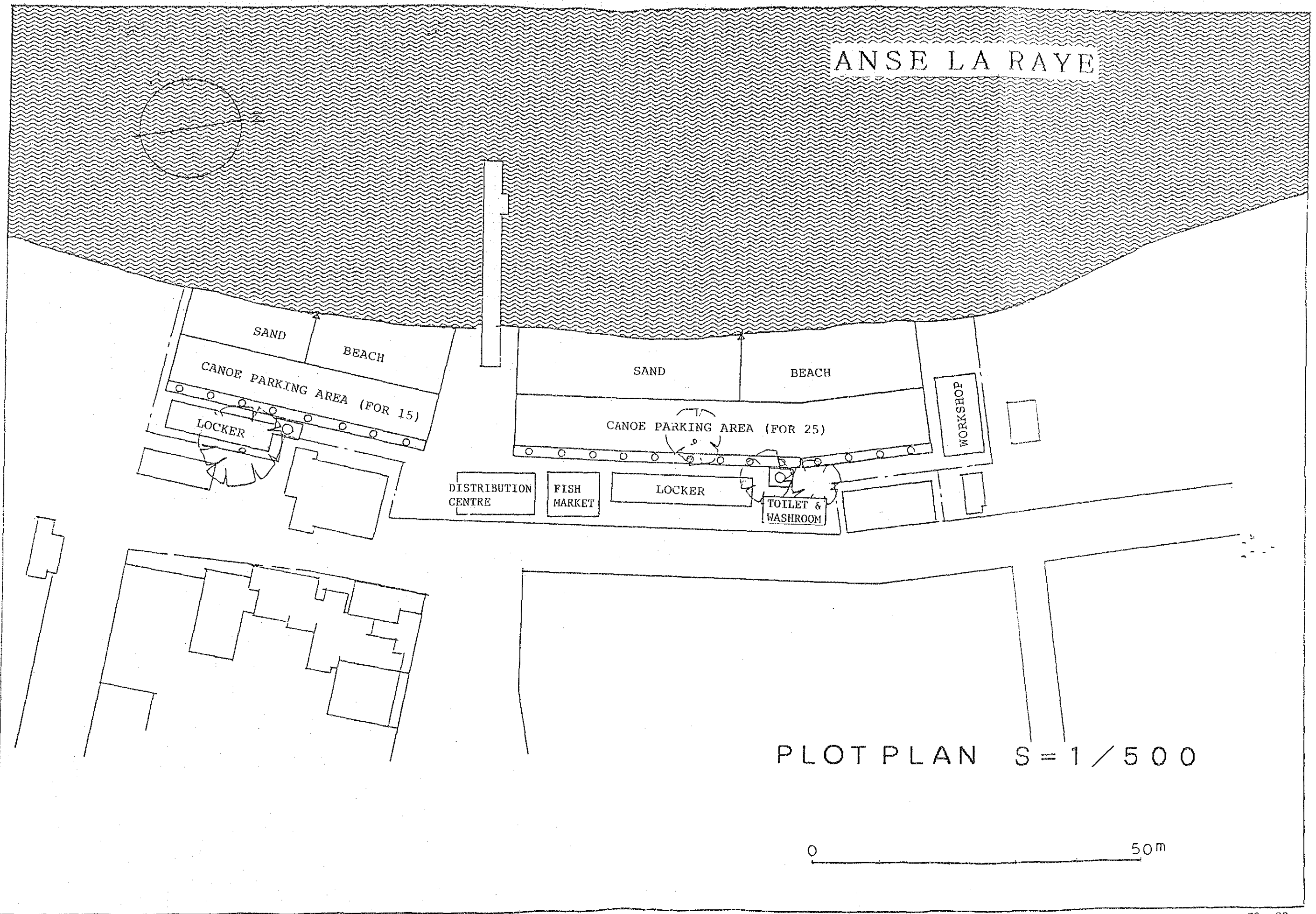


PLOT PLAN S=1/500

0 50m

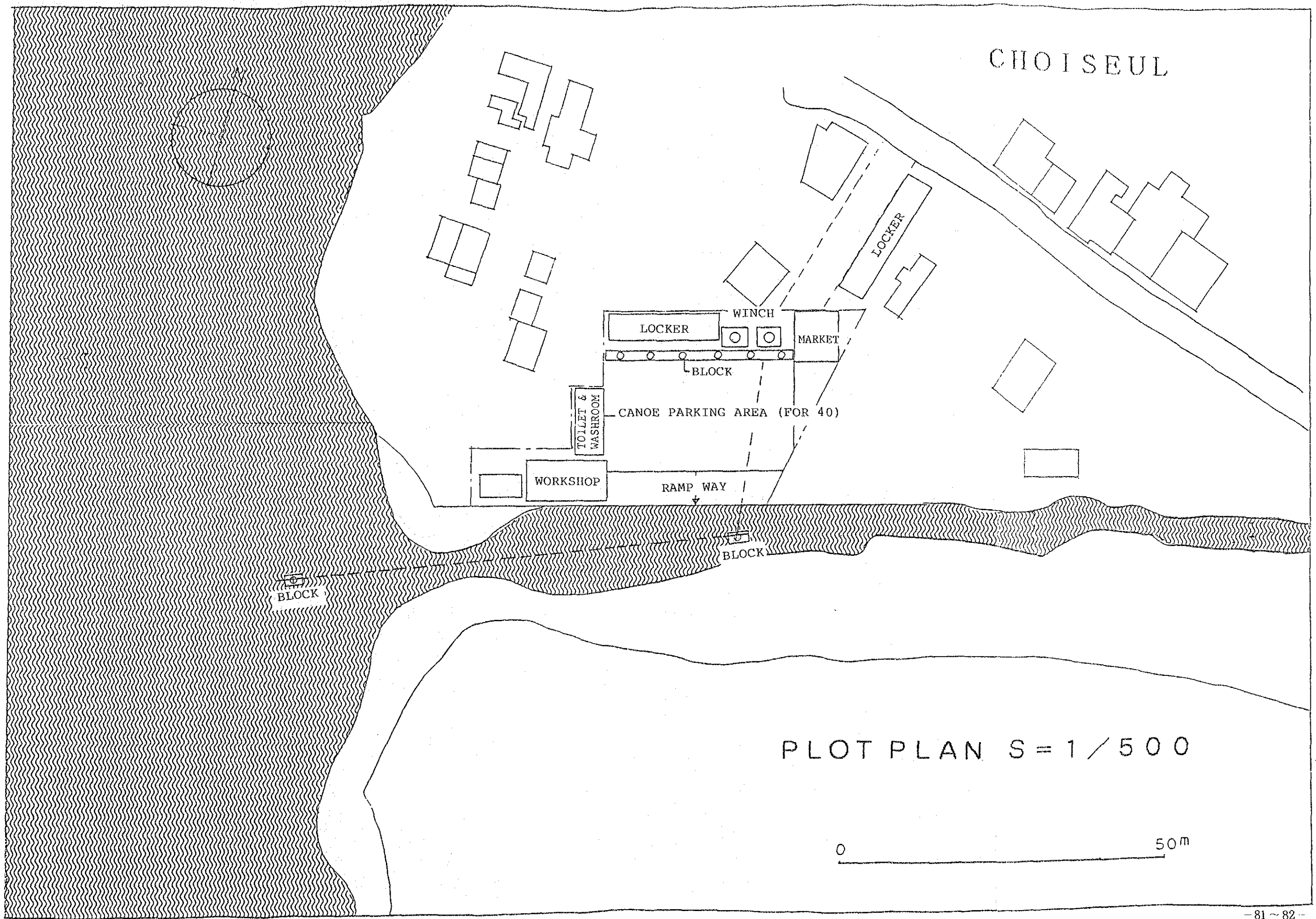
ANSE LA RAYE



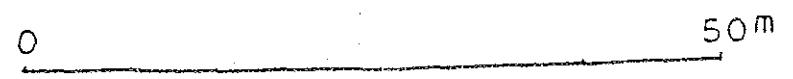
PLOT PLAN S = 1 / 500

0 50m

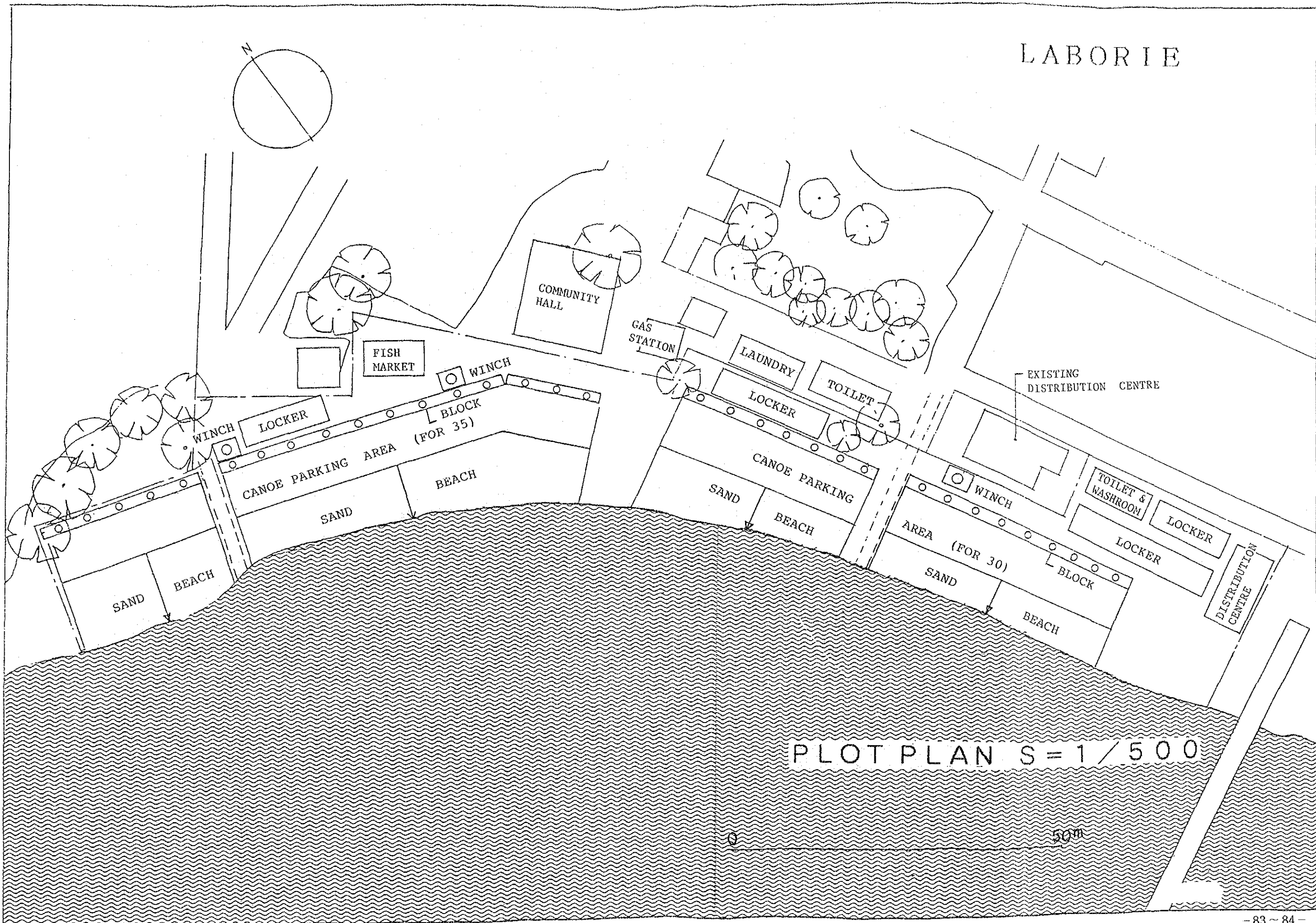
CHOISEUL



PLOT PLAN S = 1 / 500



LABORIE



PLOT PLAN S=1/500

MICOUD

SAND

BEACH

CANOE PARKING AREA (FOR 20)

TOILET &
WASHROOM

WINCH

LOCKER

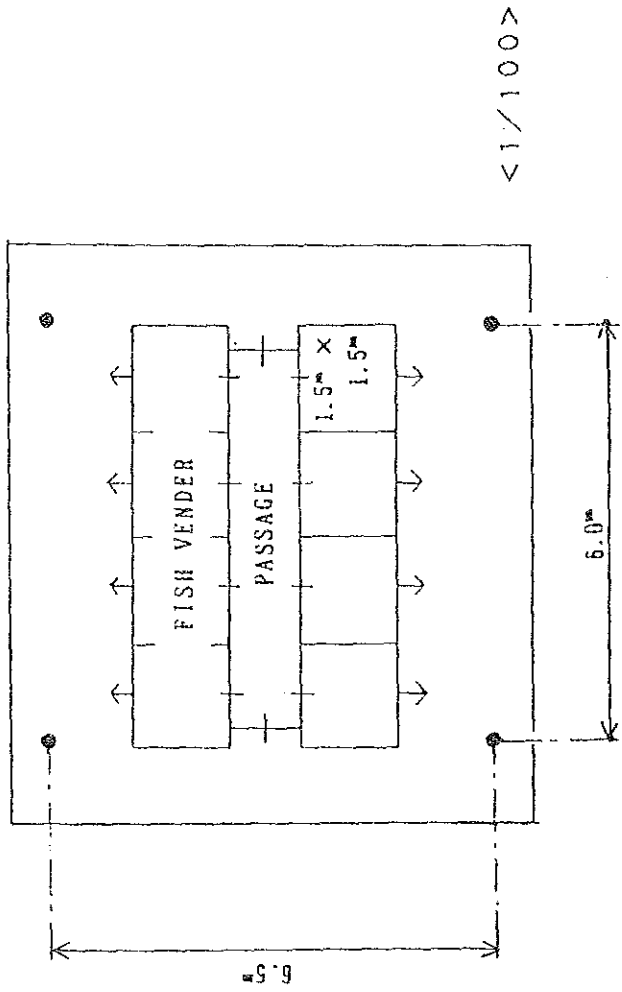
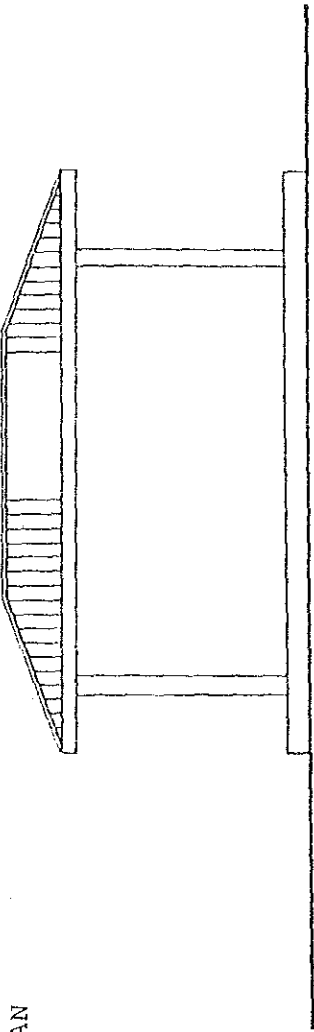
CEMETERY

PLOT PLAN S = 1 / 500

0 50m

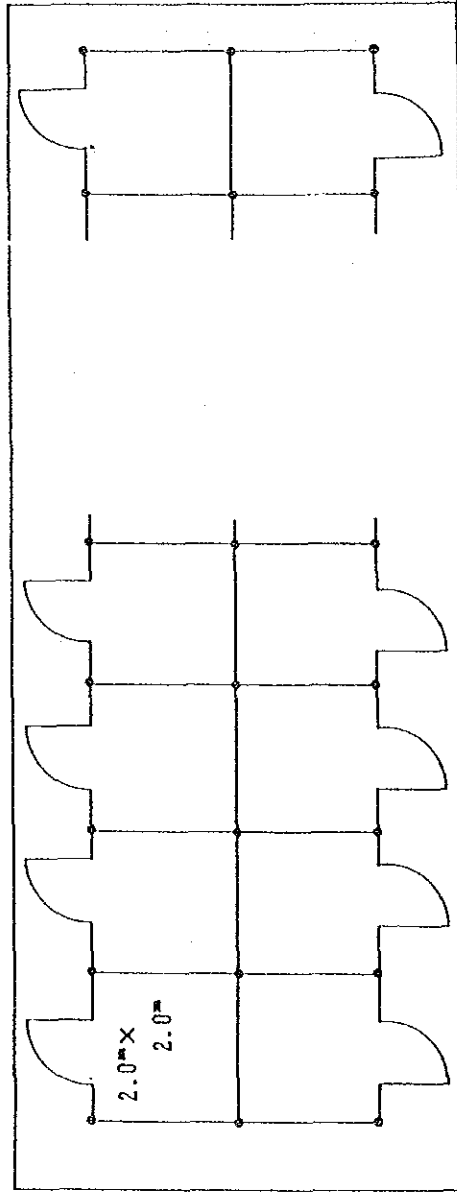
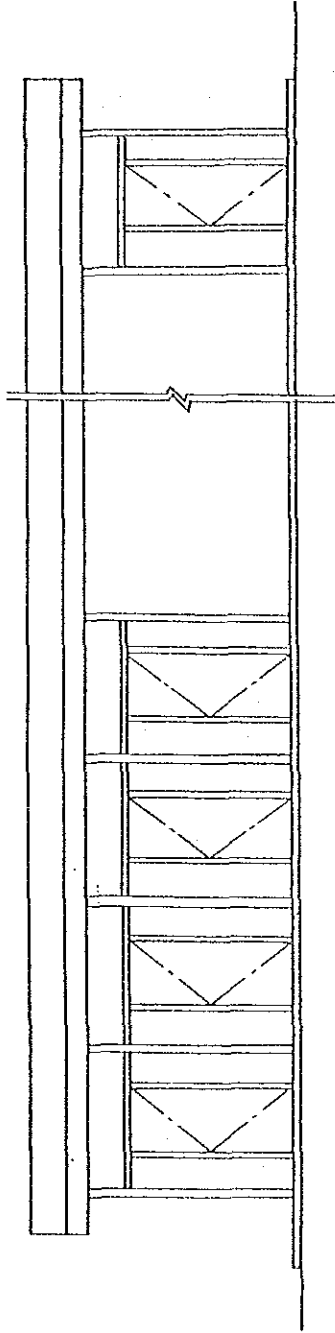
FISH MARKET

