Digestion, 3111 B. Direct Air- Acetylene Flame AAS
Iron, mg/L*	0.09	
Magnesium, mg/L*	7	
Sodium, mg/L*	128	APHA-AWWA 3500 Flame Emission Photometric Method
Chloride, mg/L	25	APHA-AWWA 4500-Cl- B. Argentometry
Silica, mg/L	96	APHA-AWWA 4500-SiO_2 B. Molybdosilicate Method
Sulfate, mg/L	32	APHA-AWWA 4500-SO_4^{2-} E. Turbidimetry
Methyl Orange Alkalinity as $CaCO_3$, mg/L	258	APHA-AWWA 2320 B. Titrimetry
Total Hardness as $CaCO_3$, mg/L	28	APHA-AWWA 2340 C. EDTA Titrimetry
Total Dissolved Solids, mg/L	424	APHA-AWWA 2540 C. Gravimetry

* Subcontracted to F.A.S.T. Laboratories (Calamba)

Ref.: APHA AWWA and WEF, 2005. Standard Methods for the Examination of Water and Wastewater, 21st ed.

Results are those obtained at time of examination and relate only to the samples tested.

CERTIFIED BY:
M.K.M.E. JAVIER
Laboratory Chemist
Chem. Reg. No. 10650

APPROVED BY:
C.G.M. SOLIS
OIC – Laboratory Manager
Chem. Reg. No. 08585

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Fig. 10.4 Test Result for Camaligan Fish Port-1

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Reference No. CQ1003-1129

Page 3 of 3

CLIENT : PHILIPPINE FISHERIES DEVELOPMENT AUTHORITY
ADDRESS : 4th Floor (Planning Department) PCA Building, Diliman, Quezon City
SAMPLE SUBMITTED : WATER FROM OVERHEAD TANK – CAMALIGAN
DATE / TIME OF SAMPLING : No data (By client)
DATE RECEIVED : 18 March 2010
DATE ANALYZED : 19 March – 06 April 2010
DATE REPORTED : 06 April 2010

ANALYSIS

Parameters	Results	Test Method
Odor	Unobjectionable	APHA-AWWA 2150 Odor
Color, PCU	Less than 5	APHA-AWWA 2120 B. Visual Comparison
Turbidity, NTU	0.7	APHA-AWWA 2130 B. Nephelometry
pH	7.9	APHA-AWWA 4500 H^+ B. Electrometry
Calcium, mg/L*	9	APHA-AWWA 3030 E. Nitric Acid Digestion, 3111 B. Direct Air- Acetylene Flame AAS
Iron, mg/L*	0.05	
Magnesium, mg/L*	7	
Sodium, mg/L*	211	APHA-AWWA 3500 Flame Emission Photometric Method
Chloride, mg/L	151	APHA-AWWA 4500-Cl^- B. Argentometry
Silica, mg/L	46	APHA-AWWA 4500-SiO_2 B. Molybdosilicate Method
Sulfate, mg/L	28	APHA-AWWA 4500-SO_4^{2-} E Turbidimetry
Methyl Orange Alkalinity as $CaCO_3$, mg/L	289	APHA-AWWA 2320 B. Titrimetry
Total Hardness as $CaCO_3$, mg/L	48	APHA-AWWA 2340 C. EDTA Titrimetry
Total Dissolved Solids, mg/L	643	APHA-AWWA 2540 C. Gravimetry

* Subcontracted to F.A.S.T. Laboratories (Calamba).

Ref.: APHA-AWWA and WEF, 2005. Standard Methods for the Examination of Water and Wastewater, 21st ed

Results are those obtained at time of examination and relate only to the sample/s tested.

CERTIFIED BY:
M.K.M.E. JAVIER
Laboratory Chemist
Chem. Reg. No. 10650

APPROVED BY:
C.G.M. SOLIS
OIC – Laboratory Manager
Chem. Reg. No. 08585

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Fig. 10.5 Test Result for Camaligan Fish Port-2

Republic of the Philippines
DAVAO CITY WATER DISTRICT
Madapo Hill, Davao City
Telephone No. (+63)(82) 221-5132
Website: http://www.davao-water.gov.ph

PRODUCTION DEPARTMENT
QUALITY CONTROL DIVISION
PHYSICAL AND CHEMICAL ANALYSIS
DOH - BHFS Accreditation No. 011
Valid Until : December 31, 2009

LABORATORY NO.: 09-01-032

NAME OF COMPANY : Davao Fish Port
ADDRESS : Toril, Daliao, Davao City
CONTACT NO. :
COLLECTED BY : Albert Aguinaldo

DATE/TIME OF COLLECTION : 1/23/2009 7:30
DATE/TIME OF SUBMISSION : 1/23/2009 10:45
DATE OF EXAMINATION : 23-Jan-09

SOURCE OF WATER SUPPLY : Well
SAMPLING POINT : Tap

DRINKING WATER : ____ YES ____ NO
TREATED WATER : x YES ____ NO

PHYSICAL	VALUE	MAXIMUM LEVEL		METHOD OF ANALYSIS
Color (Apparent)		10	CU	Colorimetric (Pt-Co)
Odor	No Objectionable odor	No Objectionable Odor		Sensory Evaluation Technique
CHEMICAL				
Temperature	26.50	-	°C	Electrometric
Acidity (Phenolpthalein)	0.00	-	mg/l	Titration
Alkalinity (Total)	89.46	-	mg/l	Titration
Calcium	9.17	-	mg/l	EDTA Titration
Chloride	6.99	250	mg/l	Argentometric
Hardness, Total	49.38	300 as $CaCO_3$	mg/l	EDTA Titration
Iron	0.00	1.0	mg/l	Colorimetric (Ferrover)
Fluoride		-	mg/l	Colorimetric (SPADNS)
Magnesium	6.46	-	mg/l	EDTA Titration
pH Wide Range	8.27	6.5 - 8.5		Electrometric
pH Wide Range [for Product Water]		5.0 -7.0		Electrometric
Sulfate		250.0	mg/l	Colorimetric (Sulfa Ver IV)
Manganese	0.27	0.4	mg/l	Colorimetric (Periodate Oxidation)
Total Dissolved Solids	79.40	500	mg/l	Electrometric

Remarks: At the time of examination, parameters analyzed were found to be within maximum allowable level.

Examined by:

ARIES GRACE P. AGUDERA
Laboratory Technician

ALMA JUDITH J. CANSON
Sr.Quality Control/Assurance Inspector

Checked by:

EVELYN B. CALONZO
Quality Control/Assurance Chief

Noted by:

HYDIE R. MASPINAS
Manager, Quality Control Division

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Fig. 10.6 Certificate of Water Quality for Davao Fish Port

:UMMARY REPORT ON PHYSICAL AND CHEMIC/ 'ALYSES
FOR YEAR 2009

ATTACHMENT A -

CONSTITUENT I. Priority Parameters	PNSDW Maximum Level (mg/L) or Characteristic	Constituent Level (mg/L) or Characteristic NAME SOURCE/LOCATION					
		San Antonio Spring #1	San Antonio Spring #2	San Antonio Spring #3	Kauntuan Spring	Sian River	Cumawas Spring
Physical 1. Color Apparent True	10 Color Units 5 Color Units	6	4	11	96	26	3
2. Turbidity	5 NTU	0	4	5	12	1	1
Chemical 3. pH	6.5 - 8.5 5.0 - 7.0 for Product water that undergone RO or distillation	7.92	7.38	7.44	7.27	7.12	8.15
4. Nitrate	50						
5. Sulfate	250	10	9	1	1	3	9
6. Chloride	250	84	38	18	92	30	20
7. Total Dissolved Solids	500 < 10 for product water that undergone RO or distillation	169.2	141.8	140.9	171.7	90.6	143.4
8. Iron	1.0	0.09	0.04	0.00	0.19	0.08	0.03
9.Manganese	0.4	0.2	0.1	0.5	0.2	0.2	0.2
10. Arsenic	0.05						
11. Lead	0.01						
12. Cadmium	0.003						
13. Benzene	0.01						
II. Other Parameters Measured Category	Action Taken						
A. Inorganic Chemical Constituents as follows: Antimony, Barium, Boron, Chromium (Total), Cyanide, Flouride, Mercury (Total), Nickel, Nitrite & Selenium	Analysis Done? ☑ No ☐ Yes > complying parameters > non-complying parameters						
B. Organic Chemicals from Industrial Pollution (Please refer to Table 2.10 of PNSDW for the list of parameters)	Analysis Done? ☑ No ☐ Yes > complying parameters > non-complying parameters						

Fig. 10.7 Certificate of Water Quality for Davao Fish Port

Appendix 11. Environmental and Social Consideration Survey

11.1 Environment Performance Report and Management Plan (EPRMP), Initial Environment Examination Report (IEER) and Initial Environment Examination Checklist (IEEC)

JICA CHECKLIST OF ENVIRONMENT IMPACT ASSESSMENT FOR THE PREPARATORY SURVEY (STAGE 2) FOR THE NATIONWIDE FISHPORTS (PACKAGE III)

In compliance with the JICA Environmental and Social Consideration requirements, this summarized checklist was purposely prepared for reference based on the study done on environmental and social environment of the identified Fish Ports.. Details of the study may be referred to in the main text of the report.

A. ENVIRONMENT PERFORMANCE REPORT AND MANAGEMENT PLAN(EPRMP)

The project has informed and consulted the stakeholders of the project and its scope of activities. The results of which was considered in the environment impact assessment of the proposed improvement/ rehabilitation/construction work of the regional and municipal Fish Ports. Except for significant impacts to air quality (GHG emissions) predicted for the expansion/rehabilitation of five existing regional fish ports no significant impacts will occur on the natural environment Positive impacts occur on living and livelihood. Possible impacts on working conditions (occupational safety), as well as during construction due to accidents of which monitoring is done for preventive measures.

N.B. Terms of impact are referred to as: SIGNIFICANT IMPACT = High to medium Negative or Positive ; NO SIGNIFICANT IMPACT = Low and minimal

Table 11.1.1 Environment Performance Report and Management Plan (EPRMP)

1. Permits and approvals, explanations	Sual	Lucena	Camaligan	Iloilo	Davao	Atimonan, Quezon	Concepcion, Iloilo
EIA and environmental permits	Have to get environmental permits	With environ-mental Permit To Operate (26 Jan 2009)	Have to get environmental permits	Have to get environmental permits	With environ-mental ECC(23 Dec 1992)	With environ-mental ECC (28 Oct 2004)	With environ-mental permits (18 Nov 1998)
Explanations to the public* (year of 2010)	Has been done (17-18 March)	Has been done (31 March)	Has been done (14 April)	Has been done (5&15 Mar)	Has been done (8 Mar)	Has been done (29 Mar)	Has been done (6 & 16 Mar)
**Stakeholders consultations*	6 Jan 2010	24 Nov 2009	9 Dec 2009	14 Dec 2009	4 Dec 2009	26 Nov 2009	15 Dec 2009

2. Anti-pollution measures	Sual	Lucena	Camaligan	Iloilo	Davao	Atimonan,	Concepcion, Iloilo
Air quality & Greenhouse Gas Emission potential	SIGNIFICANT IMPACT (-)	SIGNIFICANT IMPACT (-)	SIGNIFICANT IMPACT (-)	SIGNIFICANT IMPACT (-)	SIGNIFICANT IMPACT (-)	NO SIGNIFICANT IMPACT	NO SIGNIFICANT IMPACT
Water quality	SIGNIFICANT IMPACT (-)						
Wastewater	SIGNIFICANT IMPACT (-)						
Soil contamination/Solid Wastes Generation	SIGNIFICANT IMPACT (-)						
Noise and vibration Noise and vibration	NO SIGNIFICANT IMPACT						
Subsidence	NO SIGNIFICANT IMPACT						
Odor	NO SIGNIFICANT IMPACT						
Sediment/Siltation	NO SIGNIFICANT IMPACT	NO SIGNIFICANT IMPACT	NO SIGNIFICANT IMPACT	SIGNIFICANT IMPACT (-)	NO SIGNIFICANT IMPACT	NO SIGNIFICANT IMPACT	NO SIGNIFICANT IMPACT
3. Natural environment							
Protected areas							
• Ecosystem	NO SIGNIFICANT IMPACT						
• Hydrology	NO SIGNIFICANT IMPACT						
• Topography and geology	NO SIGNIFICANT IMPACT						
• Management of abandoned sites	NO SIGNIFICANT IMPACT						
4. Social environment							
• Heritage	NO SIGNIFICANT IMPACT						
• Ethnic minorities	NO SIGNIFICANT IMPACT						
• Landscape	NO SIGNIFICANT IMPACT						
• Living and livelihood	SIGNIFICANT IMPACT (+)						
• Resettlement	NO SIGNIFICANT IMPACT						
Working conditions (including occupational safety)	SIGNIFICANT IMPACT (-)						
5. Other							
Impact during construction	SIGNIFICANT IMPACT (-)						
• Accident prevention measures	SIGNIFICANT IMPACT (-)						
• Monitoring	SIGNIFICANT IMPACT (+)						

B . INITIAL ENVIRONMENT EXAMINATION REPORT (IEER)

All of the sites have been consulted but do not have permits and approvals as they are new sites, except for Bislig which was a never used Ro-Ro Port, and Panabo which is used for the fish cage operation. On Anti-pollution, only water quality will have to be mitigated during construction, the rest of anti-pollution has no significant impact. No significant impacts occur on the natural environment as well as the social except on working conditions. Others such impact as during construction of which accident prevention have to be mitigated through the required quarterly monitoring.

N.B. Terms of impact are referred to as : SIGNIFICANT IMPACT = High to medium Negative or Positive ; NO SIGNIFICANT IMPACT = Low and minimal

Table 11.1.2 Initial Environment Examination Report (IEER)

1. Permits and approvals, explanations	**Bislig, Surigao sur**	**Subic, Zambales**	**Calabanga, Camarines sur**	**Sta. Cruz, Davao Sur**	**Balatan, Camarines sur**	**Panabo, Davao Norte**
EIA and environmental permits	Have to get environmental permits	Have to get environmental permits	Have to get environmental permits	Have to get environmental permits	Have to get environmental permits	Have to get environmental permits
Explanations to the public*	Has been done (8-9 Mar 2010)	Has been done (19/30 Mar 2010)	Has been done (13Apr 2010)	Has been done (9 Apr 2010	Has been done (16Mar & 13Apr 2010)	Has been done (10March 2010)
Stakeholders consultations	**7Dec 2009**	**8 Jan 2010**	**7 Dec 2009**	**3 Dec 2009**	**14 2009 Dec**	**1 Dec 2009**
2. Anti-pollution measures						
Air quality/Greenhouse Gas emission potential	NO SIGNIFICANT IMPACT					
Water quality	SIGNIFICANT IMPACT (-)					
Wastewater	SIGNIFICANT IMPACT (-)					
Soil contamination/Solid waste generation	SIGNIFICANT IMPACT (-)					
Noise and vibration	NO SIGNIFICANT IMPACT					
Subsidence	NO SIGNIFICANT IMPACT					
Odor	NO SIGNIFICANT IMPACT					
Sediment/Siltation	SIGNIFICANT IMPACT (-)	NO SIGNIFICANT IMPACT		SIGNIFICANT IMPACT (-)	SIGNIFICANT IMPACT (-)	NO SIGNIFICANT IMPACT
3. Natural environment						
Protected areas:						
• Ecosystem	NO SIGNIFICANT IMPACT					
• Hydrology	NO SIGNIFICANT IMPACT					
• Topography and geology	NO SIGNIFICANT IMPACT					
• Management of abandoned sites	NO SIGNIFICANT IMPACT					

4. Social environment	
• Heritage	NO SIGNIFICANT IMPACT
• Ethnic minorities	NO SIGNIFICANT IMPACT
Landscape	NO SIGNIFICANT IMPACT
• Living and livelihood	SIGNIFICANT IMPACT (+)
• Resettlement	NO SIGNIFICANT IMPACT
Working conditions (including occupational safety)	SIGNIFICANT IMPACT (-)
5. Other	
Impact during construction	SIGNIFICANT IMPACT (-)
• Accident prevention measures	SIGNIFICANT IMPACT (-)
• Monitoring	SIGNIFICANT IMPACT (+)

C INITIAL ENVIRONMENT EXAMINATION CHECKLIST (IEEC)

All of the sites have been consulted but do not have permits and approvals as they are new sites. On Anti-pollution, only water quality will have to be mitigated during construction, the rest of anti-pollution have no significant impacts. Likewise, no significant impact occurs on the natural environment as well as the social except on working conditions. Others such as impact during construction, accident prevention have to be mitigated through the required quarterly monitoring.

N.B. Terms of impact are referred to as : SIGNIFICANT IMPACT = High to medium Negative or Positive ; NO SIGNIFICANT IMPACT = Low and minimal

Table 11.1.3 Initial Environment Examination Checklist (IEEC)

1. Permits and approvals, explanations	Mati, Davao Oriental	Dagupan, Pangasinan	San Jose de Buenavista, Antique	Dumangas, Iloilo	Calauag, Quezon	Sta. Elena, Camarines Norte	Pasacao, Camarines Sur	Oas, Albay
EIA and environmental permits	Have to get environmental permits	Have to get environmental permits	Have to get environmental permits	Have to get environmental permits	Have to get environmental permits	Have to get environmental permits	Have to get environmental permits	Have to get environmental permits
Explanations to the public	Has been done (9 Mar 2010)	Has been done (5 Mar 2010)	Has been done (7 Apr 2010)	Has been done (16 Mar 2010)	Has been done (29 Mar 2010)	Has been done (4 Dec 2009)	Has been done (11 Dec 2010)	Has been done (17 Dec 2009)
Stakeholders Consultation	7 Dec 2009	5 Jan 2009	17 Dec 2009	16 Dec 2009	2 Dec 2009	4 Dec 2009	11 Dec 2009	17 Dec 2009
2. Anti-pollution measures								
Air quality/ Greenhouse Gas	NO SIGNIFICANT IMPACT							
Water quality	SIGNIFICANT IMPACT(-)							
Wastewater	SIGNIFICANT IMPACT (-)							
Soil contamination/Solid Waste generation	NO SIGNIFICANT IMPACT							
Noise and vibration	NO SIGNIFICANT IMPACT							

Subsidence	NO SIGNIFICANT IMPACT							
Odor	NO SIGNIFICANT IMPACT							
Sediment/Siltation	NO SIGNIFICANT IMPACT		NO SIGNIFICANT IMPACT	NO SIGNIFICANT IMPACT		SIGNIFICANT IMPACT (-)	NO SIGNIFICANT IMPACT	NO SIGNIFICANT IMPACT
3. Natural environment								
Protected areas:								
• Ecosystem	NO SIGNIFICANT IMPACT							
• Hydrology	NO SIGNIFICANT IMPACT							
• Topography and geology	NO SIGNIFICANT IMPACT							
• Management of abandoned sites	NO SIGNIFICANT IMPACT							
4. Social environment								
• Heritage	NO SIGNIFICANT IMPACT							
• Ethnic minorities	NO SIGNIFICANT IMPACT							
• Landscape	NO SIGNIFICANT IMPACT							
• Living and livelihood	SIGNIFICANT IMPACT (+)							
• Resettlement	NO SIGNIFICANT IMPACT							
Working conditions (including occupational safety	SIGNIFICANT IMPACT (-)							
5. Other								
Impact during construction	SIGNIFICANT IMPACT (-)							
• Accident prevention measures	SIGNIFICANT IMPACT (-)							
• Monitoring	SIGNIFICANT IMPACT (+)							

11.2 Brief Summary of Project Impacts and EMP – Carbon Emissions

Summarily, the impacts of the fishing ports in terms of additional annual carbon emissions are presented below. The estimation of carbon footprint is based on carbon emission factor (CEF) established by IPCC in the *2006 IPCC Guidelines for NGGI, Vol 2: Energy*. Used for this study is the average of the CEF for Crude oil (20,361kg/GWh) and sub-bituminous coal (26,694 kg/GWh)-the main fuel used in fossil-fuel generating plants in the country. This average is 23.53 ton CO2/GWh generated energy.

Conservatively, the efficiency of transmission by TRANSCO is 95%. Based on Energy Regulatory Board (ERB) caps on distribution losses, distribution efficiency is 90.5% for MERALCO (losses</=9.5%) and 85.5% for Electric Cooperatives (losses </= 14.5%). Since FPP3 ports are supplied mainly by electric cooperatives, only Electric Cooperatives' distribution efficiency and TRANSCO's transmission efficiency were considered. Thus, overall efficiency is 81.23% (total losses = 18.77%).

Table 11.2.1 Estimation of Potential Impact on Greenhouse Gas Emission

Port Project	Impact and EMP
SUAL FPC	**Impac**t largely due to increase in electricity demand; 1.1GWH consumed annually equivalent to 32 tons CO2 emission; **EMP**: energy conservation measures; close & regular checks on motor usage and efficiency; install approved energy-saving devices; daylight savings during summer
Dagupan MFP	No significant CO2 footprint
Subic MFP	No significant CO2 footprint
LUCENA FPC	**Impact** mainly due to increase in electricity demand by 0.2GWh annually. This is equivalent to 5.58 tons CO2 emission; **EMP**: energy conservation incl. Replacement of incandescent bulbs to CFL lamps as well as LED lamps where possible; close and regular checks on motors and usage; install approved energy-saving devices; daylight savings during summer months
Atimonan MFP	No significant CO2 footprint
Calauag MFP	No significant CO2 footprint
CAMALIGAN FPC	**Impact** mainly due to increase in electricity demand by 1.21GWh annually. This is equivalent to 35.10 tons CO2 emission; **EMP**: energy conservation incl. Replacement of incandescent bulbs to CFL lamps as well as LED lamps where possible; close and regular checks on motors and usage; install approved energy-saving devices; daylight savings during summer months
Sta Elena MFP	No significant CO2 footprint
Calabanga MFP	No significant CO2 footprint
Pasacao MFP	No significant CO2 footprint
Balatan MFP	No significant CO2 footprint
Oas MFP	No significant CO2 footprint
ILOILO FPC	**Impact** mainly due to increase in electricity demand by 3.68 GWh annually which is equivalent to 106.74 tons CO2 emission; **EMP**: energy conservation incl. replacement of incandescent bulbs to CFL lamps as well as LED lamps where possible; close and regular checks on motors and usage; install approved energy-saving devices; daylight savings during summer months
Concepcion MFP	No significant CO2 footprint
Dumangas MFP	No significant CO2 footprint
San Jose MFP	No significant CO2 footprint
DAVAO FPC	Impact mainly due to increase in electricity demand by 0.34 GWh annually which is equivalent to 9.74 tons CO2 emission; **EMP**: energy conservation incl. Replacement of incandescent bulbs to CFL lamps as well as LED lamps where possible; close and regular checks on motors and usage; install approved energy-saving devices; daylight savings during summer months
BISLIG FPC	Impact mainly due to electricity demand by 1.702 GWh annually which is equivalent to 49.32 tons CO2 emission; **EMP**: energy conservation incl. Replacement of incandescent bulbs to CFL lamps as well as LED lamps where possible; close and regular checks on motors and usage; install approved energy-saving devices; daylight savings during summer months
Mati MFP	No significant CO2 footprint
Panabo MFP	No significant CO2 footprint
Sta Cruz MFP	No significant CO2 footprint

11.3 Vulnerability to Climate and Geophysical Disasters

Table 11.3.1 Vulnerability to Climate and Geophysical Disasters

Fish Port	Vulnerability to Climate and Geophysical Disasters					
	ASLR [1 *]	Tsunami [2]	Earthquake [2]	Typhoons [2]	Volcanic Eruption [2]	El Niño [2]
Sual FPC		High	High	Very High	No Risk	Low
Subic MFP		High	High	Very High	No Risk	Low
Dagupan MFP	3-5 m Elev.	High	High	Very High	No Risk	Low
Lucena FPC		Medium	Low	High	Medium	Low
Atimonan MFP		Medium	Low	High	Medium	Low
Calauag MFP	3-5m elev.	Medium	Low	High	Medium	Low
Camaligan FPC	3-5m elev.	Medium	Low	High	Medium	Low
Sta Elena MFP		Medium	Low	High	No Risk	Low
Calabanga MFP	3-5m elev	Medium	Low	High	Medium	Low
Pasacao MFP		Medium	Low	High	Medium	Low
Balatan MFP		Medium	Low	High	Medium	Low
Oas MFP		High	Low	Very High	High	Low
Iloilo FPC	3-5m elev.	Medium	Low	Low	No Risk	Medium
Concepcion MFP	3-5m elev	Medium	Low	Low	No Risk	Medium
Dumangas MFP	3-5m elev	Medium	Low	Low	No Risk	Medium
San Jose Buenavista MFP		Medium	Low	Low	No Risk	Medium
Davao FPC		Low	Medium	Very Low	Low	Very High
Bislig FPC		Medium	High	Very Low	No risk	High
Mati MFP		Low	High	Very Low	No risk	High
Panabo MFP		Low	Medium	Very Low	Medium	High
Sta Cruz MFP		Low	Medium	Very Low	Low	Very High

Sources: [1]Mapping Philippine Vulnerability to Environmental Disasters,DENR-Mla Observatory; [2] National Mapping and Resource Information Agency

** Accelerated Sea Level Rise - indicated depth of seawater level rise that will adversely affect the vicinity of the port site*

11.4 Examination Items of EPRMP, IEER and IEEC

11.4.1 EPRMP Outline (maximum of about 150 pages)

Project Fact Sheet
Table of Contents
Executive Summary 1) Brief Project Description, 2) Brief Summary of Project's EIA Process, 3) Brief description of the existing project vis-à-vis the proposed expansion or changes, 4) Summary on the EIA Findings on the Key Significant Impacts of the Project and corresponding EMP highlights, 5) Summary of the Environmental Monitoring Plan on the most significant impacts and key measures

DRAFT MAIN EPRMP

1.0 DESCRIPTION OF THE PROJECT'S EIA PROCESS
2.0 BASIC PROJECT INFORMATION
- 2.1 Terms of Reference of the EIA Study
- 2.2 EIA Team (Proponent & Preparer Team members, module of involvement, expertise)
- 2.3 EIA Study Schedule
- 2.4 EIA Study Area (project area up to extent of coverage of study)
- 2.5 EIA Methodology (per module)
- 2.6 EIA Public Participation (if any)

3.0 PROJECT DESCRIPTION
- 3.1 Basic Project Background and Information
- 3.2 Project Rationale
- 3.3 Complete project location (barangay, municipality, province, etc) with geographic coordinates
- 3.4 Project Site Considerations
- 3.5 Description of Project Phases & Activities
- 3.6 Resource & Utility Requirements, Manpower, Cost
- 3.7 Waste Generation & Built-in Management Measures
- 3.8 Summary of Comparison of the new and old projects

4.0 BASELINE ENVIRONMENTAL CONDITIONS FOR CRITICAL ENVIRONMENTAL PARAMETERS, IMPACT ASSESSMENT & MITIGATION (limit to relevant modules)
- 4.1 The Land
- 4.2 The Water
- 4.3 The Air
- 4.4 The People

5.0 ENVIRONMENTAL PERFORMANCE BASED ON THE ORIGINAL ECC-COVERED ENVIRONMENTAL MANAGEMENT PLAN
- 5.1 Impact(s) Mitigation Plan (IMP)
- 5.2 Environmental Monitoring Plan (EMoP) and other Monitoring Modes
- 5.3 Information, Education and Communication (IEC) and Social Development Program (SDP) or Community Assistance Program (CAP)
- 5.4 Environmental Risk Management and Emergency Response Programs (ERP)
- 5.5 Abandonment/Rehabilitation Programs
- 5.6 Institutional Set-up
- 5.7 Achievements/Awards and Outstanding Accomplishments on the Environment

6.0 ENVIRONMENTAL RISK ASSESSMENT
7.0 ENVIRONMENTAL RISK CATEGORIZATION (PEMAPS)
8.0 ENVIRONMENTAL MANAGEMENT PLAN (EMP) FOR CURRENT PROJECT & PROPOSED MODIFICATION/ EXPANSION – including EMF and EGF

9.0 BIBLIOGRAPHY
10.0 ANNEXES
- 10.1 Commitments or Agreements
- 10.2 Accountability Statements of Preparers & Proponent
- 10.3 Photographs or plates of the project site, impact areas an affected areas and communities
- 10.4 Environmental Data

11.4.2 IEER Outline

Project Fact Sheet

1. Brief Project Description
2. Brief Summary of Project's IEE Process
3. Summary of Baseline Characterization
4. Summary of Impact Assessment and Environmental Management Plan
5. Summary of Environmental Monitoring Plan

DRAFT MAIN IEER

- 1.0 BASIC PROJECT INFORMATION
- 2.0 DESCRIPTION OF THE PROJECT'S IEE PROCESS
- 3.0 Terms of Reference of the IEE Study (if scoping was done with EMB)
  - 3.1 IEE Team
  - 3.2 IEE Study Schedule
  - 3.3 IEE Study Area
  - 3.4 IEE Methodology
- 4.0 PROJECT DESCRIPTION
  - 4.1 Project Location, Area, ECA category (if applicable)
  - 4.2 Project Rationale
  - 4.3 Project Development Plan, Process/Technology and Project Components
  - 4.4 Description of Project Phases (Activities/Environmental Aspects, Associated Wastes and Built-in Pollution Control Measures)
    - 4.4.1 Pre-construction/ Pre-operational phase
    - 4.4.2 Construction/Development phase
    - 4.4.3 Operational phase
    - 4.4.4 Abandonment phase
  - 4.5 Manpower Requirements
  - 4.6 Project Cost
  - 4.7 Project Duration and Schedule

11.4.3 IEE Checklist

- 1.0 General Information
- 2.0 Project Description
- 3.0 Description of Existing Environment
- 4.0 Predicted and Assessed Impacts and Proposed
- 5.0 Enhancement/Mitigation Measures
- 6.0 Photographs of Project Site
- 7.0 Environmental Management Plan

Environmental Monitoring Plan
8.0 Abandonment Plan
9.0 Proponent's Commitments-Accountability Statement
10.0 Annexes
10.1 Memorandum Circular Number 4, series of 1998
10.2 Memorandum Circular Number 3, series of 2001
10.3 Documents Showing Ownership
10.4 Definition of Terms Used in the IEE Checklist
10.5 Clean Water Act of 2004 (Republic Act No. 9275)
10.6 RA 9003 Ecological solid Waste Management Act
10.7 Clean Air Act No. 8749, "The Philippine Clean Air of 1999".
10.8 Checklist Form for Required Information

Appendix 12. Economic and Financial Analysis Data

Table 12.1.1 Summary of Current Regional Fish Port Fees and Charges (Port Fees and Charges Relevant to the Financial Analysis)

Item	Unit	Iloilo Fish Port Complex (IFPC)[a]	Sual Fish Port Complex (SFPC)[b]	Lucena Fish Port Complex (LFPC)[c]	Camaligan Fish Port Complex (CFPC)[d]	Davao Fish Port Complex (DFPC)[e]
A. Permits and Licenses						
1. Port Entry Fee						
Domestic vessel	PhP/GT	1.25	1.50			
For DFPC (for vessels up to 100 GT)	PhP/GT					0.50
For DFPC (for vessels over 100 GT)	PhP/GT					1.00
Foreign vessel						
For IFPC	$/GT	$0.15				
For SFPC			$1.00			
For LFPC	PhP/GT/day			0.655		
For DFPC						
< GT	PhP/day					$23.00
50 to <75 GT	PhP/day					$24.00
> 75 GT	PhP/day					$25.00
100 GT abd above	PhP/day					$26.00
2. Berthing Fee						
Domestic vessel						
Below 3 GT (municipal fishing boat)	PhP/day		5.00	10.00	10.00	
1-5 GT	PhP/day					10.00
1-10 GT	PhP/day	50.00				
3.01-10 GT	PhP/day		21.00	25.00		
10-30 GT	PhP/day		62.00			
1-50 GT	PhP/day				10.00	
6-50 GT	PhP/day					35.00
10.01-50 GT	PhP/day			35.00		
11-100 GT	PhP/day	70.00				
above 50 GT	PhP/day				10.00 + 1.00/GT in excess of 50GT	
50.01-100 GT	PhP/day			48.00		
50-100 GT	PhP/GT/day					0.80
Above 30 GT	PhP/GT/day		2.50			
Above 100 GT	PhP/GT/day	0.80		55.00		1.50
Cargo vessel	PhP/GT/day		1.00			
Foreign vessel	PhP/GT/day	$ 0.10	$ 0.50			
3. Vessel Repair Fee						
Below 3 GT				11.00		
1-5 GT	PhP/day					10.00
1-10 GT	PhP/day	35.00				
3.01-10 GT	PhP/day			27.50		
6-50 GT	PhP/day					35.00
10.1-100 GT	PhP/day			36.50		
11-100 GT	PhP/day	50.00				
50-100 GT	PhP/GT/day					0.80
Above 100 GT	PhP/GT/day	0.65				1.00
100.01-200 GT	PhP/day			47.30		
200.01-300 GT	PhP/day			71.50		
300.01-400 GT	PhP/day			88.00		
400.01-500 GT	PhP/day			101.20		
500.01-1,000 GT	PhP/day			143.50		
Above 1,000 GT	PhP/day			198.00		
4. Fuel Conveyance Fee	PhP/liter	1% of landed cost	0.20	0.10		
For DFPC (for local vessels)	PhP/liter					0.18
For DFPC (for foreign vessels)	PhP/liter					0.22
5. Ice Conveyance Fee	PhP/block	3.00	16.00	5.00	5.00	
For DFPC (for local vessels)	PhP/block					5.00
For DFPC (for foreign vessels)	PhP/block					8.00
6. Water Coveyance Fee						
For IFPC	PhP/MT	10.00		13.00		
For SFPC	PhP/cu m		0.625			
For DFPC	PhP/cu m					12.00

[a] Iloilo Fish Port Complex Service Rates, effective February 1, 2010, obtained from Iloilo Fish Port Complex.

[b] Sual Fish Port Complex Service Rates, as of May 2009, obtained from Sual Fish Port Complex.

[c] Lucena Fish Port Complex Service Rates, as of 2009, obtained from Lucena Fish Port Complex.

[d] Camaligan Fish Port Complex Service Rates, as of March 2010, obtained from Camaligan Fish Port Complex.

[e] Davao Fish Port Complex Service Rates, as of 2008, obtained from Davao Fish Port Complex.

(continued…)

Table 12.1.1 Summary of Current Regional Fish Port Fees and Charges (continuation) (Port Fees and Charges Relevant to the Financial Analysis)

Item	Unit	Iloilo Fish Port Complex (IFPC)[a]	Sual Fish Port Complex (SFPC)[b]	Lucena Fish Port Complex (LFPC)[c]	Camaligan Fish Port Complex (CFPC)[d]	Davao Fish Port Complex (DFPC)[e]
B. Service Income						
1. Entrance Fee		per day	per entry	per day		
Pedicab	PhP/day (or entry)	2.00				1.00
Tricycle	PhP/day (or entry)	4.00	0.91		1.00	2.00
4-wheeler vehicle	PhP/day (or entry)	5.00	6.25	3.00	2.00	5.00
6-wheeler vehicle	PhP/day (or entry)	10.00	13.40	5.00	5.00	10.00
10-wheeler vehicle	PhP/day (or entry)	20.00	20.00	15.00		15.00
40-footer van	PhP/day (or entry)					25.00
2. Parking Fee						
4-wheeler vehicle	PhP/day	5.00	10.00	30.00		
6-wheeler vehicle	PhP/day	10.00	15.00	30.00		
10-wheeler vehicle	PhP/day	20.00	70.00	30.00		
For DPFC						
Refrigerated vans, boom trucks	PhP/vehicle/day					60.00
Insulated vans, fish cars	PhP/vehicle/day					50.00
Non-cargo vehicles	PhP/vehicle/day (day time)					5.00
Non-cargo vehicles	PhP/vehicle/day (night time)					10.00
3. Unloading Fee						
For IFPC	PhP/tub of 40 kg	4.50				
For LFPC	PhP/styropore			4.00		
For DPFC						
Local Vessels	PhP/kg					0.10
Foreign Vessels	PhP/kg					0.35-0.50
Overalnd (processing, trading)	PhP/kg					0.35-0.50
4. Transhipment Fee						
For IFPC	PhP/tub of 40 kg	4.50				
For SFPC	PhP/tub of 35 kg		2.80			
For LFPC	PhP/styropore			4.00		
For CFPC	PhP/tub				1.00	
For DFPC	PhP/kg					0.50
5. Port Utility Usage						
For SFPC						
Power (direct tapping)	PhP/hr		60.00			
Power (metered)	PhP/kwh		60.00		1.00	
Water	PhP/cum		30.00		38.00	
For DFPC						
Power						1.00 above existing rate
Water (use of vessels)	PhP/cum					26.00
Water (used in processing)	PhP/cum					26.00
Polar Bear (self drawn)	PhP/cum					16.00
6. Wastewater treatment fee	PhP/cum of discharge					10.00
C. Business Income						
1. Buyer/Seller Fee						
For IFPC	PhP/tub of 40 kg	4.50				
For DFPC	PhP/kg					0.45
2. Sale of Ice	PhP/block	83.00		77.00	90.00	45.00
3. Cold Storage						
Cold Storage (for IFPC)	PhP/sqm/month	2,394.71				
15^0 C Cold Storage (for LFPC)	PhP/kg/day			0.25		
35^0 C Cold Storage (for LFPC)	PhP/sqm/month			2,484.62		
15-20 ton capacity - 2 rooms (for CFPC)	PhP/room/month				35,000.00	
30 ton capcity - 1 room (for CFPC)	PhP/month				70,000.00	
Cold Storage Facility (for DFPC) 6mx4mx3m	PhP/cubicle					32,700.00
4. Frozen Storage	PhP/sqm/month					
5. Refrigeration Building (for SPFC) average[f]	PhP/sqm/month		28.11			
6. Market Stalls	PhP/bay/month	6,000.00		8,228.00		
For SPCF	PhP/stall/month		3,000.00			
For CPFC (rent of market hall space) 50 sqm per bay	PhP/bay/month				2,662.00	
For DPFC (rent of market hall space)	PhP/sqm/month					257.33
For DPFC (banera warehouse space)	PhP/sqm/month					159.72
7. Processing Space						
For CFPC	PhP/sqm/month				50.00	
For DPFC (in refrigeration building)	PhP/sqm/month					257.33
For DPFC (in new processing building)	PhP/sqm/month					175.69
8. Commercial Space (Office Space - for IFPC)	PhP/sqm/month	114.95				
9. Slipway Rental						
For SPCF[g]	PhP/sqm/month		21.91			
For LPCF	PhP/sqm/month			20.00		
10. Raw Land Rent (commercial)	PhP/sqm/month	33.275	25.00	70.00 ave.		