BUILDING PLAN



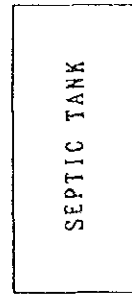
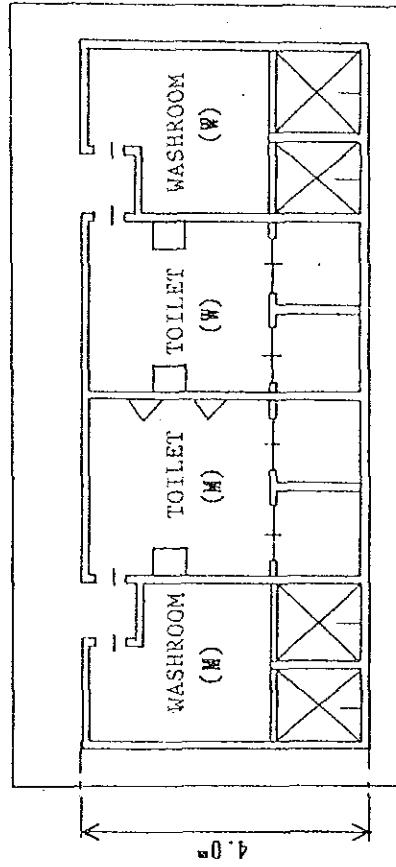
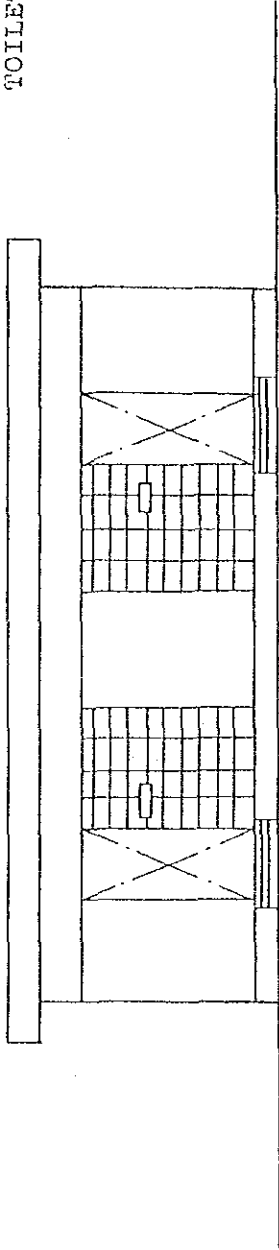
BUILDING PLAN

LOCKER FOR
FISHERMEN



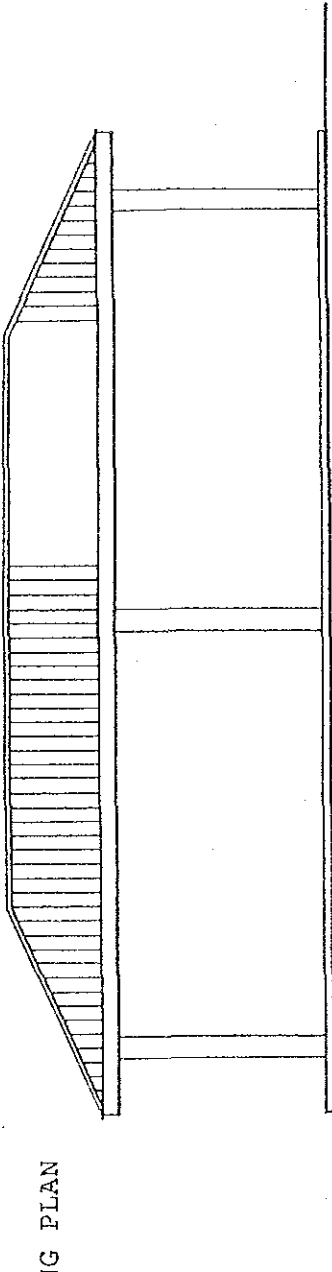
BUILDING PLAN

TOILET & WASHROOM

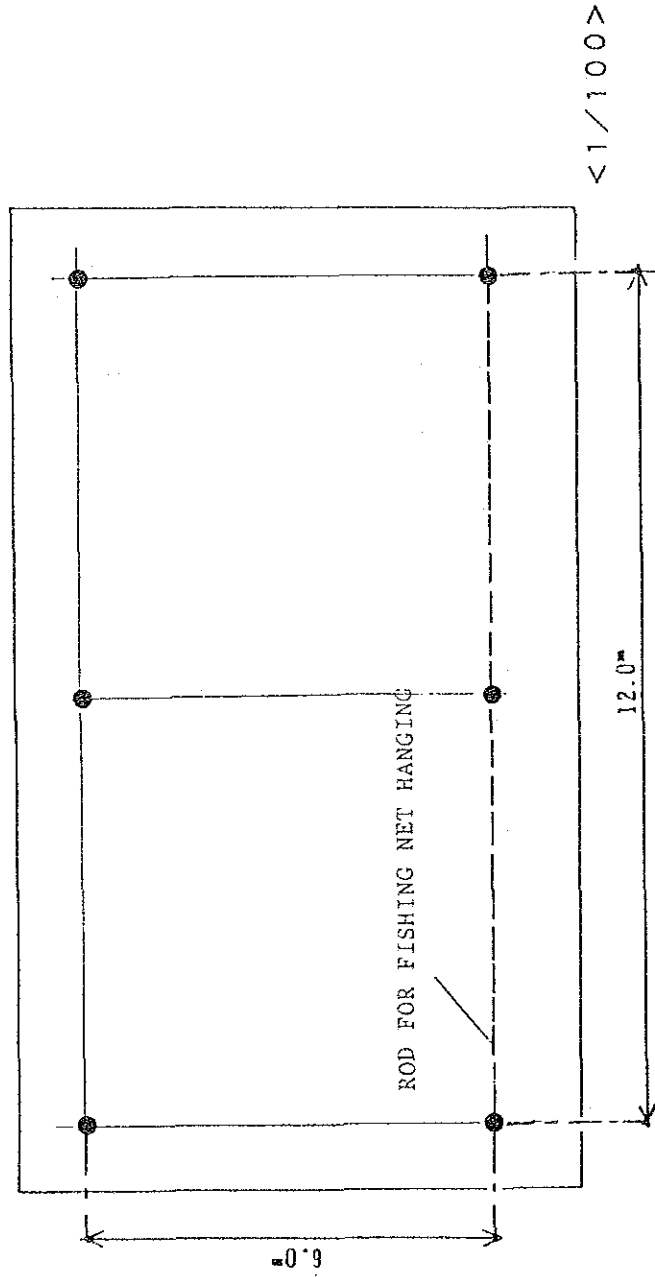


2.5m 2.5m 2.5m 2.5m < 1/100 >

WORKSHOP

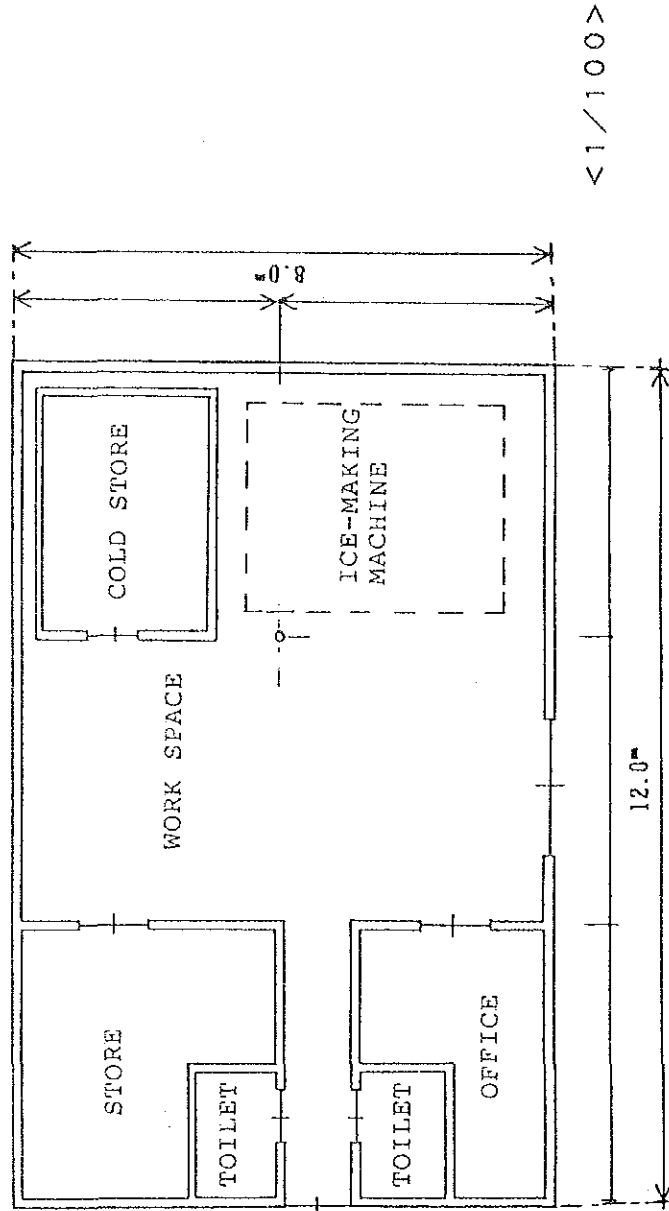
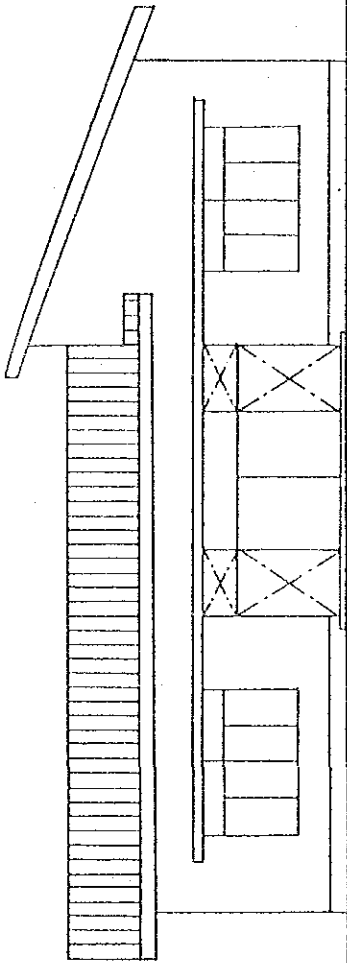


BUILDING PLAN

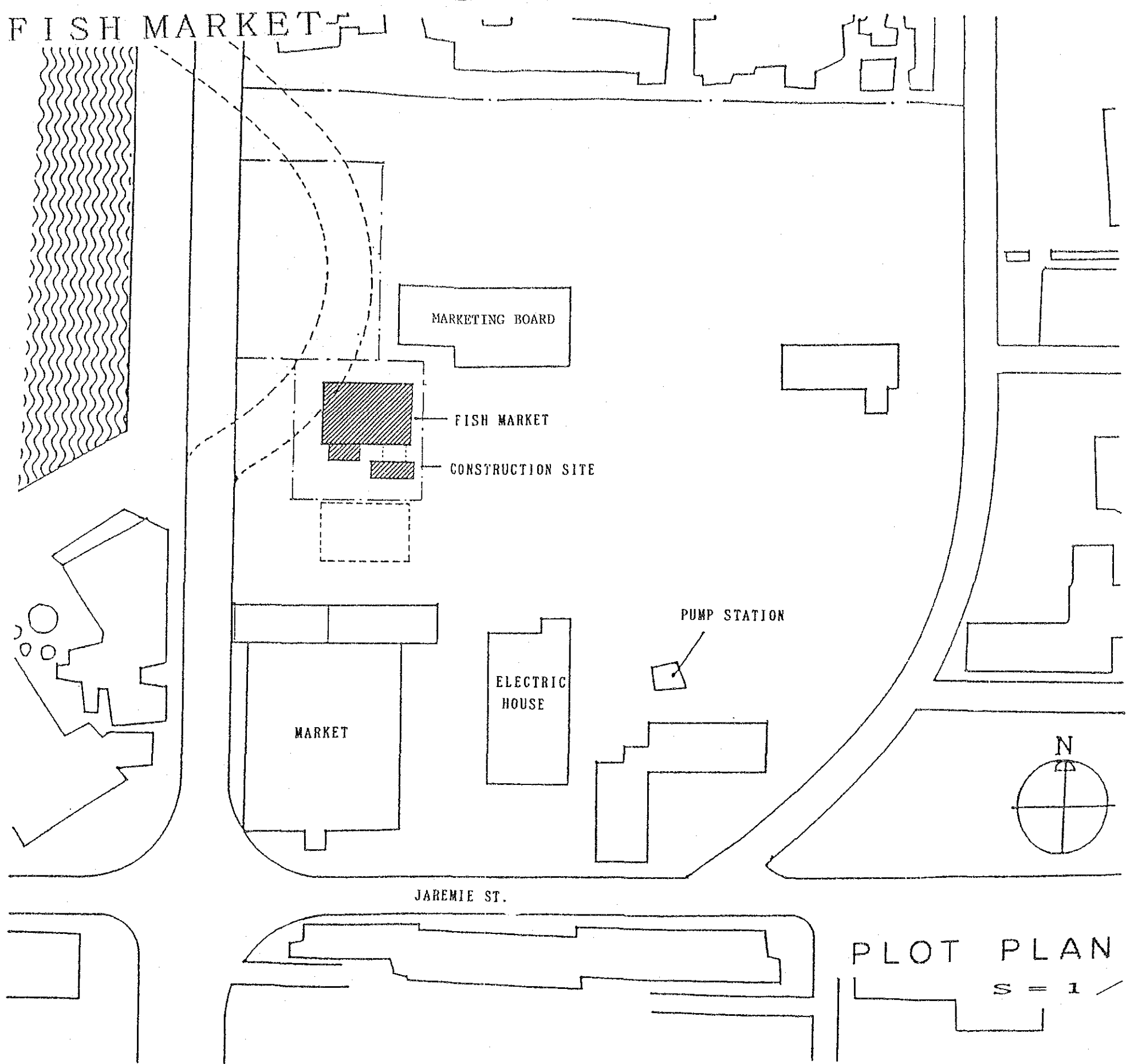


BUILDING PLAN

DISTRIBUTION CENTRE

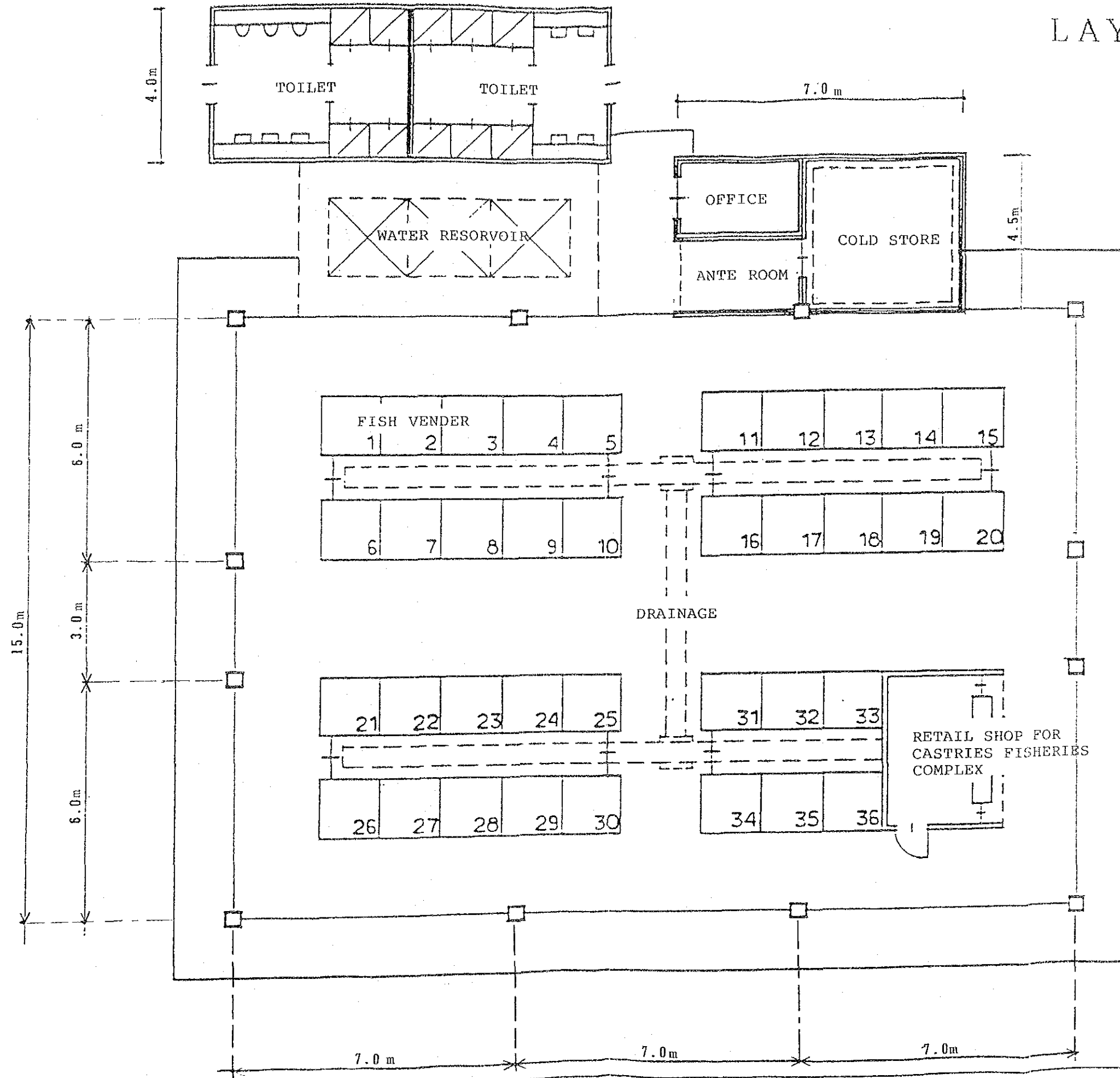


CASTRIES FISH MARKET

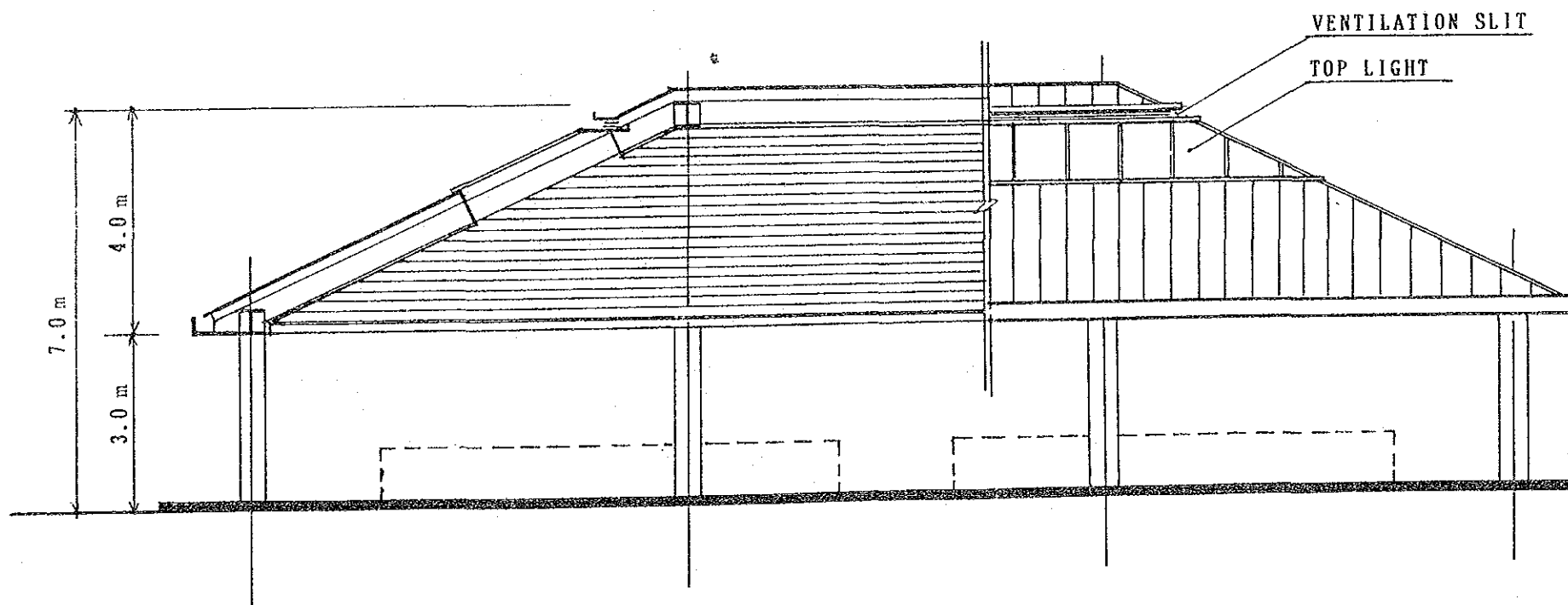
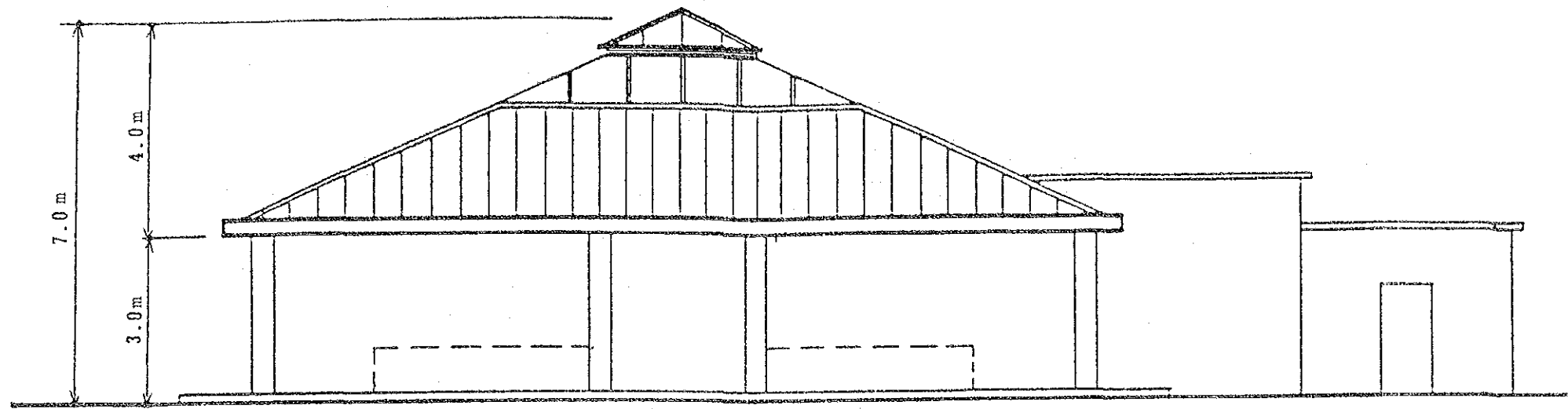


PLOT PLAN
S = 1 / 1000

LAYOUT PLAN



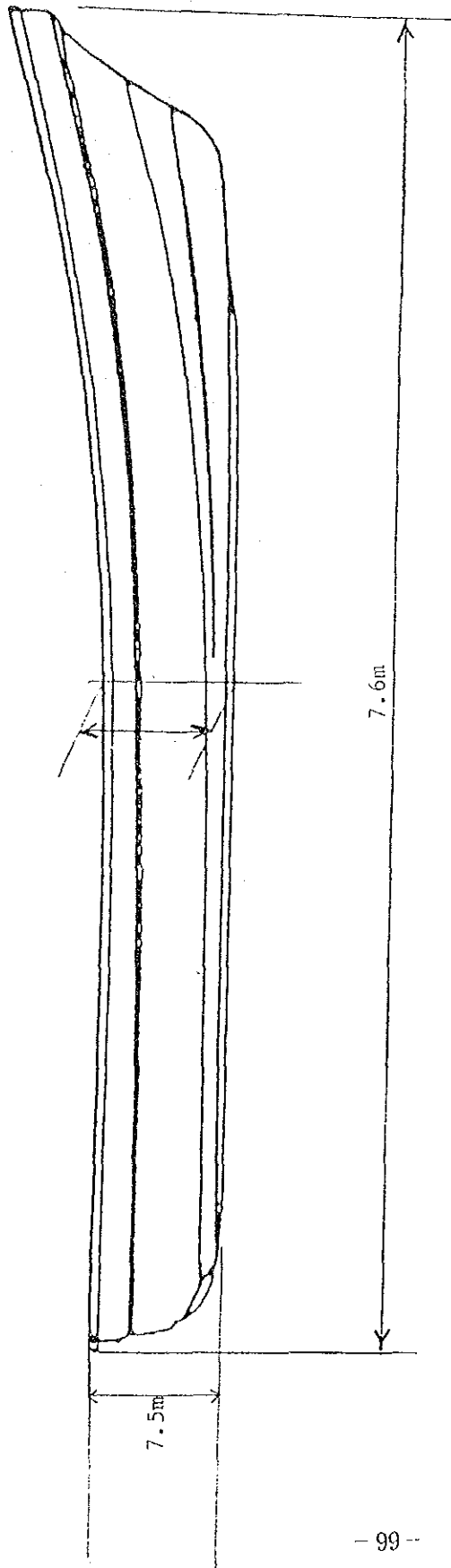
S = 1 / 100



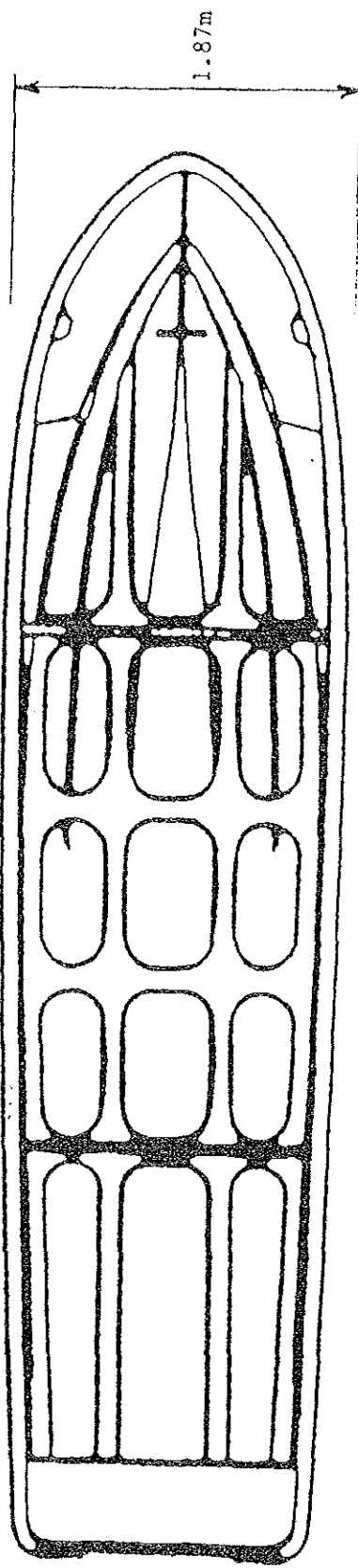
ELEVATION
SECTION
S = 1 / 100

NO. I TRANSITION VESSEL

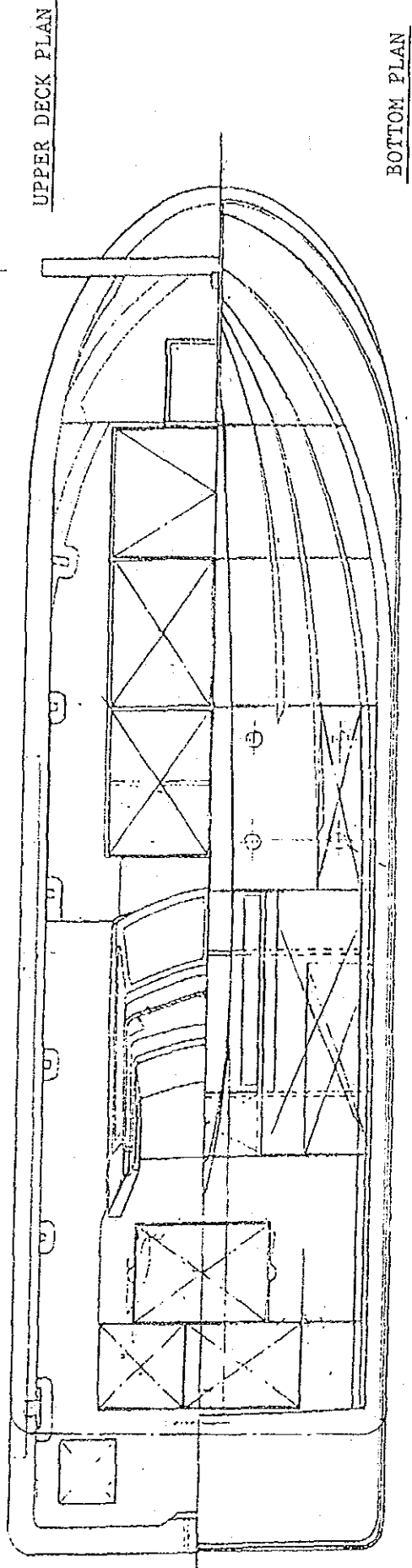
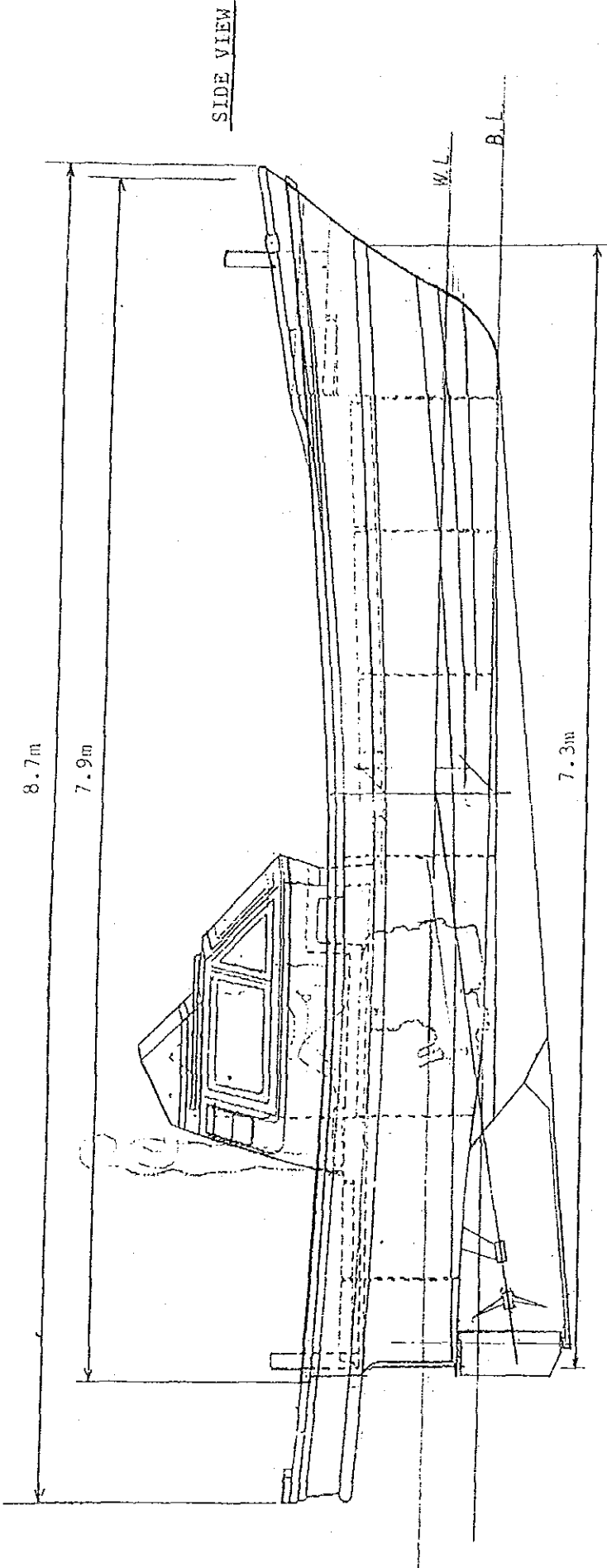
SIDE VIEW



UPPER DECK PLAN

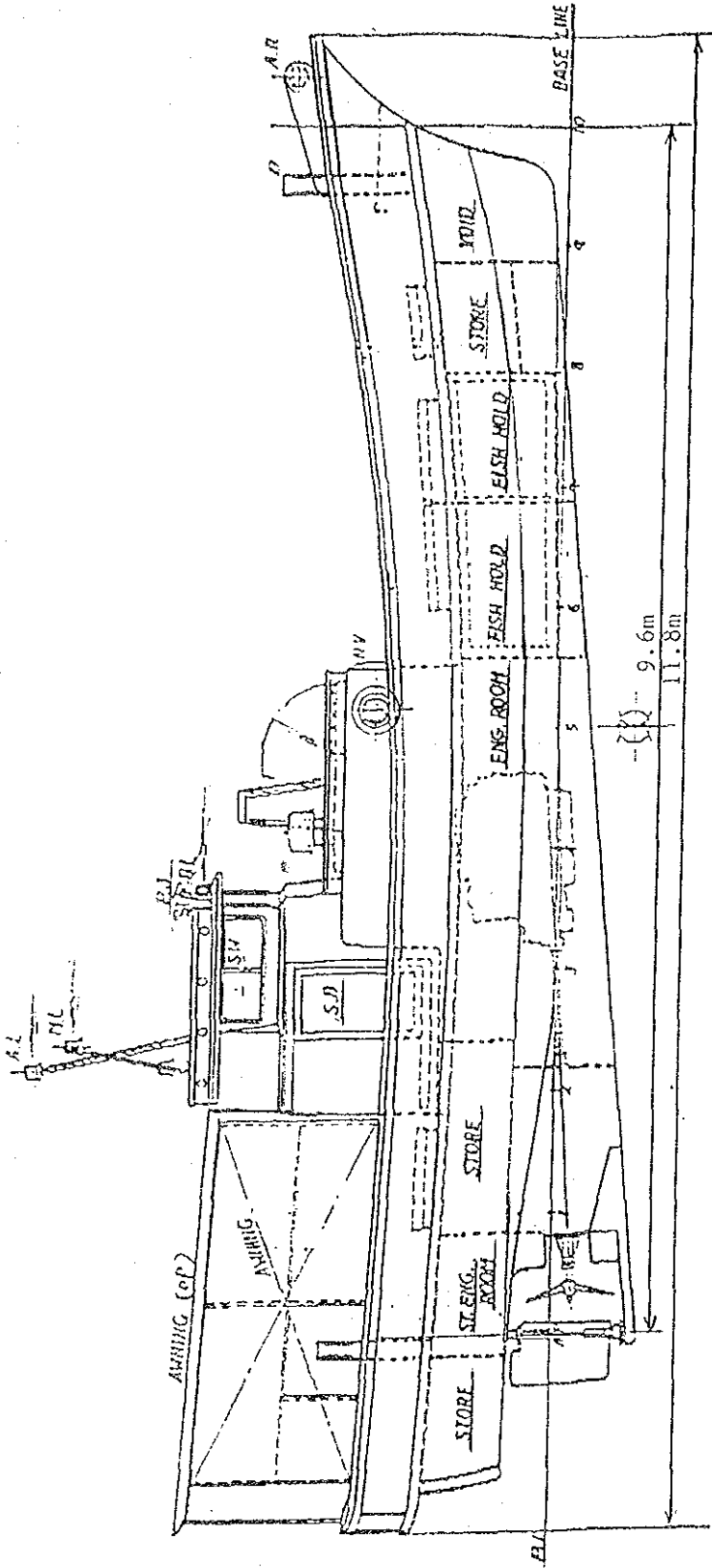


NO. II TRANSITION VESSEL (7.9M TYPE AND 8.7M TYPE)

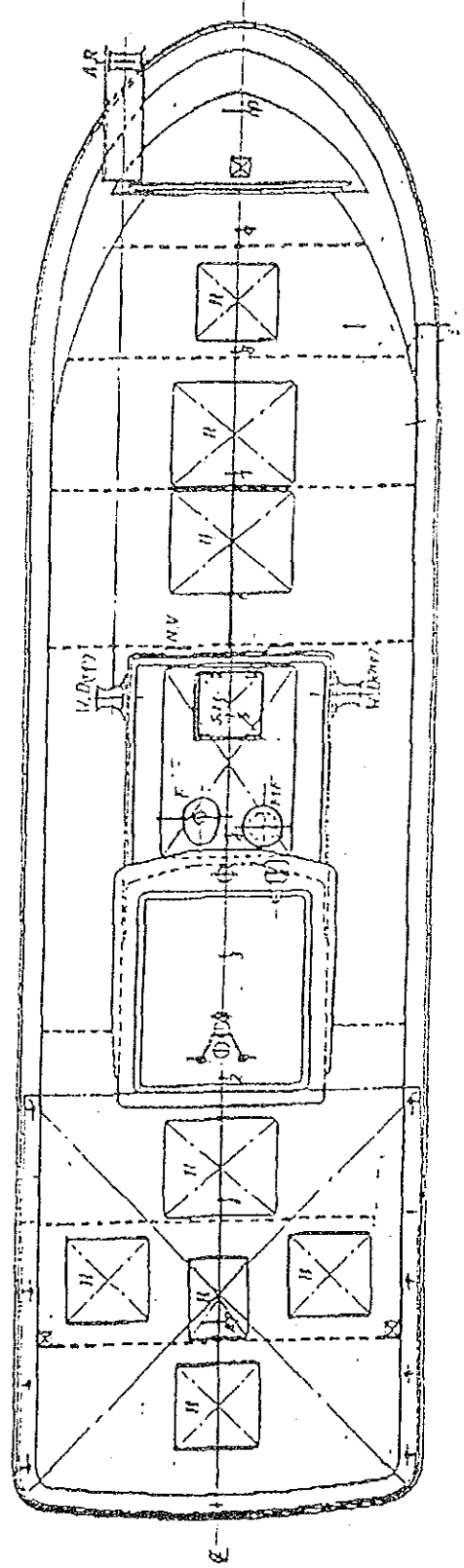


RESEARCH VESSEL

SIDE VIEW



UPPER DECK PLAN



4 - 4 Project Implementation Plan

4 - 4 - 1 Implementation Supervision

After notes have been exchanged between the Governments of Japan and St. Lucia in connection with the grant for the Project, the Government of St. Lucia will conclude an agreement with a Japanese consulting firm for consulting services including Detail Design and Implementation Supervision in conformity with the Exchange of Notes.