[a] Iloilo Fish Port Complex Service Rates, effective February 1, 2010, obtained from Iloilo Fish Port Complex.

[b] Sual Fish Port Complex Service Rates, as of May 2009, obtained from Sual Fish Port Complex.

[c] Lucena Fish Port Complex Service Rates, as of 2009, obtained from Lucena Fish Port Complex.

[d] Camaligan Fish Port Complex Service Rates, as of March 2010, obtained from Camaligan Fish Port Complex.

[e] Davao Fish Port Complex Service Rates, as of 2008, obtained from Davao Fish Port Complex.

[f] SPFC currently rents out a 2,400 sqm refrigeration building at P56,000/month for 4 months and for P73,205/month for 8 months which includes an adjustment of 30%.

[g] SPFC currently rents out a 684 sqm slipway facility at P15.73/month/sqm for 4 months and for P25/sqm/month for 8 months which includes an adjustment of 60%.

Table 12.1.2 Summary of Current and Proposed Refrigeration Charges of Regional Fish Ports

Item	Unit	Bislig Fish Port Complex		Calamigan Fish Port Complex		Davao Fish Port Complex	
		Current[a]	Proposed	Current	Proposed	Current	Proposed
Contact Freezer (1 MT/4 hrs)	PhP/cycle	2,120.00		3,850.00		3,850.00	
Blast Freezer (500kg/6 hrs)	PhP/cycle	11,200.00			5,552.74		
Brine Tank Freezer (2 MT/8hrs)	PhP/cycle	3,808.00					
Cold Storage (-20° C for fish)	PhP/sqm/month	1,792.00		1,800.00		1,750.00	
Cold Storage (-20° C for meat)	PhP/sqm/month			1,800.00	2,125.86		
Chilled Storage (-5° C)	PhP/sqm/month						
Smoking Chamber (200 kg)	PhP/cycle						
Vacuum Packing Machine	PhP/day						
Space Rental	PhP/sqm/month			50.00	50.00	49.37	
HACCP Fish Processing Facility	PhP/unit				557,583.33		278,791.67
plus Electricity	PhP/month				141,053.10		72,958.50
plus Water	PhP/month				29,108.00		10,816.00
plus Maintenance	PhP/month				73,429.17		73,429.17
Item	**Unit**	**Iloilo Fish Port Complex**		**Lucena Fish Port Complex**		**Sual Fish Port Complex**	
		Current	Proposed	Current	Proposed	Current	Proposed
Contact Freezer (1 MT/4 hrs)	PhP/cycle	5,600.00	5,600.00	5,600.00		5,600.00	
Blast Freezer (500kg/6 hrs)	PhP/cycle		5,443.44		4,080.31		4,080.31
Brine Tank Freezer (2 MT/8hrs)	PhP/cycle						
Cold Storage (-20° C for fish)	PhP/sqm/month	2,394.71	2,394.71		2,069.73	1,710.50	1,742.27
Cold Storage (-20° C for meat)	PhP/sqm/month	2,394.71	2,394.71				
Chilled Storage (-5° C)	PhP/sqm/month			1,710.50	1,710.50		
Smoking Chamber (200 kg)	PhP/cycle		2,289.18				2,213.04
Vacuum Packing Machine	PhP/day		291.09		265.91		268.76
Space Rental	PhP/sqm/month	141.61	141.61	114.95	114.95	114.95	11,495.00
HACCP Fish Processing Facility	PhP/unit		278,791.67				418,187.50
plus Electricity	PhP/month		158,994.03				158,396.37
plus Water	PhP/month		29,510.58				8,880.00
plus Maintenance	PhP/month		73,429.17				73,429.17

[a] Based on existing rates at the General Santos Fish Port Complex.

Table 12.2.1 Projected Incremental Profit and Loss Statement - Bislig Fish Port Complex

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
A. Incremental Revenue																											
Permits and Licenses	11,866,900	12,558,846	13,159,604	13,193,621	13,227,724	13,261,911	13,296,184	13,330,543	13,364,988	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519	13,399,519
Service Income	285,571	285,947	286,325	286,703	287,082	287,462	287,843	288,225	288,608	288,992	288,992	288,992	288,992	288,992	288,992	288,992	288,992	288,992	288,992	288,992	288,992	288,992	288,992	288,992	288,992	288,992	288,992
Business Income	38,474,932	48,245,667	54,380,811	58,267,736	62,671,621	67,661,223	100,475,632	106,880,729	114,137,704	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857	122,359,857
Subtotal Incremental Revenue	50,627,403	61,090,460	67,826,740	71,748,060	76,186,426	81,210,596	114,059,659	120,499,497	127,791,300	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368
B. Incremental Expenses																											
1. Cash Operating Expenses																											
(i) Variable Expenses																											
Electricity	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Water	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000
Subtotal Variable Expenses	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000
(ii) Fixed Expenses																											
Interest	10,977,321	10,977,766	10,988,196	10,548,668	10,109,140	9,669,612	9,230,085	8,790,557	8,351,029	7,911,501	7,471,973	7,032,445	6,592,918	6,153,390	5,713,862	5,274,334	4,834,806	4,395,278	3,955,751	3,516,223	3,076,695	2,637,167	2,197,639	1,758,111	1,318,584	879,056	439,528
Maintenance	6,012,273	6,012,273	6,012,273	6,012,273	6,012,273	9,531,410	9,531,410	9,531,410	9,531,410	9,531,410	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572	13,671,572
Personnel	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000	2,160,000
Subtotal Fixed Expenses	19,149,594	19,150,039	19,160,469	18,720,941	18,281,413	21,361,023	20,921,495	20,481,967	20,042,439	19,602,912	23,303,546	22,864,018	22,424,490	21,984,962	21,545,434	21,105,906	20,666,379	20,226,851	19,787,323	19,347,795	18,908,267	18,468,739	18,029,212	17,589,684	17,150,156	16,710,628	16,271,100
Subtotal Cash Operating Expenses	23,819,594	23,820,039	23,830,469	23,390,941	22,951,413	26,031,023	25,591,495	25,151,967	24,712,439	24,272,912	27,973,546	27,534,018	27,094,490	26,654,962	26,215,434	25,775,906	25,336,379	24,896,851	24,457,323	24,017,795	23,578,267	23,138,739	22,699,212	22,259,684	21,820,156	21,380,628	20,941,100
(iii) Non-cash Expenses																											
Depreciation (New Assets)	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055
Total Non-cash Expenses	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055	32,904,055
Total Incremental Expenses	56,723,649	56,724,094	56,734,524	56,294,996	55,855,468	58,935,078	58,495,550	58,056,022	57,616,495	57,176,967	60,877,601	60,438,073	59,998,545	59,559,017	59,119,490	58,679,962	58,240,434	57,800,906	57,361,378	56,921,850	56,482,323	56,042,795	55,603,267	55,163,739	54,724,211	54,284,683	53,845,156
Net Incremental Income (Loss) From Operations	(6,096,246)	4,366,366	11,092,216	15,453,063	20,330,958	22,275,518	55,564,109	62,443,475	70,174,806	78,871,401	75,170,767	75,610,295	76,049,822	76,489,350	76,928,878	77,368,406	77,807,934	78,247,462	78,686,989	79,126,517	79,566,045	80,005,573	80,445,101	80,884,629	81,324,157	81,763,684	82,203,212
Net Incremental Income Before Tax	(6,096,246)	4,366,366	11,092,216	15,453,063	20,330,958	22,275,518	55,564,109	62,443,475	70,174,806	78,871,401	75,170,767	75,610,295	76,049,822	76,489,350	76,928,878	77,368,406	77,807,934	78,247,462	78,686,989	79,126,517	79,566,045	80,005,573	80,445,101	80,884,629	81,324,157	81,763,684	82,203,212
Income Tax[a]	-	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax Expense	-	1,528,228	3,882,275	5,408,572	7,115,835	7,796,431	19,447,438	21,855,216	24,561,182	27,604,990	26,309,768	26,463,603	26,617,438	26,771,273	26,925,107	27,078,942	27,232,777	27,386,612	27,540,446	27,694,281	27,848,116	28,001,951	28,155,785	28,309,620	28,463,455	28,617,290	28,771,124
Net Incremental Profit After Tax	-	2,838,138	7,209,940	10,044,491	13,215,123	14,479,087	36,116,671	40,588,259	45,613,624	51,266,411	48,860,998	49,146,691	49,432,385	49,718,078	50,003,771	50,289,464	50,575,157	50,860,850	51,146,543	51,432,236	51,717,929	52,003,622	52,289,316	52,575,009	52,860,702	53,146,395	53,432,088
Efficiency Ratio:																											
1) Operating ratio[b]	1.12	0.93	0.84	0.78	0.73	0.73	0.51	0.48	0.45	0.42	0.45	0.44	0.44	0.44	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.41	0.41	0.41	0.40	0.40	0.40
2) Break-even point in PhP[c]	23,819,594	23,820,039	23,830,469	23,390,941	22,951,413	26,031,023	25,591,495	25,151,967	24,712,439	24,272,912	27,973,546	27,534,018	27,094,490	26,654,962	26,215,434	25,775,906	25,336,379	24,896,851	24,457,323	24,017,795	23,578,267	23,138,739	22,699,212	22,259,684	21,820,156	21,380,628	20,941,100
Benefit:Cost Ratio:	0.89	1.08	1.20	1.27	1.36	1.38	1.95	2.08	2.22	2.38	2.23	2.25	2.27	2.28	2.30	2.32	2.34	2.35	2.37	2.39	2.41	2.43	2.45	2.47	2.49	2.51	2.53
Income Ratios:																											
1) Return on sales[d]	0%	5%	11%	14%	17%	18%	32%	34%	36%	38%	36%	36%	36%	37%	37%	37%	37%	37%	38%	38%	38%	38%	38%	39%	39%	39%	39%

[a] Income tax assumed at 35% of net profit after cost of operation.
[b] Operating ratio = Cost of operation ÷ Total revenue
[c] Breakeven point (PhP) = Total fixed expenses + (Total revenue x (total variable expenses ÷ Total revenue))
[d] Return on sales = Net profit after tax and debt service ÷ Total revenue

Table 12.2.2 Projected Incremental Profit and Loss Statement - Camaligan Fish Port Complex

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
A. Incremental Revenue																											
Permits and Licenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Service Income	2,410,100	2,446,466	2,473,616	2,501,038	2,528,734	2,556,707	2,584,959	2,613,494	2,642,315	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424	2,671,424
Business Income	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837	45,207,837
Subtotal Incremental Revenue	47,617,938	47,654,303	47,681,453	47,708,875	47,736,571	47,764,544	47,792,797	47,821,332	47,850,152	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261
B. Incremental Expenses																											
1. Cash Operating Expenses																											
(i) Variable Expenses																											
Raw Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electricity	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664	3,071,664
Water	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
Transportation	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000
Miscellaneous	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Subtotal Variable Expenses	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664	4,781,664
(ii) Fixed Expenses																											
Interest	2,953,910	4,216,512	4,047,852	3,879,191	3,710,531	3,541,870	3,373,210	3,204,549	3,035,889	2,867,228	2,698,568	2,529,907	2,361,247	2,192,586	2,023,926	1,855,265	1,686,605	1,517,944	1,349,284	1,180,623	1,011,963	843,302	674,642	505,981	337,321	168,660	-
Maintenance	2,278,355	2,278,355	2,278,355	2,278,355	2,278,355	3,296,748	3,296,748	3,296,748	3,296,748	3,296,748	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141	4,315,141
Personnel	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000
Subtotal Fixed Expenses	8,112,265	9,374,868	9,206,207	9,037,547	8,868,886	9,718,619	9,549,958	9,381,298	9,212,637	9,043,977	9,893,709	9,725,049	9,556,388	9,387,728	9,219,067	9,050,407	8,881,746	8,713,086	8,544,425	8,375,765	8,207,104	8,038,444	7,869,783	7,701,123	7,532,462	7,363,802	7,195,141
Subtotal Cash Operating Expenses	12,893,930	14,156,532	13,987,871	13,819,211	13,650,550	14,500,283	14,331,622	14,162,962	13,994,301	13,825,641	14,675,373	14,506,713	14,338,052	14,169,392	14,000,731	13,832,071	13,663,410	13,494,750	13,326,089	13,157,429	12,988,768	12,820,108	12,651,447	12,482,787	12,314,126	12,145,466	11,976,805
(iii) Non-cash Expenses																											
Depreciation (New Assets)	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026
Total Non-cash Expenses	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026	13,085,026
Total Incremental Expenses	25,978,955	27,241,558	27,072,897	26,904,237	26,735,576	27,585,309	27,416,648	27,247,988	27,079,327	26,910,667	27,760,399	27,591,739	27,423,078	27,254,418	27,085,757	26,917,097	26,748,436	26,579,776	26,411,115	26,242,455	26,073,794	25,905,134	25,736,473	25,567,813	25,399,152	25,230,492	25,061,831
Net Incremental Income (Loss) From Operations	21,638,982	20,412,745	20,608,556	20,804,638	21,000,995	20,179,235	20,376,148	20,573,344	20,770,825	20,968,594	20,118,862	20,287,522	20,456,183	20,624,843	20,793,504	20,962,164	21,130,825	21,299,485	21,468,146	21,636,806	21,805,467	21,974,127	22,142,788	22,311,448	22,480,109	22,648,769	22,817,430
Net Incremental Income Before Tax	21,638,982	20,412,745	20,608,556	20,804,638	21,000,995	20,179,235	20,376,148	20,573,344	20,770,825	20,968,594	20,118,862	20,287,522	20,456,183	20,624,843	20,793,504	20,962,164	21,130,825	21,299,485	21,468,146	21,636,806	21,805,467	21,974,127	22,142,788	22,311,448	22,480,109	22,648,769	22,817,430
Income Tax[a]	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax Expense	7,573,644	7,144,461	7,212,995	7,281,623	7,350,348	7,062,732	7,131,652	7,200,670	7,269,789	7,339,008	7,041,602	7,100,633	7,159,664	7,218,695	7,277,726	7,336,758	7,395,789	7,454,820	7,513,851	7,572,882	7,631,913	7,690,945	7,749,976	7,809,007	7,868,038	7,927,069	7,986,100
Net Incremental Profit After Tax	14,065,338	13,268,284	13,395,561	13,523,015	13,650,647	13,116,503	13,244,496	13,372,674	13,501,036	13,629,586	13,077,260	13,186,890	13,296,519	13,406,148	13,515,778	13,625,407	13,735,036	13,844,665	13,954,295	14,063,924	14,173,553	14,283,183	14,392,812	14,502,441	14,612,071	14,721,700	14,831,329
Efficiency Ratio:																											
1) Operating ratio[b]	0.55	0.57	0.57	0.56	0.56	0.58	0.57	0.57	0.57	0.56	0.58	0.58	0.57	0.57	0.57	0.56	0.56	0.56	0.55	0.55	0.54	0.54	0.54	0.53	0.53	0.53	0.52
2) Break-even point in PhP[c]	12,893,930	14,156,532	13,987,871	13,819,211	13,650,550	14,500,283	14,331,622	14,162,962	13,994,301	13,825,641	14,675,373	14,506,713	14,338,052	14,169,392	14,000,731	13,832,071	13,663,410	13,494,750	13,326,089	13,157,429	12,988,768	12,820,108	12,651,447	12,482,787	12,314,126	12,145,466	11,976,805
Benefit:Cost Ratio:	1.83	1.75	1.76	1.77	1.79	1.73	1.74	1.76	1.77	1.78	1.72	1.74	1.75	1.76	1.77	1.78	1.79	1.80	1.81	1.82	1.84	1.85	1.86	1.87	1.89	1.90	1.91
Income Ratios:																											
1) Return on sales[d]	30%	28%	28%	28%	29%	27%	28%	28%	28%	28%	27%	28%	28%	28%	28%	28%	29%	29%	29%	29%	30%	30%	30%	30%	31%	31%	31%

[a] Income tax assumed at 35% of net profit after cost of operation.
[b] Operating ratio = Cost of operation ÷ Total revenue
[c] Breakeven point (PhP) = Total fixed expenses + (Total revenue x (total variable expenses ÷ Total revenue))
[d] Return on sales = Net profit after tax and debt service ÷ Total revenue

Table 12.2.3 Projected Incremental Profit and Loss Statement - Davao Fish Port Complex

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
A. Incremental Revenue																											
Permits and Licenses	3,683,990	3,802,210	3,922,656	4,045,372	4,170,402	4,297,790	4,427,581	4,559,821	4,694,559	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842	4,831,842
Service Income	782,316	864,264	947,817	1,033,008	1,119,868	1,208,431	1,298,729	1,390,798	1,484,672	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387	1,580,387
Business Income	10,601,388	10,630,121	10,659,213	10,688,668	10,718,492	10,748,689	10,779,263	10,810,220	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563	10,841,563
Subtotal Incremental Revenue	15,067,694	15,296,594	15,529,686	15,767,049	16,008,762	16,254,909	16,505,573	16,760,839	17,020,794	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792
B. Incremental Expenses																											
1. Operating Expenses																											
(i) Fixed Expenses																											
Interest	1,890,776	1,890,865	1,890,954	1,815,315	1,739,677	1,664,039	1,588,401	1,512,763	1,437,125	1,361,487	1,285,848	1,210,210	1,134,572	1,058,934	983,296	907,658	832,020	756,381	680,743	605,105	529,467	453,829	378,191	302,553	226,914	151,276	75,638
Maintenance	895,212	895,212	895,212	895,212	895,212	1,098,859	1,098,859	1,098,859	1,098,859	1,098,859	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505
Personnel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Fixed Expenses	2,785,988	2,786,077	2,786,166	2,710,528	2,634,890	2,762,898	2,687,260	2,611,622	2,535,984	2,460,345	2,588,354	2,512,716	2,437,078	2,361,440	2,285,801	2,210,163	2,134,525	2,058,887	1,983,249	1,907,611	1,831,972	1,756,334	1,680,696	1,605,058	1,529,420	1,453,782	1,378,144
Subtotal Cash Operating Expenses	2,785,988	2,786,077	2,786,166	2,710,528	2,634,890	2,762,898	2,687,260	2,611,622	2,535,984	2,460,345	2,588,354	2,512,716	2,437,078	2,361,440	2,285,801	2,210,163	2,134,525	2,058,887	1,983,249	1,907,611	1,831,972	1,756,334	1,680,696	1,605,058	1,529,420	1,453,782	1,378,144
(ii) Non-cash Expenses																											
Depreciation (New Assets)	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555
Total Non-cash Expenses	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555	5,642,555
Total Incremental Expenses	8,428,543	8,428,632	8,428,721	8,353,083	8,277,445	8,405,453	8,329,815	8,254,177	8,178,539	8,102,901	8,230,909	8,155,271	8,079,633	8,003,995	7,928,357	7,852,718	7,777,080	7,701,442	7,625,804	7,550,166	7,474,528	7,398,890	7,323,251	7,247,613	7,171,975	7,096,337	7,020,699
Net Incremental Income (Loss) From Operations	6,639,151	6,867,962	7,100,965	7,413,966	7,731,318	7,849,456	8,175,758	8,506,662	8,842,255	9,150,891	9,022,883	9,098,521	9,174,159	9,249,797	9,325,435	9,401,073	9,476,711	9,552,350	9,627,988	9,703,626	9,779,264	9,854,902	9,930,540	10,006,178	10,081,817	10,157,455	10,233,093
Net Incremental Income Before Tax	6,639,151	6,867,962	7,100,965	7,413,966	7,731,318	7,849,456	8,175,758	8,506,662	8,842,255	9,150,891	9,022,883	9,098,521	9,174,159	9,249,797	9,325,435	9,401,073	9,476,711	9,552,350	9,627,988	9,703,626	9,779,264	9,854,902	9,930,540	10,006,178	10,081,817	10,157,455	10,233,093
Income Tax[a]	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax Expense	2,323,703	2,403,787	2,485,338	2,594,888	2,705,961	2,747,310	2,861,515	2,977,332	3,094,789	3,202,812	3,158,009	3,184,482	3,210,956	3,237,429	3,263,902	3,290,376	3,316,849	3,343,322	3,369,796	3,396,269	3,422,742	3,449,216	3,475,689	3,502,162	3,528,636	3,555,109	3,581,582
Net Incremental Profit After Tax	4,315,448	4,464,175	4,615,627	4,819,078	5,025,356	5,102,146	5,314,243	5,529,330	5,747,466	5,948,079	5,864,874	5,914,038	5,963,203	6,012,368	6,061,533	6,110,698	6,159,862	6,209,027	6,258,192	6,307,357	6,356,522	6,405,686	6,454,851	6,504,016	6,553,181	6,602,346	6,651,510
Efficiency Ratio:																											
1) Operating ratio[b]	0.56	0.55	0.54	0.53	0.52	0.52	0.50	0.49	0.48	0.47	0.48	0.47	0.47	0.46	0.46	0.46	0.45	0.45	0.44	0.44	0.43	0.43	0.42	0.42	0.42	0.41	0.41
2) Break-even point in PhP[c]	2,785,988	2,786,077	2,786,166	2,710,528	2,634,890	2,762,898	2,687,260	2,611,622	2,535,984	2,460,345	2,588,354	2,512,716	2,437,078	2,361,440	2,285,801	2,210,163	2,134,525	2,058,887	1,983,249	1,907,611	1,831,972	1,756,334	1,680,696	1,605,058	1,529,420	1,453,782	1,378,144
Benefit:Cost Ratio:	1.79	1.81	1.84	1.89	1.93	1.93	1.98	2.03	2.08	2.13	2.10	2.12	2.14	2.16	2.18	2.20	2.22	2.24	2.26	2.29	2.31	2.33	2.36	2.38	2.41	2.43	2.46
Income Ratios:																											
1) Return on sales[d]	29%	29%	30%	31%	31%	31%	32%	33%	34%	34%	34%	34%	35%	35%	35%	35%	36%	36%	36%	37%	37%	37%	37%	38%	38%	38%	39%

[a] Income tax assumed at 35% of net profit after cost of operation.

[b] Operating ratio = Cost of operation ÷ Total revenue

[c] Breakeven point (PhP) = Total fixed expenses + (Total revenue x (Total variable expenses ÷ Total revenue))

[d] Return on sales = Net profit after tax and debt service ÷ Total revenue

Table 12.2.4 Projected Incremental Profit and Loss Statement - Iloilo Fish Port Complex

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
A. Incremental Revenue																											
Permits and Licenses	9,543,239	9,710,100	9,879,463	10,051,367	10,225,850	10,402,950	10,582,706	10,765,159	10,950,348	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315	11,138,315
Service Income	18,956,027	19,348,086	19,746,026	20,149,935	20,559,902	20,976,020	21,398,378	21,827,073	22,262,197	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849	22,703,849
Business Income	149,683,120	149,984,211	151,267,826	151,749,988	152,335,493	154,664,753	155,267,954	155,880,203	156,501,636	157,132,391	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338	160,602,338
Subtotal Incremental Revenue	178,182,387	179,042,397	180,893,315	181,951,291	183,121,245	186,043,722	187,249,039	188,472,435	189,714,182	190,974,555	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502
B. Incremental Expenses																											
1. Cash Operating Expenses																											
(i) Variable Expenses																											
Electricity	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394	32,727,394
Water	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000	2,060,000
Transportation	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000	1,210,000
Miscellaneous	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Subtotal Variable Expenses	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394	36,997,394
(ii) Fixed Expenses																											
Interest	15,779,012	15,779,653	15,780,294	15,149,082	14,517,870	13,886,658	13,255,447	12,624,235	11,993,023	11,361,811	10,730,600	10,099,388	9,468,176	8,836,964	8,205,753	7,574,541	6,943,329	6,312,117	5,680,906	5,049,694	4,418,482	3,787,270	3,156,059	2,524,847	1,893,635	1,262,423	631,212
Maintenance	8,705,052	8,705,052	8,705,052	8,705,052	8,705,052	8,705,052	14,883,820	14,883,820	14,883,820	14,883,820	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118	21,749,118
Personnel	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000
Subtotal Fixed Expenses	27,724,064	27,724,705	27,725,346	27,094,134	26,462,922	25,831,711	31,379,267	30,748,055	30,116,844	29,485,632	35,719,718	35,088,506	34,457,294	33,826,083	33,194,871	32,563,659	31,932,447	31,301,236	30,670,024	30,038,812	29,407,600	28,776,389	28,145,177	27,513,965	26,882,753	26,251,542	25,620,330
Subtotal Cash Operating Expenses	64,721,458	64,722,099	64,722,740	64,091,528	63,460,316	62,829,105	68,376,661	67,745,449	67,114,237	66,483,026	72,717,112	72,085,900	71,454,688	70,823,477	70,192,265	69,561,053	68,929,841	68,298,630	67,667,418	67,036,206	66,404,994	65,773,783	65,142,571	64,511,359	63,880,147	63,248,936	62,617,724
(iii) Non-cash Expenses																											
Depreciation (New Assets)	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798
Total Non-cash Expenses	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798	62,495,798
Total Incremental Expenses	127,217,257	127,217,898	127,218,538	126,587,327	125,956,115	125,324,903	130,872,459	130,241,248	129,610,036	128,978,824	135,212,910	134,581,698	133,950,487	133,319,275	132,688,063	132,056,851	131,425,640	130,794,428	130,163,216	129,532,004	128,900,793	128,269,581	127,638,369	127,007,157	126,375,946	125,744,734	125,113,522
Net Incremental Income (Loss) From Operations	50,965,130	51,824,499	53,674,777	55,363,964	57,165,130	60,718,819	56,376,579	58,231,187	60,104,146	61,995,731	59,231,592	59,862,803	60,494,015	61,125,227	61,756,439	62,387,650	63,018,862	63,650,074	64,281,286	64,912,497	65,543,709	66,174,921	66,806,133	67,437,344	68,068,556	68,699,768	69,330,980
Net Incremental Income Before Tax	50,965,130	51,824,499	53,674,777	55,363,964	57,165,130	60,718,819	56,376,579	58,231,187	60,104,146	61,995,731	59,231,592	59,862,803	60,494,015	61,125,227	61,756,439	62,387,650	63,018,862	63,650,074	64,281,286	64,912,497	65,543,709	66,174,921	66,806,133	67,437,344	68,068,556	68,699,768	69,330,980
Income Tax[a]	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax Expense	17,837,795	18,138,575	18,786,172	19,377,387	20,007,796	21,251,587	19,731,803	20,380,915	21,036,451	21,698,506	20,731,057	20,951,981	21,172,905	21,393,829	21,614,754	21,835,678	22,056,602	22,277,526	22,498,450	22,719,374	22,940,298	23,161,222	23,382,146	23,603,071	23,823,995	24,044,919	24,265,843
Net Incremental Profit After Tax	33,127,334	33,685,925	34,888,605	35,986,577	37,157,335	39,467,232	36,644,776	37,850,272	39,067,695	40,297,225	38,500,535	38,910,822	39,321,110	39,731,397	40,141,685	40,551,973	40,962,260	41,372,548	41,782,836	42,193,123	42,603,411	43,013,699	43,423,986	43,834,274	44,244,561	44,654,849	45,065,137
Efficiency Ratio:																											
1) Operating ratio[b]	0.71	0.71	0.70	0.70	0.69	0.67	0.70	0.69	0.68	0.68	0.70	0.69	0.69	0.69	0.68	0.68	0.68	0.67	0.67	0.67	0.66	0.66	0.66	0.65	0.65	0.65	0.64
2) Break-even point in PhP[c]	64,721,458	64,722,099	64,722,740	64,091,528	63,460,316	62,829,105	68,376,661	67,745,449	67,114,237	66,483,026	72,717,112	72,085,900	71,454,688	70,823,477	70,192,265	69,561,053	68,929,841	68,298,630	67,667,418	67,036,206	66,404,994	65,773,783	65,142,571	64,511,359	63,880,147	63,248,936	62,617,724
Benefit:Cost Ratio:	1.40	1.41	1.42	1.44	1.45	1.48	1.43	1.45	1.46	1.48	1.44	1.44	1.45	1.46	1.47	1.47	1.48	1.49	1.49	1.50	1.51	1.52	1.52	1.53	1.54	1.55	1.55
Income Ratios:																											
1) Return on sales[d]	19%	19%	19%	20%	20%	21%	20%	20%	21%	21%	20%	20%	20%	20%	21%	21%	21%	21%	21%	22%	22%	22%	22%	23%	23%	23%	23%

[a] Income tax assumed at 35% of net profit after cost of operation.

[b] Operating ratio = Cost of operation ÷ Total revenue

[c] Breakeven point (PhP) = Total fixed expenses + (Total revenue x (Total variable expenses ÷ Total revenue))

[d] Return on sales = Net profit after tax and debt service ÷ Total revenue

Table 12.2.5 Projected Incremental Profit and Loss Statement - Lucena Fish Port Complex

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
A. Incremental Revenue																											
Permits and Licenses	23,171	46,499	69,983	93,626	117,428	141,391	165,515	189,801	214,252	238,867	238,867	238,867	238,867	238,867	238,867	238,867	238,867	238,867	238,867	238,867	238,867	238,867	238,867	238,867	238,867	238,867	238,867
Service Income	3,115,677	3,147,229	3,178,994	3,210,973	3,243,167	3,275,579	3,308,208	3,341,058	3,374,129	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422	3,407,422
Business Income	28,436,455	28,707,001	28,979,629	32,300,078	32,601,545	32,905,342	33,211,487	33,505,978	33,797,695	34,091,520	34,294,079	34,500,462	34,614,332	34,729,285	34,845,329	34,962,477	35,080,737	35,200,122	35,320,642	35,442,307	35,565,130	35,689,120	35,814,290	35,940,651	36,068,214	36,196,991	36,326,994
Subtotal Incremental Revenue	31,575,303	31,900,729	32,228,606	35,604,677	35,962,141	36,322,312	36,685,210	37,036,837	37,386,076	37,737,809	37,940,368	38,146,751	38,260,621	38,375,574	38,491,618	38,608,766	38,727,026	38,846,411	38,966,931	39,088,596	39,211,419	39,335,409	39,460,579	39,586,940	39,714,503	39,843,280	39,973,283
B. Incremental Expenses																											
1. Cash Operating Expenses																											
(i) Variable Expenses																											
Electricity	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033
Subtotal Variable Expenses	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033	432,033
Total Variable Expenses (new and current)	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934	10,060,934
(ii) Fixed Expenses																											
Interest	3,625,831	3,626,009	3,626,187	3,481,139	3,336,092	3,191,044	3,045,997	2,900,949	2,755,902	2,610,854	2,465,807	2,320,760	2,175,712	2,030,665	1,885,617	1,740,570	1,595,522	1,450,475	1,305,427	1,160,380	1,015,332	870,285	725,237	580,190	435,142	290,095	145,047
Maintenance	1,658,890	1,658,890	1,658,890	1,658,890	1,658,890	1,658,890	2,302,633	2,302,633	2,302,633	2,302,633	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376	2,946,376
Subtotal Fixed Expenses	5,284,720	5,284,898	5,285,076	5,140,029	4,994,982	4,849,934	5,348,630	5,203,582	5,058,535	4,913,487	5,412,183	5,267,136	5,122,088	4,977,041	4,831,993	4,686,946	4,541,898	4,396,851	4,251,803	4,106,756	3,961,708	3,816,661	3,671,613	3,526,566	3,381,518	3,236,471	3,091,423
Subtotal Cash Operating Expenses	5,716,753	5,716,931	5,717,109	5,572,062	5,427,014	5,281,967	5,780,662	5,635,615	5,490,567	5,345,520	5,844,216	5,699,168	5,554,121	5,409,073	5,264,026	5,118,978	4,973,931	4,828,883	4,683,836	4,538,788	4,393,741	4,248,693	4,103,646	3,958,599	3,813,551	3,668,504	3,523,456
(iii) Non-cash Expenses																											
Depreciation (New Assets)	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209
Total Non-cash Expenses	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209	9,606,209
Total Incremental Expenses	15,322,962	15,323,140	15,323,318	15,178,270	15,033,223	14,888,175	15,386,871	15,241,824	15,096,776	14,951,729	15,450,424	15,305,377	15,160,329	15,015,282	14,870,234	14,725,187	14,580,139	14,435,092	14,290,044	14,144,997	13,999,950	13,854,902	13,709,855	13,564,807	13,419,760	13,274,712	13,129,665
Net Incremental Income (Loss) From Operations	16,252,342	16,577,589	16,905,288	20,426,407	20,928,918	21,434,136	21,298,339	21,795,013	22,289,300	22,786,080	22,489,944	22,841,374	23,100,292	23,360,292	23,621,384	23,883,579	24,146,887	24,411,319	24,676,886	24,943,599	25,211,469	25,480,507	25,750,725	26,022,133	26,294,744	26,568,568	26,843,618
Income Tax[a]	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax Expense	5,688,320	5,802,156	5,916,851	7,149,242	7,325,121	7,501,948	7,454,419	7,628,255	7,801,255	7,975,128	7,871,480	7,994,481	8,085,102	8,176,102	8,267,484	8,359,253	8,451,410	8,543,962	8,636,910	8,730,260	8,824,014	8,918,178	9,012,754	9,107,747	9,203,160	9,298,999	9,395,266
Net Incremental Profit After Tax	10,564,022	10,775,433	10,988,437	13,277,164	13,603,797	13,932,189	13,843,921	14,166,759	14,488,045	14,810,952	14,618,464	14,846,893	15,015,190	15,184,190	15,353,900	15,524,326	15,695,476	15,867,357	16,039,976	16,213,339	16,387,455	16,562,330	16,737,971	16,914,387	17,091,583	17,269,569	17,448,352
Efficiency Ratio:																											
1) Operating ratio[b]	0.49	0.48	0.48	0.43	0.42	0.41	0.42	0.41	0.40	0.40	0.41	0.40	0.40	0.39	0.39	0.38	0.38	0.37	0.37	0.36	0.36	0.35	0.35	0.34	0.34	0.33	0.33
2) Break-even point in PhP[c]	5,716,753	5,716,931	5,717,109	5,572,062	5,427,014	5,281,967	5,780,662	5,635,615	5,490,567	5,345,520	5,844,216	5,699,168	5,554,121	5,409,073	5,264,026	5,118,978	4,973,931	4,828,883	4,683,836	4,538,788	4,393,741	4,248,693	4,103,646	3,958,599	3,813,551	3,668,504	3,523,456
Benefit:Cost Ratio:	2.06	2.08	2.10	2.35	2.39	2.44	2.38	2.43	2.48	2.52	2.46	2.49	2.52	2.56	2.59	2.62	2.66	2.69	2.73	2.76	2.80	2.84	2.88	2.92	2.96	3.00	3.04
Income Ratios:																											
1) Return on sales[d]	33%	34%	34%	37%	38%	38%	38%	38%	39%	39%	39%	39%	39%	40%	40%	40%	41%	41%	41%	41%	42%	42%	42%	43%	43%	43%	44%

[a] Income tax assumed at 35% of net profit after cost of operation.