The consulting firm will prepare Specifications, Drawings, Costs of the Project, and Tender Document on which a tender for the Project will be held with the approval of the Government of St. Lucia after prequalification. The Government of St. Lucia will select the tenderer who has underbided others as the contractor based on the tender evaluation and recommendations of the consulting firm.

The contractor will conclude a contract with the Government of St. Lucia and submit the execution scheme drawings on a tender to the consulting firm, who will examine and then approve them on behalf of the GOSL. The agreement for consulting services and the contract for the Project require verification by the Government of Japan.

The contractor will carry out the work in accordance with the approved drawings, and the consulting firm will conduct supervision services and receive a "Certificate of Acceptance" issued by the GOSL after delivery. On verification of the "Certificate of Acceptance" by the Government of Japan, the project will be completed.

4 - 4 - 2 Execution Policy

(1) Fisheries Infrastructure Improvement Plan

Details of the construction work are as follows:

Item \ Site	Gros Islet	Bannanes	Anse la Raye	Choiseul	Laborie	Micoud
Canoe ramp (No. of canoes)	1 (20)	1 (25)	2 (15) (25)	1 (40)	2 (30) (35)	1 (20)
Winch	1	1	2	2	3	1
Fish market	39m ²	--	39m ²	39m ²	58m ²	39m ²
Locker	80m ²	104m ²	160m ²	160m ²	264m ²	80m ²
Toilet & washroom	40m ²	40m ²	40m ²	40m ²	40m ²	40m ²
Workshop	72m ²	72m ²	72m ²	72m ²	--	--
Distribution centre	--	--	96m ²	--	96m ²	--
Remark	Embankment for the rampway	--	--	Embankment for the rampway	--	--

Electric power and water are available locally at every site by utilizing the existing networks in the country. Foundation work, steel work, external work, and interior finish work will be executed in that order. Taking transport of construction materials and road conditions in St. Lucia into consideration, seven construction sites shall be grouped in two construction zones and the time of starting work shall be staggered so that implementation supervision can be conducted effectively by shifting construction engineers. One construction zone includes the 4 sites on the western coast, Gros Islet, Castries, Bannanes, and Anse la Raye, and the other includes the 3 sites of Micoud, Laborie and Choiseul.

(2) Castries Fish Market

Main building $21.0 \times 15.0\text{m} = 315\text{m}^2$, Steel frame structure with a colored metal roof.

Attached building $4.0 \times 7.0\text{m} = 28\text{m}^2$, Steel frame structure with a colored metal roof.

Public lavatory $4.0 \times 10.0\text{m} = 40\text{m}^2$, Concrete block structure with a color metal roof.

Though the facility is smaller in the volume of work than the 6 fishing villages, it includes the largest building as a single body in the Project. Especially, its hould be emphasized that scaffolding men are essential for the construction of the large roof with its steel frame structure. All of the equipment and materials from Japan are to be landed at Castries, so a general headquarters shall be installed there so that it can control the Project as whole.

(3) Fishing Vessels and Fishing Gear

St. Lucia has no rules and regulations on the construction of fishing vessels and fishing gear. Therefore all vessels and fishing gear shall be built and made in conformity with the rules and regulations in Japan and the Japanese Industrial Standard (JIS). Regarding the construction of fishing craft, safety at sea must be given the highest priority. Secondly, vessels must be built with due regard to easy handling for fishing purposes. Also the vessels must be of simple specifications and functions so that local fishermen can operate and maintain them without any foreign technical assistance.

4 - 4 - 3 Procurement of Equipment and Materials and the Scope of the Work

(1) Procurement of Equipment and Materials and Local Labour

Skilled workmen including steel frame workers, steel metal workers and equipment engineers are either few or not available locally. Therefore, some Japanese experts for each kind of work must be sent to St. Lucia for supervision of the work. Also these experts must take charge of a considerable quantity of the construction materials brought in from Japan so that the project can be implemented in accordance with the construction schedule and construction costs.

All of the fishing craft and the majority of the fishing gear except for the No. 1 Transition Vessels are to be built and manufactured in Japan.

(2) Scope of Work

1) Scope of the project

The project consists of proposed facilities, equipment and materials as follows;

- Fishery-related facilities at Gros Islet, Bannanes, Anse la Raye, Choiseul, Laborie, and Micoud
- Castries Fish Market
- Fishing craft
- Fishing gear and equipment
- Execution of above-mentioned work and its supervision

2) Undertakings by the Government of St. Lucia

- Exemption from any taxes, duties, fees, and levies in respect of any equipment and materials brought into St. Lucia for the execution of the project.
- Security of the seven proposed sites, demolition and removal of obstructions on the sites, and leveling of ground, especially reclamation work at Bannanes.
- Provision of such permission and licenses as Japanese personnel shall be necessary to enable them to perform their services and exemption from any taxes, duties, fees, and levies in respect of any payment made to them in connection with the implementation of the Project.
- Financing expenses necessary for effective operation and maintenance of granted facilities, fishing craft, fishing gear, and equipment and materials included in the Project.

3) Undertakings by the Japanese side

- Construction of facilities, building of fishing craft, and manufacture of

- fishing gear, and equipment and materials.
- Transportation of fishing craft, fishing gear, equipment and materials, and construction materials, and the defrayment of transport insurance.
- Consulting services on the design, tender procedure, supervision of works, etc.

4 - 4 - 4 Implementation Supervision Plan

After signing an agreement between the Government of St. Lucia and the contractor, the consulting firm shall examine the plans and drawings submitted by the contractor, supervise the working process, and attend all tests and inspections in Japan of the facilities, fishing craft, fishing gear, and equipment and materials included in the project. The consulting firm, keeping in close contact with GOSL, shall in case of necessity supervise the construction work in the field in St. Lucia to confirm whether all of the work accords with the approved execution scheme drawings. The consulting firm shall conduct the completion inspection in St. Lucia and attend the delivery of the PROJECT to the Government of St. Lucia.

4 - 5 Management Plan

4 - 5 - 1 Organization

The project consists of various components such as fisheries-related facilities and infrastructure for improvement of the fishermen's livelihoods and of fish distribution, FRP fishing craft and fishing gear aiming at increasing productivity, and the Castries Fish Market. Each component will be managed by particular organizations as follows:

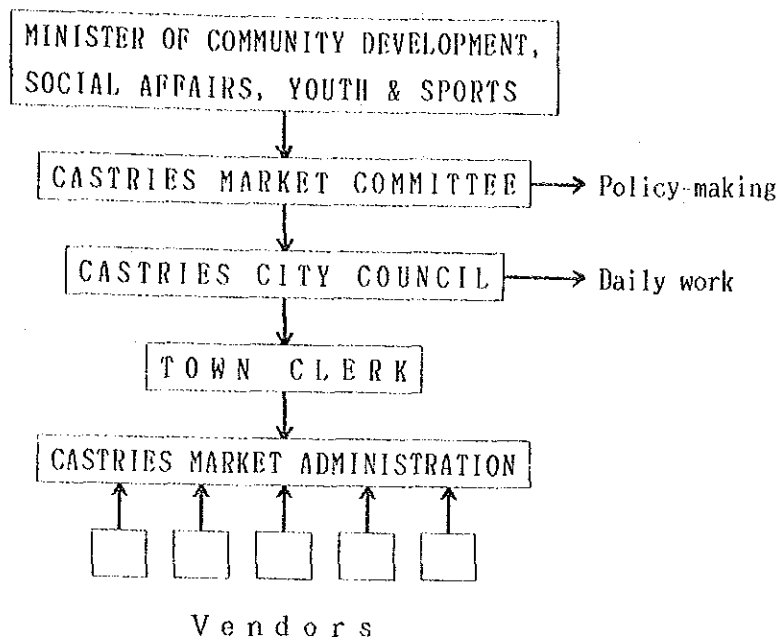
(1) Infrastructure in Fishing Villages

Facilities, consisting of canoe ramps, a winch system, fish marketing stalls (fish markets), workshops, lockers, toilet and washroom facilities, will be managed by a fishermen's co-operative society within the Co-operative Department of the Ministry of Agriculture, Lands, Fisheries and Co-operatives (MOALF). St. Lucia has nine fishermen's co-operative societies with a total membership of 788. Thirty-two per cent of the Board members are boat-owners, and at the same time, fishermen and 27% are boat-owners, but not fishermen. The societies sell some fishing gear and tackle and supply their members with tax-free gasoline and oil.

The distribution centre, consisting of a building housing a small cold store, ice making equipment, office room, toilet facilities plus an insulated van and fish boxes, are constructed at Anse la Raye and Laborie. The centres are expected to function as substations of the Castries Complex, and so will be managed by the Fisheries Management Unit (FMU) within MOALF as well as the Castries Complex.

(2) Castries Fish Market

While imports of fish products are increasing in St. Lucia, the improvement of fisheries-related infrastructure and the upgrading of fishing craft by the introduction of FRP craft will increase artisanal fish production substantially. Therefore, the construction of a new fish market with complete sanitary arrangements has a significant role to play in the expansion of fish consumption in cooperation with establishment of a distribution system through the operation of the Castries Fisheries Complex. The Castries Fish Market is to be managed by the Castries City Council, which will also give license to vendors through the Castries Market Administration as follows:

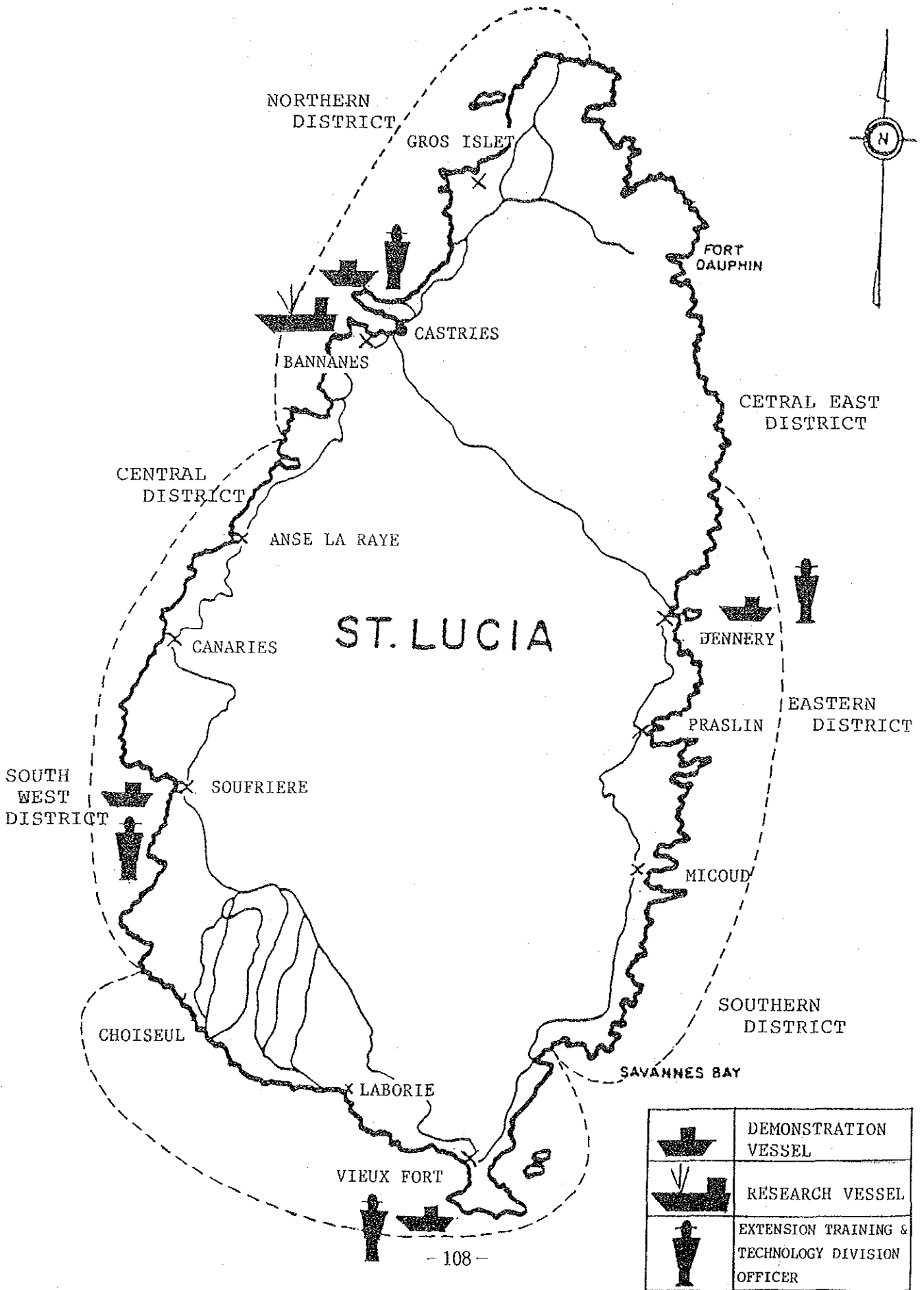


(3) Fishing Craft and Fishing Gear

Forty canoe model FRP fishing vessels shall be leased to owners who are running their fisheries enterprises successfully through the FMU, whose 4 extension officers shall manage and control them. The rent and the price for the vessel which will be sold to fishermen in future shall be deposited with the FMU and be appropriated as funds for fisheries development and the maintenance of vessels.

Out of the four demonstration vessels, three 7.9M Type vessels shall be distributed to 3 districts, as shown on the map "Fisheries Management Areas, St. Lucia", the Southern District, the Eastern District, and the South West District, and be based at Vieux Fort, Dennery, and Soufriere respectively, and one 8.7M Type Vessel shall be based at Castries and patrol the whole island. The FMU Extension & Training Division officer stationed at each district shall manage and control these vessels. Performing various duties, the FRP research vessel shall be managed and controlled by the FMU and be based at Castries.

FISHERIES MANAGEMENT AREAS, ST. LUCIA



4 - 5 -- 2 Personnel Plan

Required personnel for the facilities and equipment are as follows;

(1) Fisheries Infrastructure Improvement Plan

Main facilities and equipment consist of the canoe ramp provided with a winch system, fish market, lockers, and toilet and washroom facilities and shall be managed by existing co-operatives. However, the distribution centres, managed by the FMU, at Anse la Raye and Laborie shall require the following management staff.

① Manager	. . . . . 1	each
② Insulated van driver	. . . . . 1	each
③ Worker	. . . . . 1	each
Total	. . . . . 3	each

6 for two distribution centres

(2) Castries Fish Market

One staff member from the Castries City Council, who will take charge of management of the Fish Market, and a worker for clearing the premises shall be required.

① Manager	. . . . . 1
② Worker	. . . . . 1
Total	2

(3) Fishing Craft and Fishing Gear

- 1) No personnel are required for canoe model FRP vessels because these vessels shall be leased to fishermen through the FMU.
- 2) Three crew members shall be enough for each demonstration vessel although various fishing gear shall be used on board.
- 3) As to the research vessel, one biologist and one fishing technology expert from the FMU and 3 crew members including a skipper, totalling 5 persons, shall be required, but since staff from the FMU shall be on board in turn, 4 persons shall be manning it usually.

The following table shows the details of the personnel plan.

Facilities & equipment	Personnel	No. of personnel
Infrastructure at 6 sites	-----	-----
Distribution centres at 2 sites	Manager 1	6
	Van driver 1	
	Worker 1	
Castries Fish Market	Manager 1	2
	Worker 1	
Canoe model FRP fishing vessel (40 craft)	-----	-----
Demonstration vessel (4 craft)	Skipper 1 × 4, 4	12
	Crew 2 × 4, 8	
Research vessel	FMU staff 1	4
	Skipper 1	
	Crew 2	
Total		24

4-5-3 Annual Expenses

Expenses required to operate the facilities shall be calculated as follows:

Rate US\$ = EC\$2.7

US\$ = ¥140

EC\$ = ¥ 52

(1) Fisheries Infrastructure Improvement Plan

1) Infrastructure at the fishing villages

Electric charges for the winch system

$3.5 \text{ KW/H} \times 10 \text{ mins}/60 \text{ mins/craft} \times$

$22.5 \text{ craft} \times 260 \text{ days} \times \text{EC}\$0.45/\text{KW} = \text{EC}\$1,535$

Electric charges for illumination

$0.32 \text{ KW/H} \times 3\text{H} \times 260 \text{ days} \times \text{EC}\$0.45/\text{KW}$

$= \text{EC}\$ 112$

Water charges

$1.2 \text{ liter/person} \times 6 \text{ sets} \times 50 \text{ persons/day} \times$

$365 \text{ days} \times \text{EC}\$0.02/\text{liter} = \text{EC}\$2,628$

Electric charges for workshop

$$0.4 \text{ KW/H} \times 3\text{H} \times 260 \text{ days} \times \text{EC}\$0.45/\text{KW} = \text{EC}\$ 140$$

Total EC\$4,415 (¥229,000)

$$\text{EC}\$4,415 \times 6 = \text{EC}\$26,490 (\text{¥}1,377,000)$$

2) Distribution centre

Electric charges for the cold store

$$7.0 \text{ KW/H} \times 24\text{H} \times 365 \text{ days} \times \text{EC}\$0.45/\text{KW} = \text{EC}\$27,594$$

Electric charges for the ice-making equipment

$$7.5 \text{ KW/H} \times 24\text{H} \times 365 \text{ days} \times \text{EC}\$0.45/\text{KW} = \text{EC}\$29,565$$

Water charges (for ice-making and general service)

$$2,000 \text{ liters/day} \times 260 \text{ days} \times \text{EC}\$0.02/\text{liter} = \text{EC}\$10,400$$

$$300 \text{ liters/day} \times 260 \text{ days} \times \text{EC}\$0.02/\text{liter} = \text{EC}\$ 1,560$$

Insulated van

$$\text{depreciation} \quad \text{¥} 6 \text{ million}/5 \text{ years} = \text{EC}\$21,428$$

$$\text{fuel expenses} \quad 10 \text{ liters/day} \times 260 \text{ days} \times \text{EC}\$0.9/\text{liter} = \text{EC}\$ 2,340$$

Wages

$$3 \text{ persons} \times \text{EC}\$250/\text{week} \times 52 \text{ weeks} = \text{EC}\$39,000$$

Total EC\$131,887 (¥6,858,000)

$$\text{EC}\$131,887 \times 2 = \text{EC}\$263,774 (\text{¥}13,716,000)$$

(2) Castries Fish Market

1) Fish market

Electric charges for illumination

$$2.0 \text{ KW/H} \times 3\text{H} \times 260 \text{ days} \times \text{EC}\$0.45/\text{KW} = \text{EC}\$ 702$$

Electric charges for the cold store

$$7.0 \text{ KW/H} \times 24\text{H} \times 365 \text{ days} \times \text{EC}\$0.45/\text{KW} = \text{EC}\$27,594$$

Water charges

$$50 \text{ liters/stall/day} \times 36 \text{ stalls} \times 260 \text{ days} \times \\ 4/5(\text{utilization rate of rainfall}) \times \text{EC}\$0.02/\text{liter} = \text{EC}\$ 7,488$$

$$500 \text{ liters/day} \times 260 \text{ days} \times 4/5(\text{utilization rate of rainfall}) \times \\ \text{EC}\$0.02/\text{liter} = \text{EC}\$ 2,080$$

Wages

$$2 \text{ persons} \times \text{EC}\$250/\text{week} \times 52 \text{ weeks} = \text{EC}\$26,000$$

Total EC\$63,864 (¥3,320,000)

2) Public lavatory

Electric charges for illumination

$$0.4 \text{ KW/H} \times 3\text{H} \times 365 \text{ days} \times \text{EC}\$0.45/\text{KW} = \text{EC}\$ 197$$

Water charges

$$1.2 \text{ liters/person} \times 250 \text{ persons} \times 365 \text{ days} \times \\ 4/5 \text{ (utilization rate of rainfall)} \times \text{EC}\$0.02/\text{liter} = \text{EC}\$ 1,752$$

Total EC\$1,949 (¥101,000)

Grand Total EC\$65,813 (¥3,421,000)

(3) Fishing Craft and Fishing Gear

Operation costs of the fishing vessels shall be calculated based on the following table, "Annual Revenue per canoe, 1982", prepared by the National Development Bank.

Annual Revenue per Canoe, 1982

EC\$ = ¥90

	Fishing day	Daily Landing		Annual Landing		Unit price		Total revenue	
		lb	kg	lb	kg	EC\$/lb	¥/kg	EC\$	¥10,000
Gros Islet~ Castries	156	120	54	18,720	8,424	2.50	500	46,800	421.2
Anse la Raye~ Soufriere	156	100	45	15,600	7,020	2.00	400	31,200	280.8
Choiseul~ Dennery	156	200	90	31,200	14,040	2.00	400	62,400	561.6

Source: National Development Bank (NDB)

Rate of 1987, EC\$=¥52, is applied in the following calculations.

1) 7.9M Type No. II Transition Vessel

① Fuel expenses

$$34\text{PS} \times 0.85 \times 210\text{g/hr/PS} \times 12\text{hrs} \div 0.84 = 86.7 \text{ liters} = 90 \text{ liters/day}$$

$$90 \text{ liters/day} \times 156\text{days} \times ¥40.4/\text{liter} = ¥570,000 = \underline{\text{EC}\$11,000}$$

② Wages

Annual landings can be expected to increase threefold that of the existing canoes because fishing gear more than three times as powerful shall be used as a result of mechanization.

$$(18,720 + 15,600 \div 31,200) \div 3 \times 3 = 65,520 \text{ lbs/year} = 29,484\text{kg/year}$$

Average unit price, 1983 = $(2.50 + 2.00 + 2.00) \div 3 = \text{EC}\$2.17/\text{lb} = \text{¥}250/\text{kg}$

Assume this average unit price increases by 20% in 1987, then

$\text{EC}\$2.17 \times 1.2 = \text{EC}\$2.6/\text{lb} = \text{¥}135/\text{lb} = \text{¥}300/\text{kg}$

$65,520 \text{ lbs} \times \text{¥}135 = \text{¥}8,845,000/\text{vessel}$

Deducting fuel expenses of $\text{¥}570,000$ plus direct costs including provision costs of $\text{¥}400,000$ ($\text{EC}\$50 \times 156 \text{ days} \times \text{¥}52$),

Revenue = $\text{¥}8,840,000 - (\text{¥}570,000 + \text{¥}400,000) = \text{¥}7,870,000$

Fishermen's wages = $\text{¥}7,870,000 \times 0.6 = \text{¥}4,720,000 = \underline{\text{EC}\$90,000}$

③ Fishing gear expenses

According to the Fisheries Development Plan, fishing gear expenses of an existing canoe are estimated to be about $\text{EC}\$3,000$ ($\text{¥}156,000$) plus about $\text{EC}\$1,000$

($\text{¥}52,000$) for maintenance, totalling $\text{EC}\$4,000$ ($\text{¥}208,000$). Since three times the quantity of fishing gear is to be utilized on board the demonstration vessel, fishing gear expenses will treble.

$\text{EC}\$4,000 \times 3 \times \text{¥}52 = \text{¥}630,000 = \underline{\text{EC}\$12,000}$

④ Provision expenses

$\text{EC}\$50 \times 156 \text{ days} \times \text{¥}52 = \text{¥}400,000 = \underline{\text{EC}\$7,800}$

⑤ Repairing charges

$3\text{PS} \times \text{¥}10,000 = \text{¥}340,000 = \underline{\text{EC}\$6,500}$

⑥ Depreciation

Suppose the price per vessel is $\text{¥}10,350,000$ CIF St. Lucia, and the depreciation rate is 10% annually, then

$\text{¥}10,350,000 \times 0.1 = \text{¥}1,030,000 = \underline{\text{EC}\$19,800}$

⑦ Insurance bill

$\text{¥}10,350,000 \times 4\% = \text{¥}410,000 = \underline{\text{EC}\$7,900}$

Total expenses = ① + ② + ③ + ④ + ⑤ + ⑥ + ⑦ = $\underline{\text{EC}\$155,000 (\text{¥}8,060,000)}$

Grand total for 3 vessels = $\underline{\text{EC}\$465,000 (\text{¥}24,180,000)}$

2) 8.7M Type No. II Transition Vessel

① Fuel expenses

$60\text{PS} \times 0.85 \times 210\text{g/hr/PS} \times 12\text{hrs} \div 0.84 = 153 \text{ liters/day}$

$$153 \text{ liters/day} \times 156 \text{ days} \times \text{¥}40.4 = \text{¥}960,000$$

② Wages

Since the vessel can utilize about 10% more fishing gear than the 7.9M Type vessel does, its revenue will increase by 10%.

$$\text{¥}8,845,000 \times 1.1 = \text{¥}9,720,000$$

$\text{¥}9,720,000 - (\text{¥}960,000 \text{ for fuel expenses} + \text{¥}400,000 \text{ for provision and other expenses}) = \text{¥}8,360,000$

$$\text{Fishermen's wages} = \text{¥}8,360,000 \times 0.6 = \text{¥}5,010,000$$

③ Fishing gear expenses

An increase of 10% is applied.

$$\text{¥}630,000 \times 1.1 = \text{¥}690,000$$

④ Provision expenses

$$\text{EC\$}50 \times 156 \text{ days} \times \text{¥}52 = \text{¥}400,000$$

⑤ Repair charges

$$60\text{PS} \times \text{¥}10,000 = \text{¥}600,000$$

⑥ Depreciation

Suppose the price of the vessel is $\text{¥}12,000,000$ CIF St. Lucia and the depreciation rate is 10% annually, then

$$\text{¥}12,000,000 \times 0.1 = \text{¥}1,200,000$$

⑦ Insurance bill

$$\text{¥}12,000,000 \times 4\% = \text{¥}480,000$$

$$\text{Grand total expenses} = \text{①} + \text{②} + \text{③} + \text{④} + \text{⑤} + \text{⑥} + \text{⑦} = \underline{\text{¥}9,340,000}$$

3) FRP Research Vessel

① Fuel expenses

$$125\text{PS} \times 0.85 \times 210\text{g/hr/PS} \times 12\text{hrs} \div 0.84 = 318 \text{ liters/day}$$

Suppose the vessel performs the survey work for one third of an year, then

$$318 \text{ liters/day} \times 120 \text{ days} \times \text{¥}40.4 = \text{¥}1,540,000$$

② Wages

A fixed pay system is applied.

PMU officer @EC\$1,800/month × 13 months × 1 = EC\$23,400 (¥1,210,000)

Skipper @EC\$2,300/month × 13 months × 1 = EC\$29,900 (¥1,550,000)

Crew @EC\$1,100/month × 13 months × 2 = EC\$28,600 (¥1,490,000)

Total EC\$81,900 (¥4,250,000)

③ Fishing gear and other expenses

It is estimated that these expenses are about 2/3 of those of the 8.7M Type demonstration vessel because of its survey purpose.

Fishing gear expenses = ¥680,000 × 2/3 = ¥460,000

Other expenses for survey operations is estimated to be ¥300,000, so
¥460,000 + ¥300,000 = ¥760,000

④ Provision expenses

120 days × EC\$65 × ¥52 = ¥400,000

⑤ Repair charges

125PS × ¥10,000 = ¥1,250,000

⑥ Depreciation

Suppose the price of the vessel is ¥23,000,000 CIF St. Lucia and the depreciation rate is 10% annually, then

¥23,000,000 × 0.1 = ¥2,300,000/year

⑦ Insurance bill

¥23,000,000 × 4% = ¥920,000/year

Grand total expenses = ① + ② + ③ + ④ + ⑤ + ⑥ + ⑦ = ¥11,420,000

Required operation costs of fishing craft are tabulated as follows:

Unit: $\frac{\text{EC\$}}{\text{¥10,000}}$

Item	7.9M Demonstration Vessel		8.7M Demonstration Vessel	12.0M Research vessel	Remarks
	per vessel	three vessels			
Fuel	11,000 (57)	33,000 (171)	18,500 (96)	30,000 (154)	
Wages	9,000 (472)	270,000 (1,416)	96,000 (501)	82,000 (425)	Demonstration Vessel: percentage basis Research vessel: fixed wage system
Fishing gear	12,000 (63)	36,000 (189)	13,000 (69)	15,000 (76)	
Provisions	7,800 (40)	23,400 (120)	7,800 (40)	7,800 (40)	
Repairs	6,500 (34)	19,500 (102)	11,500 (60)	24,000 (125)	
Depreciation	19,800 (103)	59,400 (309)	23,000 (120)	44,000 (230)	Fixed amount for 10 years
Insurance	7,900 (41)	23,700 (123)	9,200 (48)	18,000 (92)	
Total	155,000 (810)	465,000 (2,430)	179,000 (934)	220,800 (1,142)	

Grand Total

EC\$864,800 (¥45,060,000)

4 - 6 Costs to Be Borne by The St. Lucian Side

Shown below are estimates of expenses to be borne by the St. Lucian side.

- | | |
|-----------------------------------|----------------------------|
| (1) Infrastructure | EC\$809,000 (¥42,068,000) |
| a) Waterworks at 6 sites | EC\$ 35,000 (¥ 1,820,000) |
| b) Power supply works at 6 sites. | EC\$ 35,000 (¥ 1,820,000) |
| c) Fence works | EC\$162,000 (¥ 8,424,000) |
| d) Reclamation at Banannes | EC\$577,000 (¥30,040,000) |

(2) Castries Fish Market	EC\$164,000 (¥ 8,528,000)
a) Waterworks	EC\$ 15,000 (¥ 780,000)
b) Underground piping works	EC\$ 50,000 (¥ 2,600,000)
c) Power supply works	EC\$ 19,000 (¥ 988,000)
d) Fence works	EC\$ 80,000 (¥ 4,160,000)
Total	EC\$973,000 (¥50,596,000)

CHAPTER 5 EVALUATION OF THE PROJECT

CHAPTER 5 . EVALUATION OF THE PROJECT

The Project aims at the well-balanced development of fish production, distribution and consumption through construction of fisheries-related infrastructure in villages alongside the Caribbean Sea to heighten fishermen's social and economic standing, improvement in fish quality control and expansion of the distribution network in remote areas, reconstruction of the Castries Fish Market to keep fish prices stable and expand fish consumption, increasing fish production by introduction of FRP fishing craft and modern fishing gear and equipment, and will have a great effect on the economy of St. Lucia.

This chapter will examine the benefits and costs of the proposed facilities and equipment in the project and estimate its economic effects.

(1) Fisheries Infrastructure Improvement Plan

In view of the improvement of fishermen's living conditions, the benefits of fisheries-related infrastructure in villages are estimated as follows.

The fishermen's canoes have been frequently lost or damaged by hurricanes, but fishermen will be released from such suffering by the improvement of canoe ramps. Also, the provision of the winch system will enable fishermen to reduce labor and make turn-arounds in port (discharge and sale of catches) rapid. Due to the lack of storage facilities a lot of fishing gear and materials have been wasted or lost. The provision of lockers for fishermen will make the maintenance of gear and materials easy and result in an increase in production.

Fishermen in St. Lucia are now selling their fish on sand beaches exposed to the direct rays of the sun. The provision of the fish market with complete sanitary arrangements, which also is provided with facilities for washing and gutting fish, will become the first step toward improvement of quality control.

Thus the improvement in fisheries-related infrastructure at fishing villages will result in an increase in production activities and produce good benefits.

The construction of the distribution centre at two villages, Anse la Raye and Laborie, where there exist in the vicinity many small agricultural communities, has great significance in that it enhances the supply of fish protein to these communities.

Also the cold store and ice-making facilities attached to the distribution centres at these two pivotal villages on the western coast which is rather isolated, though small in scale, will not only expand fish distribution in remote areas, but also have a far-reaching effect in meeting requirements for improvement of the quality of fish attendant upon the replacement of wooden canoes with FRP craft in the surrounding fishing villages.

(2) Castries Fish Market

The increase in fish production resulting from the improvement of the fisheries infrastructure and the introduction of FRP fishing craft and improved fishing gear will substantially contribute to increasing the quantity of fish handled at the Castries Fish Market, i.e. the supply of fresh fish to the population of Castries. Also high quality fish will be constantly supplied by utilizing the cold store at this Fish Market. On the completion of the new hygienic building, the Castries Fish Market will become a popular place for local people and tourists as well, and an increase in demand for fish can be expected because local people will see fresh fish in a new light.

Since the Castries Fisheries Complex, linked closely with the Fish Market, has just started operations two years ago, a distribution system is not well organized yet, but, the Fish Market, aiming at expansion of fish consumption, will provide fishermen with big buyers and stable fish prices.

(3) Comparison of Financial Aspects Between the FRP Fishing Vessel and the Existing Canoes

Fishermen, in an attempt to keep the freshness of their catches and to gain an advantage over others in sales, are impelled to race back from fishing grounds, so they tend to install high-power outboard motors out of proportion to the size of their canoes and are suffering from high engine expenses for the rather meager proceeds by using primitive fishing gear.

The team tried comparing the benefits and costs of the proposed 7.9M Type FRP fishing vessels (No. II Transition Vessel) and the existing canoes on the basis of data prepared by the National Development Bank of St. Lucia.

THE CANOE FISHING ENTERPRISE: DISTRIBUTION OF EARNINGS, 1982/83

Unit: $\frac{\text{EC\$}}{(\text{¥1,000})}$

Area	Gross Revenue	Fuel Cost	Total Shares	Average Share	Allocation Crew	Owner	Other Costs	Surplus/Deficit
Gros Islet ~	46,800	13,600	33,200	6,600	19,900	13,300	4,900	+8,400
Castries	(4,212)	(1,224)	(2,988)	(594)	(1,791)	(1,197)	(441)	(756)
Anse la Raye ~	31,200	19,500	11,100	2,200	6,700	4,400	4,900	▲500
Soufriere	(2,808)	(1,755)	(999)	(198)	(603)	(396)	(441)	(▲45)
Choiseul ~	62,400	15,600	46,800	9,400	28,100	18,700	4,900	+13,800
Dennery	(5,616)	(1,404)	(4,212)	(846)	(2,529)	(1,683)	(441)	(1,242)
Weighted	56,200	15,600	40,600	8,100	24,300	16,200	4,900	+11,300
Average	(5,058)	(1,404)	(3,654)	(729)	(2,187)	(1,458)	(441)	(1,017)

Rate: EC\$ = ¥90

THE CANOE FISHING ENTERPRISE: TYPICAL COSTS & RETURNS, 1982/83

Unit: $\frac{\text{EC\$}}{(\text{¥1,000})}$

Area	Gross Revenue	Depreciation Hull	Engine	Maintenance Hull	Engine	Gear Cost	Fuel Cost	*Total Cost	Total Revenue
Gros Islet ~	46,800	800	2,000	400	800	900	13,600	18,500	28,300
Castries	(4,212)	(72)	(180)	(36)	(72)	(81)	(1,224)	(1,665)	(2,547)
Anse la Raye ~	31,200	800	2,000	400	800	900	19,500	24,400	6,800
Soufriere	(2,808)	(72)	(180)	(36)	(72)	(81)	(1,755)	(2,196)	(612)
Choiseul ~	62,400	800	2,000	400	800	900	15,600	20,500	41,900
Dennery	(5,616)	(72)	(180)	(36)	(72)	(81)	(1,404)	(1,845)	(3,771)
Weighted	56,200	800	2,000	400	800	900	15,600	20,500	35,700
Average	(5,058)	(72)	(180)	(36)	(72)	(81)	(1,404)	(1,845)	(3,213)

Rate: EC\$ = ¥90

* Interest and insurance costs excluded.