[b] Operating ratio = Cost of operation ÷ Total revenue

[c] Breakeven point (PhP) = Total fixed expenses + (Total revenue x (Total variable expenses ÷ Total revenue))

[d] Return on sales = Net profit after tax and debt service ÷ Total revenue

Table 12.2.6 Projected Incremental Profit and Loss Statement - Sual Fish Port Complex

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
A. Incremental Revenue																											
Permits and Licenses	1,293,215	1,318,039	1,343,211	1,368,734	1,394,616	1,420,859	1,447,470	1,474,454	1,501,815	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559	1,529,559
Service Income	5,422,497	5,511,140	5,601,023	5,692,165	5,784,583	5,878,294	5,973,318	6,069,671	6,167,374	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445	6,266,445
Business Income	38,252,401	43,325,978	47,162,006	49,383,504	49,491,492	49,600,993	49,712,027	49,824,615	49,938,779	50,054,542	50,113,234	50,172,747	50,233,094	50,294,285	50,356,333	50,419,250	50,483,047	50,547,738	50,613,335	50,679,849	50,747,295	50,815,686	50,885,033	50,955,352	51,026,655	51,098,956	51,172,270
Subtotal Incremental Revenue	44,968,113	50,155,157	54,106,239	56,444,403	56,670,691	56,900,147	57,132,815	57,368,740	57,607,969	57,850,546	57,909,238	57,968,751	58,029,098	58,090,289	58,152,337	58,215,254	58,279,052	58,343,743	58,409,339	58,475,854	58,543,300	58,611,690	58,681,038	58,751,356	58,822,659	58,894,960	58,968,274
B. Incremental Expenses																											
1. Cash Operating Expenses																											
(i) Variable Expenses																											
Electricity	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691
Subtotal Variable Expenses	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691	4,782,691
(ii) Fixed Expenses																											
Interest	5,299,639	5,299,871	5,300,102	5,088,098	4,876,094	4,664,090	4,452,086	4,240,082	4,028,078	3,816,074	3,604,070	3,392,065	3,180,061	2,968,057	2,756,053	2,544,049	2,332,045	2,120,041	1,908,037	1,696,033	1,484,029	1,272,025	1,060,020	848,016	636,012	424,008	212,004
Maintenance	1,278,119	1,278,119	1,278,119	1,278,119	1,278,119	2,984,048	2,984,048	2,984,048	2,984,048	2,984,048	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978	4,689,978
Personnel	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787	840,787
Subtotal Fixed Expenses	7,418,546	7,418,777	7,419,008	7,207,004	6,995,000	8,488,925	8,276,921	8,064,917	7,852,913	7,640,909	9,134,834	8,922,830	8,710,826	8,498,822	8,286,818	8,074,814	7,862,809	7,650,805	7,438,801	7,226,797	7,014,793	6,802,789	6,590,785	6,378,781	6,166,777	5,954,773	5,742,769
Subtotal Cash Operating Expenses	12,201,237	12,201,468	12,201,700	11,989,696	11,777,692	13,271,617	13,059,613	12,847,608	12,635,604	12,423,600	13,917,525	13,705,521	13,493,517	13,281,513	13,069,509	12,857,505	12,645,501	12,433,497	12,221,493	12,009,489	11,797,485	11,585,480	11,373,476	11,161,472	10,949,468	10,737,464	10,525,460
(iii) Non-cash Expenses																											
Depreciation (New Assets)	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694
Total Non-cash Expenses	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694	15,392,694
Total Incremental Expenses	27,593,931	27,594,163	27,594,394	27,382,390	27,170,386	28,664,311	28,452,307	28,240,303	28,028,299	27,816,295	29,310,220	29,098,216	28,886,212	28,674,207	28,462,203	28,250,199	28,038,195	27,826,191	27,614,187	27,402,183	27,190,179	26,978,175	26,766,171	26,554,167	26,342,162	26,130,158	25,918,154
Net Incremental Income (Loss) From Operations	17,374,182	22,560,994	26,511,845	29,062,013	29,500,305	28,235,836	28,680,508	29,128,437	29,579,670	30,034,252	28,599,018	28,870,536	29,142,886	29,416,082	29,690,134	29,965,055	30,240,857	30,517,551	30,795,152	31,073,671	31,353,121	31,633,515	31,914,867	32,197,190	32,480,497	32,764,802	33,050,120
Net Incremental Income Before Tax	17,374,182	22,560,994	26,511,845	29,062,013	29,500,305	28,235,836	28,680,508	29,128,437	29,579,670	30,034,252	28,599,018	28,870,536	29,142,886	29,416,082	29,690,134	29,965,055	30,240,857	30,517,551	30,795,152	31,073,671	31,353,121	31,633,515	31,914,867	32,197,190	32,480,497	32,764,802	33,050,120
Income Tax[a]	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax Expense	6,080,964	7,896,348	9,279,146	10,171,705	10,325,107	9,882,542	10,038,178	10,194,953	10,352,885	10,511,988	10,009,656	10,104,688	10,200,010	10,295,629	10,391,547	10,487,769	10,584,300	10,681,143	10,778,303	10,875,785	10,973,592	11,071,730	11,170,203	11,269,016	11,368,174	11,467,681	11,567,542
Net Incremental Profit After Tax	11,293,218	14,664,646	17,232,700	18,890,308	19,175,198	18,353,293	18,642,330	18,933,484	19,226,786	19,522,264	18,589,362	18,765,848	18,942,876	19,120,453	19,298,587	19,477,286	19,656,557	19,836,408	20,016,849	20,197,886	20,379,529	20,561,785	20,744,664	20,928,173	21,112,323	21,297,121	21,482,578
Efficiency Ratio:																											
1) Operating ratio[b]	0.61	0.55	0.51	0.49	0.48	0.50	0.50	0.49	0.49	0.48	0.51	0.50	0.50	0.49	0.49	0.49	0.48	0.48	0.47	0.47	0.46	0.46	0.46	0.45	0.45	0.44	0.44
2) Break-even point in PhP[c]	12,201,237	12,201,468	12,201,700	11,989,696	11,777,692	13,271,617	13,059,613	12,847,608	12,635,604	12,423,600	13,917,525	13,705,521	13,493,517	13,281,513	13,069,509	12,857,505	12,645,501	12,433,497	12,221,493	12,009,489	11,797,485	11,585,480	11,373,476	11,161,472	10,949,468	10,737,464	10,525,460
Benefit:Cost Ratio:	1.63	1.82	1.96	2.06	2.09	1.99	2.01	2.03	2.06	2.08	1.98	1.99	2.01	2.03	2.04	2.06	2.08	2.10	2.12	2.13	2.15	2.17	2.19	2.21	2.23	2.25	2.28
Income Ratio:																											
1) Return on sales[d]	25%	29%	32%	33%	34%	32%	33%	33%	33%	34%	32%	32%	33%	33%	33%	33%	34%	34%	34%	35%	35%	35%	35%	36%	36%	36%	36%

[a] Income tax assumed at 35% of net profit after cost of operation.

[b] Operating ratio = Cost of operation ÷ Total revenue

[c] Breakeven point (PhP) = Total fixed expenses + (Total revenue x (Total variable expenses ÷ Total revenue))

[d] Return on sales = Net profit after tax and debt service ÷ Total revenue

Table 12.2.7 Projected Incremental Profit and Loss Statement - Calabanga Municipal Fish Port

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
A. Incremental Revenue																												
Service Income	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	109,500	-
Business Income	6,040,406	6,052,980	6,065,583	6,078,212	6,090,870	6,103,556	6,116,269	6,129,011	6,141,780	6,154,578	6,156,010	6,157,445	6,158,883	6,160,325	6,161,769	6,163,217	6,164,668	6,166,122	6,167,580	6,169,040	6,170,504	6,171,971	6,173,441	6,174,915	6,176,392	6,177,872	6,179,355	6,179,355
Subtotal Incremental Revenue	6,149,906	6,162,480	6,175,083	6,187,712	6,200,370	6,213,056	6,225,769	6,238,511	6,251,280	6,264,078	6,265,510	6,266,945	6,268,383	6,269,825	6,271,269	6,272,717	6,274,168	6,275,622	6,277,080	6,278,540	6,280,004	6,281,471	6,282,941	6,284,415	6,285,892	6,287,372	6,288,855	6,179,355
B. Incremental Expenses																												
1. Cash Operating Expenses																												
(i) Variable Expenses																												
Electricity	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850
Water	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740
Miscellaneous	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059
Subtotal Variable Expenses	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649
(ii) Fixed Expenses																												
Interest	287	604,029	604,029	604,029	579,868	555,707	531,546	507,385	483,223	459,062	434,901	410,740	386,579	362,418	338,256	314,095	289,934	265,773	241,612	217,451	193,289	169,128	144,967	120,806	96,645	72,484	48,322	24,161
Maintenance	311,795	311,795	311,795	311,795	311,795	428,519	428,519	428,519	428,519	428,519	545,242	545,242	545,242	545,242	545,242	545,242	545,242	545,242	545,242	545,242	545,242	545,242	545,242	545,242	545,242	545,242	545,242	545,242
Personnel	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978
Subtotal Fixed Expenses	540,061	1,143,803	1,143,803	1,143,803	1,119,642	1,212,204	1,188,043	1,163,882	1,139,721	1,115,559	1,208,122	1,183,960	1,159,799	1,135,638	1,111,477	1,087,316	1,063,155	1,038,993	1,014,832	990,671	966,510	942,349	918,188	894,026	869,865	845,704	821,543	797,382
Subtotal Cash Operating Expenses	584,710	1,188,452	1,188,452	1,188,452	1,164,291	1,256,853	1,232,692	1,208,531	1,184,370	1,160,208	1,252,771	1,228,609	1,204,448	1,180,287	1,156,126	1,131,965	1,107,804	1,083,642	1,059,481	1,035,320	1,011,159	986,998	962,837	938,675	914,514	890,353	866,192	842,031
(iii) Non-cash Expenses																												
Depreciation (New Assets)	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899
Total Non-cash Expenses	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899	1,724,899
Total Incremental Expenses	2,309,609	2,913,351	2,913,351	2,913,351	2,889,190	2,981,752	2,957,591	2,933,430	2,909,269	2,885,108	2,977,670	2,953,509	2,929,348	2,905,186	2,881,025	2,856,864	2,832,703	2,808,542	2,784,380	2,760,219	2,736,058	2,711,897	2,687,736	2,663,575	2,639,413	2,615,252	2,591,091	2,566,930
Net Incremental Income (Loss) From Operations	3,840,296	3,249,129	3,261,731	3,274,361	3,311,180	3,231,303	3,268,178	3,305,081	3,342,011	3,378,970	3,287,840	3,313,436	3,339,036	3,364,638	3,390,244	3,415,853	3,441,465	3,467,081	3,492,699	3,518,321	3,543,946	3,569,574	3,595,206	3,620,840	3,646,478	3,672,119	3,697,764	3,612,425
Net Incremental Income Before Tax	3,840,296	3,249,129	3,261,731	3,274,361	3,311,180	3,231,303	3,268,178	3,305,081	3,342,011	3,378,970	3,287,840	3,313,436	3,339,036	3,364,638	3,390,244	3,415,853	3,441,465	3,467,081	3,492,699	3,518,321	3,543,946	3,569,574	3,595,206	3,620,840	3,646,478	3,672,119	3,697,764	3,612,425
Income Tax[a]	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax Expense	1,344,104	1,137,195	1,141,606	1,146,026	1,158,913	1,130,956	1,143,862	1,156,778	1,169,704	1,182,640	1,150,744	1,159,703	1,168,663	1,177,623	1,186,585	1,195,549	1,204,513	1,213,478	1,222,445	1,231,412	1,240,381	1,249,351	1,258,322	1,267,294	1,276,267	1,285,242	1,294,217	1,264,349
Net Incremental Profit After Tax	2,496,193	2,111,934	2,120,125	2,128,335	2,152,267	2,100,347	2,124,316	2,148,303	2,172,307	2,196,331	2,137,096	2,153,734	2,170,373	2,187,015	2,203,659	2,220,305	2,236,952	2,253,602	2,270,255	2,286,909	2,303,565	2,320,223	2,336,884	2,353,546	2,370,211	2,386,878	2,403,546	2,348,076
Efficiency Ratio:																												
1) Operating ratio[b]	0.38	0.47	0.47	0.47	0.47	0.48	0.48	0.47	0.47	0.46	0.48	0.47	0.47	0.46	0.46	0.46	0.45	0.45	0.44	0.44	0.44	0.43	0.43	0.42	0.42	0.42	0.41	0.42
2) Break-even point in PhP[c]	584,710	1,188,452	1,188,452	1,188,452	1,164,291	1,256,853	1,232,692	1,208,531	1,184,370	1,160,208	1,252,771	1,228,609	1,204,448	1,180,287	1,156,126	1,131,965	1,107,804	1,083,642	1,059,481	1,035,320	1,011,159	986,998	962,837	938,675	914,514	890,353	866,192	842,031
Benefit:Cost Ratio:	2.66	2.12	2.12	2.12	2.15	2.08	2.11	2.13	2.15	2.17	2.10	2.12	2.14	2.16	2.18	2.20	2.21	2.23	2.25	2.27	2.30	2.32	2.34	2.36	2.38	2.40	2.43	2.41
Income Ratios:																												
1) Return on sales[d]	41%	34%	34%	34%	35%	34%	34%	34%	35%	35%	34%	34%	35%	35%	35%	35%	36%	36%	36%	36%	37%	37%	37%	37%	38%	38%	38%	38%

[a] Income tax assumed at 35% of net profit after cost of operation.
[b] Operating ratio = Cost of operation ÷ Total revenue
[c] Breakeven point (PhP) = Total fixed expenses + (Total revenue x (total variable expenses ÷ Total revenue))
[d] Return on sales = Net profit after tax and debt service ÷ Total revenue

Table 12.2.8 Projected Incremental Profit and Loss Statement - Sta. Cruz Municipal Fish Port

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
A. Incremental Revenue																												
Permits and Licenses	258	519	782	1,046	1,313	1,583	1,854	2,128	2,404	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682
Service Income	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	47,450	-
Business Income	5,080,621	5,119,687	5,159,073	5,198,781	5,238,816	5,279,179	5,319,873	5,360,900	5,402,264	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	5,443,967	3,318,035
Subtotal Incremental Revenue	5,128,329	5,167,656	5,207,304	5,247,278	5,287,579	5,328,212	5,369,177	5,410,478	5,452,118	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	3,320,717
B. Incremental Expenses																												
1. Cash Operating Expenses																												
(i) Variable Expenses																												
Electricity	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850	14,850
Water	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740	25,740
Miscellaneous	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059	4,059
Subtotal Variable Expenses	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649	44,649
(ii) Fixed Expenses																												
Interest	295	623,105	623,105	623,105	598,181	573,257	548,333	523,409	498,484	473,560	448,636	423,712	398,787	373,863	348,939	324,015	299,091	274,166	249,242	224,318	199,394	174,470	149,545	124,621	99,697	74,773	49,848	24,924
Maintenance	269,182	269,182	269,182	269,182	269,182	284,670	284,670	284,670	284,670	284,670	300,159	300,159	300,159	300,159	300,159	300,159	300,159	300,159	300,159	300,159	300,159	300,159	300,159	300,159	300,159	300,159	300,159	300,159
Personnel	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978
Subtotal Fixed Expenses	497,455	1,120,266	1,120,266	1,120,266	1,095,341	1,085,906	1,060,981	1,036,057	1,011,133	986,209	976,773	951,849	926,924	902,000	877,076	852,152	827,228	802,303	777,379	752,455	727,531	702,606	677,682	652,758	627,834	602,910	577,985	553,061
Subtotal Cash Operating Expenses	542,104	1,164,915	1,164,915	1,164,915	1,139,990	1,130,555	1,105,630	1,080,706	1,055,782	1,030,858	1,021,422	996,498	971,573	946,649	921,725	896,801	871,877	846,952	822,028	797,104	772,180	747,255	722,331	697,407	672,483	647,559	622,634	597,710
(iii) Non-cash Expenses																												
Depreciation (New Assets)	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467
Total Non-cash Expenses	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467	1,199,467
Total Incremental Expenses	1,741,571	2,364,382	2,364,382	2,364,382	2,339,457	2,330,021	2,305,097	2,280,173	2,255,249	2,230,325	2,220,889	2,195,964	2,171,040	2,146,116	2,121,192	2,096,268	2,071,343	2,046,419	2,021,495	1,996,571	1,971,647	1,946,722	1,921,798	1,896,874	1,871,950	1,847,025	1,822,101	1,797,177
Net Incremental Income (Loss) From Operations	3,386,759	2,803,274	2,842,923	2,882,896	2,948,122	2,998,190	3,064,079	3,130,305	3,196,869	3,263,774	3,273,210	3,298,134	3,323,059	3,347,983	3,372,907	3,397,831	3,422,755	3,447,680	3,472,604	3,497,528	3,522,452	3,547,376	3,572,301	3,597,225	3,622,149	3,647,073	3,671,998	1,523,540
Net Incremental Income Before Tax	3,386,759	2,803,274	2,842,923	2,882,896	2,948,122	2,998,190	3,064,079	3,130,305	3,196,869	3,263,774	3,273,210	3,298,134	3,323,059	3,347,983	3,372,907	3,397,831	3,422,755	3,447,680	3,472,604	3,497,528	3,522,452	3,547,376	3,572,301	3,597,225	3,622,149	3,647,073	3,671,998	1,523,540
Income Tax[a]	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax Expense	1,185,366	981,146	995,023	1,009,014	1,031,843	1,049,367	1,072,428	1,095,607	1,118,904	1,142,321	1,145,624	1,154,347	1,163,070	1,171,794	1,180,517	1,189,241	1,197,964	1,206,688	1,215,411	1,224,135	1,232,858	1,241,582	1,250,305	1,259,029	1,267,752	1,276,476	1,285,199	533,239
Net Incremental Profit After Tax	2,201,393	1,822,128	1,847,900	1,873,883	1,916,279	1,948,824	1,991,652	2,034,698	2,077,965	2,121,453	2,127,587	2,143,787	2,159,988	2,176,189	2,192,390	2,208,590	2,224,791	2,240,992	2,257,192	2,273,393	2,289,594	2,305,795	2,321,995	2,338,196	2,354,397	2,370,598	2,386,798	990,301
Efficiency Ratio:																												
1) Operating ratio[b]	0.34	0.46	0.45	0.45	0.44	0.44	0.43	0.42	0.41	0.41	0.40	0.40	0.40	0.39	0.39	0.38	0.38	0.37	0.37	0.36	0.36	0.35	0.35	0.35	0.34	0.34	0.33	0.54
2) Break-even point in PhP[c]	542,104	1,164,915	1,164,915	1,164,915	1,139,990	1,130,555	1,105,630	1,080,706	1,055,782	1,030,858	1,021,422	996,498	971,573	946,649	921,725	896,801	871,877	846,952	822,028	797,104	772,180	747,255	722,331	697,407	672,483	647,559	622,634	597,710
Benefit:Cost Ratio:	2.94	2.19	2.20	2.22	2.26	2.29	2.33	2.37	2.42	2.46	2.47	2.50	2.53	2.56	2.59	2.62	2.65	2.68	2.72	2.75	2.79	2.82	2.86	2.90	2.93	2.97	3.02	1.85
Income Ratios:																												
1) Return on sales[d]	43%	35%	35%	36%	36%	37%	37%	38%	38%	39%	39%	39%	39%	40%	40%	40%	40%	41%	41%	41%	42%	42%	42%	43%	43%	43%	43%	30%

[a] Income tax assumed at 35% of net profit after cost of operation.
[b] Operating ratio = Cost of operation ÷ Total revenue
[c] Breakeven point (PhP) = Total fixed expenses + (Total revenue x (total variable expenses ÷ Total revenue))
[d] Return on sales = Net profit after tax and debt service ÷ Total revenue

Table 12.2.9 Projected Incremental Profit and Loss Statement - Concepcion Municipal Fish Port

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
A. Incremental Revenue																												
Permits and Licenses	249,154	249,378	249,603	249,827	250,052	250,277	250,502	250,728	250,954	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179	251,179
Service Income	406,231	406,486	406,742	406,998	407,254	407,510	407,767	408,023	408,280	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538	408,538
Business Income	4,183,705	4,187,003	4,190,305	4,193,610	4,196,918	4,200,228	4,203,542	4,206,859	4,210,178	4,213,501	4,213,937	4,214,374	4,214,811	4,215,248	4,215,686	4,216,124	4,216,563	4,217,002	4,217,441	4,217,881	4,218,321	4,218,762	4,219,203	4,219,644	4,220,086	4,220,528	4,220,971	4,220,971
Subtotal Incremental Revenue	4,839,090	4,842,868	4,846,650	4,850,435	4,854,224	4,858,016	4,861,811	4,865,610	4,869,412	4,873,218	4,873,654	4,874,091	4,874,528	4,874,965	4,875,403	4,875,841	4,876,280	4,876,719	4,877,158	4,877,598	4,878,038	4,878,479	4,878,920	4,879,361	4,879,803	4,880,245	4,880,688	4,880,688
B. Incremental Expenses																												
1. Cash Operating Expenses																												
(i) Variable Expenses																												
Electricity	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290	37,290
Water	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293	44,293
Miscellaneous	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158
Subtotal Variable Expenses	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741	89,741
(ii) Fixed Expenses																												
Interest	488,048	488,507	488,507	488,507	468,967	449,426	429,886	410,346	390,806	371,265	351,725	332,185	312,644	293,104	273,564	254,024	234,483	214,943	195,403	175,862	156,322	136,782	117,242	97,701	78,161	58,621	39,081	19,540
Maintenance	212,997	212,997	212,997	212,997	212,997	229,053	229,053	229,053	229,053	229,053	245,110	245,110	245,110	245,110	245,110	245,110	245,110	245,110	245,110	245,110	245,110	245,110	245,110	245,110	245,110	245,110	245,110	245,110
Personnel	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978
Subtotal Fixed Expenses	929,024	929,482	929,482	929,482	909,942	906,458	886,918	867,378	847,837	828,297	824,813	805,273	785,732	766,192	746,652	727,112	707,571	688,031	668,491	648,951	629,410	609,870	590,330	570,789	551,249	531,709	512,169	492,628
Subtotal Cash Operating Expenses	1,018,765	1,019,223	1,019,223	1,019,223	999,683	996,199	976,659	957,118	937,578	918,038	914,554	895,014	875,473	855,933	836,393	816,852	797,312	777,772	758,232	738,691	719,151	699,611	680,071	660,530	640,990	621,450	601,909	582,369
(iii) Non-cash Expenses																												
Depreciation (New Assets)	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626
Total Non-cash Expenses	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626	997,626
Total Incremental Expenses	2,016,390	2,016,849	2,016,849	2,016,849	1,997,309	1,993,825	1,974,284	1,954,744	1,935,204	1,915,664	1,912,180	1,892,639	1,873,099	1,853,559	1,834,018	1,814,478	1,794,938	1,775,398	1,755,857	1,736,317	1,716,777	1,697,237	1,677,696	1,658,156	1,638,616	1,619,075	1,599,535	1,579,995
Net Incremental Income (Loss) From Operations	2,822,699	2,826,019	2,829,801	2,833,586	2,856,915	2,864,191	2,887,527	2,910,866	2,934,208	2,957,554	2,961,475	2,981,451	3,001,429	3,021,406	3,041,385	3,061,363	3,081,342	3,101,321	3,121,301	3,141,281	3,161,261	3,181,242	3,201,224	3,221,205	3,241,187	3,261,170	3,281,153	3,300,693
Net Incremental Income Before Tax	2,822,699	2,826,019	2,829,801	2,833,586	2,856,915	2,864,191	2,887,527	2,910,866	2,934,208	2,957,554	2,961,475	2,981,451	3,001,429	3,021,406	3,041,385	3,061,363	3,081,342	3,101,321	3,121,301	3,141,281	3,161,261	3,181,242	3,201,224	3,221,205	3,241,187	3,261,170	3,281,153	3,300,693
Income Tax[a]	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax Expense	987,945	989,107	990,430	991,755	999,920	1,002,467	1,010,634	1,018,803	1,026,973	1,035,144	1,036,516	1,043,508	1,050,500	1,057,492	1,064,485	1,071,477	1,078,470	1,085,462	1,092,455	1,099,448	1,106,441	1,113,435	1,120,428	1,127,422	1,134,416	1,141,409	1,148,403	1,155,242
Net Incremental Profit After Tax	1,834,755	1,836,912	1,839,371	1,841,831	1,856,995	1,861,724	1,876,892	1,892,063	1,907,235	1,922,410	1,924,958	1,937,943	1,950,929	1,963,914	1,976,900	1,989,886	2,002,872	2,015,859	2,028,846	2,041,833	2,054,820	2,067,807	2,080,795	2,093,783	2,106,772	2,119,760	2,132,749	2,145,450
Efficiency Ratio:																												
1) Operating ratio[b]	0.42	0.42	0.42	0.42	0.41	0.41	0.41	0.40	0.40	0.39	0.39	0.39	0.38	0.38	0.38	0.37	0.37	0.36	0.36	0.36	0.35	0.35	0.34	0.34	0.34	0.33	0.33	0.32
2) Break-even point in PhP[c]	1,018,765	1,019,223	1,019,223	1,019,223	999,683	996,199	976,659	957,118	937,578	918,038	914,554	895,014	875,473	855,933	836,393	816,852	797,312	777,772	758,232	738,691	719,151	699,611	680,071	660,530	640,990	621,450	601,909	582,369
Benefit:Cost Ratio:	2.40	2.40	2.40	2.40	2.43	2.44	2.46	2.49	2.52	2.54	2.55	2.58	2.60	2.63	2.66	2.69	2.72	2.75	2.78	2.81	2.84	2.87	2.91	2.94	2.98	3.01	3.05	3.09
Income Ratios:																												
1) Return on sales[d]	38%	38%	38%	38%	38%	38%	39%	39%	39%	39%	39%	40%	40%	40%	41%	41%	41%	41%	42%	42%	42%	42%	43%	43%	43%	43%	44%	44%

[a] Income tax assumed at 35% of net profit after cost of operation.

[b] Operating ratio = Cost of operation ÷ Total revenue

[c] Breakeven point (PhP) = Total fixed expenses + (Total revenue x (total variable expenses ÷ Total revenue))

[d] Return on sales = Net profit after tax and debt service ÷ Total revenue

Table 12.2.10 Projected Incremental Profit and Loss Statement - Atimonan Municipal Fish Port

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
A. Incremental Revenue																												
Service Income	219,361	219,369	219,378	219,386	219,395	219,404	219,412	219,421	219,429	219,438	219,438	219,438	219,438	219,438	219,438	219,438	219,438	219,438	219,438	219,438	219,438	219,438	219,438	219,438	219,438	219,438	219,438	43,070
Business Income	3,202,713	3,203,216	3,203,719	3,204,222	3,204,726	3,205,229	3,205,732	3,206,236	3,206,740	3,207,244	3,207,317	3,207,390	3,207,463	3,207,537	3,207,610	3,207,683	3,207,756	3,207,830	3,207,903	3,207,976	3,208,050	3,208,123	3,208,196	3,208,270	3,208,343	3,208,417	3,208,490	2,593,169
Subtotal Incremental Revenue	3,422,073	3,422,585	3,423,097	3,423,609	3,424,121	3,424,633	3,425,145	3,425,657	3,426,169	3,426,682	3,426,755	3,426,828	3,426,901	3,426,975	3,427,048	3,427,121	3,427,194	3,427,268	3,427,341	3,427,414	3,427,488	3,427,561	3,427,635	3,427,708	3,427,781	3,427,855	3,427,928	2,636,239
B. Incremental Expenses																												
1. Cash Operating Expenses																												
(i) Variable Expenses																												
Electricity	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595	23,595
Water	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864	39,864
Miscellaneous	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346	6,346
Subtotal Variable Expenses	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805	69,805
(ii) Fixed Expenses																												
Interest	297,058	297,058	297,058	285,176	273,294	261,411	249,529	237,647	225,764	213,882	202,000	190,117	178,235	166,353	154,470	142,588	130,706	118,823	106,941	95,059	83,176	71,294	59,412	47,529	35,647	23,765	11,882	-
Maintenance	140,017	140,017	140,017	140,017	140,017	170,773	170,773	170,773	170,773	170,773	201,529	201,529	201,529	201,529	201,529	201,529	201,529	201,529	201,529	201,529	201,529	201,529	201,529	201,529	201,529	201,529	201,529	201,529
Personnel	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978
Subtotal Fixed Expenses	665,054	665,054	665,054	653,172	641,289	660,163	648,280	636,398	624,516	612,633	631,507	619,624	607,742	595,860	583,977	572,095	560,213	548,330	536,448	524,566	512,683	500,801	488,919	477,036	465,154	453,272	441,389	429,507
Subtotal Cash Operating Expenses	734,859	734,859	734,859	722,976	711,094	729,967	718,085	706,203	694,320	682,438	701,312	689,429	677,547	665,665	653,782	641,900	630,018	618,135	606,253	594,371	582,488	570,606	558,724	546,841	534,959	523,077	511,194	499,312
(iii) Non-cash Expenses																												
Depreciation (New Assets)	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135
Total Non-cash Expenses	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135	905,135
Total Incremental Expenses	1,639,994	1,639,994	1,639,994	1,628,112	1,616,230	1,635,103	1,623,221	1,611,338	1,599,456	1,587,574	1,606,447	1,594,565	1,582,682	1,570,800	1,558,918	1,547,035	1,535,153	1,523,271	1,511,388	1,499,506	1,487,624	1,475,741	1,463,859	1,451,977	1,440,094	1,428,212	1,416,330	1,404,447
Net Incremental Income (Loss) From Operations	1,782,079	1,782,591	1,783,103	1,795,497	1,807,891	1,789,530	1,801,924	1,814,319	1,826,713	1,839,108	1,820,308	1,832,263	1,844,219	1,856,175	1,868,130	1,880,086	1,892,041	1,903,997	1,915,953	1,927,908	1,939,864	1,951,820	1,963,776	1,975,731	1,987,687	1,999,643	2,011,599	1,231,791
Net Incremental Income Before Tax	1,782,079	1,782,591	1,783,103	1,795,497	1,807,891	1,789,530	1,801,924	1,814,319	1,826,713	1,839,108	1,820,308	1,832,263	1,844,219	1,856,175	1,868,130	1,880,086	1,892,041	1,903,997	1,915,953	1,927,908	1,939,864	1,951,820	1,963,776	1,975,731	1,987,687	1,999,643	2,011,599	1,231,791
Income Tax[a]	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax Expense	623,728	623,907	624,086	628,424	632,762	626,335	630,673	635,012	639,350	643,688	637,108	641,292	645,477	649,661	653,846	658,030	662,215	666,399	670,583	674,768	678,952	683,137	687,321	691,506	695,690	699,875	704,059	431,127
Net Incremental Profit After Tax	1,158,351	1,158,684	1,159,017	1,167,073	1,175,129	1,163,194	1,171,251	1,179,307	1,187,364	1,195,420	1,183,200	1,190,971	1,198,742	1,206,514	1,214,285	1,222,056	1,229,827	1,237,598	1,245,369	1,253,140	1,260,912	1,268,683	1,276,454	1,284,225	1,291,997	1,299,768	1,307,539	800,664
Efficiency Ratio:																												
1) Operating ratio[b]	0.48	0.48	0.48	0.48	0.47	0.48	0.47	0.47	0.47	0.46	0.47	0.47	0.46	0.46	0.45	0.45	0.45	0.44	0.44	0.44	0.43	0.43	0.43	0.42	0.42	0.42	0.41	0.53
2) Break-even point in PhP[c]	734,859	734,859	734,859	722,976	711,094	729,967	718,085	706,203	694,320	682,438	701,312	689,429	677,547	665,665	653,782	641,900	630,018	618,135	606,253	594,371	582,488	570,606	558,724	546,841	534,959	523,077	511,194	499,312
Benefit:Cost Ratio:	2.09	2.09	2.09	2.10	2.12	2.09	2.11	2.13	2.14	2.16	2.13	2.15	2.17	2.18	2.20	2.22	2.23	2.25	2.27	2.29	2.30	2.32	2.34	2.36	2.38	2.40	2.42	1.88
Income Ratios:																												
1) Return on sales[d]	34%	34%	34%	34%	34%	34%	34%	34%	35%	35%	35%	35%	35%	35%	35%	36%	36%	36%	36%	37%	37%	37%	37%	37%	38%	38%	38%	30%

[a] Income tax assumed at 35% of net profit after cost of operation.

[b] Operating ratio = Cost of operation ÷ Total revenue

[c] Breakeven point (PhP) = Total fixed expenses + (Total revenue x (total variable expenses ÷ Total revenue))

[d] Return on sales = Net profit after tax and debt service ÷ Total revenue

Table 12.2.11 Projected Incremental Profit and Loss Statement - Subic Municipal Fish Port

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
A. Incremental Revenue																												
Permits and Licenses	247,733	252,465	257,287	262,201	267,209	272,313	277,514	282,814	288,216	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721	293,721
Service Income	394,578	399,151	403,812	408,562	413,403	418,336	423,363	428,486	433,708	439,029	439,029	439,029	439,029	439,029	439,029	439,029	439,029	439,029	439,029	439,029	439,029	439,029	439,029	439,029	439,029	439,029	439,029	283,904
Business Income	3,451,321	3,502,366	3,554,386	3,607,400	3,661,426	3,716,484	3,772,594	3,829,775	3,888,049	3,947,436	3,978,986	4,011,140	4,043,907	4,077,301	4,111,332	4,146,013	4,181,356	4,217,375	4,254,082	4,291,489	4,329,612	4,368,462	4,408,054	4,448,403	4,489,522	4,531,427	4,574,132	4,140,770
Subtotal Incremental Revenue	4,093,631	4,153,982	4,215,485	4,278,163	4,342,038	4,407,133	4,473,471	4,541,076	4,609,973	4,680,185	4,711,736	4,743,889	4,776,657	4,810,050	4,844,081	4,878,763	4,914,106	4,950,125	4,986,831	5,024,239	5,062,361	5,101,211	5,140,804	5,181,152	5,222,272	5,264,176	5,306,881	4,718,395
B. Incremental Expenses																												
1. Cash Operating Expenses																												
(i) Variable Expenses																												
Electricity	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090	24,090
Water	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800	19,800
Miscellaneous	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389
Subtotal Variable Expenses	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279	48,279
(ii) Fixed Expenses																												
Interest	195	421,958	421,958	421,958	405,079	388,201	371,323	354,444	337,566	320,688	303,809	286,931	270,053	253,175	236,296	219,418	202,540	185,661	168,783	151,905	135,026	118,148	101,270	84,392	67,513	50,635	33,757	16,878
Maintenance	208,030	208,030	208,030	208,030	208,030	269,993	269,993	269,993	269,993	269,993	331,957	331,957	331,957	331,957	331,957	331,957	331,957	331,957	331,957	331,957	331,957	331,957	331,957	331,957	331,957	331,957	331,957	331,957
Personnel	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978	227,978
Subtotal Fixed Expenses	436,203	857,966	857,966	857,966	841,087	886,173	869,294	852,416	835,538	818,660	863,745	846,867	829,988	813,110	796,232	779,353	762,475	745,597	728,719	711,840	694,962	678,084	661,205	644,327	627,449	610,570	593,692	576,814
Subtotal Cash Operating Expenses	484,482	906,245	906,245	906,245	889,366	934,452	917,573	900,695	883,817	866,939	912,024	895,146	878,267	861,389	844,511	827,632	810,754	793,876	776,998	760,119	743,241	726,363	709,484	692,606	675,728	658,849	641,971	625,093
(iii) Non-cash Expenses																												
Depreciation (New Assets)	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445
Total Non-cash Expenses	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445	1,346,445
Total Incremental Expenses	1,830,926	2,252,689	2,252,689	2,252,689	2,235,811	2,280,897	2,264,018	2,247,140	2,230,262	2,213,383	2,258,469	2,241,590	2,224,712	2,207,834	2,190,956	2,174,077	2,157,199	2,140,321	2,123,442	2,106,564	2,089,686	2,072,807	2,055,929	2,039,051	2,022,173	2,005,294	1,988,416	1,971,538
Net Incremental Income (Loss) From Operations	2,262,705	1,901,292	1,962,795	2,025,473	2,106,226	2,126,236	2,209,453	2,293,936	2,379,711	2,466,802	2,453,267	2,502,299	2,551,945	2,602,216	2,653,126	2,704,685	2,756,907	2,809,804	2,863,389	2,917,675	2,972,675	3,028,404	3,084,875	3,142,102	3,200,099	3,258,882	3,318,465	2,746,857
Net Incremental Income Before Tax	2,262,705	1,901,292	1,962,795	2,025,473	2,106,226	2,126,236	2,209,453	2,293,936	2,379,711	2,466,802	2,453,267	2,502,299	2,551,945	2,602,216	2,653,126	2,704,685	2,756,907	2,809,804	2,863,389	2,917,675	2,972,675	3,028,404	3,084,875	3,142,102	3,200,099	3,258,882	3,318,465	2,746,857
Income Tax[a]	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax Expense	791,947	665,452	686,978	708,916	737,179	744,183	773,308	802,878	832,899	863,381	858,644	875,805	893,181	910,776	928,594	946,640	964,918	983,431	1,002,186	1,021,186	1,040,436	1,059,941	1,079,706	1,099,736	1,120,035	1,140,609	1,161,463	961,400
Net Incremental Profit After Tax	1,470,758	1,235,840	1,275,817	1,316,558	1,369,047	1,382,053	1,436,144	1,491,059	1,546,812	1,603,421	1,594,624	1,626,494	1,658,764	1,691,441	1,724,532	1,758,045	1,791,990	1,826,373	1,861,203	1,896,489	1,932,239	1,968,463	2,005,169	2,042,366	2,080,064	2,118,273	2,157,002	1,785,457
Efficiency Ratio:																												
1) Operating ratio[b]	0.45	0.54	0.53	0.53	0.51	0.52	0.51	0.49	0.48	0.47	0.48	0.47	0.47	0.46	0.45	0.45	0.44	0.43	0.43	0.42	0.41	0.41	0.40	0.39	0.39	0.38	0.37	0.42
2) Break-even point in PhP[c]	484,482	906,245	906,245	906,245	889,366	934,452	917,573	900,695	883,817	866,939	912,024	895,146	878,267	861,389	844,511	827,632	810,754	793,876	776,998	760,119	743,241	726,363	709,484	692,606	675,728	658,849	641,971	625,093
Benefit:Cost Ratio:	2.24	1.84	1.87	1.90	1.94	1.93	1.98	2.02	2.07	2.11	2.09	2.12	2.15	2.18	2.21	2.24	2.28	2.31	2.35	2.39	2.42	2.46	2.50	2.54	2.58	2.63	2.67	2.39
Income Ratios:																												
1) Return on sales[d]	36%	30%	30%	31%	32%	31%	32%	33%	34%	34%	34%	34%	35%	35%	36%	36%	36%	37%	37%	38%	38%	39%	39%	39%	40%	40%	41%	38%

[a] Income tax assumed at 35% of net profit after cost of operation.