Source: Based on NDB data.

COMPARISON TABLE

Unit: EC\$
(¥1,000)

	Landing lbs (kg)	Revenue	Fuel Cost	Wages	Gear Cost	Provi- sions	Mainte- nance	Depre- ciation	Insur- ance	Total Cost	Surplus Deficit
Canoe	21,840	56,200	15,600	40,600	900	*4,900	1,200	2,800		66,000	▲9,800
	(9,828)	(5,058)	(1,404)	(3,654)	(81)	(441)	(108)	(252)		(5,940)	(▲882)
7.9M Type FRP Vessel	65,520	170,000	11,000	90,000	12,000	7,800	6,500	19,800	7,900	155,000	15,000
	(29,484)	(8,840)	(570)	(4,720)	(630)	(400)	(340)	(1,030)	(410)	(8,100)	(740)

Rate: Canoe EC\$ = ¥90 in 1983

FRP Vessel EC\$ = ¥52 in 1987

* Expenses including provisions

On making the Table, the following has been taken into consideration.

Crew

While a skipper/owner and 3 fishermen are on board a typical canoe, the proposed FRP vessel has a skipper/owner and 2 fishermen on board.

In the former case, fishermen have 3 shares and the skipper/owner has 2 shares, and fishermen have 2 shares and the skipper/owner has 2 shares in the latter case.

Revenue

It is estimated that the revenue of the FRP vessel will be triple that of the canoe due to mechanization of fishing methods.

Fuel cost

While the price of gasoline for the outboard motor is ¥62/liter, the price of gas oil, ¥40.4/liter, is applied for the diesel engine of the FRP vessel. Also the FRP vessel operates for 12 hours from 4 a.m. to 4 p.m.

As the Table shows, the 7.9M Type FRP vessel is more economical than the existing canoes, and benefits can be expected from its demonstration. And, as mentioned in section 4-5-3, "Annual Expenses", the operation costs of the canoe Type FRP vessel and the FRP demonstration vessel can be covered by their respective revenues, so only the required operation costs of the FRP research vessel only, which is managed by the FMU, must be financed by a budget.

Each component of the Project is by no means great in scale, but the Fisheries-

related Infrastructure Improvement Plan and the Fishing Craft and Fishing Gear Plan aiming at increasing production and the Distribution Centre Plan and the Castries Fish Market Rehabilitation Plan aiming at the expansion of fish distribution are considered to be well balanced. Thus, it is judged that the Project can meet the requirements of fisheries development in St. Lucia.

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS

CHAPTER 6 . CONCLUSIONS AND RECOMMENDATIONS

Since independence in 1979, the Government of St. Lucia has carried out a Fisheries Development Plan, with CIDA's assistance, aiming at the improvement of artisanal fishermen's living standards, the supply of cheap fish protein to the nation and decreasing fish product imports through increasing production of artisanal fishes.

With assistance from CIDA, construction of the Castries Fisheries Complex was completed, and improvement of the distribution system was initiated (Phase I), and a plan for the construction of fishing bases at Dennery and Vieux Fort under Phase II is now being formulated.

The Project aims at improvement of the fisheries-related infrastructure in fishing villages along the Caribbean Sea, reconstruction of the Castries Fish Market at the capital and introduction of FRP fishing craft and improved fishing gear, apart from the above-mentioned plan carried out with CIDA's assistance.

The Fisheries Management Unit (FMU) of the Ministry of Fisheries, responsible for implementation of the Project, is taking charge of the development of fisheries in St. Lucia and has sent its staff abroad for training and now has a small core of staff who are capable of overseeing the management and implementation of the Project, and, technically speaking, it is judged that handling of the facilities and equipment will be performed without difficulties.

The operating costs of the fisheries infrastructure in fishing villages and the Castries Fish Market shall be financed by the fisheries cooperative budget at each village where the facilities are to be constructed and by the Castries City Council budget respectively. As for the FRP craft, revenues derived from their catches will cover their operating costs, except for the research vessel performing management and survey duties within the EEZ of St. Lucia.

It is judged that the Project is in proportion to the actual conditions of the fishing industry in St. Lucia and can meet the requirements of future development. On implementation of the project the following effects are expected.

- (1) Stimulation of a will to work among fishermen and activation of the economy in fishing villages.

- (2) Linkage of distribution and consumption centering on the Castries Fisheries Complex whose major functions are the collection and processing of fish and the Castries Fish Market aiming at the expansion of fish consumption.
 - (3) Increase of fish production by the improvement of fishing activities.
- Accordingly, the team concluded that the implementation of the Project has great significance as a Japanese Grant Aid project.

To implement the Project smoothly and attain its objectives, the Government of St. Lucia should take the following measures.

- (1) Increase catches using the demonstration vessels

The No. II Transition Vessel must demonstrate that the Vessel is of the most appropriate size and type for rationalization of fishing enterprises in St. Lucia in future. Therefore the FMU responsible for the implementation of the Project should concentrate its efforts on increasing the catches of vessels through efficient management.

- (2) Control of and financial arrangements for facilities and equipment

To carry out the Project effectively, the FMU should strengthen the control system of facilities and equipment to utilize them efficiently and take financial measures, including the purchase of various parts, to insure that they work fully. Above all, financial arrangements for the research vessel managing fisheries resources within the 200-mile EEZ of St. Lucia is essential for its operation.

- (3) Promotion of the training of fisheries experts

The FMU has some extension officers who are capable of dealing with technical matters in the Project. However, since the fishing craft proposed in the Project are to be equipped with various fishing machinery to increase the production of fish, the FMU should train more technical experts, particularly fisheries management staff.

- (4) Effective use of a fisheries development fund

Canoe type FRP fishing vessels shall be leased to fishermen. The FMU should make out a plan to control and use the rent income from these vessels as a fisheries development fund effectively.

- (5) Improvement of harbour facilities and navigational aids

When the No. II Transition Vessel has been introduced on a large scale, from the

standpoints of efficiency and safety in work operations, the construction of harbour facilities including jetties and wharves which vessels can come alongside will be necessary. In addition, in order to meet the requirements of night operations and night sailings necessary for increasing the working efficiency of fishing craft, the improvement of navigational aids such as harbour approach markers and coastal beacons, etc, should be projected in future.

APPENDIX

C O N T E N T S

	PAGE
I . MINUTES OF DISCUSSIONS	A- 1
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III . STUDY ITINERARY	A-13
IV . LIST OF THE PERSONS CONCERNED	A-15
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VIII . SOME COMMON FISHES OF ST. LUCIA	A-21

I. MINUTES OF DISCUSSIONS ON JAPAN-SAINT LUCIA
DEVELOPMENT ASSISTANCE PROGRAMME TO THE
FISHERIES SECTOR

MINUTES OF DISCUSSIONS ON JAPAN - SAINT LUCIA
 DEVELOPMENT ASSISTANCE PROGRAMME TO THE
 FISHERIES SECTOR

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Central Planning Unit

April 1987

In response to the request of the Government of Saint Lucia, the Government of Japan decided to conduct a basic design study on the Project for Fisheries Development in Saint Lucia (hereinafter referred to as the Project) and entrusted the study to the Japan International Cooperation Agency (JICA). JICA sent to Saint Lucia the study team headed by Mr. Junichiro OKAMOTO, Deputy Director of Long-distance Fisheries Division, Oceanic Fisheries Department, Fisheries Agency from March 29th to April 20th, 1987.

The team held a series of discussions on the Project with relevant officials of the Government of Saint Lucia and conducted a field survey in Castries and other areas.

As a result of the study, both parties agreed to recommend to their respective governments that the major points of understanding reached between them which are attached herewith should be examined towards the realisation of the Project.

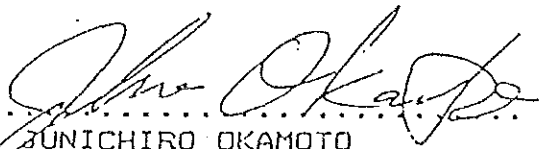
Attachments:

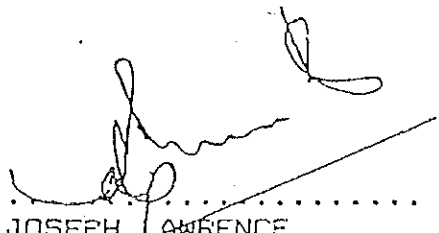
Annex I - Site Layouts

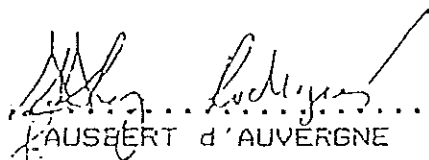
Annex II - Request of Government of Saint Lucia

Annex III - Measures to be taken by the Government of Saint Lucia

Castries, April 15, 1987


.....
MR. JUNICHIRO OKAMOTO
Leader, Japanese Study Team
Japan International Cooperation
Agency (JICA)


.....
MR. JOSEPH LAWRENCE
Ag. Permanent Secretary
Ministry of Agriculture,
Forestry, Lands,
Fisheries, and
Co-operatives


.....
FAUSBERT d'AUVERGNE
Deputy Director
Ministry of Finance & Planning (Planning)

ATTACHMENT

1. OBJECTIVE OF THE PROJECT

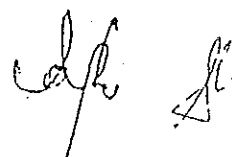
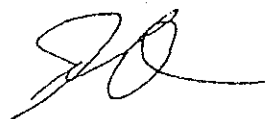
The objective of the Project is to contribute to fisheries development in Saint Lucia through the improvement of fisheries infrastructure and fish marketing and the introduction of improved fishing boats.

2. PROJECT SITES

All the proposed sites have been secured and will be prepared for the construction works before their commencement by the Government of Saint Lucia. The location of each site is shown in Annex I.

3. EXECUTING AGENCY

The Fisheries Management Unit of the Ministry of Agriculture, Forestry, Lands, Fisheries and Co-operatives is the executing agency of the Project with the coordination and assistance of the Central Planning Unit of the Ministry of Finance and Planning. The former is responsible for the administration, operation and maintenance of the equipment and facilities provided by the Project after its completion.



The Government of Saint Lucia confirmed that it will take the necessary budgetary measures for the effective operation and maintenance of the equipment and facilities provided by the Project.

4. REQUEST OF THE GOVERNMENT OF SAINT LUCIA

The Japanese Basic Design Study Team will convey to the Government of Japan the request of the Government of Saint Lucia for the provision of fisheries related equipment and the construction of facilities listed in Annex II within the scope of the Grant Aid Programme of the Government of Japan.

5. MEASURES TO BE TAKEN BY THE GOVERNMENT OF SAINT LUCIA

The Government of Saint Lucia will take the necessary measures as listed in Annex III on condition that Grand Aid by the Government of Japan is extended to the Project.

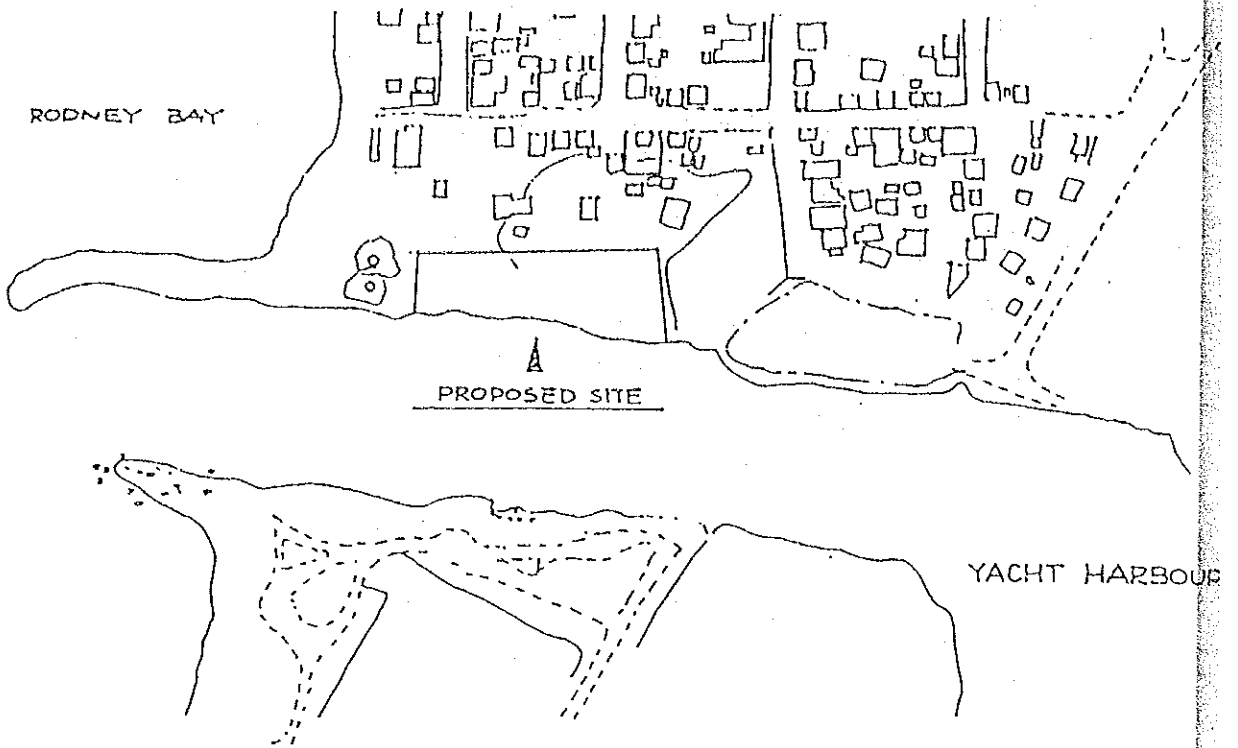
6. SYSTEM OF GRANT AID OF JAPAN

Both parties confirmed that the Japanese Basic Design Study team elucidated the Grant Aid Programme of Japan and the Saint Lucia side understood it.