[b] Operating ratio = Cost of operation ÷ Total revenue

[c] Breakeven point (PhP) = Total fixed expenses + (Total revenue x (total variable expenses ÷ Total revenue))

[d] Return on sales = Net profit after tax and debt service ÷ Total revenue

Table 12.3.1 Projected Cash Flow Statement - Bislig Fish Port Complex

Item	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
1. Inflow																																
Revenue						50,627,403	61,090,460	67,826,740	71,748,060	76,186,426	81,210,596	114,059,659	120,499,497	127,791,300	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368
Net internal cash generation							-	-	-	-	-	-	-	-	-	-	-	-	-	48,855,855	-	-	-	-	382,295,482	-	-	-	-	530,594,378	-	-
JICA loan proceeds	-	-	49,924,336	351,257,678	532,328,754	4,450,027	4,450,027	-																								
Government equity contribution	-	20,000,000	57,636,883	85,883,953	-																											
Total Inflow	-	20,000,000	107,561,219	437,141,631	532,328,754	55,077,430	65,540,488	67,826,740	71,748,060	76,186,426	81,210,596	114,059,659	120,499,497	127,791,300	136,048,368	136,048,368	136,048,368	136,048,368	136,048,368	184,904,223	136,048,368	136,048,368	136,048,368	136,048,368	518,343,849	136,048,368	136,048,368	136,048,368	136,048,368	666,642,746	136,048,368	136,048,368
2. Outflow																																
Cash operating expenses						12,842,273	12,842,273	12,842,273	12,842,273	12,842,273	16,361,410	16,361,410	16,361,410	16,361,410	16,361,410	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572
Capital investments	-	20,000,000	107,561,219	437,141,631	532,328,754																											
Total Outflow	-	20,000,000	107,561,219	437,141,631	532,328,754	12,842,273	12,842,273	12,842,273	12,842,273	12,842,273	16,361,410	16,361,410	16,361,410	16,361,410	16,361,410	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572	20,501,572
3. Net Flow Before Financing	-			-	-	42,235,158	52,698,215	54,984,467	58,905,787	63,344,154	64,849,186	97,698,249	104,138,087	111,429,890	119,686,957	115,546,795	115,546,795	115,546,795	115,546,795	164,402,651	115,546,795	115,546,795	115,546,795	115,546,795	497,842,277	115,546,795	115,546,795	115,546,795	115,546,795	646,141,173	115,546,795	115,546,795
4. Financing																																
Add: Government/PFDA investment	-	20,000,000	57,636,883	85,883,953	-															48,855,855					382,295,482							
Add: Loans received																																
JICA Loan	-	-	49,924,336	351,257,678	532,328,754	4,450,027	4,450,027	-																								
Total GOP and loan	-	20,000,000	107,561,219	437,141,631	532,328,754	4,450,027	4,450,027	-	-	-	-	-	-	-	-	-	-	-	-	48,855,855	-	-	-	-	382,295,482	-	-	-	-	-	-	-
Less: Repayment of loan																																
a. Investment and debt service																																
Interest	-	-	4,992	4,370,690	10,977,321	10,977,766	10,988,196	10,548,668	10,109,140	9,669,612	9,230,085	8,790,557	8,351,029	7,911,501	7,471,973	7,032,445	6,592,918	6,153,390	5,713,862	5,274,334	4,834,806	4,395,278	3,955,751	3,516,223	3,076,695	2,637,167	2,197,639	1,758,111	1,318,584	879,056	439,528	439,528
Repayment of principal	-	-	-	-	-	-	-	-	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433	37,696,433
Subtotal repayment on loan	-	-	4,992	4,370,690	10,977,321	10,977,766	10,988,196	10,548,668	47,805,573	47,366,045	46,926,518	46,486,990	46,047,462	45,607,934	45,168,406	44,728,878	44,289,350	43,849,823	43,410,295	42,970,767	42,531,239	42,091,711	41,652,183	41,212,656	40,773,128	40,333,600	39,894,072	39,454,544	39,015,016	38,575,489	38,135,961	38,135,961
5. Net Financing	-	20,000,000	107,556,226	432,770,941	521,351,433	(6,527,739)	(6,538,168)	(10,548,668)	(47,805,573)	(47,366,045)	(46,926,518)	(46,486,990)	(46,047,462)	(45,607,934)	(45,168,406)	(44,728,878)	(44,289,350)	(43,849,823)	(43,410,295)	5,885,088	(42,531,239)	(42,091,711)	(41,652,183)	(41,212,656)	341,522,354	(40,333,600)	(39,894,072)	(39,454,544)	(39,015,016)	(38,575,489)	(38,135,961)	(38,135,961)
6. Net Flow After Financing	-	(20,000,000)	(107,556,226)	(432,770,941)	(521,351,433)	35,707,419	46,160,046	44,435,799	11,100,214	15,978,108	17,922,668	51,211,259	58,090,625	65,821,956	74,518,551	70,817,917	71,257,445	71,696,973	72,136,501	72,576,028	73,015,556	73,455,084	73,894,612	74,334,140	74,773,668	75,213,195	75,652,723	76,092,251	76,531,779	607,565,685	77,410,835	77,410,835
7. Less: Income Tax Paid						-	1,528,228	3,882,275	5,408,572	7,115,835	7,796,431	19,447,438	21,855,216	24,561,182	27,604,990	26,309,768	26,463,603	26,617,438	26,771,273	26,925,107	27,078,942	27,232,777	27,386,612	27,540,446	27,694,281	27,848,116	28,001,951	28,155,785	28,309,620	28,463,455	28,617,290	28,771,124
8. Net flow After Financing and Taxes	-	(20,000,000)	(107,556,226)	(432,770,941)	(521,351,433)	35,707,419	44,631,818	40,553,523	5,691,641	8,862,273	10,126,237	31,763,821	36,235,409	41,260,774	46,913,561	44,508,149	44,793,842	45,079,535	45,365,228	45,650,921	45,936,614	46,222,307	46,508,000	46,793,693	47,079,386	47,365,080	47,650,773	47,936,466	48,222,159	579,102,230	48,793,545	48,639,710
9. Accumulated (Cash)						35,707,419	80,339,237	120,892,761	126,584,402	135,446,675	145,572,912	177,336,733	213,572,142	254,832,916	301,746,477	346,254,625	391,048,467	436,128,002	481,493,230	478,288,295	524,224,910	570,447,217	616,955,217	663,748,910	328,532,815	375,897,895	423,548,667	471,485,133	519,707,292	1,098,809,522	1,147,603,067	1,196,242,777
FIRR =	**3.84%**																															
Benefit-cost ratio =	**2.67**																															

Table 12.3.2 Projected Cash Flow Statement - Camaligan Fish Port Complex

Item	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
1. Inflow																																
Revenue						47,617,938	47,654,303	47,681,453	47,708,875	47,736,571	47,764,544	47,792,797	47,821,332	47,850,152	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261
Net internal cash generation							-	-	-	-	-	-	-	-	-	-	-	-	-	11,262,014	-	-	-	-	94,394,602	-	-	-	-	132,362,738		-
JICA loan proceeds	-	18,362,708	102,217,164	137,387,904	98,016,285	1,958,025	1,958,025	-	-																							
Government equity contribution	-		16,999,006	22,648,556	17,140,490																											
Total Inflow	-	18,362,708	119,216,170	160,036,460	115,156,775	49,575,963	49,612,328	47,681,453	47,708,875	47,736,571	47,764,544	47,792,797	47,821,332	47,850,152	47,879,261	47,879,261	47,879,261	47,879,261	47,879,261	59,141,275	47,879,261	47,879,261	47,879,261	47,879,261	142,273,863	47,879,261	47,879,261	47,879,261	47,879,261	180,241,999	47,879,261	47,879,261
2. Outflow																																
Cash operating expenses						9,940,020	9,940,020	9,940,020	9,940,020	9,940,020	10,958,413	10,958,413	10,958,413	10,958,413	10,958,413	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805
Capital investments	-	18,362,708	119,216,170	160,036,460	115,156,775																											
Total Outflow	-	18,362,708	119,216,170	160,036,460	115,156,775	9,940,020	9,940,020	9,940,020	9,940,020	9,940,020	10,958,413	10,958,413	10,958,413	10,958,413	10,958,413	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805	11,976,805
3. Net Flow Before Financing	-			-	-	39,635,943	39,672,308	37,741,434	37,768,855	37,796,551	36,806,131	36,834,384	36,862,919	36,891,740	36,920,849	35,902,456	35,902,456	35,902,456	35,902,456	47,164,470	35,902,456	35,902,456	35,902,456	35,902,456	130,297,058	35,902,456	35,902,456	35,902,456	35,902,456	168,265,194	35,902,456	35,902,456
4. Financing																																
Add: Government/PFDA investment	-	-	16,999,006	22,648,556	17,140,490															11,262,014					94,394,602							
Add: Loans received																																
JICA Loan	-	18,362,708	102,217,164	137,387,904	98,016,285	1,958,025	1,958,025	-																								
Total GOP and loan	-	18,362,708	119,216,170	160,036,460	115,156,775	1,958,025	1,958,025	-	-	-	-	-	-	-	-	-	-	-	-	11,262,014	-	-	-	-	94,394,602	-	-	-	-	-	-	-
Less: Repayment of loan																																
a. Investment and debt service																																
Interest	-	-	1,836	1,253,519	2,953,714	2,953,714	2,953,910	4,216,512	4,047,852	3,879,191	3,710,531	3,541,870	3,373,210	3,204,549	3,035,889	2,867,228	2,698,568	2,529,907	2,361,247	2,192,586	2,023,926	1,855,265	1,686,605	1,517,944	1,349,284	1,180,623	1,011,963	843,302	674,642	505,981	337,321	168,660
Repayment of principal	-	-	-	-	-	-	-	-	-	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004	14,396,004
Subtotal repayment on loan	-	-	1,836	1,253,519	2,953,714	2,953,714	2,953,910	4,216,512	4,047,852	18,275,196	18,106,535	17,937,875	17,769,214	17,600,554	17,431,893	17,263,233	17,094,572	16,925,912	16,757,251	16,588,591	16,419,930	16,251,270	16,082,609	15,913,949	15,745,288	15,576,628	15,407,967	15,239,307	15,070,646	14,901,986	14,733,325	14,564,665
5. Net Financing	-	18,362,708	119,214,333	158,782,941	112,203,061	(995,689)	(995,885)	(4,216,512)	(4,047,852)	(18,275,196)	(18,106,535)	(17,937,875)	(17,769,214)	(17,600,554)	(17,431,893)	(17,263,233)	(17,094,572)	(16,925,912)	(16,757,251)	(5,326,577)	(16,419,930)	(16,251,270)	(16,082,609)	(15,913,949)	78,649,314	(15,576,628)	(15,407,967)	(15,239,307)	(15,070,646)	(14,901,986)	(14,733,325)	(14,564,665)
6. Net Flow After Financing	-	(18,362,708)	(119,214,333)	(158,782,941)	(112,203,061)	38,640,254	38,676,423	33,524,921	33,721,004	19,521,356	18,699,596	18,896,509	19,093,705	19,291,186	19,488,955	18,639,223	18,807,883	18,976,544	19,145,204	19,313,865	19,482,525	19,651,186	19,819,846	19,988,507	20,157,167	20,325,828	20,494,488	20,663,149	20,831,809	153,363,208	21,169,130	21,337,791
7. Less: Income Tax Paid						7,573,644	7,144,461	7,212,995	7,281,623	7,350,348	7,062,732	7,131,652	7,200,670	7,269,789	7,339,008	7,041,602	7,100,633	7,159,664	7,218,695	7,277,726	7,336,758	7,395,789	7,454,820	7,513,851	7,572,882	7,631,913	7,690,945	7,749,976	7,809,007	7,868,038	7,927,069	7,986,100
8. Net flow After Financing and Taxes	-	(18,362,708)	(119,214,333)	(158,782,941)	(112,203,061)	31,066,610	31,531,963	26,311,927	26,439,380	12,171,007	11,636,864	11,764,857	11,893,034	12,021,397	12,149,947	11,597,621	11,707,250	11,816,880	11,926,509	12,036,138	12,145,768	12,255,397	12,365,026	12,474,656	12,584,285	12,693,914	12,803,544	12,913,173	13,022,802	145,495,170	13,242,061	13,351,690
9. Accumulated (Cash)						31,066,610	62,598,573	88,910,499	115,349,880	127,520,887	139,157,751	150,922,608	162,815,643	174,837,040	186,986,987	198,584,608	210,291,858	222,108,738	234,035,247	234,809,371	246,955,139	259,210,536	271,575,562	284,050,218	202,239,901	214,933,815	227,737,359	240,650,532	253,673,334	399,168,504	412,410,564	425,762,255
FIRR =	**3.92%**																															
Benefit-cost ratio =	**2.34**																															

Table 12.3.3 Projected Cash Flow Statement - Davao Fish Port Complex

Item	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
1. Inflow																																
Revenue						15,067,694	15,296,594	15,529,686	15,767,049	16,008,762	16,254,909	16,505,573	16,760,839	17,020,794	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792
Net internal cash generation							-	-	-	-	-	-	-	-	-	-	-	-	-	13,071,173	-	-	-	-	7,293,491	-	-	-	-	32,336,004	-	-
JICA loan proceeds	-	-	8,382,472	62,913,944	88,680,796	890,024	890,024																									
Government equity contribution	-		306,529	9,856,094	14,558,630																											
Total Inflow	-	-	8,689,001	72,770,037	103,239,427	15,957,718	16,186,618	15,529,686	15,767,049	16,008,762	16,254,909	16,505,573	16,760,839	17,020,794	17,253,792	17,253,792	17,253,792	17,253,792	17,253,792	30,324,965	17,253,792	17,253,792	17,253,792	17,253,792	24,547,283	17,253,792	17,253,792	17,253,792	17,253,792	49,589,796	17,253,792	17,253,792
2. Outflow																																
Cash operating expenses						895,212	895,212	895,212	895,212	895,212	1,098,859	1,098,859	1,098,859	1,098,859	1,098,859	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505
Capital investments	-	-	8,689,001	72,770,037	103,239,427																											
Total Outflow	-	-	8,689,001	72,770,037	103,239,427	895,212	895,212	895,212	895,212	895,212	1,098,859	1,098,859	1,098,859	1,098,859	1,098,859	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505	1,302,505
3. Net Flow Before Financing	-			-	-	15,062,506	15,291,406	14,634,474	14,871,836	15,113,550	15,156,051	15,406,714	15,661,980	15,921,935	16,154,933	15,951,286	15,951,286	15,951,286	15,951,286	29,022,459	15,951,286	15,951,286	15,951,286	15,951,286	23,244,777	15,951,286	15,951,286	15,951,286	15,951,286	48,287,290	15,951,286	15,951,286
4. Financing																																
Add: Government/PFDA investment	-		306,529	9,856,094	14,558,630															13,071,173					7,293,491							
Add: Loans received																																
JICA Loan	-	-	8,382,472	62,913,944	88,680,796	890,024	890,024																									
Total GOP and loan	-	-	8,689,001	72,770,037	103,239,427	890,024	890,024	-	-	-	-	-	-	-	-	-	-	-	-	13,071,173	-	-	-	-	7,293,491	-	-	-	-	-	-	-
Less: Repayment of loan																																
a. Investment and debt service																																
Interest	-	-	-	838	1,891,614	1,890,776	1,890,865	1,890,954	1,815,315	1,739,677	1,664,039	1,588,401	1,512,763	1,437,125	1,361,487	1,285,848	1,210,210	1,134,572	1,058,934	983,296	907,658	832,020	756,381	680,743	605,105	529,467	453,829	378,191	302,553	226,914	151,276	75,638
Repayment of principal	-	-	-	-	-	-	-	-	-	-	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290	6,470,290
Subtotal repayment on loan	-	-	-	838	1,891,614	1,890,776	1,890,865	1,890,954	1,815,315	1,739,677	8,134,330	8,058,691	7,983,053	7,907,415	7,831,777	7,756,139	7,680,501	7,604,863	7,529,224	7,453,586	7,377,948	7,302,310	7,226,672	7,151,034	7,075,396	6,999,757	6,924,119	6,848,481	6,772,843	6,697,205	6,621,567	6,545,929
5. Net Financing	-	-	8,689,001	72,769,199	101,347,813	(1,000,752)	(1,000,841)	(1,890,954)	(1,815,315)	(1,739,677)	(8,134,330)	(8,058,691)	(7,983,053)	(7,907,415)	(7,831,777)	(7,756,139)	(7,680,501)	(7,604,863)	(7,529,224)	5,617,587	(7,377,948)	(7,302,310)	(7,226,672)	(7,151,034)	218,096	(6,999,757)	(6,924,119)	(6,848,481)	(6,772,843)	(6,697,205)	(6,621,567)	(6,545,929)
6. Net Flow After Financing	-	-	(8,689,001)	(72,769,199)	(101,347,813)	14,061,754	14,290,565	12,743,520	13,056,521	13,373,873	7,021,721	7,348,023	7,678,927	8,014,520	8,323,156	8,195,147	8,270,785	8,346,424	8,422,062	8,497,700	8,573,338	8,648,976	8,724,614	8,800,252	8,875,891	8,951,529	9,027,167	9,102,805	9,178,443	41,590,085	9,329,719	9,405,358
7. Less: Income Tax Paid						2,323,703	2,403,787	2,485,338	2,594,888	2,705,961	2,747,310	2,861,515	2,977,332	3,094,789	3,202,812	3,158,009	3,184,482	3,210,956	3,237,429	3,263,902	3,290,376	3,316,849	3,343,322	3,369,796	3,396,269	3,422,742	3,449,216	3,475,689	3,502,162	3,528,636	3,555,109	3,581,582
8. Net flow After Financing and Taxes	-	-	(8,689,001)	(72,769,199)	(101,347,813)	11,738,051	11,886,779	10,258,182	10,461,633	10,667,912	4,274,411	4,486,508	4,701,595	4,919,731	5,120,344	5,037,138	5,086,303	5,135,468	5,184,633	5,233,798	5,282,962	5,332,127	5,381,292	5,430,457	5,479,622	5,528,786	5,577,951	5,627,116	5,676,281	38,061,450	5,774,610	5,823,775
9. Accumulated (Cash)						11,738,051	23,624,830	33,883,012	44,344,645	55,012,557	59,286,968	63,773,476	68,475,071	73,394,802	78,515,146	83,552,284	88,638,587	93,774,055	98,958,688	91,121,312	96,404,275	101,736,402	107,117,694	112,548,151	110,734,281	116,263,067	121,841,019	127,468,134	133,144,415	171,205,865	176,980,475	182,804,250
FIRR =	**3.33%**																															
Benefit-cost ratio =	**2.65**																															

Table 12.3.4 Projected Cash Flow Statement - Iloilo Fish Port Complex

Item	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
1. Inflow																																
Revenue						178,182,387	179,042,397	180,893,315	181,951,291	183,121,245	186,043,722	187,249,039	188,472,435	189,714,182	190,974,555	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502	194,444,502
Net internal cash generation							-	-	-	-	-	-	-	-	-	-	-	-	-	334,075,190	-	-	-	-	409,188,146	-	-	-	-	628,395,768		-
JICA loan proceeds	-	69,815,340	237,131,134	948,348,197	79,727,602	6,408,006	6,408,006																									
Government equity contribution	-	-	38,317,747	151,273,200	13,988,594																											
Total Inflow	-	69,815,340	275,448,880	1,099,621,397	93,716,196	184,590,393	185,450,403	180,893,315	181,951,291	183,121,245	186,043,722	187,249,039	188,472,435	189,714,182	190,974,555	194,444,502	194,444,502	194,444,502	194,444,502	528,519,692	194,444,502	194,444,502	194,444,502	194,444,502	603,632,648	194,444,502	194,444,502	194,444,502	194,444,502	822,840,270	194,444,502	194,444,502
2. Outflow																																
Cash operating expenses						48,942,446	48,942,446	48,942,446	48,942,446	48,942,446	48,942,446	55,121,214	55,121,214	55,121,214	55,121,214	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512
Capital investments	-	69,815,340	275,448,880	1,099,621,397	93,716,196																											
Total Outflow	-	69,815,340	275,448,880	1,099,621,397	93,716,196	48,942,446	48,942,446	48,942,446	48,942,446	48,942,446	48,942,446	55,121,214	55,121,214	55,121,214	55,121,214	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512	61,986,512
3. Net Flow Before Financing	-			-	-	135,647,947	136,507,957	131,950,869	133,008,844	134,178,799	137,101,276	132,127,824	133,351,220	134,592,967	135,853,341	132,457,990	132,457,990	132,457,990	132,457,990	466,533,179	132,457,990	132,457,990	132,457,990	132,457,990	541,646,136	132,457,990	132,457,990	132,457,990	132,457,990	760,853,758	132,457,990	132,457,990
4. Financing																																
Add: Government/PFDA investment	-	-	38,317,747	151,273,200	13,988,594															334,075,190					409,188,146							
Add: Loans received																																
JICA Loan	-	69,815,340	237,131,134	948,348,197	79,727,602	6,408,006	6,408,006																									
Total GOP and loan	-	69,815,340	275,448,880	1,099,621,397	93,716,196	6,408,006	6,408,006	-	-	-	-	-	-	-	-	-	-	-	-	334,075,190	-	-	-	-	409,188,146	-	-	-	-	-	-	-
Less: Repayment of loan																																
a. Investment and debt service																																
Interest	-	-	6,982	2,918,932	14,799,128	15,779,012	15,779,653	15,780,294	15,149,082	14,517,870	13,886,658	13,255,447	12,624,235	11,993,023	11,361,811	10,730,600	10,099,388	9,468,176	8,836,964	8,205,753	7,574,541	6,943,329	6,312,117	5,680,906	5,049,694	4,418,482	3,787,270	3,156,059	2,524,847	1,893,635	1,262,423	631,212
Repayment of principal	-	-	-	-	-	-	-	-	-	-	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531	53,913,531
Subtotal repayment on loan	-	-	6,982	2,918,932	14,799,128	15,779,012	15,779,653	15,780,294	15,149,082	14,517,870	67,800,190	67,168,978	66,537,766	65,906,555	65,275,343	64,644,131	64,012,919	63,381,708	62,750,496	62,119,284	61,488,072	60,856,861	60,225,649	59,594,437	58,963,225	58,332,014	57,700,802	57,069,590	56,438,378	55,807,167	55,175,955	54,544,743
5. Net Financing	-	69,815,340	275,441,899	1,096,702,465	78,917,068	(9,371,006)	(9,371,647)	(15,780,294)	(15,149,082)	(14,517,870)	(67,800,190)	(67,168,978)	(66,537,766)	(65,906,555)	(65,275,343)	(64,644,131)	(64,012,919)	(63,381,708)	(62,750,496)	271,955,906	(61,488,072)	(60,856,861)	(60,225,649)	(59,594,437)	350,224,920	(58,332,014)	(57,700,802)	(57,069,590)	(56,438,378)	(55,807,167)	(55,175,955)	(54,544,743)
6. Net Flow After Financing	-	(69,815,340)	(275,441,899)	(1,096,702,465)	(78,917,068)	126,276,941	127,136,310	116,170,575	117,859,762	119,660,929	69,301,086	64,958,846	66,813,454	68,686,413	70,577,998	67,813,859	68,445,070	69,076,282	69,707,494	70,338,706	70,969,917	71,601,129	72,232,341	72,863,553	73,494,764	74,125,976	74,757,188	75,388,400	76,019,611	705,046,591	77,282,035	77,913,247
7. Less: Income Tax Paid						17,837,795	18,138,575	18,786,172	19,377,387	20,007,796	21,251,587	19,731,803	20,380,915	21,036,451	21,698,506	20,731,057	20,951,981	21,172,905	21,393,829	21,614,754	21,835,678	22,056,602	22,277,526	22,498,450	22,719,374	22,940,298	23,161,222	23,382,146	23,603,071	23,823,995	24,044,919	24,265,843
8. Net flow After Financing and Taxes	-	(69,815,340)	(275,441,899)	(1,096,702,465)	(78,917,068)	108,439,145	108,997,735	97,384,403	98,482,375	99,653,133	48,049,499	45,227,043	46,432,539	47,649,962	48,879,492	47,082,802	47,493,089	47,903,377	48,313,664	48,723,952	49,134,240	49,544,527	49,954,815	50,365,103	50,775,390	51,185,678	51,595,966	52,006,253	52,416,541	681,222,596	53,237,116	53,647,404
9. Accumulated (Cash)						108,439,145	217,436,880	314,821,284	413,303,659	512,956,792	561,006,291	606,233,335	652,665,873	700,315,835	749,195,327	796,278,129	843,771,218	891,674,595	939,988,259	654,637,021	703,771,261	753,315,788	803,270,603	853,635,706	495,222,950	546,408,628	598,004,594	650,010,847	702,427,388	1,383,649,984	1,436,887,100	1,490,534,504
FIRR =	**3.99%**																															
Benefit-cost ratio =	**2.28**																															

Table 12.3.5 Projected Cash Flow Statement - Lucena Fish Port Complex

Item	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
1. Inflow																																
Revenue						31,575,303	31,900,729	32,228,606	35,604,677	35,962,141	36,322,312	36,685,210	37,036,837	37,386,076	37,737,809	37,940,368	38,146,751	38,260,621	38,375,574	38,491,618	38,608,766	38,727,026	38,846,411	38,966,931	39,088,596	39,211,419	39,335,409	39,460,579	39,586,940	39,714,503	39,843,280	39,973,283
Net internal cash generation							-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,662,647	-	-	-	-	43,711,667	-	-	-	80,455,905	-	-
JICA loan proceeds	-	-	16,811,256	132,591,895	159,658,287	1,780,002	1,780,002																									
Government equity contribution	-	-	1,135,099	21,729,859	26,180,517																											
Total Inflow	-	-	17,946,355	154,321,754	185,838,804	33,355,305	33,680,731	32,228,606	35,604,677	35,962,141	36,322,312	36,685,210	37,036,837	37,386,076	37,737,809	37,940,368	38,146,751	38,260,621	38,375,574	38,491,618	59,271,413	38,727,026	38,846,411	38,966,931	39,088,596	82,923,086	39,335,409	39,460,579	39,586,940	120,170,408	39,843,280	39,973,283
2. Outflow																																
Cash operating expenses						2,090,922	2,090,922	2,090,922	2,090,922	2,090,922	2,090,922	2,734,666	2,734,666	2,734,666	2,734,666	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409
Capital investments	-	-	17,946,355	154,321,754	185,838,804																											
Total Outflow	-	-	17,946,355	154,321,754	185,838,804	2,090,922	2,090,922	2,090,922	2,090,922	2,090,922	2,090,922	2,734,666	2,734,666	2,734,666	2,734,666	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409	3,378,409
3. Net Flow Before Financing	-			-	-	31,264,383	31,589,808	30,137,684	33,513,755	33,871,218	34,231,389	33,950,545	34,302,171	34,651,410	35,003,143	34,561,960	34,768,342	34,882,213	34,997,165	35,113,210	55,893,004	35,348,618	35,468,002	35,588,522	35,710,188	79,544,677	35,957,001	36,082,171	36,208,532	116,792,000	36,464,872	36,594,874
4. Financing																																
Add: Government investment	-	-	1,135,099	21,729,859	26,180,517	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,662,647	-	-	-	-	43,711,667	-	-	-		-	-
Add: Loans received																																
JICA Loan	-	-	16,811,256	132,591,895	159,658,287	1,780,002	1,780,002	-																								
Total GOP and loan	-	-	17,946,355	154,321,754	185,838,804	1,780,002	1,780,002	-	-	-	-	-	-	-	-	-	-	-	-	-	20,662,647	-	-	-	-	43,711,667	-	-	-	-	-	-
Less: Repayment of loan																																
a. Investment and debt service																																
Interest	-	-	-	1,681	3,625,831	3,625,831	3,626,009	3,626,187	3,481,139	3,336,092	3,191,044	3,045,997	2,900,949	2,755,902	2,610,854	2,465,807	2,320,760	2,175,712	2,030,665	1,885,617	1,740,570	1,595,522	1,450,475	1,305,427	1,160,380	1,015,332	870,285	725,237	580,190	435,142	290,095	145,047
Repayment of principal	-	-	-	-	-	-	-	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858	12,504,858
Subtotal repayment on loan	-	-	-	1,681	3,625,831	3,625,831	3,626,009	16,131,044	15,985,997	15,840,950	15,695,902	15,550,855	15,405,807	15,260,760	15,115,712	14,970,665	14,825,617	14,680,570	14,535,522	14,390,475	14,245,427	14,100,380	13,955,332	13,810,285	13,665,237	13,520,190	13,375,143	13,230,095	13,085,048	12,940,000	12,794,953	12,649,905
5. Net Financing	-	-	17,946,355	154,320,072	182,212,973	(1,845,829)	(1,846,007)	(16,131,044)	(15,985,997)	(15,840,950)	(15,695,902)	(15,550,855)	(15,405,807)	(15,260,760)	(15,115,712)	(14,970,665)	(14,825,617)	(14,680,570)	(14,535,522)	(14,390,475)	6,417,220	(14,100,380)	(13,955,332)	(13,810,285)	(13,665,237)	30,191,477	(13,375,143)	(13,230,095)	(13,085,048)	(12,940,000)	(12,794,953)	(12,649,905)
6. Net Flow After Financing	-	-	(17,946,355)	(154,320,072)	(182,212,973)	29,418,554	29,743,801	14,006,639	17,527,758	18,030,269	18,535,487	18,399,690	18,896,364	19,390,650	19,887,431	19,591,295	19,942,725	20,201,643	20,461,643	20,722,735	20,984,930	21,248,238	21,512,670	21,778,237	22,044,950	22,312,820	22,581,858	22,852,076	23,123,484	103,851,999	23,669,919	23,944,969
7. Less: Income Tax Paid						5,688,320	5,802,156	5,916,851	7,149,242	7,325,121	7,501,948	7,454,419	7,628,255	7,801,255	7,975,128	7,871,480	7,994,481	8,085,102	8,176,102	8,267,484	8,359,253	8,451,410	8,543,962	8,636,910	8,730,260	8,824,014	8,918,178	9,012,754	9,107,747	9,203,160	9,298,999	9,395,266
8. Net flow After Financing and Taxes	-	-	(17,946,355)	(154,320,072)	(182,212,973)	23,730,234	23,941,645	8,089,788	10,378,515	10,705,148	11,033,539	10,945,271	11,268,110	11,589,396	11,912,303	11,719,815	11,948,244	12,116,541	12,285,541	12,455,250	12,625,677	12,796,827	12,968,708	13,141,327	13,314,690	13,488,806	13,663,681	13,839,322	14,015,737	94,648,839	14,370,920	14,549,703
9. Accumulated (Cash)						23,730,234	47,671,879	55,761,667	66,140,183	76,845,330	87,878,870	98,824,141	110,092,251	121,681,646	133,593,950	145,313,764	157,262,008	169,378,549	181,664,089	194,119,340	186,082,369	198,879,197	211,847,905	224,989,232	238,303,922	208,081,061	221,744,741	235,584,063	249,599,801	344,248,640	358,619,560	373,169,263
FIRR =	**4.27%**																															
Benefit-cost ratio =	**2.86**																															

Table 12.3.6 Projected Cash Flow Statement - Sual Fish Port Complex

Item	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
1. Inflow																																
Revenue						44,968,113	50,155,157	54,106,239	56,444,403	56,670,691	56,900,147	57,132,815	57,368,740	57,607,969	57,850,546	57,909,238	57,968,751	58,029,098	58,090,289	58,152,337	58,215,254	58,279,052	58,343,743	58,409,339	58,475,854	58,543,300	58,611,690	58,681,038	58,751,356	58,822,659	58,894,960	58,968,274
Net internal cash generation							-	-	-	-	-	-	-	-	-	-	-	-	-	-	34,260,755	-	-	-	-	163,300,698	-	-	-	180,522,531	-	
JICA loan proceeds	-	-	24,035,928	129,399,079	296,703,398	2,314,025	2,314,025																									
Government equity contribution	-	-	1,082,013	21,168,459	47,706,852																											
Total Inflow	-	-	25,117,941	150,567,538	344,410,250	47,282,139	52,469,183	54,106,239	56,444,403	56,670,691	56,900,147	57,132,815	57,368,740	57,607,969	57,850,546	57,909,238	57,968,751	58,029,098	58,090,289	58,152,337	92,476,009	58,279,052	58,343,743	58,409,339	58,475,854	221,843,998	58,611,690	58,681,038	58,751,356	239,345,190	58,894,960	58,968,274
2. Outflow																																
Cash operating expenses						6,901,597	6,901,597	6,901,597	6,901,597	6,901,597	8,607,527	8,607,527	8,607,527	8,607,527	8,607,527	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456
Capital investments	-	-	25,117,941	150,567,538	344,410,250																											
Total Outflow	-	-	25,117,941	150,567,538	344,410,250	6,901,597	6,901,597	6,901,597	6,901,597	6,901,597	8,607,527	8,607,527	8,607,527	8,607,527	8,607,527	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456	10,313,456
3. Net Flow Before Financing	-			-	-	40,380,541	45,567,585	47,204,642	49,542,805	49,769,093	48,292,620	48,525,288	48,761,214	49,000,442	49,243,020	47,595,782	47,655,296	47,715,642	47,776,834	47,838,882	82,162,553	47,965,596	48,030,287	48,095,883	48,162,398	211,530,542	48,298,234	48,367,582	48,437,900	229,031,734	48,581,505	48,654,818
4. Financing																																
Add: Government investment	-	-	1,082,013	21,168,459	47,706,852	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34,260,755	-	-	-	-	163,300,698	-	-	-	-	-	
Add: Loans received																																
JICA Loan	-	-	24,035,928	129,399,079	296,703,398	2,314,025	2,314,025																									
Total GOP and loan	-	-	25,117,941	150,567,538	344,410,250	2,314,025	2,314,025	-	-	-	-	-	-	-	-	-	-	-	-	-	34,260,755	-	-	-	-	163,300,698	-	-	-	-	-	-
Less: Repayment of loan																																
a. Investment and debt service																																
Interest	-	-	-	2,404	5,299,639	5,299,639	5,299,871	5,300,102	5,088,098	4,876,094	4,664,090	4,452,086	4,240,082	4,028,078	3,816,074	3,604,070	3,392,065	3,180,061	2,968,057	2,756,053	2,544,049	2,332,045	2,120,041	1,908,037	1,696,033	1,484,029	1,272,025	1,060,020	848,016	636,012	424,008	212,004
Repayment of principal	-	-	-	-	-	-	-	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658	18,190,658
Subtotal repayment on loan	-	-	-	2,404	5,299,639	5,299,639	5,299,871	23,490,761	23,278,756	23,066,752	22,854,748	22,642,744	22,430,740	22,218,736	22,006,732	21,794,728	21,582,724	21,370,720	21,158,715	20,946,711	20,734,707	20,522,703	20,310,699	20,098,695	19,886,691	19,674,687	19,462,683	19,250,679	19,038,675	18,826,670	18,614,666	18,402,662
5. Net Financing	-	-	25,117,941	150,565,134	339,110,611	(2,985,614)	(2,985,845)	(23,490,761)	(23,278,756)	(23,066,752)	(22,854,748)	(22,642,744)	(22,430,740)	(22,218,736)	(22,006,732)	(21,794,728)	(21,582,724)	(21,370,720)	(21,158,715)	(20,946,711)	13,526,047	(20,522,703)	(20,310,699)	(20,098,695)	(19,886,691)	143,626,011	(19,462,683)	(19,250,679)	(19,038,675)	(18,826,670)	(18,614,666)	(18,402,662)
6. Net Flow After Financing	-	-	(25,117,941)	(150,565,134)	(339,110,611)	37,394,927	42,581,740	23,713,881	26,264,049	26,702,341	25,437,872	25,882,544	26,330,473	26,781,706	27,236,288	25,801,054	26,072,572	26,344,923	26,618,118	26,892,170	27,167,091	27,442,893	27,719,588	27,997,188	28,275,707	28,555,157	28,835,551	29,116,903	29,399,226	210,205,063	29,966,838	30,252,156
7. Less: Income Tax Paid						6,080,964	7,896,348	9,279,146	10,171,705	10,325,107	9,882,542	10,038,178	10,194,953	10,352,885	10,511,988	10,009,656	10,104,688	10,200,010	10,295,629	10,391,547	10,487,769	10,584,300	10,681,143	10,778,303	10,875,785	10,973,592	11,071,730	11,170,203	11,269,016	11,368,174	11,467,681	11,567,542
8. Net flow After Financing and Taxes	-	-	(25,117,941)	(150,565,134)	(339,110,611)	31,313,963	34,685,391	14,434,736	16,092,345	16,377,234	15,555,329	15,844,366	16,135,520	16,428,822	16,724,300	15,791,398	15,967,884	16,144,912	16,322,489	16,500,623	16,679,322	16,858,593	17,038,445	17,218,885	17,399,922	17,581,565	17,763,821	17,946,700	18,130,209	198,836,890	18,499,157	18,684,614
9. Accumulated (Cash)						31,313,963	65,999,355	80,434,091	96,526,435	112,903,669	128,458,998	144,303,365	160,438,885	176,867,707	193,592,006	209,383,404	225,351,289	241,496,201	257,818,690	274,319,313	256,737,880	273,596,473	290,634,918	307,853,803	325,253,725	179,534,592	197,298,413	215,245,112	233,375,322	432,212,211	450,711,369	469,395,983
FIRR =	**4.15%**																															
Benefit-cost ratio =	**2.68**																															