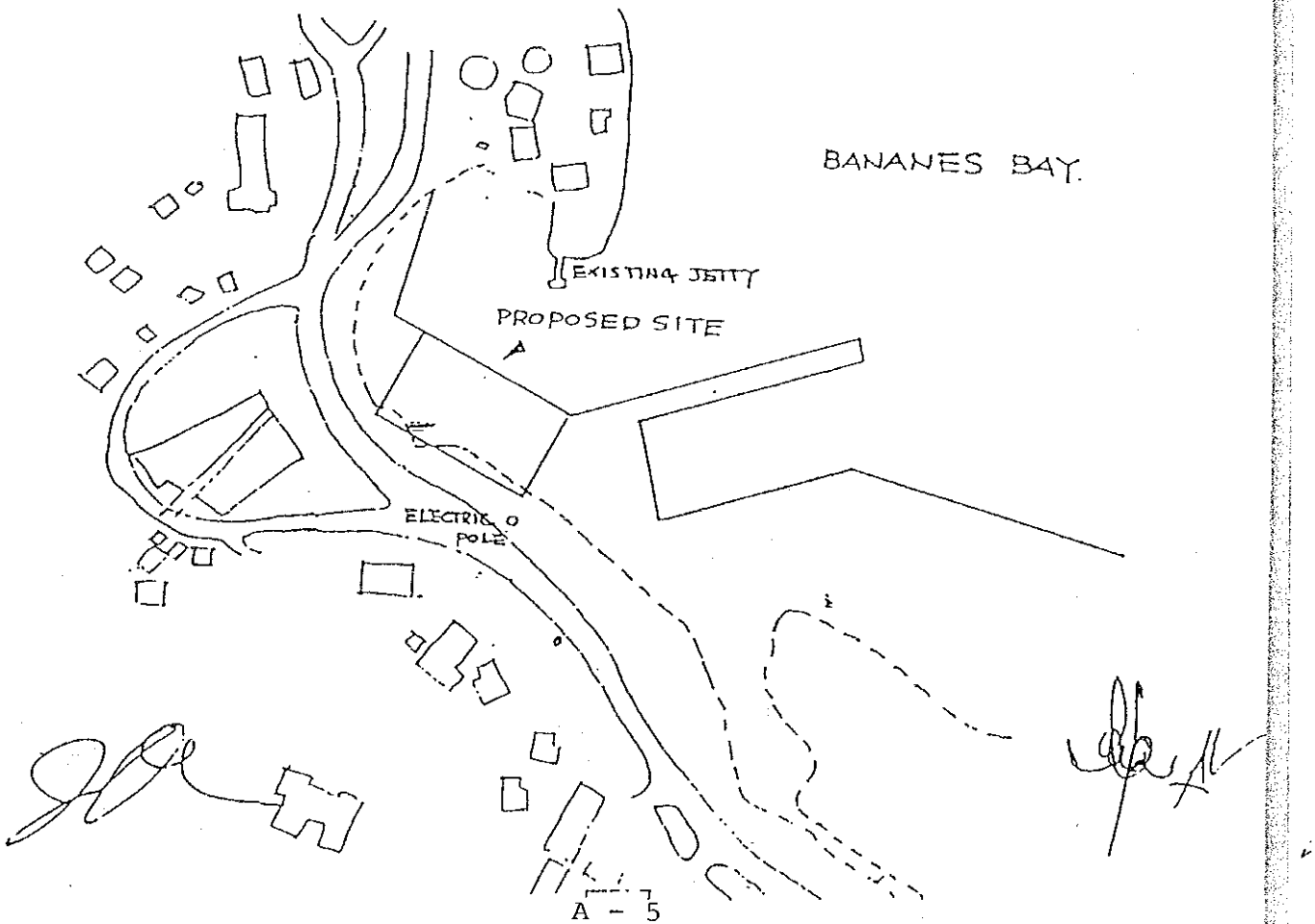


Annex I-A

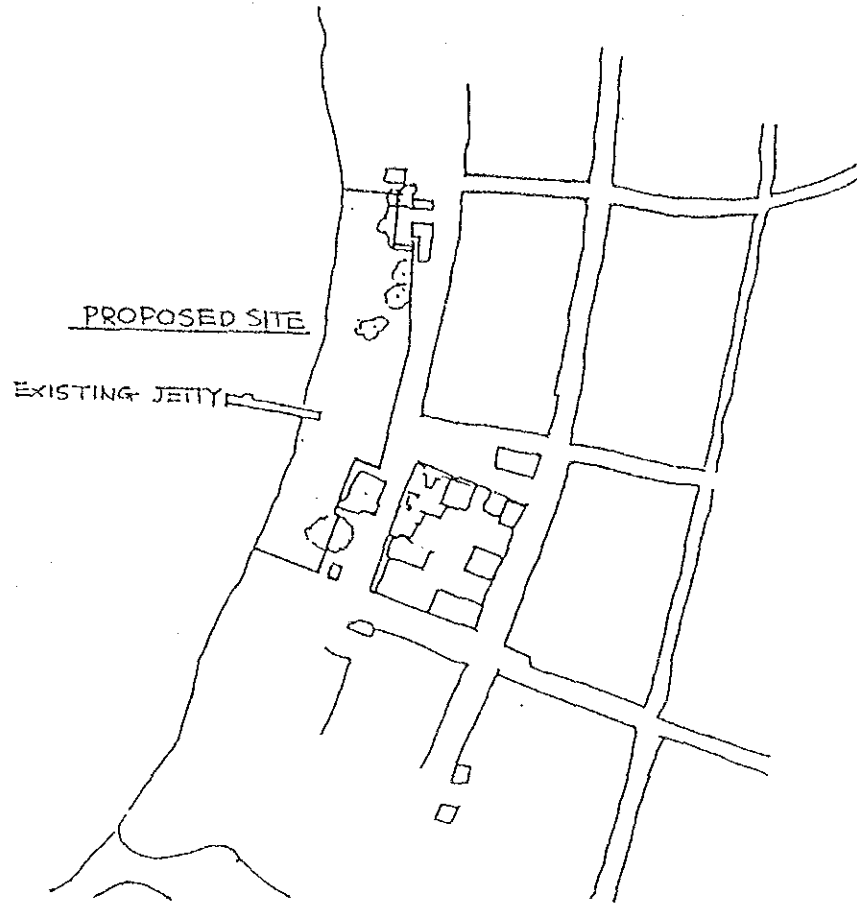
GROISLET



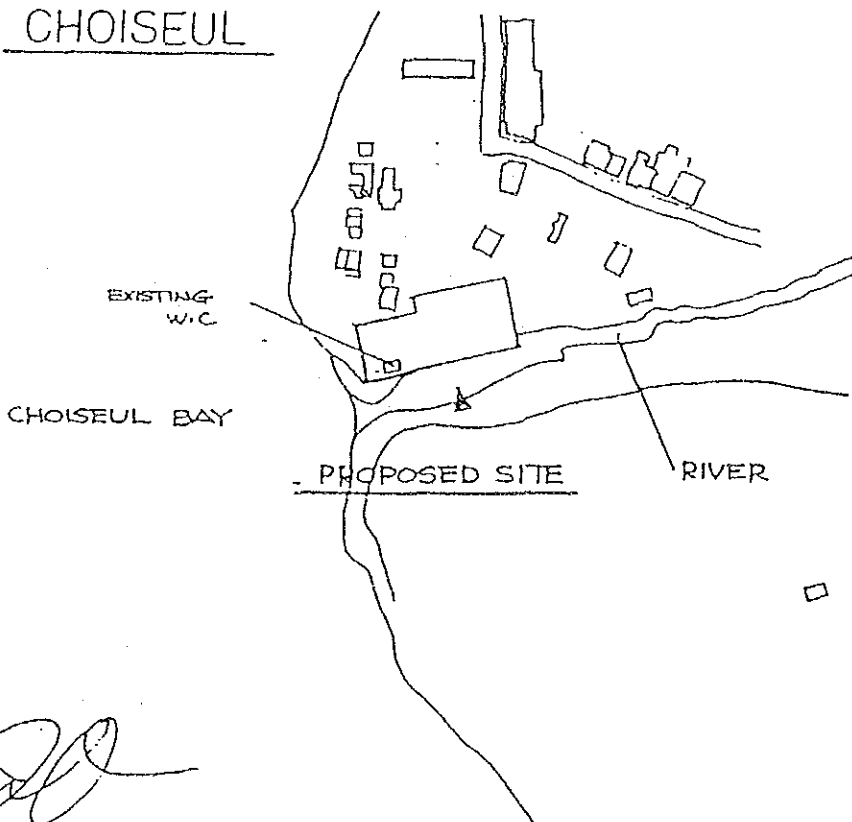
BANANES



ANSELARAYE

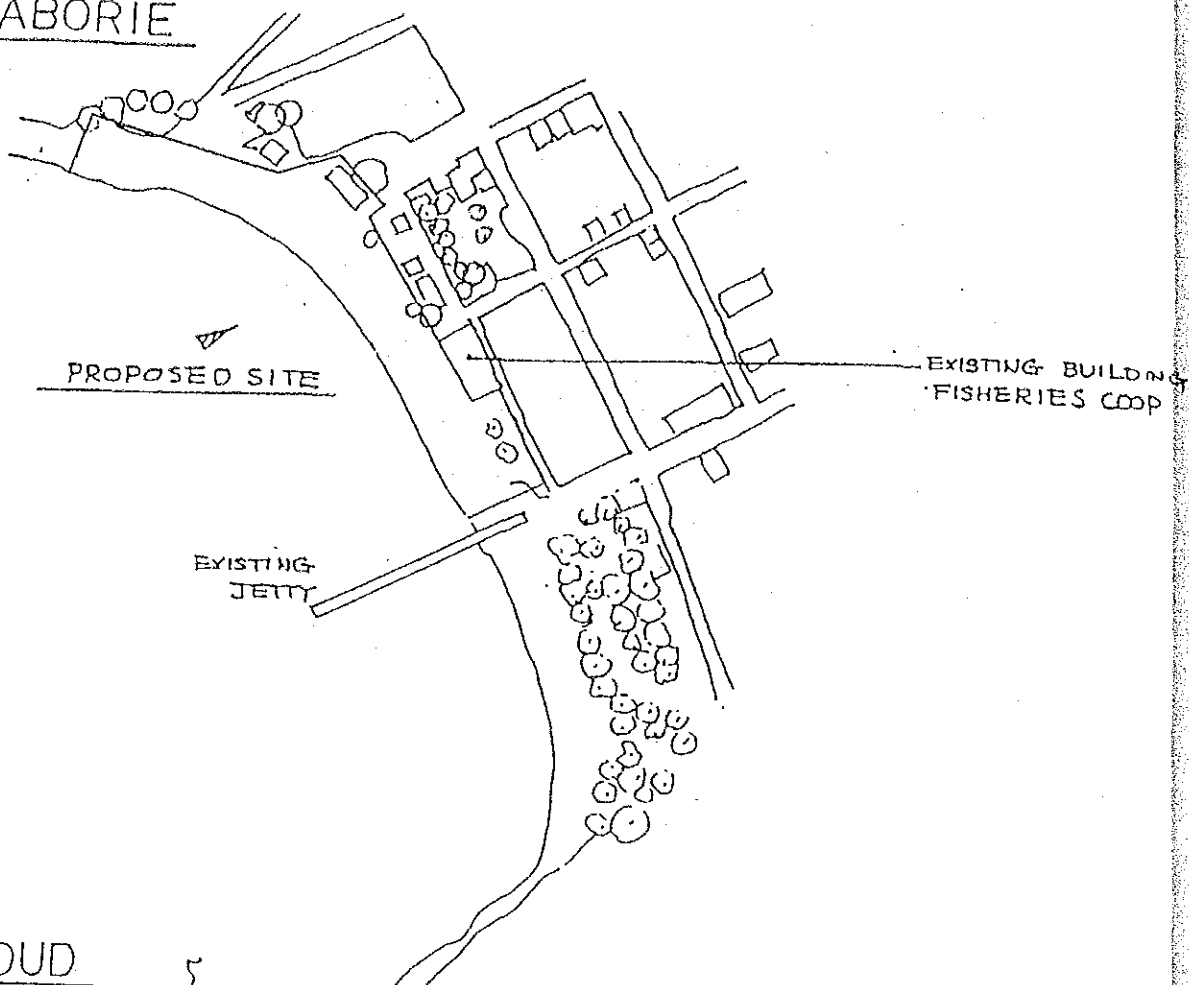


CHOISEUL

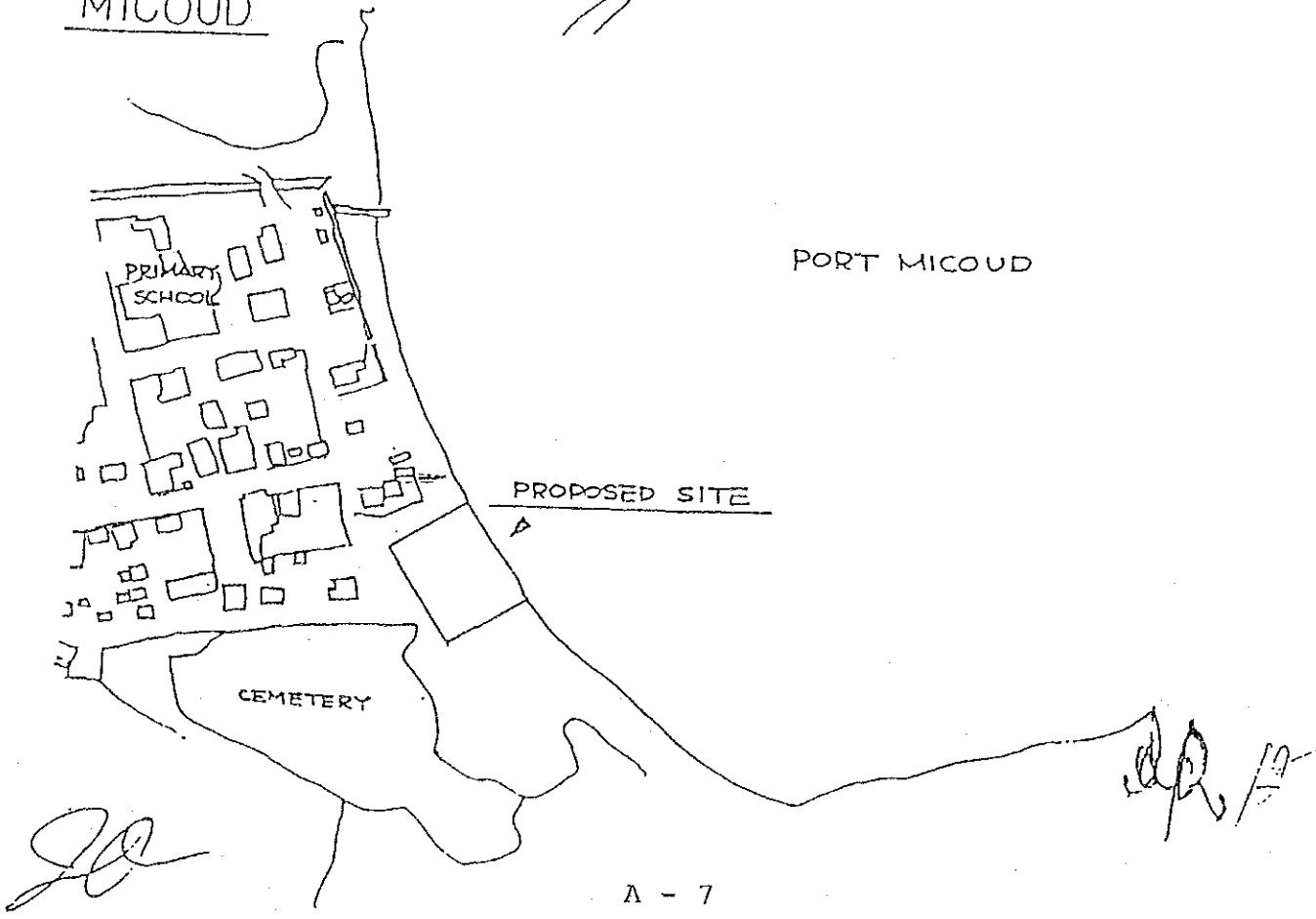


Annex I-C

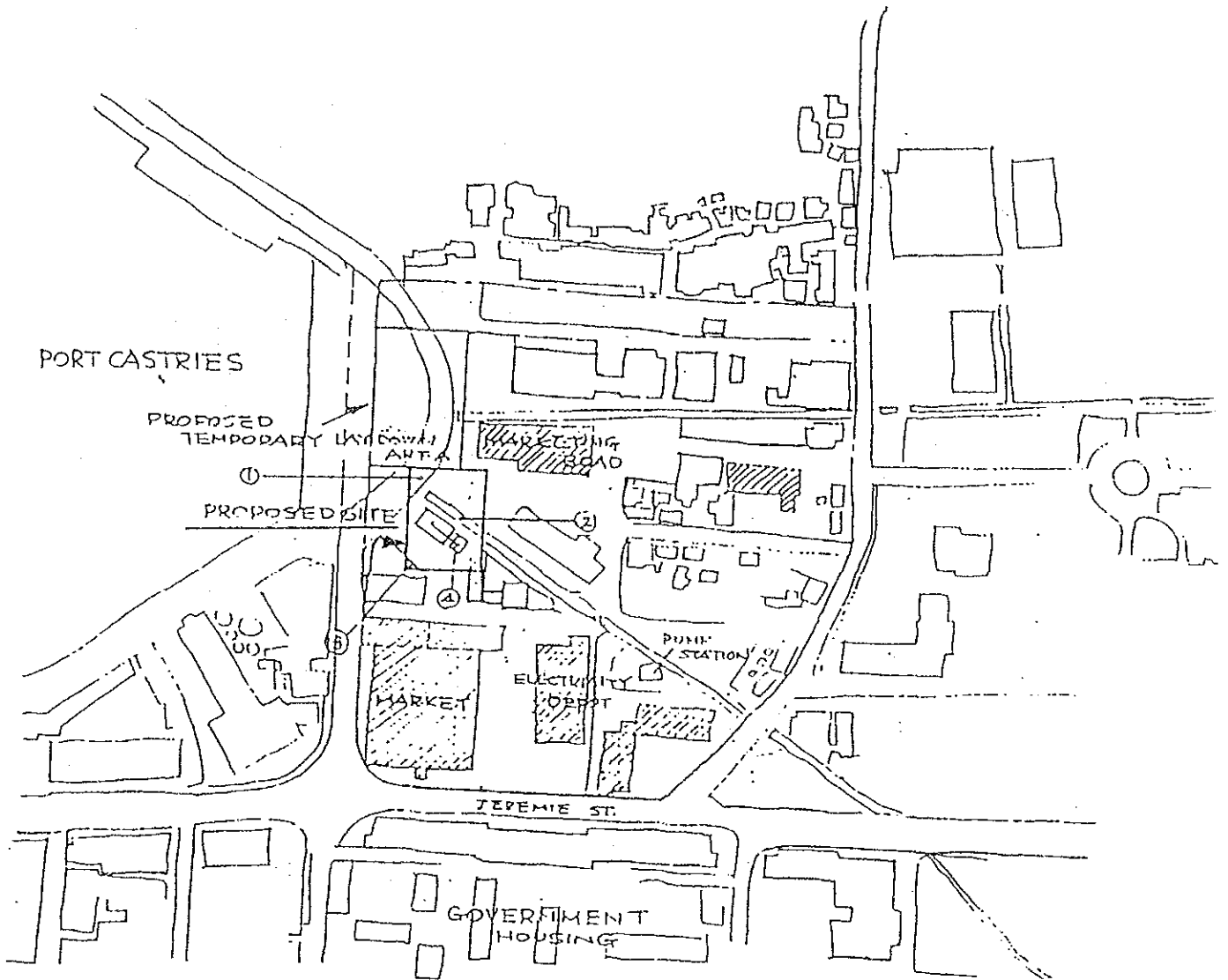
LABORIE



MICOUD



FISH MARKET IN CASTRIES



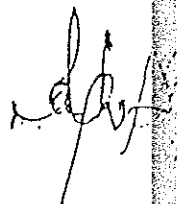
① ~ ④ SHOULD BE RELOCATED OR DEMOLISHED BY SAINT LUCIA

- ① EXISTING ROAD
- ② EXISTING DRAINAGE
- ③ A PART OF WALL ATTACHED TO A MEAT SHOP.
- ④ COAL MARKET AND ATTACHED BUILDING.

ANNEX II

Request of the Government of Saint Lucia (in order of priority):

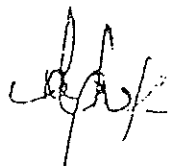
1. Equipment and facilities for the improvement of fisheries infrastructure and fish marketing in fishermen's communities (canoe ramps, fishermen's locker rooms and workshops, cold storages, insulated van trucks, etc).
2. Equipment for the introduction of improved fishing boats (model boats, research boat and related gears).
3. Equipment and facilities for the improvement of fish marketing in Castries (Fish Market building and related equipment within the building).



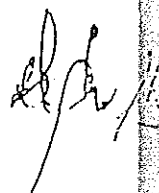
ANNEX III

The following measures are required to be undertaken by the Government of Saint Lucia at its own cost.

1. To secure, clear, level and reclaim the Project sites, including the demolition of existing buildings where needed, prior to the commencement of construction works.
2. To provide facilities for the distribution of electricity, telephone; water supply, storm water drainage and sewerage up to the sites where needed.
3. To construct the gate and fence in and around the sites where needed.
4. To provide general furniture required for administrative purposes.
5. To ensure tax exemption and customs clearance at the ports of disembarkation in Saint Lucia and to facilitate the prompt unloading and internal transportation of the products and materials provided under the Grant Aid programme of the Government of Japan.
6. To exempt Japanese nationals engaged in the Project from customs duties, internal taxes and other fiscal levies which may be imposed in Saint Lucia with respect to the supply of the products and services under the verified contracts.



7. To provide to Japanese nationals whose services are required in connection with the supply of the products and services under the verified contracts such facilities as may be necessary for their entry into Saint Lucia and their stay therein for the performance of their services.
8. To take the following measures, when the equipment provided by the Project are sold or leased to fishermen:
 - i) deposit the amount to be obtained by such sale or lease in a separate and distinct account than that of the Accountant General of Saint Lucia as a counter-part fund.
 - ii) utilize the above-mentioned counter-part fund for the purpose of fisheries development and maintenance of the equipment provided by the Project,
 - iii) report, upon the request of the Government of Japan, the use to which the counter-part funds have been put.
9. To maintain and use properly and effectively the facilities constructed and equipment provided by the Project.
10. To bear all the expenses, other than those to be borne by the Grant aid programme of Japan necessary for the construction of the facilities and provision of the equipment.



II . MEMBER OF THE STUDY TEAM

1. Mr. Jun-ichiro Okamoto (Leader of the Team)
Long-Distance Fisheries Division, Fisheries Agency,
Ministry of Agriculture, Forestry and Fisheries.

2. Ms. Nobuko Kayashima (Project Coordinator)
Second Basic Design Division, Grant Aid Planning & Survey
Department, JICA.