Table 12.3.7 Projected Cash Flow Statement - Calabanga Fish Port Complex

Item	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
1. Inflow																															
Revenue				6,149,906	6,162,480	6,175,083	6,187,712	6,200,370	6,213,056	6,225,769	6,238,511	6,251,280	6,264,078	6,265,510	6,266,945	6,268,383	6,269,825	6,271,269	6,272,717	6,274,168	6,275,622	6,277,080	6,278,540	6,280,004	6,281,471	6,282,941	6,284,415	6,285,892	6,287,372	6,288,855	6,179,355
Net internal cash generation					-	-	-	-	-	-	-	-	-	-	-	-	-	11,672,333	-	-	-	-	-	-	-	-	-	-	-	-	14,061,921
JICA loan proceeds		2,871,344	48,780,128	-	-	-																									
Government equity contribution		295,533	7,898,547																												
Total Inflow	-	3,166,877	56,678,675	6,149,906	6,162,480	6,175,083	6,187,712	6,200,370	6,213,056	6,225,769	6,238,511	6,251,280	6,264,078	6,265,510	6,266,945	6,268,383	6,269,825	17,943,602	6,272,717	6,274,168	6,275,622	6,277,080	6,278,540	6,280,004	6,281,471	6,282,941	6,284,415	6,285,892	6,287,372	6,288,855	20,241,276
2. Outflow																															
Cash operating expenses				584,423	584,423	584,423	584,423	584,423	701,146	701,146	701,146	701,146	701,146	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870
Capital investments	-	3,166,877	56,678,675																												
Total Outflow	-	3,166,877	56,678,675	584,423	584,423	584,423	584,423	584,423	701,146	701,146	701,146	701,146	701,146	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870	817,870
3. Net Flow Before Financing		-	-	5,565,483	5,578,057	5,590,660	5,603,290	5,615,947	5,511,910	5,524,623	5,537,365	5,550,134	5,562,932	5,447,640	5,449,076	5,450,514	5,451,955	17,125,733	5,454,848	5,456,299	5,457,753	5,459,210	5,460,671	5,462,135	5,463,602	5,465,072	5,466,545	5,468,022	5,469,502	5,470,985	19,423,406
4. Financing																															
Add: Government/PFDA investment		295,533	7,898,547															11,672,333					-								
Add: Loans received																															
JICA Loan		2,871,344	48,780,128	-	-	-																									
Total GOP and loan	-	3,166,877	56,678,675	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,672,333	-	-	-	-	-	-	-	-	-	-	-	-	-
Less: Repayment of loan																															
a. Investment and debt service																															
Interest		-	-	287	604,029	604,029	604,029	579,868	555,707	531,546	507,385	483,223	459,062	434,901	410,740	386,579	362,418	338,256	314,095	289,934	265,773	241,612	217,451	193,289	169,128	144,967	120,806	96,645	72,484	48,322	24,161
Repayment of principal	-	-	-	-	-	-	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059	2,066,059
Subtotal repayment on loan	-	-	-	287	604,029	604,029	2,670,088	2,645,927	2,621,766	2,597,605	2,573,443	2,549,282	2,525,121	2,500,960	2,476,799	2,452,638	2,428,476	2,404,315	2,380,154	2,355,993	2,331,832	2,307,671	2,283,509	2,259,348	2,235,187	2,211,026	2,186,865	2,162,704	2,138,542	2,114,381	2,090,220
5. Net Financing	-	3,166,877	56,678,675	(287)	(604,029)	(604,029)	(2,670,088)	(2,645,927)	(2,621,766)	(2,597,605)	(2,573,443)	(2,549,282)	(2,525,121)	(2,500,960)	(2,476,799)	(2,452,638)	(2,428,476)	9,268,018	(2,380,154)	(2,355,993)	(2,331,832)	(2,307,671)	(2,283,509)	(2,259,348)	(2,235,187)	(2,211,026)	(2,186,865)	(2,162,704)	(2,138,542)	(2,114,381)	(2,090,220)
6. Net Flow After Financing	-	(3,166,877)	(56,678,675)	5,565,196	4,974,028	4,986,630	2,933,201	2,970,020	2,890,144	2,927,019	2,963,921	3,000,852	3,037,811	2,946,680	2,972,277	2,997,876	3,023,479	3,049,085	3,074,694	3,100,306	3,125,921	3,151,540	3,177,161	3,202,786	3,228,415	3,254,046	3,279,681	3,305,318	3,330,960	3,356,604	17,333,186
7. Less: Income Tax Paid				1,344,104	1,137,195	1,141,606	1,146,026	1,158,913	1,130,956	1,143,862	1,156,778	1,169,704	1,182,640	1,150,744	1,159,703	1,168,663	1,177,623	1,186,585	1,195,549	1,204,513	1,213,478	1,222,445	1,231,412	1,240,381	1,249,351	1,258,322	1,267,294	1,276,267	1,285,242	1,294,217	1,264,349
8. Net flow After Financing and Taxes	-	(3,166,877)	(56,678,675)	4,221,092	3,836,833	3,845,024	1,787,175	1,811,107	1,759,188	1,783,156	1,807,143	1,831,148	1,855,171	1,795,936	1,812,574	1,829,214	1,845,855	1,862,499	1,879,145	1,895,793	1,912,443	1,929,095	1,945,749	1,962,405	1,979,064	1,995,724	2,012,386	2,029,051	2,045,718	2,062,387	16,068,838
9. Accumulated (Cash)				4,221,092	8,057,925	11,902,949	13,690,124	15,501,232	17,260,419	19,043,576	20,850,718	22,681,866	24,537,037	26,332,974	28,145,548	29,974,761	31,820,617	22,010,783	23,889,928	25,785,721	27,698,163	29,627,258	31,573,007	33,535,413	35,514,476	37,510,200	39,522,587	41,551,638	43,597,356	45,659,742	61,728,580
FIRR =	**4.23%**																														
Benefit-cost ratio =	**2.72**																														

Table 12.3.8 Projected Cash Flow Statement – Sta. Cruz Fish Port Complex

Item	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
1. Inflow																															
Revenue				5,128,329	5,167,656	5,207,304	5,247,278	5,287,579	5,328,212	5,369,177	5,410,478	5,452,118	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	3,320,717
Net internal cash generation				-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,548,833	-	-	-	-	-	-	-	-	-	-	-	-	20,251,304
JICA loan proceeds		2,945,280	50,334,972	-	-																										
Government equity contribution		193,429	8,036,560																												
Total Inflow	-	3,138,709	58,371,533	5,128,329	5,167,656	5,207,304	5,247,278	5,287,579	5,328,212	5,369,177	5,410,478	5,452,118	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	7,042,931	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	5,494,099	23,572,021
2. Outflow																															
Cash operating expenses				541,809	541,809	541,809	541,809	541,809	557,298	557,298	557,298	557,298	557,298	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786
Capital investments	-	3,138,709	58,371,533																												
Total Outflow	-	3,138,709	58,371,533	541,809	541,809	541,809	541,809	541,809	557,298	557,298	557,298	557,298	557,298	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786	572,786
3. Net Flow Before Financing		-	-	4,586,520	4,625,846	4,665,495	4,705,469	4,745,770	4,770,914	4,811,879	4,853,180	4,894,820	4,936,801	4,921,313	4,921,313	4,921,313	4,921,313	6,470,145	4,921,313	4,921,313	4,921,313	4,921,313	4,921,313	4,921,313	4,921,313	4,921,313	4,921,313	4,921,313	4,921,313	4,921,313	22,999,235
4. Financing																															
Add: Government/PFDA investment		193,429	8,036,560	-	-													1,548,833					-						23,849,705		
Add: Loans received																															
JICA Loan		2,945,280	50,334,972	-	-																										
Total GOP and loan	-	3,138,709	58,371,533	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,548,833	-	-	-	-	-	-	-	-	-	-	23,849,705	-	-
Less: Repayment of loan																															
a. Investment and debt service																															
Interest		-	-	295	623,105	623,105	623,105	598,181	573,257	548,333	523,409	498,484	473,560	448,636	423,712	398,787	373,863	348,939	324,015	299,091	274,166	249,242	224,318	199,394	174,470	149,545	124,621	99,697	74,773	49,848	24,924
Repayment of principal	-	-	-	-	-	-	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210	2,131,210
Subtotal repayment on loan	-	-	-	295	623,105	623,105	2,754,315	2,729,391	2,704,467	2,679,543	2,654,619	2,629,694	2,604,770	2,579,846	2,554,922	2,529,998	2,505,073	2,480,149	2,455,225	2,430,301	2,405,376	2,380,452	2,355,528	2,330,604	2,305,680	2,280,755	2,255,831	2,230,907	2,205,983	2,181,059	2,156,134
5. Net Financing	-	3,138,709	58,371,533	(295)	(623,105)	(623,105)	(2,754,315)	(2,729,391)	(2,704,467)	(2,679,543)	(2,654,619)	(2,629,694)	(2,604,770)	(2,579,846)	(2,554,922)	(2,529,998)	(2,505,073)	(931,317)	(2,455,225)	(2,430,301)	(2,405,376)	(2,380,452)	(2,355,528)	(2,330,604)	(2,305,680)	(2,280,755)	(2,255,831)	(2,230,907)	21,643,722	(2,181,059)	(2,156,134)
6. Net Flow After Financing	-	(3,138,709)	(58,371,533)	4,586,226	4,002,741	4,042,390	1,951,153	2,016,379	2,066,447	2,132,336	2,198,562	2,265,126	2,332,031	2,341,467	2,366,391	2,391,315	2,416,240	2,441,164	2,466,088	2,491,012	2,515,936	2,540,861	2,565,785	2,590,709	2,615,633	2,640,557	2,665,482	2,690,406	26,565,035	2,740,254	20,843,101
7. Less: Income Tax Paid				1,185,366	981,146	995,023	1,009,014	1,031,843	1,049,367	1,072,428	1,095,607	1,118,904	1,142,321	1,145,624	1,154,347	1,163,070	1,171,794	1,180,517	1,189,241	1,197,964	1,206,688	1,215,411	1,224,135	1,232,858	1,241,582	1,250,305	1,259,029	1,267,752	1,276,476	1,285,199	533,239
8. Net flow After Financing and Taxes	-	(3,138,709)	(58,371,533)	3,400,860	3,021,595	3,047,367	942,139	984,536	1,017,080	1,059,908	1,102,955	1,146,221	1,189,710	1,195,843	1,212,044	1,228,245	1,244,446	1,260,646	1,276,847	1,293,048	1,309,249	1,325,449	1,341,650	1,357,851	1,374,051	1,390,252	1,406,453	1,422,654	25,288,559	1,455,055	20,309,862
9. Accumulated (Cash)				3,400,860	6,422,455	9,469,822	10,411,961	11,396,497	12,413,578	13,473,486	14,576,441	15,722,663	16,912,373	18,108,216	19,320,260	20,548,505	21,792,950	21,504,764	22,781,611	24,074,659	25,383,908	26,709,357	28,051,007	29,408,858	30,782,909	32,173,161	33,579,614	35,002,268	60,290,827	61,745,882	82,055,744
FIRR =	**3.74%**																														
Benefit-cost ratio =	**2.52**																														

Table 12.3.9 Projected Cash Flow Statement - Concepcion Fish Port Complex

Item	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
1. Inflow																															
Revenue				4,839,090	4,842,868	4,846,650	4,850,435	4,854,224	4,858,016	4,861,811	4,865,610	4,869,412	4,873,218	4,873,654	4,874,091	4,874,528	4,874,965	4,875,403	4,875,841	4,876,280	4,876,719	4,877,158	4,877,598	4,878,038	4,878,479	4,878,920	4,879,361	4,879,803	4,880,245	4,880,688	4,880,688
Net internal cash generation				-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,605,629	-	-	-	-	-	-	-	-	-	-	-	-	-	14,665,900
JICA loan proceeds		2,222,976	39,429,609	-	-																										
Government equity contribution		193,429	6,342,497																												
Total Inflow	-	2,416,405	45,772,106	4,839,090	4,842,868	4,846,650	4,850,435	4,854,224	4,858,016	4,861,811	4,865,610	4,869,412	4,873,218	4,873,654	4,874,091	4,874,528	4,874,965	6,481,032	4,875,841	4,876,280	4,876,719	4,877,158	4,877,598	4,878,038	4,878,479	4,878,920	4,879,361	4,879,803	4,880,245	4,880,688	19,546,587
2. Outflow																															
Cash operating expenses				530,716	530,716	530,716	530,716	530,716	546,773	546,773	546,773	546,773	546,773	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829
Capital investments	-	2,416,405	45,772,106																												
Total Outflow	-	2,416,405	45,772,106	530,716	530,716	530,716	530,716	530,716	546,773	546,773	546,773	546,773	546,773	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829	562,829
3. Net Flow Before Financing		-	-	4,308,373	4,312,152	4,315,933	4,319,719	4,323,507	4,311,243	4,315,038	4,318,837	4,322,640	4,326,445	4,310,825	4,311,262	4,311,699	4,312,136	5,918,203	4,313,012	4,313,451	4,313,890	4,314,329	4,314,769	4,315,209	4,315,650	4,316,091	4,316,532	4,316,974	4,317,416	4,317,859	18,983,758
4. Financing																															
Add: Government/PFDA investment		193,429	6,342,497															1,605,629					-								
Add: Loans received																															
JICA Loan		2,222,976	39,429,609	-	-																										
Total GOP and loan	-	2,416,405	45,772,106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,605,629	-	-	-	-	-	-	-	-	-	-	-	-	-
Less: Repayment of loan																															
a. Investment and debt service																															
Interest		-	-	488,048	488,507	488,507	488,507	468,967	449,426	429,886	410,346	390,806	371,265	351,725	332,185	312,644	293,104	273,564	254,024	234,483	214,943	195,403	175,862	156,322	136,782	117,242	97,701	78,161	58,621	39,081	19,540
Repayment of principal	-	-	-	-	-	-	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103	1,666,103
Subtotal repayment on loan	-	-	-	488,048	488,507	488,507	2,154,610	2,135,070	2,115,530	2,095,989	2,076,449	2,056,909	2,037,369	2,017,828	1,998,288	1,978,748	1,959,208	1,939,667	1,920,127	1,900,587	1,881,046	1,861,506	1,841,966	1,822,426	1,802,885	1,783,345	1,763,805	1,744,265	1,724,724	1,705,184	1,685,644
5. Net Financing	-	2,416,405	45,772,106	(488,048)	(488,507)	(488,507)	(2,154,610)	(2,135,070)	(2,115,530)	(2,095,989)	(2,076,449)	(2,056,909)	(2,037,369)	(2,017,828)	(1,998,288)	(1,978,748)	(1,959,208)	(334,039)	(1,920,127)	(1,900,587)	(1,881,046)	(1,861,506)	(1,841,966)	(1,822,426)	(1,802,885)	(1,783,345)	(1,763,805)	(1,744,265)	(1,724,724)	(1,705,184)	(1,685,644)
6. Net Flow After Financing	-	(2,416,405)	(45,772,106)	3,820,325	3,823,645	3,827,427	2,165,108	2,188,437	2,195,713	2,219,049	2,242,388	2,265,731	2,289,077	2,292,997	2,312,974	2,332,951	2,352,929	2,372,907	2,392,885	2,412,864	2,432,843	2,452,823	2,472,803	2,492,784	2,512,765	2,532,746	2,552,727	2,572,709	2,592,692	2,612,675	17,298,115
7. Less: Income Tax Paid				987,945	989,107	990,430	991,755	999,920	1,002,467	1,010,634	1,018,803	1,026,973	1,035,144	1,036,516	1,043,508	1,050,500	1,057,492	1,064,485	1,071,477	1,078,470	1,085,462	1,092,455	1,099,448	1,106,441	1,113,435	1,120,428	1,127,422	1,134,416	1,141,409	1,148,403	1,155,242
8. Net flow After Financing and Taxes	-	(2,416,405)	(45,772,106)	2,832,380	2,834,538	2,836,996	1,173,353	1,188,517	1,193,246	1,208,415	1,223,585	1,238,758	1,253,933	1,256,481	1,269,466	1,282,451	1,295,436	1,308,422	1,321,408	1,334,395	1,347,381	1,360,368	1,373,355	1,386,342	1,399,330	1,412,318	1,425,306	1,438,294	1,451,283	1,464,271	16,142,872
9. Accumulated (Cash)				2,832,380	5,666,918	8,503,915	9,677,268	10,865,785	12,059,031	13,267,446	14,491,031	15,729,788	16,983,721	18,240,202	19,509,667	20,792,118	22,087,555	21,790,349	23,111,757	24,446,151	25,793,532	27,153,900	28,527,255	29,913,597	31,312,927	32,725,244	34,150,550	35,588,844	37,040,127	38,504,398	54,647,270
FIRR =	**3.99%**																														
Benefit-cost ratio =	**2.64**																														

Table 12.3.10 Projected Cash Flow Statement - Atimonan Fish Port Complex

Item	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
1. Inflow																															
Revenue				3,422,073	3,422,585	3,423,097	3,423,609	3,424,121	3,424,633	3,425,145	3,425,657	3,426,169	3,426,682	3,426,755	3,426,828	3,426,901	3,426,975	3,427,048	3,427,121	3,427,194	3,427,268	3,427,341	3,427,414	3,427,488	3,427,561	3,427,635	3,427,708	3,427,781	3,427,855	3,427,928	2,636,239
Net internal cash generation				-	-	-	-	-	-	-	-	-	-	-	-	-	-		3,075,570	-	-	-	-	-	-	-	-	-	-	-	-
JICA loan proceeds		1,389,360	23,967,400	-	-																										
Government equity contribution		132,949	3,872,128																												
Total Inflow	-	1,522,309	27,839,528	3,422,073	3,422,585	3,423,097	3,423,609	3,424,121	3,424,633	3,425,145	3,425,657	3,426,169	3,426,682	3,426,755	3,426,828	3,426,901	3,426,975	3,427,048	6,502,691	3,427,194	3,427,268	3,427,341	3,427,414	3,427,488	3,427,561	3,427,635	3,427,708	3,427,781	3,427,855	3,427,928	2,636,239
2. Outflow																															
Cash operating expenses				437,800	437,800	437,800	437,800	437,800	468,556	468,556	468,556	468,556	468,556	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312
Capital investments	-	1,522,309	27,839,528																												
Total Outflow	-	1,522,309	27,839,528	437,800	437,800	437,800	437,800	437,800	468,556	468,556	468,556	468,556	468,556	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312	499,312
3. Net Flow Before Financing		-	-	2,984,273	2,984,785	2,985,296	2,985,808	2,986,320	2,956,076	2,956,589	2,957,101	2,957,613	2,958,126	2,927,443	2,927,516	2,927,590	2,927,663	2,927,736	6,003,379	2,927,883	2,927,956	2,928,029	2,928,103	2,928,176	2,928,249	2,928,323	2,928,396	2,928,469	2,928,543	2,928,616	2,136,927
4. Financing																															
Add: Government/PFDA investment		132,949	3,872,128																3,075,570				-								
Add: Loans received																															
JICA Loan		1,389,360	23,967,400	-	-																										
Total GOP and loan	-	1,522,309	27,839,528	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,075,570	-	-	-	-	-	-	-	-	-	-	-	-
Less: Repayment of loan																															
a. Investment and debt service																															
Interest			139	297,058	297,058	297,058	285,176	273,294	261,411	249,529	237,647	225,764	213,882	202,000	190,117	178,235	166,353	154,470	142,588	130,706	118,823	106,941	95,059	83,176	71,294	59,412	47,529	35,647	23,765	11,882	-
Repayment of principal	-	-	-	-	-	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	1,014,270	-
Subtotal repayment on loan	-	-	139	297,058	297,058	1,311,329	1,299,446	1,287,564	1,275,682	1,263,799	1,251,917	1,240,035	1,228,152	1,216,270	1,204,388	1,192,505	1,180,623	1,168,741	1,156,858	1,144,976	1,133,094	1,121,211	1,109,329	1,097,447	1,085,564	1,073,682	1,061,800	1,049,917	1,038,035	1,026,153	-
5. Net Financing	-	1,522,309	27,839,389	(297,058)	(297,058)	(1,311,329)	(1,299,446)	(1,287,564)	(1,275,682)	(1,263,799)	(1,251,917)	(1,240,035)	(1,228,152)	(1,216,270)	(1,204,388)	(1,192,505)	(1,180,623)	(1,168,741)	1,918,712	(1,144,976)	(1,133,094)	(1,121,211)	(1,109,329)	(1,097,447)	(1,085,564)	(1,073,682)	(1,061,800)	(1,049,917)	(1,038,035)	(1,026,153)	-
6. Net Flow After Financing	-	(1,522,309)	(27,839,389)	2,687,215	2,687,726	1,673,968	1,686,362	1,698,756	1,680,395	1,692,789	1,705,184	1,717,578	1,729,973	1,711,173	1,723,129	1,735,084	1,747,040	1,758,995	7,922,091	1,782,907	1,794,862	1,806,818	1,818,773	1,830,729	1,842,685	1,854,641	1,866,596	1,878,552	1,890,508	1,902,464	2,136,927
7. Less: Income Tax Paid				623,728	623,907	624,086	628,424	632,762	626,335	630,673	635,012	639,350	643,688	637,108	641,292	645,477	649,661	653,846	658,030	662,215	666,399	670,583	674,768	678,952	683,137	687,321	691,506	695,690	699,875	704,059	431,127
8. Net flow After Financing and Taxes	-	(1,522,309)	(27,839,389)	2,063,487	2,063,820	1,049,882	1,057,938	1,065,994	1,054,059	1,062,116	1,070,172	1,078,229	1,086,285	1,074,065	1,081,836	1,089,607	1,097,379	1,105,150	7,264,061	1,120,692	1,128,463	1,136,234	1,144,006	1,151,777	1,159,548	1,167,319	1,175,090	1,182,862	1,190,633	1,198,404	1,705,800
9. Accumulated (Cash)				2,063,487	4,127,306	5,177,188	6,235,126	7,301,120	8,355,180	9,417,295	10,487,468	11,565,696	12,651,982	13,726,047	14,807,883	15,897,491	16,994,869	18,100,019	25,364,080	26,484,772	27,613,235	28,749,470	29,893,475	31,045,252	32,204,800	33,372,119	34,547,210	35,730,071	36,920,704	38,119,108	39,824,908
FIRR =	**5.39%**																														
Benefit-cost ratio =	**2.59**																														

Table 12.3.11 Projected Cash Flow Statement - Subic Fish Port Complex

Item	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
1. Inflow																															
Revenue				4,093,631	4,153,982	4,215,485	4,278,163	4,342,038	4,407,133	4,473,471	4,541,076	4,609,973	4,680,185	4,711,736	4,743,889	4,776,657	4,810,050	4,844,081	4,878,763	4,914,106	4,950,125	4,986,831	5,024,239	5,062,361	5,101,211	5,140,804	5,181,152	5,222,272	5,264,176	5,306,881	4,718,395
Net internal cash generation				-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,196,369	-	-	-	-	-	-	-	-	-	-	-	-	3,905,493
JICA loan proceeds		1,945,104	33,988,349	-	-																										
Government equity contribution	-	193,429	5,504,865	-																											
Total Inflow	-	2,138,533	39,493,214	4,093,631	4,153,982	4,215,485	4,278,163	4,342,038	4,407,133	4,473,471	4,541,076	4,609,973	4,680,185	4,711,736	4,743,889	4,776,657	4,810,050	11,040,451	4,878,763	4,914,106	4,950,125	4,986,831	5,024,239	5,062,361	5,101,211	5,140,804	5,181,152	5,222,272	5,264,176	5,306,881	8,623,888
2. Outflow																															
Cash operating expenses				484,287	484,287	484,287	484,287	484,287	546,251	546,251	546,251	546,251	546,251	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215
Capital investments	-	2,138,533	39,493,214																												
Total Outflow	-	2,138,533	39,493,214	484,287	484,287	484,287	484,287	484,287	546,251	546,251	546,251	546,251	546,251	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215	608,215
3. Net Flow Before Financing		-	-	3,609,344	3,669,695	3,731,198	3,793,876	3,857,750	3,860,882	3,927,220	3,994,825	4,063,722	4,133,934	4,103,521	4,135,675	4,168,442	4,201,836	10,432,236	4,270,548	4,305,892	4,341,910	4,378,617	4,416,024	4,454,147	4,492,997	4,532,589	4,572,938	4,614,057	4,655,962	4,698,667	8,015,673
4. Financing																															
Add: Government/PFDA investment		193,429	5,504,865															6,196,369					-						7,944,827		
Add: Loans received																															
JICA Loan		1,945,104	33,988,349	-	-																										
Total GOP and loan	-	2,138,533	39,493,214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,196,369	-	-	-	-	-	-	-	-	-	-	7,944,827	-	-
Less: Repayment of loan																															
a. Investment and debt service																															
Interest		-	-	195	421,958	421,958	421,958	405,079	388,201	371,323	354,444	337,566	320,688	303,809	286,931	270,053	253,175	236,296	219,418	202,540	185,661	168,783	151,905	135,026	118,148	101,270	84,392	67,513	50,635	33,757	16,878
Repayment of principal	-	-	-	-	-	-	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338	1,437,338
Subtotal repayment on loan	-	-	-	195	421,958	421,958	1,859,296	1,842,417	1,825,539	1,808,661	1,791,782	1,774,904	1,758,026	1,741,148	1,724,269	1,707,391	1,690,513	1,673,634	1,656,756	1,639,878	1,622,999	1,606,121	1,589,243	1,572,365	1,555,486	1,538,608	1,521,730	1,504,851	1,487,973	1,471,095	1,454,216
5. Net Financing	-	2,138,533	39,493,214	(195)	(421,958)	(421,958)	(1,859,296)	(1,842,417)	(1,825,539)	(1,808,661)	(1,791,782)	(1,774,904)	(1,758,026)	(1,741,148)	(1,724,269)	(1,707,391)	(1,690,513)	4,522,735	(1,656,756)	(1,639,878)	(1,622,999)	(1,606,121)	(1,589,243)	(1,572,365)	(1,555,486)	(1,538,608)	(1,521,730)	(1,504,851)	6,456,854	(1,471,095)	(1,454,216)
6. Net Flow After Financing	-	(2,138,533)	(39,493,214)	3,609,150	3,247,737	3,309,240	1,934,580	2,015,333	2,035,343	2,118,559	2,203,043	2,288,818	2,375,909	2,362,374	2,411,406	2,461,051	2,511,323	2,562,233	2,613,792	2,666,014	2,718,911	2,772,496	2,826,782	2,881,782	2,937,511	2,993,981	3,051,208	3,109,206	11,112,816	3,227,572	6,561,457
7. Less: Income Tax Paid				791,947	665,452	686,978	708,916	737,179	744,183	773,308	802,878	832,899	863,381	858,644	875,805	893,181	910,776	928,594	946,640	964,918	983,431	1,002,186	1,021,186	1,040,436	1,059,941	1,079,706	1,099,736	1,120,035	1,140,609	1,161,463	961,400
8. Net flow After Financing and Taxes	-	(2,138,533)	(39,493,214)	2,817,203	2,582,285	2,622,262	1,225,664	1,278,154	1,291,160	1,345,251	1,400,165	1,455,919	1,512,528	1,503,730	1,535,601	1,567,871	1,600,547	1,633,638	1,667,152	1,701,096	1,735,479	1,770,310	1,805,595	1,841,346	1,877,569	1,914,275	1,951,473	1,989,171	9,972,207	2,066,109	5,600,057
9. Accumulated (Cash)				2,817,203	5,399,488	8,021,750	9,247,414	10,525,568	11,816,728	13,161,979	14,562,144	16,018,063	17,530,591	19,034,321	20,569,922	22,137,793	23,738,340	19,175,610	20,842,762	22,543,858	24,279,337	26,049,647	27,855,242	29,696,588	31,574,157	33,488,433	35,439,905	37,429,076	47,401,283	49,467,393	55,067,449
FIRR =	**5.17%**																														
Benefit-cost ratio =	**2.72**																														

Table 12.4.1 EIRR Calculation – Bislig Fish Port Complex

Year	Economic Costs							Economic Benefits				Net Benefits
	Technical Assistance Consultants (PhP)	Design and Construction Consultants (PhP)	Construction and Equipment (PhP)	PMO Cost (PhP)	Total Investment Cost (PhP)	Operation and Maintenance Cost (PhP)	Total Costs (PhP)	Savings in Fuel Consumption[a] (PhP)	Improved Health[b] (PhP)	Reduced Loss in Income Due to Improved Health[c] (PhP)	Total Benefits (PhP)	(PhP)
2010												
2011	-	-	-		-	-	-				-	-
2012	-	-	-		-	-	-				-	-
2013	-	49,226,081	20,000,000	-	69,226,081	-	69,226,081				-	(69,226,081)
2014	-	38,870,795	361,734,238	2,607,086	403,212,120	-	403,212,120				-	(403,212,120)
2015	-	59,581,368	547,414,236	2,607,086	609,602,690	-	609,602,690				-	(609,602,690)
2016	4,387,788	-	-		4,387,788	12,970,696	17,358,484	258,661,688	731,168	193,064	259,585,920	242,227,436
2017	4,387,788				4,387,788	12,970,696	17,358,484	274,828,043	731,168	193,064	275,752,276	258,393,792
2018	-				-	12,970,696	12,970,696	307,160,754	731,168	193,064	308,084,987	295,114,291
2019					-	12,970,696	12,970,696	323,327,110	731,168	193,064	324,251,342	311,280,647
2020					-	12,970,696	12,970,696	323,327,110	731,168	193,064	324,251,342	311,280,647
2021					-	16,525,025	16,525,025	323,327,110	731,168	193,064	324,251,342	307,726,317
2022					-	16,525,025	16,525,025	323,327,110	731,168	193,064	324,251,342	307,726,317
2023					-	16,525,025	16,525,025	323,327,110	731,168	193,064	324,251,342	307,726,317
2024					-	16,525,025	16,525,025	323,327,110	731,168	193,064	324,251,342	307,726,317
2025					-	16,525,025	16,525,025	323,327,110	731,168	193,064	324,251,342	307,726,317
2026					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2027					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2028					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2029					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2030			48,172,545		48,172,545	20,706,588	68,879,133	323,327,110	731,168	193,064	324,251,342	255,372,209
2031					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2032					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2033					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2034					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2035			376,948,599		376,948,599	20,706,588	397,655,187	323,327,110	731,168	193,064	324,251,342	(73,403,845)
2036					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2037					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2038					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2039					-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
2040			-		-	20,706,588	20,706,588	323,327,110	731,168	193,064	324,251,342	303,544,754
											EIRR[d] =	**23.3%**
											ENPV[d] =	**454,076,508**
											Benefit:Cost Ratio=	**1.53**

[a] This represents the total savings in fuel cost of fishing boats by shifting their landing base from General Santos Fish Port Complex to Bislig Fish Port Complex.

[b] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[c] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[d] Economic opportunity cost of capital is at 15%.

Table 12.4.2 EIRR Calculation – Camaligan Fish Port Complex

Year	Economic Costs						Economic Benefits						Net Benefits
	Technical Assistance Consultants (PhP)	Design and Construction Consultants (PhP)	Construction and Equipment (PhP)	Total Investment Cost (PhP)	Operation and Maintenance Cost (PhP)	Total Costs (PhP)	Benefits from Improved Fish Quality - Municipal Fish Ports[a] (PhP)	Reduced Loss in Fish Value due to Lack of Ice[b] (PhP)	Value-added HACCP[c] (PhP)	Improved Health[d] (PhP)	Reduced Loss in Income Due to Improved Health[e] (PhP)	Total Benefits (PhP)	(PhP)
2010													
2011	-	-		-		-						-	-
2012	-	18,201,116		18,201,116		18,201,116						-	(18,201,116)
2013	-	12,789,899	104,150,296	116,940,195		116,940,195						-	(116,940,195)
2014	-	15,918,746	141,482,520	157,401,266		157,401,266						-	(157,401,266)
2015	-	7,831,300	105,085,224	112,916,523		112,916,523						-	(112,916,523)
2016	1,940,794	-	-	1,940,794	10,039,420	11,980,214	45,800,580	28,894,237	88,628,760	287,610	66,486	163,677,673	151,697,458
2017	1,940,794	-		1,940,794	10,039,420	11,980,214	46,623,203	32,506,016	99,707,355	287,610	66,486	179,190,670	167,210,456
2018				-	10,039,420	10,039,420	47,377,274	36,117,796	110,785,950	287,610	66,486	194,635,116	184,595,696
2019				-	10,039,420	10,039,420	48,068,506	36,117,796	110,785,950	287,610	66,486	195,326,348	185,286,928
2020				-	10,039,420	10,039,420	48,702,135	36,117,796	110,785,950	287,610	66,486	195,959,977	185,920,557
2021				-	11,067,997	11,067,997	49,282,962	36,117,796	110,785,950	287,610	66,486	196,540,804	185,472,807
2022				-	11,067,997	11,067,997	49,815,387	36,117,796	110,785,950	287,610	66,486	197,073,228	186,005,232
2023				-	11,067,997	11,067,997	50,303,443	36,117,796	110,785,950	287,610	66,486	197,561,284	186,493,288
2024				-	11,067,997	11,067,997	50,750,827	36,117,796	110,785,950	287,610	66,486	198,008,669	186,940,672
2025				-	11,067,997	11,067,997	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	191,861,902
2026				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2027				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2028				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2029				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2030			11,162,908	11,162,908	12,096,574	23,259,482	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	179,670,417
2031				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2032				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2033				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2034				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2035			93,563,928	93,563,928	12,096,574	105,660,502	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	97,269,397
2036				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2037				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2038				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2039				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
2040				-	12,096,574	12,096,574	55,672,057	36,117,796	110,785,950	287,610	66,486	202,929,899	190,833,325
												EIRR[f] =	**31.1%**
												ENPV[f] =	**390,056,526**
												Benefit:Cost Ratio=	**2.23**

[a] This is the estimated value of benefits resulting from improved quality of fish as a consequence of improvements in the market facilities of the Camaligan Fish Port Complex.

[b] This is the estimated value of fish saved from physical degradation due to readily available ice at the municipal fish ports served by the Camaligan Fish Port Complex.

[c] This is the estimated value-added resulting from the establishment of HACCP facilities at the fish port.

[d] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[e] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The incidence of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[f] Economic opportunity cost of capital is at 15%.

Table 12.4.3 EIRR Calculation – Davao Fish Port Complex

Year	Economic Costs						Economic Benefits					Net Benefits
	Technical Assistance Consultants (PhP)	Design and Construction Consultants (PhP)	Construction and Equipment (PhP)	Total Investment Cost (PhP)	Operation and Maintenance Cost (PhP)	Total Costs (PhP)	Benefits from Improved Fish Quality - DFPC[a] (PhP)	Value-added HACCP[b] (PhP)	Improved Health[c] (PhP)	Reduced Loss in Income Due to Improved Health[d] (PhP)	Total Benefits (PhP)	(PhP)
2010						-						
2011	-	-	-	-		-					-	-
2012	-	-	-	-		-					-	-
2013	-	8,295,867	-	8,295,867		8,295,867					-	(8,295,867)
2014	-	8,708,827	63,006,011	71,714,837	904,164	72,619,002	54,307,002	6,971,976	747,785	197,452	62,224,216	(10,394,786)
2015	-	7,837,073	94,032,353	101,869,426	904,164	102,773,591	54,876,503	7,843,473	747,785	197,452	63,665,213	(39,108,377)
2016	880,829	-	-	880,829	904,164	1,784,993	55,446,004	8,714,970	747,785	197,452	65,106,211	63,321,218
2017	880,829			880,829	904,164	1,784,993	56,015,504	8,714,970	747,785	197,452	65,675,712	63,890,719
2018	-			-	904,164	904,164	56,585,005	8,714,970	747,785	197,452	66,245,212	65,341,048
2019				-	1,109,847	1,109,847	57,154,506	8,714,970	747,785	197,452	66,814,713	65,704,866
2020				-	1,109,847	1,109,847	57,724,006	8,714,970	747,785	197,452	67,384,214	66,274,366
2021				-	1,109,847	1,109,847	58,293,507	8,714,970	747,785	197,452	67,953,714	66,843,867
2022				-	1,109,847	1,109,847	58,863,007	8,714,970	747,785	197,452	68,523,215	67,413,367
2023				-	1,109,847	1,109,847	59,432,508	8,714,970	747,785	197,452	69,092,715	67,982,868
2024				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2025				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2026				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2027				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2028				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2029				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2030			12,936,126	12,936,126	1,315,531	14,251,656	59,432,508	8,714,970	747,785	197,452	69,092,715	54,841,059
2031				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2032				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2033				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2034				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2035			7,218,137	7,218,137	1,315,531	8,533,668	59,432,508	8,714,970	747,785	197,452	69,092,715	60,559,048
2036				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2037				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2038				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2039				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
2040				-	1,315,531	1,315,531	59,432,508	8,714,970	747,785	197,452	69,092,715	67,777,185
											EIRR[e] =	**77.0%**
											ENPV[e] =	**238,834,236**
											Benefit:Cost Ratio=	**2.75**

[a] This is the estimated value of benefits resulting from improved quality of fish as a consequence of improvements in the market facilities of the Davao Fish Port Complex.

[b] This is the estimated value-added resulting from the establishment of the HACCP facilities at the fish port.

[c] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[d] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[e] Economic opportunity cost of capital is at 15%.

Table 12.4.4 EIRR Calculation – Iloilo Fish Port Complex

Year	Economic Costs						Economic Benefits								Net Benefits
	Technical Assistance Consultants (PhP)	Design and Construction Consultants (PhP)	Construction and Equipment (PhP)	Total Investment Cost (PhP)	Operation and Maintenance Cost (PhP)	Total Costs (PhP)	Benefits from Improved Fish Quality - IFPC[a] (PhP)	Reduced Loss in Fish Value due to Lack of Ice[b] (PhP)	Value-added HACCP[c] (PhP)	Value-added Local Fish Processing[d] (PhP)	Improved Health[e] (PhP)	Reduced Loss in Income Due to Improved Health[f] (PhP)	Reduced Wave Damage on Port Facilities[g] (PhP)	Total Benefits (PhP)	(PhP)
2010															
2011	-	-	-	-		-								-	-
2012	-	69,129,373	-	69,129,373		69,129,373								-	(69,129,373)
2013	-	29,055,963	242,053,237	271,109,200		271,109,200								-	(271,109,200)
2014	-	99,493,181	987,690,672	1,087,183,853		1,087,183,853								-	(1,087,183,853)
2015	-	9,709,602	81,452,519	91,162,120		91,162,120								-	(91,162,120)
2016	6,345,045	-	-	6,345,045	49,431,871	55,776,915	387,914,351	88,516,405	9,214,920	597,600	575,219	143,289	42,847,160	529,808,944	474,032,029
2017	6,345,045			6,345,045	49,431,871	55,776,915	367,906,900	99,580,955	10,366,785	672,300	575,219	143,289	1,467,400	480,712,849	424,935,933
2018	-			-	49,431,871	49,431,871	407,136,906	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	532,233,971	482,802,100
2019				-	49,431,871	49,431,871	447,182,332	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	572,279,397	522,847,526
2020				-	49,431,871	49,431,871	488,058,814	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	613,155,879	563,724,008
2021				-	49,431,871	49,431,871	529,782,274	110,645,506	11,518,650	747,000	575,219	143,289	18,214,160	671,626,098	622,194,227
2022				-	55,672,426	55,672,426	572,368,922	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	697,465,986	641,793,560
2023				-	55,672,426	55,672,426	615,835,268	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	740,932,332	685,259,906
2024				-	55,672,426	55,672,426	660,198,120	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	785,295,184	729,622,758
2025				-	55,672,426	55,672,426	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	774,899,231
2026				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	49,586,160	878,690,417	816,084,040
2027				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	767,965,280
2028				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	767,965,280
2029				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	767,965,280
2030			330,792,752	330,792,752	62,606,377	393,399,129	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	437,172,529
2031				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	18,214,160	847,318,417	784,712,040
2032				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	767,965,280
2033				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	767,965,280
2034				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	767,965,280
2035			405,167,689	405,167,689	62,606,377	467,774,067	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	362,797,591
2036				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	49,586,160	878,690,417	816,084,040
2037				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	767,965,280
2038				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	767,965,280
2039				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	767,965,280
2040				-	62,606,377	62,606,377	705,474,593	110,645,506	11,518,650	747,000	575,219	143,289	1,467,400	830,571,657	767,965,280
														EIRR[h] =	**26.7%**
														ENPV[h] =	**1,153,558,337**
														Benefit:Cost Ratio=	**1.91**

[a] This is the estimated value of benefits resulting from improved quality of fish as a consequence of improvements in the market facilities of the Iloilo Fish Port Complex.