3. Mr. Tokuichiro Kamei (Fisheries Development Planner)
D & A Engineering Co., Ltd.

4. Mr. Kaname Motoki (Engineer for Fish Landing Facilities)
D & A Engineering Co., Ltd.

5. Mr. Yasunari Koyanagi (Naval Architect)
D & A Engineering Co., Ltd.

III . STUDY ITINERARY

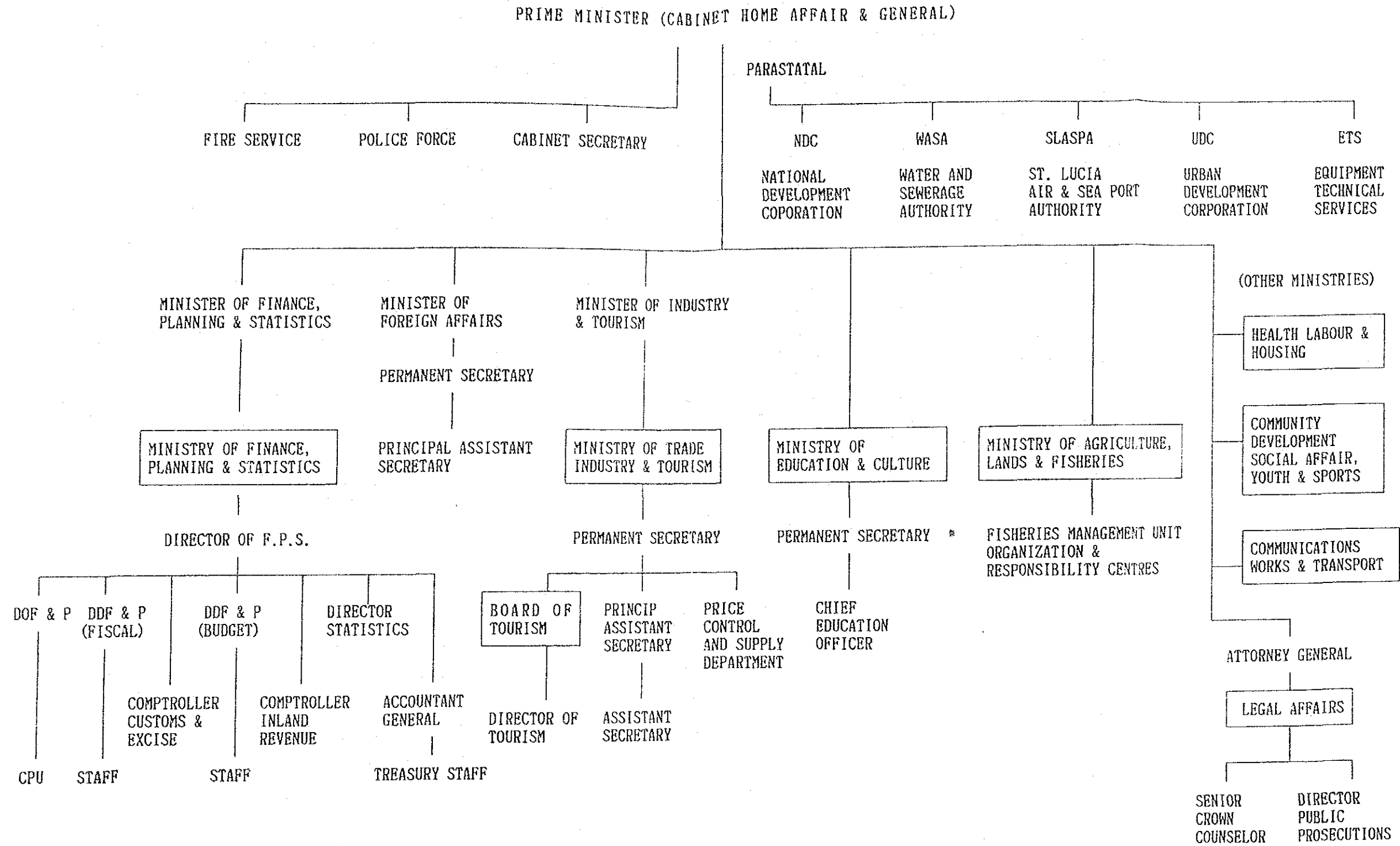
March	29(Sun)	1200	Lv. Tokyo	Okamoto, Kayashima & Kamei
		2140	Ar. Ottawa	
	30(Mon)			· Discussion with the officials of CIDA
	31(Tue)	0615	Lv. Ottawa	
		(1200	Lv. Tokyo,	Motoki & Koyanagi)
April	1(Wed)	0115	Ar. Port-of-Spain	
				· Courtesy call to Japanese Embassy.
		1315	Lv. Port-of-Spain	for St. Vincent, Okamoto & Kayashima.
		(0915	Ar. St. Lucia,	Motoki & Koyanagi)
	2(Thu)	0630	Lv. Port-of-Spain	Kamei
		0810	Ar. St. Lucia	
				· General meeting with officials of MOALF and CPU.
	3(Fri)			· General meeting with officials of CPU.
				· Survey of Castries Fishereis Complex.
				· Survey of proposed sites at Gros Islet and Banennes.
	4(Sat)			· Survey of the proposed sites of Anse la Raye,
				Canaries, Choiseul, Laborie, Vieux Fort, Micound,
				Praslin and Dennery.
	5(Sun)			· Discussion among the Team members.
	6(Mon)			· General meeting with officials of CPU & FMU.
	7(Tue)			· General meeting with officials of CPU.
				· Survey of fisheries facilities at Castries.
				· Meeting with custom officers.
	8(Wed)	0820	Okamoto & kayashima	arrived from St. Vincent.
				· General meeting with officials of CPU & FMU.
				· Discussion among the Team members.
	9(Thu)			· General meeting with officials of CPU, FMU and CIDA.
				· Survey and interview at Gros Islet.
	10(Fri)			· Meeting with officials of FMU.
				· Meeting with officials of CPU.
				· Survey of Castries Fisheries Complex.
	11(Sat)			· Drawing the Minutes.
	12(Sun)			· Discussion among the Team members.
	13(Mon)			· Survey of the proposed sites at Anse la Raye,
				Canaries, Choiseul, Laborie, Vieux Fort and Micound.
				(Okamoto & Kayashima)

- Survey of fishing craft maintenance facilities at
Canaries.
- Survey of construction materials.
- 14(Tue) • Courtesy call to Foreign Ministry.
- Courtesy call to Prime Minister, Mr. Compton.
- Meeting with officials of Castries Harbour Authority.
- Signature to the Minutes.
- 15(Wed) 0915 Lv. St. Lucia, Okamoto, Kayasima & Kamei.
- 1600 Ar. Port-of-Spain
 - Reporting to Japanese Embassy.
 - Survey of the proposed sites. (Motoki & Koyanagi)
- 16(Thu) 0630 Lv. Port-of-Spain for Tokyo, Okamoto & Kayashima.
- 1700 Lv. Port-of-Spain, Kamei
- 1750 Ar. St. Lucia
 - Meeting with officials of CPU & FMU.
- 17(Fri) • Discussion among the Team members.
- 18(Sat) 0812 Lv. St. Lucia
- 1750 Ar. Washington
- 19(Sun) 0950 Lv. Washington
- 20(Mon) 1440 Ar. Tokyo

IV. LIST OF THE PERSONS CONCERNED

Prime Minister of St. Lucia	Mr. J. Compton
(Ministry of Foreign Affairs)	
Political Officer	Ms. P. Medar
Chief of Protocol	Ms. U. George
(MOALF)	
Permanent Secretary	Mr. J. Lawrence
(FMU)	
Chief Fisheries Officer	Mr. V. Charles
Extention Officer	Mr. P. Mathy
(CPU)	
Chief Economist	Mr. A. Severin
Senior Economist	Mr. A. Roy Rodriguez
Architect	Mr. R. James
Quantity Surveyor	Mrs. A. Marty
(Castries Fisheries Complex)	
General Manager	Mr. M. Fevrier
(Custom Authority)	
Comptroller of Customs	Mr. M. Sholar
(CIDA)	
Country Program Analyst	Mr. J. Lobsinger
Senior Country Program manager	Mr. P. R. Houliston
Fisheries Specialist	Mr. L. O'Rileyhinds
Counseller Development Canadian High Commission	Mr. P. Dunber
(Japanese Embassy)	
Ambassador	Mr. Mitsuo Iijima
	Mr. Ko Kodaira
	Mr. Hiroaki Nishitani
	Mr. Seiji Yamada

V. ORGANIZATION CHART



FISHERIES MANAGEMENT UNIT ORGANIZATION & RESPONSIBILITY CENTRES

PRINCIPAL ASSISTANT SECRETARY

AG. CHIEF FISHERIES OFFICER

SENIOR FISHERIES OFFICER
ADMINISTRATIVE, PLANNING & DEVELOPMENT DIVISION

SENIOR FISHERIES OFFICER
FISHERIES MANAGEMENT DIVISION

SENIOR FISHERIES OFFICER
EXTENSION, TRAINING & TECHNOLOGY DIVISION

AG. FISHERIES OFFICER

FISHERIES BIOLOGIST

SENIOR FISHERIES ASSISTANT

Administration & Finance
Branch

Planning & Development
Branch

Extension Branch

Training & Technology
Branch

Payroll

Policy

Vessel Licences

Public Awareness
Programme

Staff Salaries

Budget

Vessel Inspections

Services to Fishing
Community

Training Programmes &
Technological Innovation
Demonstration Vessel

Equipment & Supply
Inventories

Enforcement

Aquaculture Extension

Primary Sector
(Fishing Operations)

Requisitions

Conservation

Aquaculture Extension

Primary Sector
(Fishing Operations)

Gasoline Rebates

Research Vessel

Aquaculture Extension

Primary Sector
(Fishing Operations)

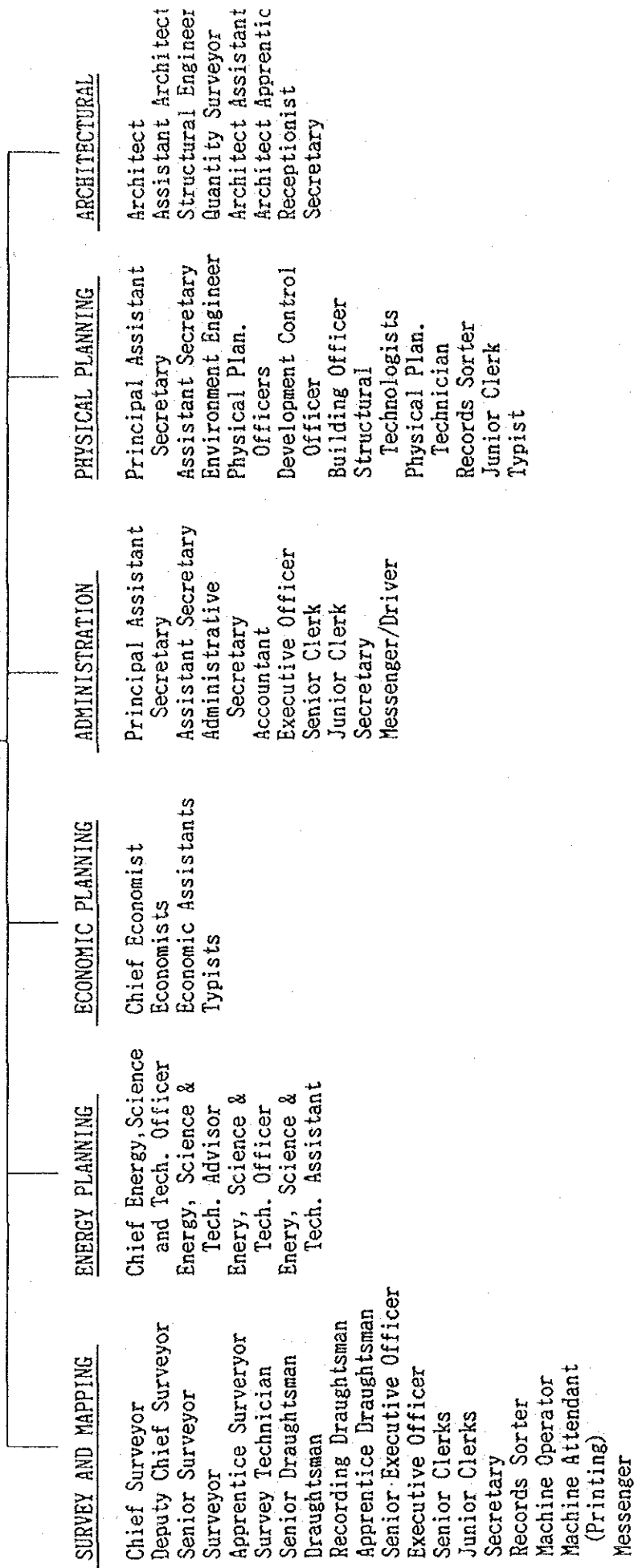
Liaison with Carribean
Marine Resource Survey

Secondary Sector
(Castries Complex &
New Landing Sites)

Aquaculture

CENTRAL PLANNING UNIT-ORGANIZATIONAL CHART

DEPUTY DIRECTOR OF FINANCE AND PLANNING (PLANNING)



VI. NATIONAL ACCOUNTS OF ST. LUCIA

Source: O.E.C.S. Statistical
Pocket Digest 1985

	1982	1983	1984	unit: EC\$M 1985
G.D.P. of which:	314.6 (100.0)	323.4 (100.0)	353.0 (100.0)	388.8 (100.0)
Agriculture	36.4 (11.6)	42.3 (13.1)	46.2 (13.1)	58.3 (15.0)
Manufacturing	29.9 (9.5)	30.2 (9.3)	31.1 (8.8)	33.0 (8.5)
Construction	34.1 (10.8)	19.6 (6.1)	23.2 (6.6)	27.0 (6.9)
Trade	50.8 (16.1)	53.6 (16.6)	58.2 (16.5)	61.9 (15.9)
Hotel & Restaurants	20.1 (6.4)	22.2 (6.9)	24.8 (7.0)	26.5 (6.8)
Transport	34.6 (11.0)	37.6 (11.6)	38.7 (11.0)	40.4 (10.4)
Govt. Services	62.7 (19.9)	67.8 (21.0)	76.3 (21.6)	84.0 (21.6)
Other	46.0 (14.6)	50.1 (15.4)	54.5 (15.4)	57.7 (14.9)
per Capita (EC\$)	2,550	2,461	2,633	2,839

VII. MONTHLY LANDINGS BY AREA, 1986

Unit: kg

month	1	2	3	4	5	6	7	8	9	10	11	12	合 計
CASTRIES	17,062	4,422	10,115	10,976	0	0	0	3,438	5,004	5,900	3,521	15,467	75,905
CHOISEUL	56,330	29,258	3,515	3,293	4,572	0	151	799	1,671	2,002	2,076	0	103,667
DENNERY	10,427	18,375	19,412	12,902	9,753	20,930	1,047	0	552	0	2,919	5,692	102,009
GROS ISLET	0	0	0	0	2,187	0	50	908	688	0	0	755	4,588
LABORIE	3,930	1,946	6,222	4,028	865	0	944	1,124	864	0	480	84	20,487
MICLOUD	1,076	2,022	2,908	2,632	0	0	0	0	0	911	543	1,226	11,318
PRASLIN	450	886	2,763	0	0	0	0	0	0	0	0	126	4,225
SAVANNES	846	4,572	14,086	0	4,483	801	5,141	1,500	2,334	390	0	0	34,153
VIEUX FORT	9,191	13,965	16,714	0	0	0	0	3,855	5,614	12,360	6,724	2,817	71,240
TOTAL	99,312	75,446	75,735	33,831	21,860	21,731	7,333	11,624	16,727	21,563	16,263	26,167	427,592

Source: FMU

VIII. SOME COMMON FISHES OF ST. LUCIA

<u>Taxonomic Nomenclature</u>	<u>English Name</u>	<u>Local Name</u>
<u>Demersal (Reef) Species</u>		
<i>Acanthurus bahianus</i>	Surgeonfish	Siwigen
<i>Balistes vetula</i>	Triggerfish	Boose
<i>Bodianus rufus</i>	Hogfish	Bouteille
<i>Caranx</i> spp.	Jack	Cawang
<i>Chaetodon</i> spp.	Butterflyfish	Demoiselle
<i>Epinephelus adscensionis</i>	Rock Hind	Couwanay
<i>Gymnothorax</i> spp.	Moray Eel	Cong
<i>Haemulon</i> spp.	Grunt	Gorwette
<i>Holocentrus rufus</i>	Squirrelfish	Mawayang
<i>Lactophrys</i> spp.	Cowfish	Coff
<i>Lutjanus</i> spp.	Red Snapper	Sob
<i>Malacanthus plumieri</i>	Sandtile	Vive
<i>Mulloidichthys martinicus</i>	Goatfish	Souwee
<i>Mycteroperca</i> spp.	Grouper	Vierge
<i>Myripristis jacobus</i>	Soldierfish	Tete Faire
<i>Octopus</i> spp.	Octopus	Chattoo
<i>Ocyurus chrysurus</i>	Yellowtail Snapper	Sob
<i>Panilurus argus</i>	Spiny Lobster	Hoomah
<i>Pomacanthus paru</i>	Angelfish	Portejay
<i>Scarus</i> spp.	Parrotfish	Cap
<i>Sphyræna barracuda</i>	Barracuda	Baycheen
<i>Strombus gigas</i>	Conch	Lambie
<i>Thalassowra bifasciatum</i>	Wrasse	Potata-a-Lance
<u>Coastal Pelagic Species</u>		
<i>Acanthocybium solanderi</i>	Kingfish	Baway
<u>Oceanic Pelagic Species</u>		
<i>Coryphaena hippurus</i>	Dolphinfish	Doward
<i>Euthynnus</i>	Little Tuna	
<i>Exocoetidae & Parexocoetidae</i> spp.	Flying Fish	Volant
<i>katsuwonus pelamis</i>	Skipjack Tuna	Ton Noir
<i>Thunnus alalunga</i>	Albacore Tuna	Ton
<i>Thunnus albacores</i>	Yellowfish Tuna	Ti Jaune
<i>Thunnus atlanticus</i>	Blackfin Tuna	Ton
<i>Thunnus obesus</i>	Bigeye Tuna	Ton
<i>Thunnus thynnus</i>	Bluefin Tuna	Ton
?	Shark	Waychen/Kwayak
?	Porpoise	Mashwin
?	Turtle	Carette

Source: North-South Intermedium Limited

JICA