[b] This is the estimated value of fish saved from physical degradation due to readily available ice at the municipal fish ports provided by the Iloilo Fish Port Complex.

[c] This is the estimated value-added resulting from the establishment of HACCP facilities at the fish port.

[d] This is the estimated value-added resulting from the establishment of a local fish processing facility at the fish port.

[e] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[f] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The incidence of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[g] This is the estimated reduction in repair and maintenance cost of port facilities (i.e., quay wall, Banca/Basnig landing, slipway, revetment, and port basin dredging) due to the construction of the breakwater.

[h] Economic opportunity cost of capital is at 15%.

Table 12.4.5 EIRR Calculation – Lucena Fish Port Complex

Year	Economic Costs						Economic Benefits							Net Benefits
	Technical Assistance Consultants (PhP)	Design and Construction Consultants (PhP)	Construction and Equipment (PhP)	Total Investment Cost (PhP)	Operation and Maintenance Cost (PhP)	Total Costs (PhP)	Benefits from Improved Fish Quality - LFPC[a] (PhP)	Value-added Local Fish Processing[b] (PhP)	Improved Health[c] (PhP)	Reduced Loss in Income Due to Improved Health[d] (PhP)	Total Cost Savings in Fish Unloading due to Breakwater Rehabilitation[e] (PhP)	Reduced Port Damage and Loss in Revenue due to Breakwater Rehabilitation[f] (PhP)	Total Benefits (PhP)	(PhP)
2010														
2011	-	-	-	-		-							-	-
2012	-	-	-	-		-							-	-
2013	-	16,477,739	-	16,477,739		16,477,739							-	(16,477,739)
2014	-	15,573,052	134,574,545	150,147,597		150,147,597							-	(150,147,597)
2015	-	17,382,426	163,656,958	181,039,383		181,039,383							-	(181,039,383)
2016	1,744,688	-	-	1,744,688	2,111,832	3,856,520	147,382,474	478,080	798,916	187,868	3,678,896	6,926,372	159,452,605	155,596,085
2017	1,744,688			1,744,688	2,111,832	3,856,520	158,160,511	537,840	798,916	187,868	3,678,896	6,926,372	170,290,402	166,433,882
2018				-	2,111,832	2,111,832	168,938,547	597,600	798,916	187,868	3,678,896	6,926,372	181,128,199	179,016,367
2019				-	2,111,832	2,111,832	179,716,584	597,600	798,916	187,868	3,678,896	6,926,372	191,906,235	189,794,404
2020				-	2,111,832	2,111,832	190,494,620	597,600	798,916	187,868	3,678,896	121,073,532	316,831,432	314,719,600
2021				-	2,111,832	2,111,832	201,272,657	597,600	798,916	187,868	3,678,896	6,926,372	213,462,308	211,350,477
2022				-	2,762,012	2,762,012	212,050,693	597,600	798,916	187,868	3,678,896	6,926,372	224,240,345	221,478,333
2023				-	2,762,012	2,762,012	222,828,730	597,600	798,916	187,868	3,678,896	6,926,372	235,018,381	232,256,369
2024				-	2,762,012	2,762,012	233,606,766	597,600	798,916	187,868	3,678,896	6,926,372	245,796,418	243,034,406
2025				-	2,762,012	2,762,012	244,384,803	597,600	798,916	187,868	3,678,896	121,073,532	370,721,614	367,959,602
2026				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2027				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2028				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2029				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2030			20,252,723	20,252,723	3,412,193	23,664,915	244,384,803	597,600	798,916	187,868	3,678,896	121,073,532	370,721,614	347,056,699
2031				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2032				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2033				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2034				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2035			42,844,475	42,844,475	3,412,193	46,256,668	244,384,803	597,600	798,916	187,868	3,678,896	121,073,532	370,721,614	324,464,946
2036				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2037				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2038				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2039				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	6,926,372	256,574,454	253,162,262
2040				-	3,412,193	3,412,193	244,384,803	597,600	798,916	187,868	3,678,896	121,073,532	370,721,614	367,309,422
													EIRR[g] =	**44.0%**
													ENPV[g] =	**699,741,314**
													Benefit:Cost Ratio=	**3.66**

[a] This is the estimated value of benefits resulting from improved quality of fish as a consequence of improvements in the market facilities of the Lucena Fish Port Complex.

[b] This is the estimated value-added resulting from the establishment of a local fish processing facility at the fish port.

[c] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[d] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[e] This is the savings in cost due to improved efficiency in fish unloading due to the improvement of the pier.

[f] This is the estimated savings in the repair of port facilities and prevention of losses in annual port revenue due to breakwater rehabilitation. These mainly consist of: (i) revenue from fish unloading and transhipment by municipal and commercial fishing boats; and (ii) cost of repair of damaged port facilities, every five years, due to strong waves caused by typhoons.

[g] Economic opportunity cost of capital is at 15%.

Table 12.4.6 EIRR Calculation – Sual Fish Port Complex

Year	Economic Costs						Economic Benefits							Net Benefits
	Technical Assistance Consultants	Design and Construction Consultants	Construction and Equipment	Total Investment Cost	Operation and Maintenance Cost	Total Costs	Benefits from Reduced Losses in Fish Feed Due to Ice Availability[a]	Benefits from Maintaining Fish Feed Quality at Premium Price[b]	Value-added HACCP[c]	Value-added Local Fish Processing[d]	Improved Health[e]	Reduced Loss in Income Due to Improved Health[f]	Total Benefits	
	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
													-	
													-	
2010													-	
2011	-	-	-	-		-							-	-
2012	-	-	-	-		-							-	-
2013	-	23,801,351	-	23,801,351		23,801,351							-	(23,801,351)
2014	-	15,423,871	132,602,758	148,026,630		148,026,630		-					-	(148,026,630)
2015	-	32,178,830	307,798,715	339,977,545		339,977,545		-					-	(339,977,545)
2016	2,291,442	-	-	2,291,442	6,970,613	9,262,055	79,838,908	5,322,594	15,719,022	4,201,470	276,957	79,478	105,438,429	96,176,374
2017	2,291,442			2,291,442	6,970,613	9,262,055	84,040,956	5,602,730	16,592,301	4,434,885	276,957	79,478	111,027,307	101,765,252
2018				-	6,970,613	6,970,613	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	105,163,388
2019				-	6,970,613	6,970,613	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	105,163,388
2020				-	6,970,613	6,970,613	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	105,163,388
2021				-	8,693,602	8,693,602	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	103,440,399
2022				-	8,693,602	8,693,602	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	103,440,399
2023				-	8,693,602	8,693,602	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	103,440,399
2024				-	8,693,602	8,693,602	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	103,440,399
2025				-	8,693,602	8,693,602	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	103,440,399
2026				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2027				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2028				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2029				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2030			33,926,389	33,926,389	10,416,590	44,342,979	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	67,791,022
2031				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2032				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2033				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2034				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2035			80,853,487	80,853,487	10,416,590	91,270,077	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	20,863,924
2036				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2037				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2038				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2039				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
2040				-	10,416,590	10,416,590	84,040,956	5,602,730	17,465,580	4,668,300	276,957	79,478	112,134,001	101,717,411
													EIRR [g] =	**18.2%**
													ENPV [g] =	**72,826,660**
													Benefit:Cost Ratio=	**1.18**

[a] This is the estimated value-added resulting from the establishment of HACCP facilities at the fish port.

[b] This is the estimated value-added resulting from the establishment of a local fish processing facility at the fish port.

[c] This is the estimated value-added resulting from the establishment of HACCP facilities at the fish port.

[d] This is the estimated value-added resulting from the establishment of a local fish processing facility at the fish port.

[e] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[f] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The incidence of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[g] Economic opportunity cost of capital is at 15%.

Table 12.4.7 EIRR Calculation – Calabanga Municipal Fish Port

Year	Economic Costs					Economic Benefits				Net Benefits
	Design and Construction Consultants (PhP)	Construction and Equipment (PhP)	Total Investment Cost (PhP)	Operation and Maintenance Cost (PhP)	Total Costs (PhP)	Benefits from Improved Fish Quality - CMFP[a] (PhP)	Improved Health[b] (PhP)	Reduced Loss in Income Due to Improved Health[c] (PhP)	Total Benefits (PhP)	(PhP)
									-	-
2010									-	-
2011	-	-	-		-				-	-
2012	-	-	-		-				-	-
2013	-	-	-		-				-	-
2014	2,809,532	-	2,809,532		2,809,532				-	(2,809,532)
2015	5,573,749	49,595,619	55,169,367		55,169,367				-	(55,169,367)
2016	-	-	-	590,267	590,267	5,231,857	230,088	53,189	5,515,133	4,924,866
2017			-	590,267	590,267	6,605,432	230,088	53,189	6,888,709	6,298,441
2018			-	590,267	590,267	7,984,102	230,088	53,189	8,267,379	7,677,112
2019			-	590,267	590,267	9,367,884	230,088	53,189	9,651,160	9,060,893
2020			-	590,267	590,267	10,756,792	230,088	53,189	11,040,069	10,449,802
2021			-	708,158	708,158	12,150,843	230,088	53,189	12,434,120	11,725,962
2022			-	708,158	708,158	13,550,053	230,088	53,189	13,833,330	13,125,172
2023			-	708,158	708,158	14,954,438	230,088	53,189	15,237,714	14,529,557
2024			-	708,158	708,158	16,364,013	230,088	53,189	16,647,289	15,939,132
2025			-	708,158	708,158	17,778,795	230,088	53,189	18,062,071	17,353,913
2026			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2027			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2028			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2029			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2030		11,421,060	11,421,060	826,048	12,247,108	18,737,993	230,088	53,189	19,021,270	6,774,162
2031			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2032			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2033			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2034			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2035			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2036			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2037			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2038			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2039			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
2040			-	826,048	826,048	18,737,993	230,088	53,189	19,021,270	18,195,221
									EIRR [d] =	**18.0%**
									ENPV [d] =	**10,992,735**
									Benefit:Cost Ratio=	**1.41**

[a] This is the estimated value of benefits resulting from improved quality of fish as a consequence of improvements in the market facilities of the Calabanga Municipal Fish Port.

[b] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[c] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The incidence of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[d] Economic opportunity cost of capital is at 15%.

Table 12.4.8 EIRR Calculation – Sta. Cruz Municipal Fish Port

Year	Economic Costs					Economic Benefits				Net Benefits
	Design and Construction Consultants (PhP)	Construction and Equipment (PhP)	Total Investment Cost (PhP)	Operation and Maintenance Cost (PhP)	Total Costs (PhP)	Benefits from Improved Fish Quality - SCMFP[a] (PhP)	Improved Health[b] (PhP)	Reduced Loss in Income Due to Improved Health[c] (PhP)	Total Benefits (PhP)	(PhP)
									-	-
2010									-	-
2011	-	-	-		-				-	-
2012	-	-	-		-				-	-
2013	-	-	-		-				-	-
2014	2,885,734	-	2,885,734		2,885,734				-	(2,885,734)
2015	5,771,468	51,230,427	57,001,895		57,001,895				-	(57,001,895)
2016	-	-	-	547,227	547,227	18,950,263	345,132	45,315	19,340,710	18,793,482
2017			-	547,227	547,227	20,355,416	345,132	45,315	20,745,863	20,198,635
2018			-	547,227	547,227	21,775,764	345,132	45,315	22,166,210	21,618,983
2019			-	547,227	547,227	23,211,461	345,132	45,315	23,601,907	23,054,680
2020			-	547,227	547,227	24,662,663	345,132	45,315	25,053,110	24,505,882
2021			-	562,871	562,871	26,129,529	345,132	45,315	26,519,976	25,957,105
2022			-	562,871	562,871	27,612,217	345,132	45,315	28,002,664	27,439,793
2023			-	562,871	562,871	29,110,889	345,132	45,315	29,501,335	28,938,465
2024			-	562,871	562,871	30,625,706	345,132	45,315	31,016,152	30,453,282
2025			-	562,871	562,871	32,156,833	345,132	45,315	32,547,280	31,984,409
2026			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2027			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2028			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2029			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2030		1,517,519	1,517,519	578,514	2,096,033	32,634,906	345,132	45,315	33,025,353	30,929,320
2031			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2032			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2033			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2034			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2035			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2036			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2037			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2038			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2039			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
2040			-	578,514	578,514	32,634,906	345,132	45,315	33,025,353	32,446,839
									EIRR [d] =	**36.9%**
									ENPV [d] =	**79,506,140**
									Benefit:Cost Ratio=	**2.64**

[a] This is the estimated value of benefits resulting from improved quality of fish as a consequence of improvements in the market facilities of the Sta. Cruz Municipal Fish Port.

[b] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[c] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The incidence of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[d] Economic opportunity cost of capital is at 15%.

Table 12.4.9 EIRR Calculation – Concepcion Municipal Fish Port

Year	Economic Costs					Economic Benefits				Net Benefits
	Design and Construction Consultants (PhP)	Construction and Equipment (PhP)	Total Investment Cost (PhP)	Operation and Maintenance Cost (PhP)	Total Costs (PhP)	Benefits from Improved Fish Quality - CMFP[a] (PhP)	Improved Health[b] (PhP)	Reduced Loss in Income Due to Improved Health[c] (PhP)	Total Benefits (PhP)	(PhP)
2010										-
2011	-	-	-		-					-
2012	-	-	-		-					-
2013	-	-	-		-					-
2014	2,176,331	-	2,176,331		2,176,331					(2,176,331)
2015	4,488,682	40,133,603	44,622,285		44,622,285					(44,622,285)
2016	-	-	-	536,024	536,024	9,521,817	287,610	71,645	9,881,072	9,345,048
2017			-	536,024	536,024	10,025,544	287,610	71,645	10,384,798	9,848,774
2018			-	536,024	536,024	10,530,089	287,610	71,645	10,889,344	10,353,320
2019			-	536,024	536,024	11,035,456	287,610	71,645	11,394,710	10,858,687
2020			-	536,024	536,024	11,541,645	287,610	71,645	11,900,899	11,364,876
2021			-	552,240	552,240	12,048,656	287,610	71,645	12,407,911	11,855,670
2022			-	552,240	552,240	12,556,492	287,610	71,645	12,915,746	12,363,506
2023			-	552,240	552,240	13,065,153	287,610	71,645	13,424,407	12,872,167
2024			-	552,240	552,240	13,574,640	287,610	71,645	13,933,894	13,381,654
2025			-	552,240	552,240	13,984,353	287,610	71,645	14,343,607	13,791,366
2026			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2027			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2028			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2029			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2030		1,571,937	1,571,937	568,457	2,140,394	13,984,353	287,610	71,645	14,343,607	12,203,212
2031			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2032			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2033			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2034			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2035			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2036			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2037			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2038			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2039			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
2040			-	568,457	568,457	13,984,353	287,610	71,645	14,343,607	13,775,149
									EIRR [d] =	**23.4%**
									ENPV [d] =	**21,191,608**
									Benefit:Cost Ratio=	**2.05**

[a] This is the estimated value of benefits resulting from improved quality of fish as a consequence of improvements in the market facilities of the Concepcion Municipal Fish Port.

[b] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[c] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The incidence of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[d] Economic opportunity cost of capital is at 15%.

Table 12.4.10 EIRR Calculation – Atimonan Municipal Fish Port

Year	Economic Costs					Economic Benefits				Net Benefits
	Design and Construction Consultants (PhP)	Construction and Equipment (PhP)	Total Investment Cost (PhP)	Operation and Maintenance Cost (PhP)	Total Costs (PhP)	Benefits from Improved Fish Quality - AMFP[a] (PhP)	Improved Health[b] (PhP)	Reduced Loss in Income Due to Improved Health[c] (PhP)	Total Benefits (PhP)	(PhP)
									-	-
2010									-	-
2011	-	-	-		-				-	-
2012	-	-	-		-				-	-
2013	-	-	-		-				-	-
2014	1,345,014	-	1,345,014		1,345,014				-	(1,345,014)
2015	2,690,028	24,132,202	26,822,230		26,822,230				-	(26,822,230)
2016	-	-	-	442,178	442,178	3,809,597	115,044	27,053	3,951,693	3,509,515
2017	-	-	-	442,178	442,178	4,745,615	115,044	27,053	4,887,712	4,445,534
2018			-	442,178	442,178	5,681,999	115,044	27,053	5,824,095	5,381,917
2019			-	442,178	442,178	6,618,747	115,044	27,053	6,760,844	6,318,666
2020			-	442,178	442,178	7,555,861	115,044	27,053	7,697,958	7,255,779
2021			-	473,242	473,242	8,493,340	115,044	27,053	8,635,437	8,162,195
2022			-	473,242	473,242	9,431,185	115,044	27,053	9,573,282	9,100,040
2023			-	473,242	473,242	10,369,395	115,044	27,053	10,511,492	10,038,250
2024			-	473,242	473,242	11,307,971	115,044	27,053	11,450,068	10,976,826
2025			-	473,242	473,242	12,246,913	115,044	27,053	12,389,010	11,915,768
2026			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2027			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2028			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2029			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2030		2,997,597	2,997,597	504,305	3,501,902	12,246,913	115,044	27,053	12,389,010	8,887,107
2031			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2032			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2033			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2034			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2035			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2036			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2037			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2038			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2039			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
2040			-	504,305	504,305	12,246,913	115,044	27,053	12,389,010	11,884,705
									EIRR [d] =	**23.8%**
									ENPV [d] =	**16,566,784**
									Benefit:Cost Ratio=	**1.69**

[a] This is the estimated value of benefits resulting from improved quality of fish as a consequence of improvements in the market facilities of the Atimonan Municipal Fish Port.

[b] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[c] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The incidence of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[d] Economic opportunity cost of capital is at 15%.

Table 12.4.11 EIRR Calculation – Subic Municipal Fish Port

Year	Economic Costs					Economic Benefits				Net Benefits
	Design and Construction Consultants (PhP)	Construction and Equipment (PhP)	Total Investment Cost (PhP)	Operation and Maintenance Cost (PhP)	Total Costs (PhP)	Benefits from Improved Fish Quality - SMFP[a] (PhP)	Improved Health[b] (PhP)	Reduced Loss in Income Due to Improved Health[c] (PhP)	Total Benefits (PhP)	(PhP)
									-	-
2010									-	-
2011	-	-	-		-				-	-
2012	-	-	-		-				-	-
2013	-	-	-		-				-	-
2014	1,896,848	-	1,896,848		1,896,848				-	(1,896,848)
2015	3,793,696	34,531,104	38,324,800		38,324,800				-	(38,324,800)
2016	-	-	-	489,130	489,130	(12,749,194)	223,696	53,495	(12,472,003)	(12,961,133)
2017	-	-	-	489,130	489,130	(5,786,563)	223,696	53,495	(5,509,372)	(5,998,502)
2018			-	489,130	489,130	1,246,495	223,696	53,495	1,523,686	1,034,556
2019			-	489,130	489,130	8,350,692	223,696	53,495	8,627,883	8,138,753
2020			-	489,130	489,130	15,526,744	223,696	53,495	15,803,935	15,314,805
2021			-	551,713	551,713	22,775,375	223,696	53,495	23,052,566	22,500,853
2022			-	551,713	551,713	30,097,319	223,696	53,495	30,374,510	29,822,796
2023			-	551,713	551,713	37,493,313	223,696	53,495	37,770,504	37,218,791
2024			-	551,713	551,713	44,964,105	223,696	53,495	45,241,296	44,689,582
2025			-	551,713	551,713	52,510,448	223,696	53,495	52,787,639	52,235,925
2026			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2027			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2028			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2029			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2030		6,042,644	6,042,644	614,297	6,656,941	52,955,014	223,696	53,495	53,232,205	46,575,264
2031			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2032			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2033			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2034			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2035			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2036			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2037			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2038			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2039			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
2040			-	614,297	614,297	52,955,014	223,696	53,495	53,232,205	52,617,908
									EIRR [d] =	**26.3%**
									ENPV [d] =	**68,557,435**
									Benefit:Cost Ratio=	**3.03**

[a] This is the estimated value of benefits resulting from improved quality of fish as a consequence of improvements in the market facilities of the Subic Municipal Fish Port.

[b] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[c] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The incidence of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[d] Economic opportunity cost of capital is at 15%.

Table 12.4.12 EIRR Calculation – Balatan Municipal Fish Port

Year	Economic Costs					Economic Benefits					Net Benefits
	Design and Construction Consultants (PhP)	Construction and Equipment (PhP)	Total Investment Cost (PhP)	Operation and Maintenance Cost (PhP)	Total Costs (PhP)	Benefits from Improved Fish Quality - BMFP[a] (PhP)	Reduced Cost In Fuel Comsumption[b] (PhP)	Improved Health[c] (PhP)	Reduced Loss in Income Due to Improved Health[d] (PhP)	Total Benefits (PhP)	(PhP)
					-					-	-
2010					-					-	-
2011	-	-	-		-					-	-
2012	-	-	-		-					-	-
2013	10,512,212	-	10,512,212		10,512,212					-	(10,512,212)
2014	12,543,068	101,767,995	114,311,063		114,311,063					-	(114,311,063)
2015	6,076,427	49,133,689	55,210,116		55,210,116					-	(55,210,116)
2016	-	-	-	839,557	839,557	4,238,381	43,545,600	345,132	79,783	48,208,896	47,369,339
2017			-	839,557	839,557	4,982,328	45,964,800	345,132	79,783	51,372,043	50,532,487
2018			-	839,557	839,557	5,726,275	48,384,000	345,132	79,783	54,535,190	53,695,634
2019			-	839,557	839,557	6,470,223	48,384,000	345,132	79,783	55,279,137	54,439,581
2020			-	839,557	839,557	7,214,170	48,384,000	345,132	79,783	56,023,085	55,183,528
2021			-	971,007	971,007	7,958,117	48,384,000	345,132	79,783	56,767,032	55,796,025
2022			-	971,007	971,007	8,702,064	48,384,000	345,132	79,783	57,510,979	56,539,972
2023			-	971,007	971,007	9,446,011	48,384,000	345,132	79,783	58,254,926	57,283,919
2024			-	971,007	971,007	10,189,958	48,384,000	345,132	79,783	58,998,873	58,027,866
2025			-	971,007	971,007	10,933,905	48,384,000	345,132	79,783	59,742,820	58,771,813
2026			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2027			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2028			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2029			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2030		12,816,799	12,816,799	1,102,458	13,919,256	11,677,852	48,384,000	345,132	79,783	60,486,767	46,567,511
2031			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2032			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2033			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2034			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2035			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2036			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2037			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2038			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2039			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
2040			-	1,102,458	1,102,458	11,677,852	48,384,000	345,132	79,783	60,486,767	59,384,310
										EIRR [e] =	**24.8%**
										ENPV [e] =	**99,996,595**
										Benefit:Cost Ratio=	**1.73**

[a] This is the estimated value of benefits resulting from improved quality of fish as a consequence of improvements in the market facilities of the Balatan Municipal Iloilo Fish Port.

[b] This is the total savings in fuel and oil by fishing boats if they land fish at Balatan Municipal Fish Port compared with landing at Lucena.

[c] This represents the total savings in medical cost incurred by affected persons for treatment of water-borne diseases. This is a consequence of improved environmental conditions resulting from the installation of a wastewater treatment facility.

[d] This is the estimated reduction in loss in earnings due to illness resulting from water-borne diseases. The incidence of these diseases is expected to be reduced by the establishment of a wastewater treatment facility.

[e] Economic opportunity cost of capital is at 15%.

Appendix 13. Socio-economic Profiles of Municipalities/ Cities Identified by the Project as Regional and Municipal Fish Ports

Table. 13.1 Income Classifications of Cities and Municipalities

Region	Province	Location & Classification	Income Class *	Urban/ rural	District	Population	Registered Fishermen	Land area
1	Pangasinan	Sual Regional Fish Port	1st	Partially Urban	1st	29,925	N/A	13,016
		Dagupan Municipal Fish	2nd (City)	Urban	4th	149,554	4,350	3,723
3	Zambales	Subic Municipal Fish Port	1st	Partially Urban	1st	77,118	16,434	28,716
4	Quezon	Lucena Regional Fish Port	2nd (City)	Highly Urbanized	2nd	236,390	N/A	8,021
		Atimonan Municipal Fish Port	1st	Partially Urban	4th	59,157	N/A	23,966
		Calauag Municipal Fish Port	1st	Partially Urban	4th	69,475	4,523	32,471
5	Camarines Norte	Sta. Elena Municipal Fish port	3rd	Partially Urban	lone	40,300	7,848	19,935
	Camarines Sur	Camaligan Regional Fish Port	5th	Urban	2nd	20,758	N/A	468
		Calabanga Municipal Fish Port	1st	Partially Urban	2nd	73,333	N/A	16,380
		Pasacao Municipal Fish Port	3rd	Partially Urban	1st	41,533	N/A	14,954
		Balatan Municipal Fish port	4th	Partially Urban	4th	25,982	5,110	9,309
	Albay	Oas Municipal Fish Port	1st	Partially Urban	3rd	63,888	6,944	26,361
6	Iloilo	Iloilo City Regional Fish Port	1st (City)	Highly Urbanized	lone	418,710	N/A	7,834
		Dumangas Municipal Fish Port	1st	Partially Urban	4th	62,769	819	12,870
		Concepcion Municipal Fish Port	3rd	Partially Urban	5th	36,881	9,000	8,612
	Antique	San Jose de Buenavista Fish Port	1st	Partially Urban	lone	54,871	2,500	4,856
11	Davao Sur	Davao Regional Fish Port	1st	Highly Urbanized	LD	1,363,337	N/A	244,361
		Sta. Cruz Municipal Fish Port	1st	Partially Urban	1st	76,113	2,526	31,991
	Davao Norte	Panabo Municipal	3rd (City)	Partially Urban	2nd	154,329	25,629	25,123
	Davao Oriental	Mati Municipal Port		Partially Urban	2nd	122,046	7,000	58,863
12	Surigao Sur	Bislig Fish Port	3rd (City)	Partially Urban	2nd	102,009	1,995	33,180

*** Income classification:** Cities and municipalities are classified according to average annual income based on the previous 3 calendar years.

1) City income classifications:

- 1st class – P400 million or more
- 2nd class – P320 million or more but less than P 300 million
- 3rd class – P240 million or more but less than P240 million
- 4th class – P160 million or more but less than P180 million
- 5th class – P80 million or more but less than P120 million
- 6th class - Below P 80 million

2) Municipalities income classifications :

- 1st class – P55 million or more
- 2nd class – P45 million or more but less than P 55 million
- 3rd class – P35 million or more but less than P45 million
- 4th class – P25 million or more but less than P35 million
- 5th class – P15 million or more but less than P25 million
- 6th class - Below P15 million

Appendix 14. Organization Structure

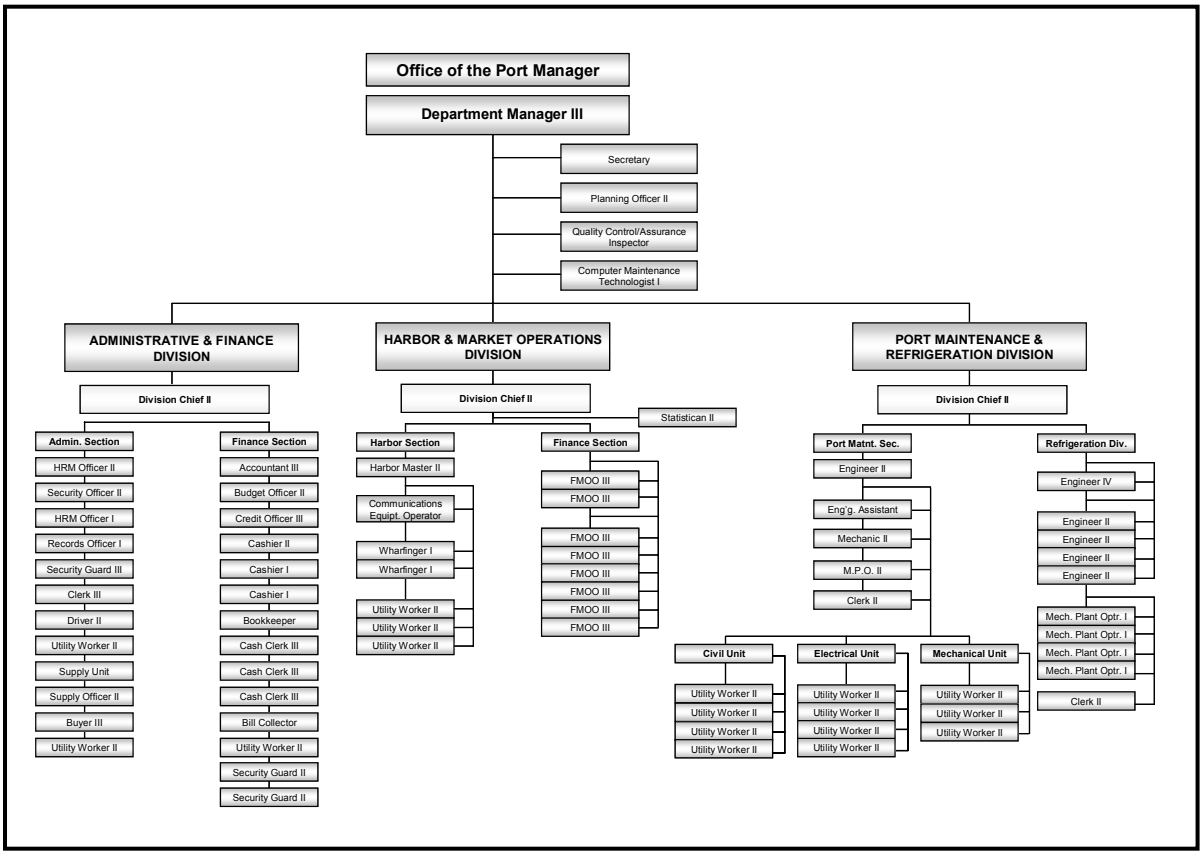

Fig. 14.1 Organization Chart of PFDA Iloilo Fish Port Complex

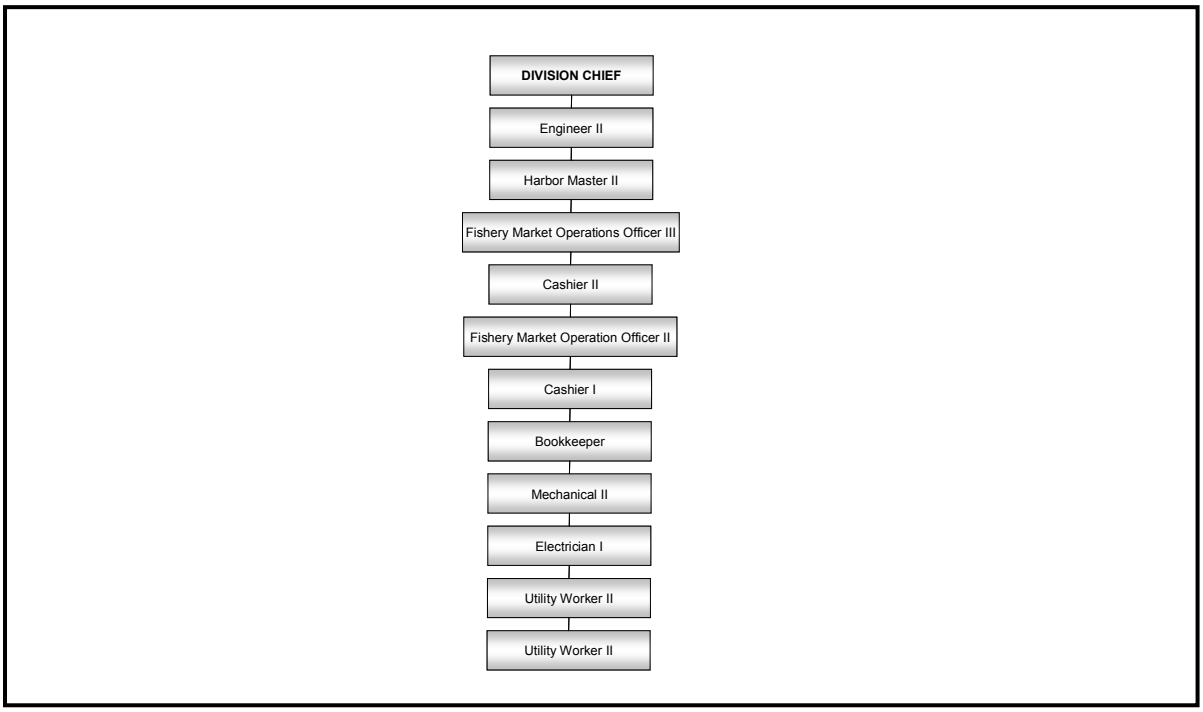

Fig. 14.2 Organization Chart of PFDA Sual Fish Port Complex

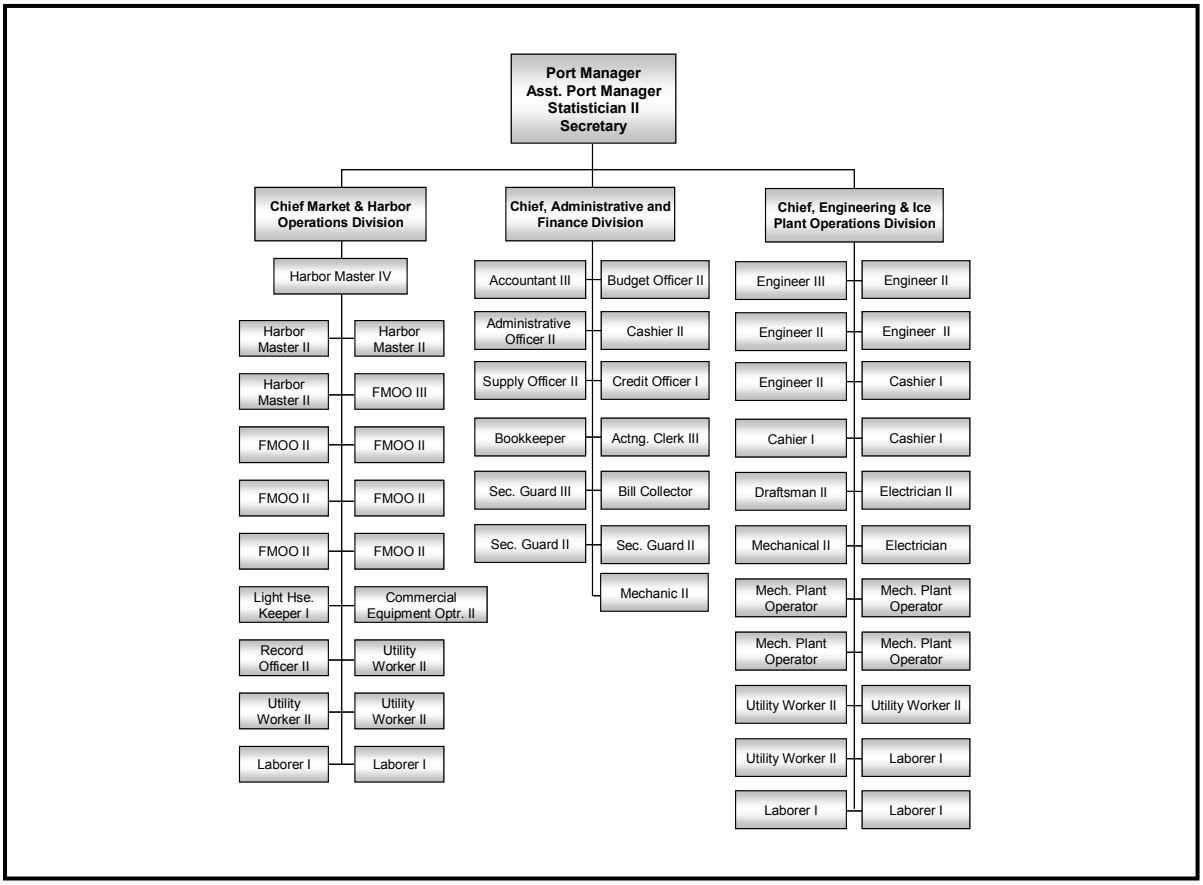

Fig. 14.3 Organization Chart of PFDA Lucena Fish Port Complex

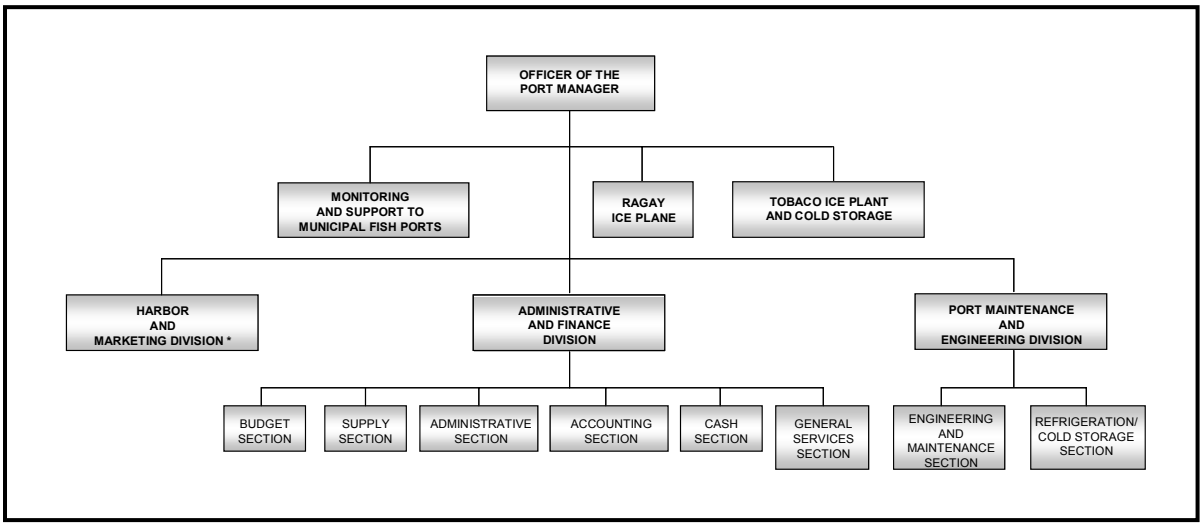

Fig. 14.4 Organization Chart of PFDA Camaligan Fish Port Complex

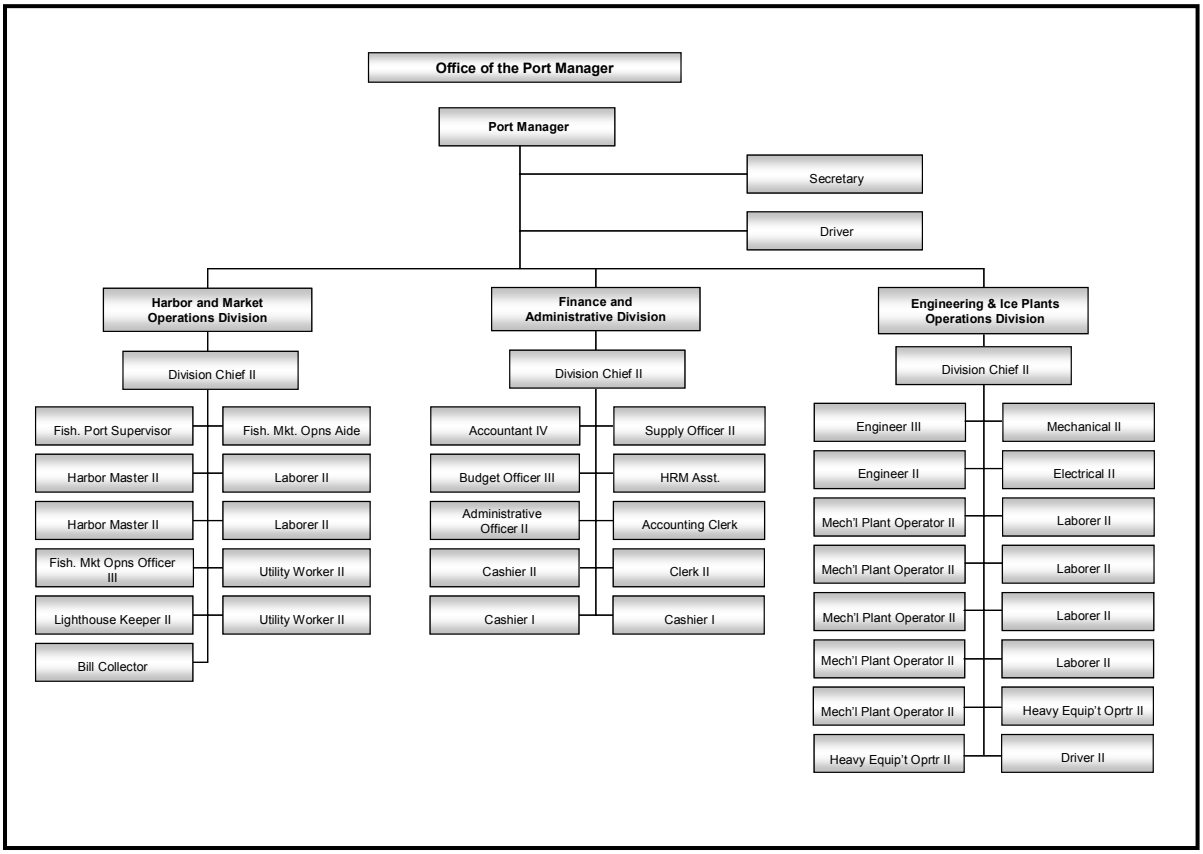

Fig. 14.5 Organization Chart of PFDA Davao Fish Port Complex

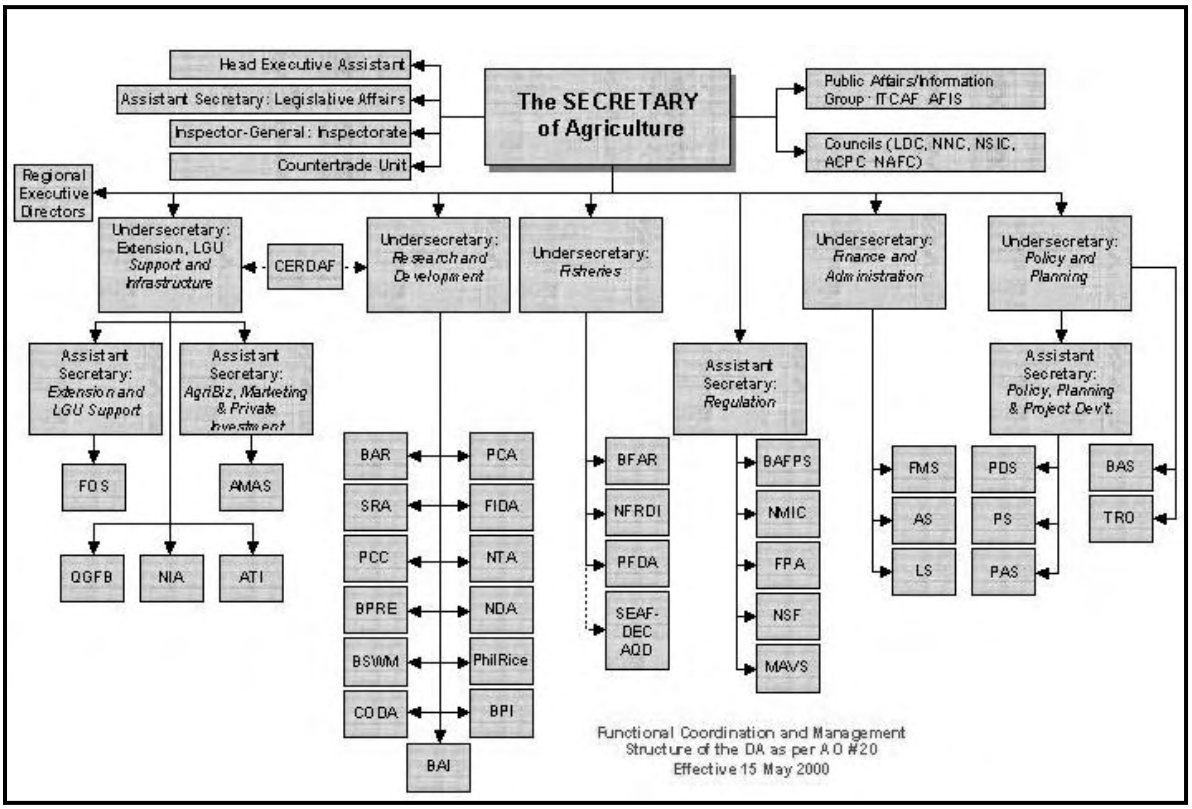

Fig. 14.6 Organization Chart of DA

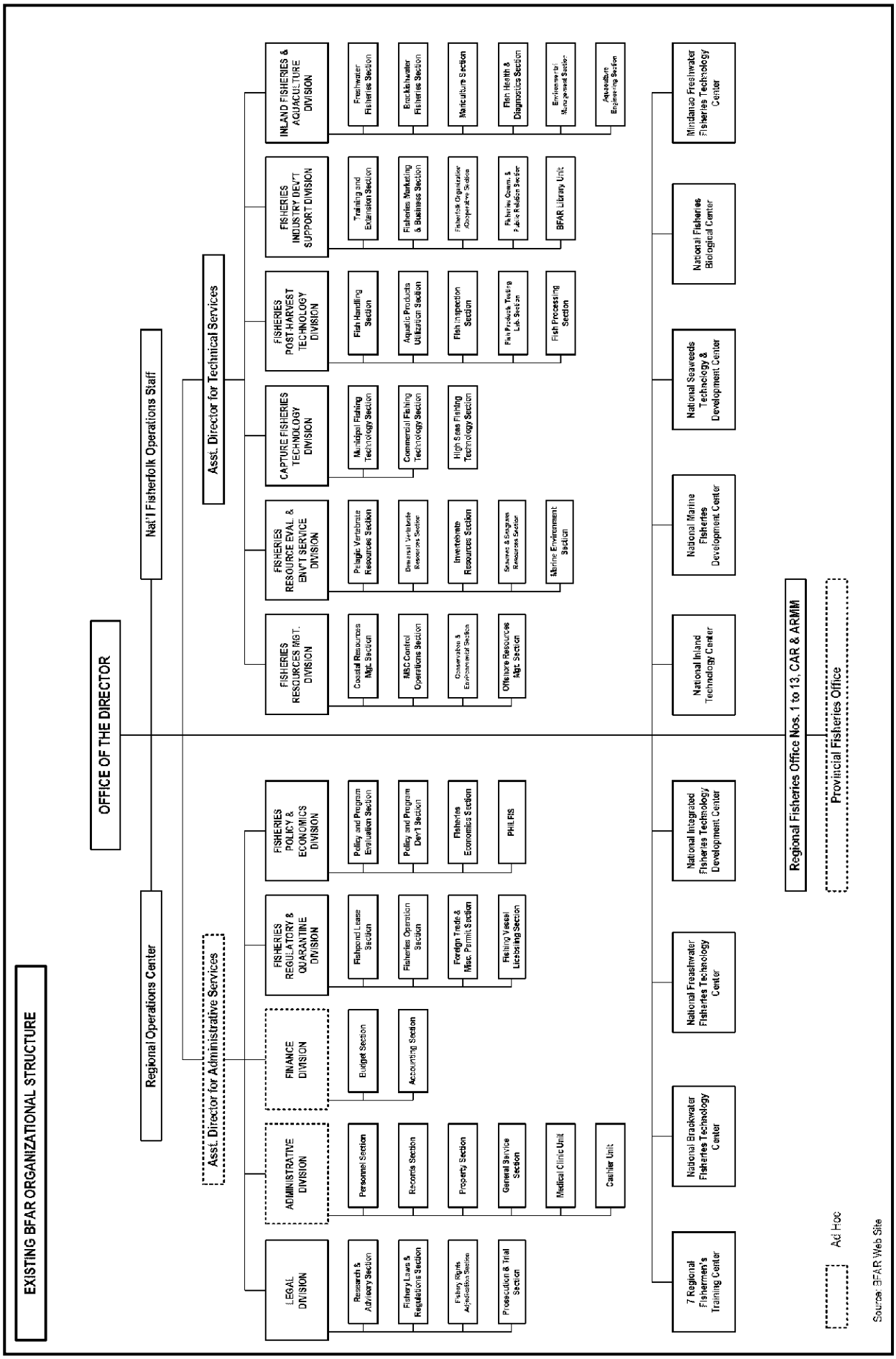

Fig. 14.7 Organization Chart of BFAR

Appendix 15. Financial Condition

15.1 Income Schedule of PFDA

Table 15.1.1 Income Schedule of PFDA

PHILIPPINE FISHERIES DEVELOPMENT AUTHORITY
Schedule of Income (Consolidated)
December 31, 2009

		N F P C	G S F P C	Z F P C	L F P C	D F P C	I F P C	C F P C	S F P C	M F P	I P C S	C.O.	TOTAL
	Permits and Licences												
604	Motor Vehicle Users Charge						15,000.00						15,000.00
605	Permit Fees												
-01	*Port Entry Fee*	203,431.54	901,203.60	203,820.67	257,420.17	3,263,375.02	95,937.88		67,475.63				4,992,664.51
-02	*Berthing Fee*	3,273,341.51	4,211,689.57	1,246,766.01	565,969.35	95,510.99	317,685.38	744.60	281,280.69	17,965.00			10,010,953.10
-03	*Vessel Repair Fee*	415,894.35	85,905.86	27,515.00	18,816.50		141,263.23						689,394.94
-04	*Fuel Conveyance Fee*	2,304,385.19	305,260.50	556,451.36	356,255.00	263,086.44	42,647.83		55,418.50				3,883,504.82
-05	*Ice Conveyance Fee*	524,647.61	342,500.00	1,778,157.00	1,605,433.00	48,783.98	269,947.00		65,604.27	2,640.00			4,637,712.86
-06	*Water Conveyance Fee*	1,367,300.16		132,985.00	192,601.10		27,770.00		10,147.00	4,940.00			1,735,743.26
-07	*Royalty Fee*	17,241,991.49	3,240,000.00	14,415.00		175,139.74			541,393.26	13,785.00			21,226,724.49
-08	*Hauler's Fee*					32,304.40				55,327.50			87,631.90
-09	*Vendor's Fee*	1,565,771.99	15.00	72,195.00	29,802.25		570,055.00			4,167.50			2,242,006.74
-10	*Accreditation Fee*	177,426.82	1,365,545.00	64,300.00	322,066.93	386,723.00	132,900.00						2,448,961.75
-11	*Clearance Fee*					42,100.00							42,100.00
-12	*Easement Fee (Right of Way)*	2,288,841.89		255,639.28	12,950.00	720.00							2,558,151.17
-13	*Others*	418,771.82					4,650.00						423,421.82
608	Other Permits and Lincences			19,375.00	400.00								19,775.00
609	Fines and Penalties-Permits and Licences	34,509.64	10,500.00	6,281.16									51,290.80
	Sub-Total	29,816,314.01	10,462,619.53	4,377,900.48	3,361,714.30	4,307,743.57	1,617,856.32	744.60	1,021,319.35	98,825.00	0.00	0.00	55,065,037.16
	Service Income												
616	Garbage Fee			49,139.98		180,300.00							229,439.98
623	Toll and Terminal Fees												
-01	Entrance Fee	3,908,196.47	1,362,945.00	621,518.00	673,083.00	78,175.00	519,576.00	2,504.00	49,168.47	27,021.00			7,242,186.94
-02	Parking Fee	7,772,219.16	1,158,810.00	11,953.00	452,205.00	117,431.60	246,545.00		108,619.60	15,883.50			9,883,666.86
628	Other Service Income												
-01	Wharfage Fee	3,255,251.12	4,688,877.28	86,906.15	2,951.20	569,595.47	309,673.64	1,248.00	1,003,662.61	1,376.00			9,919,541.47
-02	Delivery Fee					83,932.00		24,630.00					108,562.00
-03	Ice Crusher Fee			19,520.00	8,779.95	200.00							28,499.95
-04	Port Utility Usage	17,867,888.43	9,667,519.10	9,970,116.33	1,761,576.06	3,228,418.56	11,249,427.49	812,307.08	295,149.31	35,550.00			54,887,952.36
-05	Waste Water Treatment Fee			462,845.52		561,236.00							1,024,081.52
629	Fines and Penalties-Service Income	2,381,068.68		82,615.15	81,518.15								2,545,201.98
	Sub-Total	35,184,623.86	16,878,151.38	11,304,614.13	2,980,113.36	4,819,288.63	12,325,222.13	840,689.08	1,456,599.99	79,830.50	0.00	0.00	85,869,133.06
	Business Income												
636	Income from Markets												
-01	Market Fee		476,904.91	246,521.00	2,049,053.00		1,401,003.00			67,308.00			4,240,789.91
-02	Unloading Fee	6,796,354.00	5,203,255.48	213,775.00	1,995,707.00	1,455,804.44	1,751,356.50	351.00	4,487.38	201,373.50			17,622,464.30
-03	Buyer/Seller Fee		4,062,786.62	533,706.00	15,898.00	979,573.99	728,624.00		43,782.74				6,364,371.35
-04	Transshipment Fee	2,363,856.03		1,734,710.01	300,835.00	1,346,000.40	28,228.50			108,610.00			5,882,239.94
	Rent Income												
642	Land												
-01	Industrial	114,857,061.15	3,162,273.36	1,359,286.88	1,859,901.95			204,341.64					121,442,864.98
-02	Commercial	9,313,992.94	794,723.82	379,882.46	1,233,026.99	3,829,965.57	2,091,407.74		77,583.31	188,043.39			17,908,626.22
	Facilities												
-11	IPCS										1,005,437.84		1,005,437.84
-12	Cold Storage/Chillroom		40,376,182.85	3,029,744.91	1,661,218.56	1,853,299.75	8,114,631.84	1,680,000.00					56,715,077.91
-13	Individual Quick Freezer (IQF)					366,129.16							366,129.16
-14	Air Blast Freezer		1,694,400.00										1,694,400.00
-15	Contact Freezer		1,782,028.52	4,838,560.00		16,050.00		289,918.75					6,926,557.27
-17	Slipway/Dry Docking Facility			1,386,537.11	2,865,035.26		1,644,228.66		179,961.87				6,075,762.90
-18	Pier	1,216,259.24											1,216,259.24
-19	Mooring Area	4,030,183.30											4,030,183.30
-20	Sub-Station								947,434.80				947,434.80
	Building												
-31	Market	22,254,810.00	4,578,746.69	41,568.00	2,648,024.73	3,671,196.76	2,000,540.00	132,972.00		56,875.00			35,384,733.18
-32	Refrigeration Building		3,481,998.34	1,653,208.48		284,075.22	424,090.90	429,444.50	915,150.00	47,178.75			7,235,146.19
-33	Staff House/PMO Bldg.		350.00	35,606.67		31,200.00	6,000.00	15,450.00					88,606.67
-34	Administration Bldg.	2,412,625.41	67,003.20					167,212.50					2,646,841.11
-35	Warehouse	450,176.59	376,656.00			399,390.31				66,732.50			1,292,955.40
-36	Other Building	1,403,344.61			121,124.00	948,418.50	1,540,663.14	1,899,999.96	47,352.37				5,960,902.58
	Equipment												
-51	Heavy Equipment		122,586.08	1,259,944.65	2,545.60	788,378.27							2,173,454.60
-52	Refrigerated Van							1,706,430.66					1,706,430.66
-53	Generator Set			36,700.72									36,700.72
	Miscellaneous												
-62	Processing Paraphernalias		631,695.00	103,804.33			640.00	4,318.00					740,457.33
-63	Multi-purpose Area	61,700.00	205,285.56	93,333.96		1,800.00		1,848.00	10,718.16	5,800.00			380,485.68
-64	Locker Cabinet		57,750.00										57,750.00
643	Sales Revenue												
-01	Sale of Ice		8,664,698.44	9,211,444.00	8,664,700.00	6,861,704.46		3,638,010.00					37,040,556.90
-02	ID Issuance	83,810.63	786,976.47	102,509.00	101,580.00		95,391.00						1,170,267.10
-03	Vehicle Stickers	181,664.05	74,266.97	14,900.00			12,700.00						283,531.02
648	Other Business Income												
-01	Retainer's Fee (MFP)							42,950.72		738,701.14			781,651.86
649	Fines and Penalties-Business Income			775.36	320,541.36		176,872.14	230,984.16	26,764.33	4,749.69			760,687.04
	Sub-Total	165,425,837.95	76,600,568.31	26,276,518.54	23,839,191.45	22,832,986.83	20,016,377.42	10,444,231.89	2,253,234.96	1,485,371.97	1,005,437.84	0.00	350,179,757.16
	Other Income												
662	Income from Grants and Donations	2,487,426.64	88,598.40			1,397,236.52	737,769.34					1,372,013.68	6,083,044.58
664	Interest Income	109,535.74	255,555.29	69,556.51	84,091.48	299,531.63	123,649.60	16,889.65	8,548.48	971.26		2,083,879.47	3,052,209.11
678	Miscellaneous Income	1,613.26	110,374.05	165,078.12	12,587.50	226,363.43	7,164.30		790.00			49,422.08	573,392.74
679	Other Fines and Penalties					329,958.91							329,958.91
		2,598,575.64	454,527.74	234,634.63	96,678.98	2,253,090.49	868,583.24	16,889.65	9,338.48	971.26	0.00	3,505,315.23	10,038,605.34
	GRAND TOTAL	233,025,351.46	104,395,866.96	42,193,667.78	30,277,698.09	34,213,109.52	34,828,039.11	11,302,555.22	4,740,492.78	1,664,998.73	1,005,437.84	3,505,315.23	501,152,532.72

15.2 PFDA Consolidated Statement of Income and Expenses

Table 15.2.1 Consolidated Statement of Income and Expenses

PHILIPPINE FISHERIES DEVELOPMENT AUTHORITY
CONSOLIDATED STATEMENT OF INCOME AND EXPENSES
For The Year Ended December 31, 2009

		NFPC	GSFPC	ZFPC	DFPC	IFPC	LFPC	CFPC	SFPC	CO/MFP/IPCS
INCOME										
Permits and Licences	55,065,037.16	29,816,314.01	10,462,619.53	4,377,900.48	4,307,743.57	1,617,856.32	3,361,714.30	744.60	1,021,319.35	98,825.00
Service Income	85,869,133.06	35,184,623.86	16,878,151.38	11,304,614.13	4,819,288.63	12,325,222.13	2,980,113.36	840,689.08	1,456,599.99	79,830.50
Business Income	350,179,757.16	165,425,837.95	76,600,568.31	26,276,518.54	22,832,986.83	20,016,377.42	23,839,191.45	10,444,231.89	2,253,234.96	2,490,809.81
Other Income	903,351.65	1,613.26	110,374.05	165,078.12	556,322.34	7,164.30	12,587.50		790.00	49,422.08
GROSS INCOME	492,017,279.03	230,428,389.08	104,051,713.27	42,124,111.27	32,516,341.37	33,966,620.17	30,193,606.61	11,285,665.57	4,731,944.30	2,718,887.39
EXPENSES										
Personal Services	214,610,032.45	58,412,589.35	21,686,651.02	17,461,619.46	11,883,784.24	20,122,876.80	14,567,502.19	7,521,359.32	2,468,687.13	60,484,962.94
Maintenance and Other Operating Expenses										
Traveling Expenses	1,778,958.28	243,884.00	497,224.03	129,288.19	123,849.06	21,825.07	158,807.30	64,146.56	18,216.00	521,718.07
Training Expenses	215,279.00	100,000.00	89,555.00	0.00	4,500.00	0.00	8,824.00	12,400.00		0.00
Supplies and Materials Expense	22,829,946.40	5,537,925.50	5,910,979.12	1,802,603.40	1,570,198.28	1,345,024.36	2,014,993.30	777,441.09	131,398.61	3,739,382.74
Utility Expenses	101,710,669.36	33,149,078.39	18,662,627.11	15,798,005.73	6,540,732.46	13,896,650.77	7,761,093.83	3,855,980.37	239,506.97	1,806,993.73
Communication Expenses	2,637,585.74	339,860.40	565,311.89	351,318.37	256,818.30	124,788.16	155,666.84	103,504.04	68,234.14	672,083.60
Membership Dues and Contributions to Organiz	12,000.00		2,000.00	0.00						10,000.00
Awards and Indemnities	0.00									
Advertising Expenses	96,998.47	6,000.00	57,080.00	1,455.00	1,080.00	1,300.00	400.00	6,828.13		22,855.34
Printing and Binding Expenses	195,068.38	0.00	18,229.36	0.00	1,600.64	54,924.90	113,375.22	6,058.26	0.00	880.00
Rent Expenses	6,604,556.55		0.00							6,604,556.55
Representation Expenses	1,490,627.65	146,050.00	454,074.14	76,279.20	185,381.38	60,000.00	60,000.00	76,633.60	9,395.97	422,813.36
Transportation and Delivery Expenses	997,381.90		21,625.15	2,603.25	9,713.83	17,763.21		945,676.46		
Storage Expenses	0.00			0.00				0.00		
Subscription Expenses	174,398.10	72,714.00		0.00	16,209.14	12,428.00	4,945.00	5,380.00		62,721.96
Survey Expenses	0.00									
Rewards and Other Claims	0.00									
Professional Services	76,670,568.51	21,462,408.98	22,192,353.48	6,456,728.41	5,766,185.29	4,146,331.14	5,044,470.70	515,326.97	968,425.47	10,118,338.07
Repairs and Maintenance	9,956,730.00	2,016,725.88	5,306,607.58	588,775.90	797,055.64	127,341.62	494,682.00	321,009.91	41,592.07	262,939.40
Donations	1,300.00							1,300.00		
Taxes, Duties and Licenses	13,192,048.75	9,862,723.18	2,337,993.45	615.00	234,688.58	233,995.54	221,751.84	202,126.91	87,154.25	11,000.00
Fidelity Bond Premiums	192,504.25	69,150.00	31,357.50	9,735.00	9,165.00	9,570.00	7,728.75	8,488.00	1,653.75	45,656.25
Insurance Expenses	931,128.65	17,448.50	95,656.61	59,141.58	258,211.19	11,974.56	259,531.62	126,231.01		102,933.58
Bad Debts Expenses	918,505.88	0.00					908,825.88	9,680.00		
Depreciation	24,589,961.83	8,998,405.78	1,226,950.90	3,546,340.74	2,113,245.83	3,936,654.13	1,352,722.72	557,893.08	368,776.36	2,488,972.29
Other Maintenance and Operating Expenses	5,819,516.45	159,509.72	280,294.37	47,144.18	237,053.35	69,221.91	174,899.36	57,172.14	20,049.39	4,774,172.03
Total MOOE	271,015,734.15	82,181,884.33	57,749,919.69	28,870,033.95	18,125,687.97	24,069,793.37	18,742,718.36	7,653,276.53	1,954,402.98	31,668,016.97
Financial Expenses	19,863.50	1,025.00	0.00	0.00	0.00	131.50	1,750.00	8,280.00	1,637.00	7,040.00
TOTAL EXPENSES	485,645,630.10	140,595,498.68	79,436,570.71	46,331,653.41	30,009,472.21	44,192,801.67	33,311,970.55	15,182,915.85	4,424,727.11	92,160,019.91
INCOME FROM OPERATIONS	6,371,648.93	89,832,890.40	24,615,142.56	-4,207,542.14	2,506,869.16	-10,226,181.50	-3,118,363.94	-3,897,250.28	307,217.19	-89,441,132.52
Add(Deduct) Other Income/Expenses										
Income from Grants and Donations	6,083,044.58	2,487,426.64	88,598.40	0.00	1,397,236.52	737,769.34	0.00	0.00	0.00	1,372,013.68
Interest Income	3,052,209.11	109,535.74	255,555.29	69,556.51	299,531.63	123,649.60	84,091.48	16,889.65	8,548.48	2,084,850.73
Subsidy from Other National Gov't Agancies	0.00									0.00
Interests and Other Financing Charges	-900,893.17									-900,893.17
Gain(Loss) on Sale/Disposal of Assets	395,525.19				56,202.69	327,322.50				12,000.00
Gain(Loss) on Foreign Exchange(FOREX)	-327,076.49		-9,089.89		-280,752.92					-37,233.68
NET INCOME	14,674,458.15	92,429,852.78	24,950,206.36	-4,137,985.63	3,979,087.08	-9,037,440.06	-3,034,272.46	-3,880,360.63	315,765.67	-86,910,394.96
Operating Ratio	0.99	0.61	0.76	1.10	0.92	1.30	1.10	1.35	0.94	33.90

15.3 Balance Sheet of PFDA

Table 15.3.1 Balance Sheet of PFDA

PFDA '000 Peso

Balance Sheet (Consolidated, as of 31 December)

	2008	2007	2006	2005	2004	2003
ASSETS						
Current Assets						
Cash	307,172	339,504	256,141	228,022	234,243	201,451
Receivables	116,496	106,020	152,898	157,105	137,077	124,188
Inventories	11,946	11,425	9,352	9,794	5,840	5,130
Repayments	4,408	6,699	3,983	709	3,753	4,670
Other Cuttent Assets	8,600	8,600	8,618	8,605	0	0
Sub-Total	448,622	472,248	430,992	404,235	380,913	335,438
Investments	139	139	139	47,656	74,842	97,228
Property, Plant & Equipment	355,699	291,360	241,954	220,508	212,104	206,279
Other Assets	79,014	83,027	45,397	45,384	16,220	17,065
TOTAL ASSETS	883,474	846,774	718,482	717,783	684,081	656,010
LIABILITIES and EQUITY						
Current Liabilities	748,287	728,767	608,763	624,865	621,226	651,358
Long Term Liabilities	67,119	63,758	81,198	109,026	134,055	121,148
Deferred Credists	18,039	14,394	10,261	11,997	0	0
TOTAL LIABILITIES	833,445	806,919	700,222	745,887	755,281	772,506
NE EQUITY						
Equity/Net Worth	50,029	39,855	18,259	-28,104	-71,200	-116,460
TOTAL LIABILITIES and EQUITY	883,474	846,774	718,482	717,784	684,081	656,046

Revenue and Expenditure Statement (Consolidated, as of 31 December)

	2008	2007	2006	2005	2004	2003
REVENUES						
Subsidy	12,500	25,000	38,860	38,860	38,860	12,310
Permits and Licenses	57,289	51,280	53,343	60,918	2,541	3,661
Service/Business/Other Income	408,347	396,555	390,138	378,800	430,464	406,034
Miscellaneous Revnues	-6,355	15,438	21,244	5,879	663	7,646
TOTAL REVENUES	471,781	488,273	503,585	484,457	472,529	429,650
EXPENDITURES	462,155	440227.8	436,261	438,472	404,585	405,099
TOTAL EXPENDITURES	462,155	440,228	436,261	438,472	404,585	405,099
BALANCE OF REVENUE/EXPEND	9,625	48,045	67,324	45,985	67,944	24,551

Cashflows (Consolidated, as of 31 December)

	2008	2007	2006	2005	2004	2003
CASH INFLOWS	509,105	587,143	471,527	467,111	460,535	444,395
CASH OUTFLOWS	490,405	453,083	455,558	445,966	450,355	451,996
CASH provided by Operations	18,699	134,059	15,969	21,145	10,180	-7,600
CASH FLOW from Investments						
Cash Inflow	4,849	4,903	53,172	36,435	22,386	23,671
Cash Outflows	40,939	38,312	25,566	4,848	25,050	16,714
Balance	-36,091	-33,409	27,606	31,587	-2,664	6,958
CASH FLOW from Finances						
Cash Inflow	0	0	0	636	38,860	12,310
Cash Outflows	16383.8	16,329	15,456	27,247	13,584	13,008
Balance	-16,384	-16,329	-15,456	-26,611	25,276	-698
Total Cash provided by Operations,	-33,775	84,321	28,119	26,121	32,792	-1,341
Balance brought forwad/w adjstmnt	340,947	255,184	228,022	201,901	201,451	202,792
BALANCE to be brought forward	307,172	339,504	256,141	228,022	234,243	201,451

15.4 Balance Sheet of DA

Table 15.4.1 Balance Sheet of DA

DA '000 Peso

Balance Sheet (Consolidated, as of 31 December)

	2008	2007	2006	2005	2004	2003
ASSETS						
Current Assets						
Cash	6,238,903	3,323,777	2,701,667	2,475,981	1,965,631	1,709,906
Receivables	24,474,490	16,306,175	11,948,626	11,013,393	11,343,965	10,153,359
Inventories	1,364,174	1,170,946	1,415,765	1,479,137	1,702,898	970,848
Repayments	730,072	908,574	1,179,210	1,083,375	1,218,299	1,083,456
Other Cuttent Assets	25,260	25,719	25,849	26,131	24,847	25,231
Sub-Total	32,832,898	21,735,191	17,271,117	16,078,017	16,255,640	13,942,800
Investments	107,559	124,935	123,096	139,837	207,189	1,423,032
Property, Plant & Equipment	64,289,566	61,537,999	55,796,706	51,455,233	48,227,995	45,983,178
Other Assets	262,206	250,755	29,437	24,911	29,732	21,839
TOTAL ASSETS	97,492,229	83,648,879	73,220,356	67,697,998	64,720,556	61,370,849
LIABILITIES and EQUITY						
Current Liabilities	7,226,044	5,357,013	4,734,422	5,241,031	4,895,269	11,229,792
Long Term Liabilities	9,807	10,786	10,970	6,077	781	573
Deferred Credists	94,746	95,550	95,031	87,900	3,665	2,953
TOTAL LIABILITIES	7,330,597	5,463,349	4,840,423	5,335,008	4,899,715	11,233,318
EQUITY						
Government Equity	90,161,632	78,185,531	68,379,934	62,362,989	59,820,841	50,137,530
TOTAL LIABILITIES and EQUITY	97,492,229	83,648,879	73,220,357	67,697,997	64,720,556	61,370,848

Income and Expenses Statement (Consolidated, as of 31 December)

	2008	2007	2006	2005	2004	2003
INCOME						
Subsidy from National Gov.	29,789,771	19,284,531	12,574,089	11,077,588	12,384,389	10,652,740
Other Susidies/Sales	10,932	8,543	23,825	87,658	6,181	1,056
Others	106,894	97,419	193,712	75,659	49,255	48,556
TOTAL INCOME	29,907,597	19,390,492	12,791,626	11,240,905	12,439,825	10,702,352
EXPENSES						
Personal Services	2,215,226	2,112,394	2,070,515	2,017,312	1,994,018	2,052,729
Maintenance and Operating	6,516,867	4,826,027	3,820,229	3,303,975	3,679,602	2,490,143
Financial Expenses	481	514	596	881	267,182	1,412
TOTAL EXPENSES	8,732,574	6,938,935	5,891,340	5,322,168	5,940,802	4,544,284
BALANCE OF INCOME/EXPENSE	21,175,023	12,451,558	6,900,286	5,918,737	6,499,023	6,158,068

Cashflows (Consolidated, as of 31 December)

	2008	2007	2006	2005	2004	2003
CASH INFLOWS	46,243,407	26,838,278	16,523,435	12,823,132	15,347,582	10,944,661
CASH OUTFLOWS	42,514,163	25,730,408	16,130,034	12,259,487	12,518,558	6,836,021
CASH provided by Operations	3,729,243	1,107,870	393,401	563,645	2,829,024	4,108,640
CASH FLOW from Investments						
Cash Inflow	814,117	391,767	15,000	3,609,670	118,967	2,001
Cash Outflows	0	0	201,206	3,664,785	2,759,993	4,577,113
Balance	814,117	391,767	-186,206	-55,115	-2,641,026	-4,575,112
CASH FLOW from Finances						
Cash Inflow	0	15744.9	18491	23289	69,046	0
Cash Outflows	0	11,163	0	29,474	1,319	0
Balance	0	4,582	18,491	-6,185	67,727	0
Total Cash provided by Operations,	4,543,360	1,504,219	225,686	502,345	255,725	-466,472
Balance brought forwad/w adjstmnt	3,323,777	2,603,092	2,475,982	1,973,637	1,709,907	2,176,379
BALANCE to be brought forward	7,867,137	4,107,311	2,701,668	2,475,982	1,965,632	1,709,907

15.5 Balance Sheet of BFAR

Table 15.5.1 Balance Sheet of BFAR

BFAR '000 Peso

Balance Sheet (Consolidated, as of 31 December)

	2008	2007	2006	2005	2004	2003
ASSETS						
Current Assets						
Cash	258,529	295,588	151,667	141,393	108,543	157,965
Receivables	585,314	706,594	478,740	429,391	539,316	518,792
Inventories	49,544	30,978	34,140	24,070	41,841	64,895
Repayments	43,447	29,398	28,917	14,029	9,546	17,486
Other Cuttent Assets	2,927	2,970	3,254	1,642	2,333	1,926
Sub-Total	939,761	1,065,528	696,718	610,526	701,579	761,063
Investments	123	123	123	123	123	0
Property, Plant & Equipment	2,897,472	2,831,233	3,055,470	3,271,204	1,331,139	1,445,008
Other Assets	19,256	10,018	7,677	2,890	4,379	720,566
TOTAL ASSETS	3,856,612	3,906,902	3,759,987	3,884,743	2,037,220	2,926,637
LIABILITIES and EQUITY						
Current Liabilities	333,896	448,573	261,589	279,255	1,261,625	1,605,468
Long Term Liabilities	0	0	0	0	0	0
Deferred Credists	0	0	0	0	0	0
TOTAL LIABILITIES	333,896	448,573	261,589	279,255	1,261,625	1,605,468
EQUITY						
Government Equity	3,522,716	3,458,329	3,498,398	3,605,489	775,595	1,321,169
TOTAL LIABILITIES and EQUITY	3,856,612	3,906,902	3,759,987	3,884,743	2,037,220	2,926,637

Income and Expenses Statement (Consolidated, as of 31 December)

	2008	2007	2006	2005	2004	2003
INCOME						
Subsidy from National Gov.	1,548,123	1,649,968	1,354,693	1,435,875	1,718,244	1,270,351
Other Susidies/Sales	0	0	-2,680	-18,778	720,245	609,214
Others	557	37,013	-84	-40	22,857	822
TOTAL INCOME	1,548,680	1,686,981	1,351,930	1,417,057	2,461,346	1,880,386
EXPENSES						
Personal Services	368,258	336,557	331,988	327,342	314,051	317,967
Maintenance and Operating	1,240,223	1,055,986	1,048,909	972,786	1,870,589	1,335,447
Financial Expenses	47	38	33	190	144	112
TOTAL EXPENSES	1,608,528	1,392,581	1,380,930	1,300,318	2,184,784	1,653,526
BALANCE OF INCOME/EXPENSE	-59,848	294,400	-29,000	116,739	276,563	226,861

Cashflows (Consolidated, as of 31 December)

	2008	2007	2006	2005	2004	2003
CASH INFLOWS	2,752,434	2,772,206	2,249,903	2,250,967	2,203,581	1,909,228
CASH OUTFLOWS	2,673,190	2,537,509	2,183,606	2,180,720	2,199,373	1,970,537
CASH provided by Operations	79,244	234,697	66,297	70,246	4,208	-61,308
CASH FLOW from Investments						
Cash Inflow	0	2	0	1,000	500	0
Cash Outflows	116,278	90,772	56,333	38,399	53,337	32,472
Balance	-116,278	-90,770	-56,333	-37,399	-52,837	-32,472
CASH FLOW from Finances						
Cash Inflow	0	0	0	0	0	0
Cash Outflows	25	6	3	1	0	0
Balance	-25	-6	-3	-1	0	0
Total Cash provided by Operations,	-37,059	143,921	9,961	32,846	-48,629	-93,781
Balance brought forwad/w adjstmnt	295,588	151,667	141,393	108,543	157,965	251,745
BALANCE to be brought forward	258,529	295,588	151,667	141,393	108,543	157,965

Appendix 16. Terms of Reference of Engineering Services and Technical Assistance

16.1 Preparation of Detailed Design and Bid Documents

The scope of works will include but not limited to the following:

a) Collection of additional data/ information for the review of the Feasibility Study.
b) Confirmation/ correction of base line data for the indicators of project outputs.
c) Conduct detailed topo-hydrographic surveys and additional geological investigations needed to pursue the detailed design and construction of facilities.
d) Undertaking of detailed design of fish port facilities. For the civil and marine work, collection of detail information will be taken from users such as type and kind of vessels, fish landing method, type of vehicles for fish transport, fish trading procedures, etc. Opinion or suggestion from users about the type of refrigeration equipment, HACCP processing facilities, capacity of Slipway, number of lessees, method of utilization, period/method of storage of raw/frozen materials, etc will be taken for the preparation of plans and designs.
e) Preparation of layout plans and detailed drawings of all facilities will be conducted by CAD. Preparation of specifications for all facilities based on internationally accepted standards.
f) Preparation of bid and contract documents for civil works, building works and refrigeration equipment for international bidding. This shall include instructions to bidders, conditions of contract (genera1 and special conditions) and other associated documents for all required works a consistent with JICA Guidelines for Procurement.
g) Preparation of Bills of Quantities for all works and the costing of the bills of quantities supported with unit cost derivation. The estimated cost shall be broken down into local and foreign currency components.
h) Preparation of pre-qualification documents for civil and marine works, building works, installation of procurement and utilities work and procurement of refrigeration and associated equipments including invitation to tender. Assistance to reply of questionnaires and evaluation of proposals including recommendations as may be required. Final decision for selection of qualified contractors however will rest with PFDA, subject to concurrence of JICA. Provision of assistance for invitation to bid.

The tender documents for civil and marine works, building facilities, utilities work and refrigeration equipment shall be prepared for internationa1 competitive bidding consistent with JICA guidelines for Procurement.

Manning schedule of detailed design is shown in the following.

Table 16.1.1 Implementation and Manning Schedule of the Engineering Services (DD) (Regional and Municipal Fish Ports)

	Year/Month / Assignment	1	2	3	4	5	6	7	8	9	10	11	12	M/M	Trip
Foreign Expert															
1	Team Leader	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.0	1.0
2	Port Engineer	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.0	1.0
3	Civil Engineer			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	10.0	1.0
4	Road and Pavement Engineer				1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		8.0	1.0
5	Dredging/Hydraulic Engineer		1.0	1.0	1.0	1.0	1.0	1.0	1.0					7.0	1.0
6	Geotechnical Engineer	1.0	1.0	1.0	1.0	1.0	1.0	1.0						7.0	1.0
7	Fish Port Operation/Management Expert				1.0	1.0	1.0	1.0				1.0	1.0	6.0	2.0
8	Fish Resources/Marketing Expert	1.0	1.0	1.0	1.0	1.0	1.0	1.0						7.0	1.0
9	HACCP Expert							1.0	1.0	1.0				3.0	1.0
10	Refregiration Engineer							1.0	1.0	1.0	1.0	1.0		5.0	1.0
11	Electrical Engineer							1.0	1.0	1.0	1.0	1.0		5.0	1.0
12	Mechanical Engineer					1.0	1.0	1.0	1.0	1.0	1.0	1.0		7.0	1.0
13	Economic/Financial Expert											1.0	1.0	2.0	1.0
14	Document Specialist										1.0	1.0	1.0	3.0	1.0
15	Environmental Expert				1.0	1.0						1.0		3.0	1.0
16														0.0	
17														0.0	
	Sub-Total	4.0	5.0	6.0	9.0	10.0	9.0	12.0	9.0	8.0	8.0	11.0	6.0	**97.0**	16.0
Local Expert															
1	Co-Team Leader	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.0	
2	Structural Engineer 1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.0	
3	Structural Engineer 2		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		10.0	
4	Civil Engineer 1		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	11.0	
5	Civil Engineer 2			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		9.0	
6	Road and Pavement Engineer				1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9.0	
7	Architect						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0	
8	Electrical Engineer						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0	
9	Mechanical Engineer						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0	
10	Cost Estimator								1.0	1.0	1.0	1.0	1.0	5.0	
11	Economic/Financial Expert										1.0	1.0	1.0	3.0	
12	Document Specialist									1.0	1.0	1.0	1.0	4.0	
17	Environmental Expert				1.0	1.0	1.0					1.0		4.0	
	Sub-Total	2.0	4.0	5.0	7.0	7.0	10.0	9.0	10.0	11.0	12.0	13.0	10.0	**100.0**	
	Total	6.0	9.0	11.0	16.0	17.0	19.0	21.0	19.0	19.0	20.0	24.0	16.0	**197.0**	

Table 16.1.2 Cost Breakdown of Engineering Services (DD)
(Regional and Municipal Fish Ports)

Item		Unit	Unit Rate	Detailed Design Stage	
				Quantity	Total
A	**Foregn Currency Component**		(1,000YEN)		(1,000YEN)
A-1	Remuneration				
	1) Remuneration of Expatriate	M/M	2,500	97	242,500
A-2	Direct Cost				
	1) International Travel Expense	Trip	150	16	2,400
	2) Mobilization Cost & Excess Charge	Trip	100	16	1,600
	3) Per Diem and Accommodation for Expatriate	M/M	420	97	40,740
	4) International Communication Expense	Month	100	12	1,200
	5) Overseas Traning of Philippinos Officials	Person	1,000	4	4,000
	6) Computer Analysis for Wave and Structure Design	Sum	7,500	1	7,500
	Sub-total 1				299,940
	Equivalent to 1,000 PHP				**153,456**
B	**Local Currency Component**		(1,000PHP)		(1,000PHP)
B-1	Remuneration				
	1) Engineer	M/M	100	100	10,000
	2) Adminiatrative Staff	M/M	40	48	1,920
	3) Technical Supporting Staff	M/M	70	36	2,520
B-2	Direct Cost				
	1) Office Rental	Month	150	12	1,800
	2) Office Furniture	Sum	300	1	300
	3) Office Equipment	Sum	500	1	500
	4) Office Consumables	Month	150	12	1,800
	5) Local Communication	Month	15	12	180
	6) Local Travel Cost for Site Visit	Month	15	12	180
	7) Vehicle Rental	Month	202	12	2,424
	8) Report Preparation	Sum	230	1	230
	9) Field Investigation				
	- Soil Investigation	Sum	8,000	1	8,000
	-Topo/Hydro Survey	Sum	7,000	1	7,000
	-Environmantal Impact Assessment Survey	Sum	8,000	1	8,000
	Sub-total 2				**44,854**
	Ground Total (Sub-total 1+2)				**198,310**

In the case that the five (5) municipal fish ports are excluded from the project, The Project will only consist of six (6) regional ports. In this scenario, implementation & manning schedule and cost breakdown of the engineering services (DD) are shown in table 16.1.3 and 16.1.4.

Table 16.1.3 Implementation and Manning Schedule of the Engineering Services (DD) (Regional Fish Ports Only)

	Year/Month													M/M	Trip
	Assignment	1	2	3	4	5	6	7	8	9	10	11	12		
Foreign Expert															
1	Team Leader	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.0	1.0
2	Port Engineer	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.0	1.0
3	Civil Engineer			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	10.0	1.0
4	Road and Pavement Engineer					1.0	1.0	1.0	1.0	1.0	1.0			6.0	1.0
5	Dredging/Hydraulic Engineer				1.0	1.0	1.0	1.0	1.0					5.0	1.0
6	Geotechnical Engineer	1.0	1.0	1.0	1.0	1.0	1.0	1.0						7.0	1.0
7	Fish Port Operation/Management Expert				1.0	1.0	1.0	1.0				1.0	1.0	6.0	2.0
8	Fish Resources/Marketing Expert		1.0	1.0	1.0	1.0	1.0	1.0						6.0	1.0
9	HACCP Expert							1.0	1.0	1.0				3.0	1.0
10	Refregiration Engineer							1.0	1.0	1.0	1.0	1.0		5.0	1.0
11	Electrical Engineer							1.0	1.0	1.0	1.0	1.0		5.0	1.0
12	Mechanical Engineer					1.0	1.0	1.0	1.0	1.0	1.0	1.0		7.0	1.0
13	Economic/Financial Expert											1.0	1.0	2.0	1.0
14	Document Specialist										1.0	1.0	1.0	3.0	1.0
15	Environmental Expert				1.0	1.0						1.0		3.0	1.0
16														0.0	
17														0.0	
	Sub-Total	3.0	4.0	5.0	8.0	10.0	9.0	12.0	9.0	8.0	8.0	10.0	6.0	**92.0**	16.0
Local Expert															
1	Co-Team Leader	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.0	
2	Structural Engineer 1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.0	
3	Structural Engineer 2		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		10.0	
4	Civil Engineer 1		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		10.0	
5	Civil Engineer 2			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		9.0	
6	Road and Pavement Engineer					1.0	1.0	1.0	1.0	1.0	1.0	1.0		7.0	
7	Architect						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0	
8	Electrical Engineer						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0	
9	Mechanical Engineer						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0	
10	Cost Estimator									1.0	1.0	1.0	1.0	4.0	
11	Economic/Financial Expert										1.0	1.0	1.0	3.0	
12	Document Specialist									1.0	1.0	1.0	1.0	4.0	
17	Environmental Expert				1.0	1.0						1.0		3.0	
	Sub-Total	2.0	4.0	5.0	6.0	7.0	9.0	9.0	9.0	11.0	12.0	13.0	8.0	**95.0**	
	Total	5.0	8.0	10.0	14.0	17.0	18.0	21.0	18.0	19.0	20.0	23.0	14.0	**187.0**	

Table 16.1.4 Cost Breakdown of Engineering Services (DD)
(Regional Fish Ports Only)

Item		Unit	Unit Rate	Detailed Design Stage	
				Quantity	Total
A	**Foregn Currency Component**		(1,000YEN)		(1,000YEN)
A-1	Remuneration				
	1) Remuneration of Expatriate	M/M	2,500	92	230,000
A-2	Direct Cost				
	1) International Travel Expense	Trip	150	15	2,250
	2) Mobilization Cost & Excess Charge	Trip	100	15	1,500
	3) Per Diem and Accommodation for Expatriate	M/M	420	92	38,640
	4) International Communication Expense	Month	100	12	1,200
	5) Overseas Traning of Philippinos Officials	Person	1,000	4	4,000
	6) Computer Analysis for Wave and Structure Design	Sum	7,500	1	7,500
	Sub-total 1				285,090
	Equivalent to 1,000 PHP				**145,858**
B	**Local Currency Component**		(1,000PHP)		(1,000PHP)
B-1	Remuneration				
	1) Engineer	M/M	100	95	9,500
	2) Adminiatrative Staff	M/M	40	45	1,800
	3) Technical Supporting Staff	M/M	70	34	2,380
B-2	Direct Cost				
	1) Office Rental	Month	150	12	1,800
	2) Office Furniture	Sum	300	1	300
	3) Office Equipment	Sum	500	1	500
	4) Office Consumables	Month	150	12	1,800
	5) Local Communication	Month	15	12	180
	6) Local Travel Cost for Site Visit	Month	15	12	180
	7) Vehicle Rental	Month	202	12	2,424
	8) Report Preparation	Sum	232	1	232
	9) Field Investigation				
	- Soil Investigation	Sum	7,100	1	7,100
	-Topo/Hydro Survey	Sum	6,200	1	6,200
	-Environmantal Impact Assessment Survey	Sum	7,050	1	7,050
	Sub-total 2				**41,446**
	Ground Total (Sub-total 1+2)				**187,304**

16.2 Bidding and Construction Supervision

Assist PFDA in the evaluation of bids and undertaking of construction supervision of the project. This will include but limited to the following:

a) Provision of assistances for invitations to pre-qualify and bid, evaluation of bids and preparation of detailed tender evaluation report for submission to PFDA together with the recommendations for the award of the contract to the lowest evaluated and most responsive bidders for approval of PFDA and JICA.
b) Checking and/or recommending approval of the Manufacturer's Drawings and/or Contractor's Proposa1 for the construction of the Project.
c) Preparation of additional designs and checking of all working drawings of the Contractor for approval of PFDA for the satisfactory execution of works including those required as a result of any modification and /or alterations from the original bid documents.
d) To check the location, alignment and workmanship of all works as laid by the Contractor including the installation of procured equipment for recommendation to PFDA for acceptance or rejection;
e) Recommendation of acceptance or rejection of materials to be used or incorporated in the works, Continuous inspection of the works and where necessary to issue instructions to the contractor to make corrections for compliance with the Contract.
f) Checking of monthly Contract Payment Certificate for progress payments and certifying progress payments for approval of PFDA.
g) Assisting PFDA in negotiating and implementing any change order which may be necessary.
h) Checking, evaluating and recommending for PFDA approval the Contractor's and Supplier's Work Schedule (CPM) and Progress Schedule for the most effective and expeditious methods of carrying out the works as well as the manufacture and installation of equipment.
i) Conducting of periodic coordination meetings regularly and as may be required.
j) Maintaining permanent records of all measurements made for the works, quantities to be paid and results of all tests made on materials used for the works.
k) Evaluating and preparing recommendations for PFDA's approval of all claims, disputes and requests for time extension(s) or changes that the Contractor may request, and assist PFDA in negotiating with the Contractor on all prompt solution of such request.
l) Supervising the fabrication/installation of all equipment and facilities at site and performance of final performance test.
m) Issuing interim payment certificates, certificates of completion, final payment certificates and maintenance certificates in accordance with the Contract.
n) Preparing Environmental Monitoring Program during project construction.
o) Reviewing and submitting to PFDA, upon the issuance of the Final Certificate of Acceptance of the Project, all job records, as-built drawings and written instructions for the satisfactory operation and maintenance of the Project.
p) Management of site safety.

Within three (3) months after the issuance of the Final Certificate of Acceptance of the Project, the Consultant shall submit to PFDA a Contract Completion Report describing the progress of work, construction record, list of variation orders, final cost and other matters as may be required by PFDA.

Manning schedule of construction management is shown in the following.

Table 16.2.1 Manning Schedule of the Engineering Services (Construction Management) (Regional and Municipal Fish Ports)

		Year/Month	2013		2014				2015				2016				M/M	Trip
		Assignment	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th		
Foreign Expert																		
Manila Head Office Team	1	Team Leader	1.0	1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	38.0	5.0
	2	Port/StructuralEngineer			1.0	3.0	3.0	3.0	3.0	3.0							16.0	2.0
	3	Dredging/Hydraulic Engineer					3.0	3.0									6.0	1.0
	4	Geotechnical Engineer			2.0	3.0											5.0	1.0
	5	Fish Port Operation/Management Expert												2.0	3.0		5.0	1.0
	6	HACCP Expert								3.0					2.0		5.0	2.0
	7	Refregiration Engineer	0.5	0.5	1.0		2.0			2.0			2.0		2.0	1.0	11.0	8.0
	8	Electrical Engineer								1.0	1.0	1.5	1.5	1.5	1.5	1.5	9.5	7.0
	9	Mechanical Engineer									1.5	1.5	1.5	1.5			6.0	4.0
	10	Environmental Expert				1.0					1.0				1.0		3.0	3.0
Iloilo	11	Leader of Iloilo Group			2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	35.0	3.0
																	0.0	
Lucena	12	Leader of Lucena Group			1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	33.0	3.0
	13	Civil/Structural Engineer										2.0	3.0	2.0			7.0	1.0
Davao	14	Leader of Davao Group				1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	30.0	3.0
																	0.0	
		Sub-Total	1.5	1.5	10.0	17.0	20.0	18.0	15.0	21.0	15.5	17.0	20.0	19.0	21.5	12.5	**209.5**	44.0
Local Expert																		
Manila Head Office	1	Co-Team Leader	1.0	1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	38.0	
	2	Structural Engineer				2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0			26.0	
	3	Civil Engineer						3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	26.0	
	4	Architect							3.0	3.0	3.0	3.0	3.0	3.0	3.0		21.0	
	5	Electrical Engineer							2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	23.0	
	6	Mechanical Engineer						3.0	3.0	3.0	3.0	3.0	3.0	3.0			21.0	
	7	Environmental Expert				1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	11.0	
Iloilo	8	Structural Engineer					3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0		25.0	
	9	Civil Engineer			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	36.0	
Lucena	10	Structural Engineer					3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0		25.0	
	11	Civil Engineer			1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	33.0	
Davao	12	Structural Engineer						3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0		22.0	
	13	Civil Engineer				1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	30.0	
		Sub-Total	1.0	1.0	7.0	13.0	22.0	31.0	36.0	37.0	37.0	37.0	37.0	37.0	25.0	16.0	**337.0**	
		Total	2.5	2.5	17.0	30.0	42.0	49.0	51.0	58.0	52.5	54.0	57.0	56.0	46.5	28.5	**546.5**	

Table 16.2.2 Cost Breakdown of Engineering Services (Construction Management)

(Regional and Municipal Fish Ports)

Item		Unit	Unit Rate	Construction Management Stage	
				Quantity	Total
A	**Foregn Currency Component**		(1,000YEN)		(1,000 YEN)
A-1	Remuneration				
	1) Remuneration of Expatriate	M/M	2,500	210	523,750
A-2	Direct Cost				
	1) International Travel Expense	Trip	150	44	6,600
	2) Mobilization Cost & Excess Charge	Trip	100	44	4,400
	3) Per Diem and Accommodation for Expatriate	M/M	420	210	87,990
	4) International Communication Expense	Month	100	38	3,800
	5) Overseas Traning of Philippinos Officials	Person	1,000	4	4,000
	Ssub-total 1				630,540
	Equivalent to 1,000 PHP				**322,598**
B	**Local Currency Component**		(PHP)		(PHP)
B-1	Remuneration				
	1) Engineer	M/M	100	337	33,700
	2) Adminiatrative Staff	M/M	40	288	11,520
	3) Technical Supporting Staff	M/M	70	108	7,560
B-2	Direct Cost				
	1) Office Rental	Month	150	38	5,700
	2) Office Furniture	Sum	300	1	300
	3) Office Equipment	Sum	500	1	500
	4) Office Consumables	Month	150	38	5,700
	5) Local Communication	Month	15	38	570
	6) Local Travel Cost for Site Visit	Month	15	36	540
	7) Vehicle purchase	Unit	940	8	7,522
	8) Report Preparation	Sum	10	36	360
	Sub-total 2				73,972
	Ground Total (Sub-total 1+2)				**396,570**

In the case that the five (5) municipal fish ports are excluded from the project, The Project will only consist of six (6) regional ports. In this scenario, implementation & manning schedule and cost breakdown of the engineering services (Construction Management) are shown in table 16.2.3 and 16.2.4.

Table 16.2.3 Manning Schedule of the Engineering Services (Construction Management) (Regional Fish Ports Only)

		Year/Month	2013		2014				2015				2016				M/M	Trip
		Assignment	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th		
Foreign Expert																		
Manila Head Office Team	1	Team Leader	1.0	1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	38.0	5.0
	2	Port/StructuralEngineer			1.0	2.0	3.0	3.0	3.0	3.0							15.0	2.0
	3	Dredging/Hydraulic Engineer					2.0	2.0									4.0	1.0
	4	Geotechnical Engineer			1.0	2.0											3.0	1.0
	5	Fish Port Operation/Management Expert												2.0	3.0		5.0	1.0
	6	HACCP Expert								3.0					2.0		5.0	2.0
	7	Refregiration Engineer	0.5	0.5	1.0		2.0			2.0			2.0		2.0	1.0	11.0	8.0
	8	Electrical Engineer								1.0	1.0	1.0	1.0	1.5	1.5	1.5	8.5	7.0
	9	Mechanical Engineer									1.0	1.5	1.5	1.5			5.5	4.0
	10	Environmental Expert				1.0					1.0				1.0		3.0	3.0
Iloilo	11	Leader of Iloilo Group			1.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	33.0	3.0
																	0.0	
Lucena	12	Leader of Lucena Group			1.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	32.0	3.0
	13	Civil/Structural Engineer										2.0	2.0	2.0			6.0	1.0
Davao	14	Leader of Davao Group				1.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	29.0	3.0
																	0.0	
		Sub-Total	1.5	1.5	8.0	13.0	18.0	17.0	15.0	21.0	15.0	16.5	18.5	19.0	21.5	12.5	**198.0**	44.0
Local Expert																		
Manila Head Office	1	Co-Team Leader	1.0	1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	38.0	
	2	Structural Engineer				1.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0			23.0	
	3	Civil Engineer						1.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0	22.0	
	4	Architect							1.0	2.0	3.0	3.0	3.0	3.0	3.0		18.0	
	5	Electrical Engineer							2.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	22.0	
	6	Mechanical Engineer						1.0	2.0	3.0	3.0	3.0	3.0	3.0			18.0	
	7	Environmental Expert				1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	11.0	
Iloilo	8	Structural Engineer					1.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0		22.0	
	9	Civil Engineer			1.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	32.0	
Lucena	10	Structural Engineer					1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0		23.0	
	11	Civil Engineer			1.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0	31.0	
Davao	12	Structural Engineer						3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0		22.0	
	13	Civil Engineer				1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0	29.0	
		Sub-Total	1.0	1.0	5.0	10.0	17.0	26.0	32.0	36.0	37.0	37.0	37.0	36.0	25.0	11.0	**311.0**	
		Total	2.5	2.5	13.0	23.0	35.0	43.0	47.0	57.0	52.0	53.5	55.5	55.0	46.5	23.5	**509.0**	

Table 16.2.4 Cost Breakdown of Engineering Services (Construction Management)

(Regional Fish Ports Only)

Item		Unit	Unit Rate	Construction Management Stage	
				Quantity	Total
A	**Foregn Currency Component**		(1,000YEN)		(1,000 YEN)
A-1	Remuneration				
	1) Remuneration of Expatriate	M/M	2,500	198	495,000
A-2	Direct Cost				
	1) International Travel Expense	Trip	150	43	6,450
	2) Mobilization Cost & Excess Charge	Trip	100	43	4,300
	3) Per Diem and Accommodation for Expatriate	M/M	420	198	83,160
	4) International Communication Expense	Month	100	38	3,800
	5) Overseas Traning of Philippinos Officials	Person	1,000	4	4,000
	Ssub-total 1				596,710
	Equivalent to 1,000 PHP				**305,290**
B	**Local Currency Component**		(PHP)		(PHP)
B-1	Remuneration				
	1) Engineer	M/M	100	311	31,100
	2) Adminiatrative Staff	M/M	40	250	10,000
	3) Technical Supporting Staff	M/M	70	100	7,000
B-2	Direct Cost				
	1) Office Rental	Month	150	38	5,700
	2) Office Furniture	Sum	300	1	300
	3) Office Equipment	Sum	500	1	500
	4) Office Consumables	Month	150	38	5,700
	5) Local Communication	Month	15	38	570
	6) Local Travel Cost for Site Visit	Month	15	36	540
	7) Vehicle purchase	Unit	940	8	7,522
	8) Report Preparation	Sum	10	34	340
	Sub-total 2				69,272
	Ground Total (Sub-total 1+2)				**374,561**

16.3 Monitoring of Defects during the Defect Liability Period

For the first year after project completion, the Contractor shall execute maintenance work in accordance with the Contract. The Consultant will periodically inspect the performance work of the Contractor.

During the period of maintenance, the Consultant shall prepare instructions to the Contractor in writing for the restoration of all defectives works discovered during the defects liability period. When all maintenance work has been completed in accordance with the Contract, the latter will issue a Defects Liability Certificate to the Contractor.

Upon issuance of the Defects Liability Certificate, the Consultant will submit a Defects Liability Completion Report summarizing the conditions of the facilities and any or all restoration works that were taken.

16.4 Technical Assistance

16.4.1 Fish Port Management Advisor

(1) Objectives

Fish port utilization charges/fees are increased as projected at six regional fish ports (IFPC,

SFPC, LFPC, CFPC, DFPC and BFPC) so as to ensure the financially sustainable and independent operation and management.

(2) Expected Outputs

1) Fish port operation and maintenance system will be established / revised, accepted by stakeholders and implemented (including rules & regulations, port utilization charge/fees, and organization structures).
2) Project facilities are effectively utilized as projected with increase of number of lessees.

(3) Scope Of Activities

1) Improvement of fish port operation and management

- Review the existing organization structure and recommend the necessary measures for improvement including the plan for capacity building and the recruitment plan of new staff.
- Review the existing fish port operation and management system including rules & regulations and port facilities charges/fees and prepare the plan for improvement based on the projected assumptions under F/S.
- Organize the stakeholder workshops at each fish port in order to explain and obtain the consensus of the revised fish port operation and management plan.
- Assist the PFDA in selecting the lessees for fish port facilities (fish processing facility, boat repair facility and so on) both in technical and financial points of view.

2) Promotion for fish port utilization

- Demonstrate and extend the merits to use the market hall of IFPC and LFPC to the fish sellers and buyers, in collaboration with the TCP experts.
- Encourage fish cage operators of Sual to use the SFPC for unloading of milkfish by providing with feed storage, net washing facilities and other merits, if any.
- Encourage boat operators (purse seiners and hand liners) of General Santos to shift operation base to Bislig by campaigning of merits of a new BFPC.
- Encourage fish processors to use the IFPC, SFPC, CFPC and DFPC by demonstrating results of experiments and assisting in HACCP planning, in collaboration with TCP experts.

(4) Period Of Activities

Twenty-four (24) months commencing from 6 months before the completion of construction work of each fish port.

(5) Others

(Facilities and Services Provided by Philippine side)
Office space and office equipment

(Counterpart personnel from Philippine side)
PFDA top management (GM, AGM and Planning Director)
PFDA port managers (Iloilo, Lucena)

16.4.2 Fish Postharvest Expert

(1) Objectives

The potential lessees for the PFDA refrigeration and fish processing facilities are encouraged to use the local fish processing facility in the PFDA fish ports.

(2) Expected Outputs

1) The current demand for fish processed products and the taste of local consumers in the target areas are clarified.
2) At least 3 processed products, which are acceptable at local markets, are be developed using small pelagics (sardine, eastern little tuna and round scad) and skipjack.

3) Small- and medium-scale fish processors and NGOs of Iloilo, Lucena and Sual are identified and encouraged to tackle on the local fish processing.

(3) Scope Of Activities

1) Market Analysis

- Conduct a market study on fish processed products with particular emphasis on small pelagics (sardine, eastern little tune and round scad) and skipjack in the consumption markets in Metro Manila, Iloilo and northern Luzon.

2) Development of new processed products

- Based on the results of the market study, conduct an experimental fish processing (proof test) at BFAR Region-V Fish Processing laboratory, including the testing of products quality and the sanitary certification of BFAR.
- Examine the acceptability of products (taste and price) for local consumers through a experimental sales and a tasting party.

3) Extension and demonstration of processing technology

- Demonstrate the processing methods to local fish processors on experimental base (conduct an experimental fish processing as same as item 3.2 at fish ports (Iloilo, Lucena and Sual) by inviting the interested fish processors.
- Extend and enlighten new processed products to the public using advertisement tools such as a homepage of fish port, local food fairs and supermarket chains.

(4) Period Of Activities

(First Year) Activities (3) 1) and 2) are executed to achieve the outputs and(3) 2) for 10 months in FY 2011 before the detailed design of the project facilities is commenced.

(Second Year) Activities (3) 3) are executed to achieve the outputs (2) 3 for 10 months in FY 2012 before the tender documents for refrigeration equipment is drafted.

(5) Others

(Equipment to be procured by Japanese side)
Following equipment are to be procured for conducting an experimental fish processing (Total amount approx. US$30,000).
Vacuum packing machine
Fish burger preparation kit (meat chopper, stainless table, mold, cooking equipment)
Fish smoking chamber (experimental scale)
Consumables

(Facilities and Services to be provided by the Philippine side)

1) Existing PFDA fish port facilities (Space for processing and cold storage)
2) Existing BFAR Region-V Fish Processing Laboratory
3) Testing of product quality and sanitary certification by BFAR
4) Raw materials for experiments (100 kg/time/species x 3 species x 20 times)

(Counterpart personnel from Philippine side)

1) PFDA port managers (Iloilo, Lucena and Sual)
2) PFDA officers in charge of marketing
3) NFRDI/BFAR researchers on postharvest technology

16.4.3 Fish Marketing Expert

(1) Objectives

Price of fresh fish is raised and stabilized at market hall of IFPC and LFPC.

(2) Expected Outputs

1) Fish handling and trading activities in the market hall are properly controlled in accordance with GMP/SSOP.
2) Daily fish market price information network system will be established and accepted by port users.
3) Quality assurance (QA) system including standards, operation procedure and organization (Fish inspection unit) is established in IFPC and LFPC.
4) No illegal fish and low quality fish is dealt in the market hall of IFPC and LFPC, and at least 10% of total unloaded fish will be quality-assured with official label.

(3) Scope Of Activities

1) Improvement of fish handling and trading activities

- Review the current GMP/SSOP and the current fish handling and marketing activities, recommend and execute the necessary actions to be taken for improvement at the market hall of IFPC and LFPC.
- Introduce appropriate identification system of market-related stakeholders so as to control the entrance of general people other than registered fish producers, brokers and buyers.
- Provide the PFDA staffs with on-site training on GMP/SSOP.

2) Establishment of market price information network system

- Identify the market information that are required by fish producers and buyers at IFPC and LFPC.
- Elaborate a digital device for market information system at IFPC and LFPC.
- Recommend an appropriate network for market information among major fish ports in the Philippines.

3) Establishment of quality assurance (QA) system

- Establish the fresh fish inspection structure for quality assurance (QA) at IFPC and LFPC, to control not only the illegally caught fish but also the low quality fish.
- Prepare and implement the operational procedure for sensory test of fresh fish and water quality.
- Prepare and implement the standards for quality assurance of fresh fish including those for equipment used at market hall.

4) Public awareness and promotion of quality assurance (QA) system

- Publicize the facilities and services related to fresh fish handling and marketing provided at IFPC and LFPC, using a homepage and posters as well as organizing local campaigns / events.
- Identify the special fresh fish that are handled in conformity with QA standards at IFPC and LFPC, and provide with the official quality-assured label so as to obtain a better reputation to fishes handled at IFPC and LFPC.

(4) Period of Activities

(First Year)	Activities 3.1 and 3.2 are executed to achieve the outputs 2.1 and 2.2 for 6 months in FY 2014 before and during the construction work for market hall.
(Second Year)	Activities 3.3 are executed to achieve the outputs 2.3 for 6 months in FY 2015 before the completion of construction work of market hall.
(Third Year)	Activities 3.4 are executed to achieve the output 2.4 for 8 months in FY 2016 after opening of new market halls at IFPC and LFPC.

(5) Others

(Equipment)

Equipment for quality assurance (thermometer, pH meter, ATP meter, label printer, etc.)

(Counterpart personnel from Philippine side)

1) PFDA port managers (Iloilo, Lucena)
2) PFDA Chief of Harbor and Market Operation (Iloilo, Lucena)
3) PFDA Officers in charge of quality assurance (Iloilo, Lucena)

16.4.4 HACCP and quality control expert (Fish processing)

(1) Objectives

Quality of processed fish products will improve, and exporting amount are increased from IFPC, DFPC, CFPC and SFPC.

(2) Expected Outputs

1) Improvement of Processed fish quality (HACCP plan)
   - Regional staff in fish port (IFPC, DFPC, CFPC and SFPC) and BFAR are properly conduct HACCP monitoring procedure to small and medium scale fish processors.
   - PFDA staffs will have knowledge to the principle of HACCP Plan for management of HACCP accrediatable processing facilities. (Establish and effective HACCP plan for every different product whom eager to join the regional fish port.)
   - The regional small and medium scale fish processing companies will have access to information of HACCP Plan to encourage to produce export quality products.

(3) Scope of Activities

1) Review of fish processed procedure
   - Review the current GMP/SSOP and the current fish handling in fish processed facilities, recommend and execute the necessary actions to be taken for improvement at the processed fish facilities in IFPC, DFPC, CFPC and SFPC regions.
   - Review the current monitoring procedure in competent monitoring authority relating to HACCP system
2) **Assistance in HACCP system monitoring (Capacity building of BFAR and PFDA staff)**
   - Provide the PFDA staffs with on-site training on HACCP monitoring.
   - Provide the BFAR staffs with on-site training on HACCP inspection including laboratory work. Laboratory work will be focused in Microbiological and chemical analysis, which are prescribed in HACCP regulation.
   - Elaborate laboratory equipments for Chemical analysis and Microbiological analysis in DFPC, CFPC and IFPC.
3) **Implementation of HACCP Plan for fish processing facilities**
   - Review the current processing procedure of in fish processing facilities, to identify the necessary action to improve for the HACCP certificate.
   - Analyze and conduct a hazard analysis of all possible Food Safety Hazards that are likely to occur in the processing operation in fish port. Based on the species being processed and the process used.
   - Establish "Critical Control Points (CCPs)" in the current processing facilities to identify the failure or unsafe if proper Control is not exercised.
   - Establish "Critical limits(s)" to the parameters of the process associated with each identified CCPs.
   - Establish monitor control of the CCP to keep track of the processes performance.
   - Support to establish for appropriate HACCP Plan to HACCP facilities-related fish port stakeholders who are dedicated to operate in fish port and export their product to overseas.

(4) Period of Activities

(First Year) Activities 4.1 are executed to achieve the outputs 3.1 for 6 months in FY 2014 before and during the construction work for HACCP facilities.

(Second Year) Activities 4.2 and 4.3 are executed to achieve the outputs 3.2 And 3.3 for 6 months in FY 2015 before the completion of construction work of HACCP processing facility.

(Third Year) Activities a part of 4.2 and 4.3 are executed to achieve the output 3.3 for 8 months in FY 2016.

(5) Others

(Equipment)

Equipment for laboratory work (Analytical equipment: glass ware equipment, LC/MS, Microscope, computer, etc.)

(Counterpart personnel from Philippine side)

1) PFDA port managers (IFPC, DFPC, CFPC and SFPC)
2) PFDA HACCP staff (IFPC, DFPC, CFPC and SFPC)
3) BFAR laboratory staff (Chemical and microbiology)
4) PFDA Officers in charge of quality assurance (IFPC, DFPC, CFPC and SFPC)

Appendix 17. Photographs

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Fig. 17.19 Sta. Cruz Fish Port A-255

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Fig. 17.21 Mati Fish Port A-257

West Breakwater (Observed siltation) (1),(4)

Damaged Fender to be replaced (2)

Change to Stair Landing (Request from Stakeholder) (3)

Rehabilitation of East Revetment (Damaged by Typhoon) (5)

Fig. 17.1 (1) Iloilo Fish Port

Damaged Slipway to be repaired (6)

Congested Market Hall

Deteriorated Market Hall

Reconstruction & Extension of Market Hall (7)

Damaged Roof of Refrigeration Bldg. to be repaired (8)

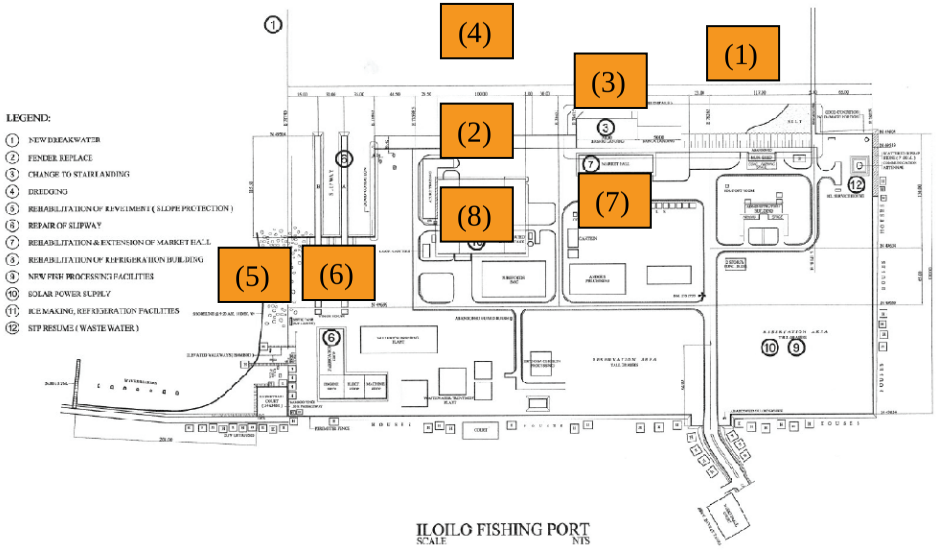

Fig. 17.1 (2) Iloilo Fish Port