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別添資料１

モーリシァス共和国　漁業管理訓練施設改善計画　予備調査
調査団員名簿

１．総括	村上　裕道	国際協力事業団 無償資金協力部業務第４課
２．無償資金協力	松田　竜太	外務省 経済協力局無償資金協力課
３．技術参与	小笠原　昇市	水産庁 漁政部国際課海外漁業協力室
４．漁業訓練計画	川崎　博之	アイ・シー・ネット株式会社
５．施設機材計画	岩崎　渉	オーバーシーズ・アグロフィッシャリーズ ・コンサルタンツ株式会社

別添資料２

モーリシァス共和国　漁業管理訓練施設改善計画　予備調査

予備調査日程

調査機関：2001 年 1 月 23 日より同年 2 月 4 日

日数	月／日	曜日	日程	宿泊地
01	1／23	火	成田⇨パリ　移動（AF275 12:50→17:20）	パリ
02	1／24	水	パリ⇨アンタナナリボ　移動（AF3876 10:15→22:55）	ｱﾝﾀﾅﾅﾘﾎﾞ
03	1／25	木	在マダガスカル大使館を表敬訪問	ｱﾝﾀﾅﾅﾘﾎﾞ
04	1／26	金	アンタナナリボ⇨モーリシァス（MD 11:05→11:50） AFRC にて協議	ﾎﾟｰﾄﾙｲｽ
05	1／27	土	建設敷地視察、ファンファロン漁港視察 AFRC にて協議	ﾎﾟｰﾄﾙｲｽ
06	1／28	日	マヘバーグ地区保護・管理支所視察 ブルーラグーン海洋公園視察、団内協議	ﾎﾟｰﾄﾙｲｽ
07	1／29	月	漁業大臣表敬、漁業次官表敬・協議 船員学校視察、AFRC にて協議、資料収集	ﾎﾟｰﾄﾙｲｽ
08	1／30	火	AFRC にて協議、経済開発財務援助省表敬・協議 AFRC にて協議、資料収集、団内協議	ﾎﾟｰﾄﾙｲｽ
09	1／31	水	船員学校視察、AFRC にて協議、資料収集 漁業次官協議内容報告、ポートルイス中央魚市場視察	ﾎﾟｰﾄﾙｲｽ
10	2／01	木	建設敷地視察、北部漁村視察、団内協議	ﾎﾟｰﾄﾙｲｽ
11	2／02	金	モーリシァス⇨アンタナナリボ　移動 （MD287 11:05→11:50） 在マダガスカル大使館にて調査報告	機中泊
12	2／03	土	アンタナナリボ⇨パリ（AF3877 01:10→10:00） パリ⇨（AF276 13:20→、AF274 23:20→	機中泊
13	2／04	日	⇨成田（AF276 →05:59、AF274 →19:00）	

別添資料３

主要面談者リスト

１．漁業省（ Ministry of Fisheries ）

Hon. Louis Sylvio MICHEL	Minister, Ministry of Fisheries
Mr. R. MUDHOO	Permanent secretary
Mr. A. K. UTCHANAH	Principal Assistant Secretary
Mr. LAVENERABLE	Press Attache for the Minister
Mr. JUBBHO	Project Coordinator for the Ministry

１－１ 漁業保護・管理部（ Fisheries Protection Service ）

Mr. S. P. P. TORUL	Chief Fisheries Protection Officer
Mr. K. BATHIA	Senior Fisheries Protection Officer

＊この他数名の Fisheries Protection Officer

１－２ アルビオン水産研究センター（ Albion Fisheries Research Centre ）

Mr. M. MUNBODH	Principal Fisheries Officer
Mr. M. I. JEIANGEER	Deputy P.F.O.
Mr. A. VENKATASAMI	Divisional Scientific Officer, Marine Resources
Mr. C. R. SAMBOO	D.S.O, Aquaculture
Mr. D. GOORAH	D.S.O, Marine Parks & Research Service
Mr. V. CHINEAH	D.S.O, Marine Science
Mr. S. HANOOMANJEE	Scientific Officer, Marine Resources
Mr. S. B. PANRAY	Scientific Officer, Marine Resources

２．経済開発財務援助省（ Ministry of Economic Development, Financial Services and Corporate Affairs ）

Mr. G. WONG SO	Director

３．在マダガスカル日本大使館

日向　精義氏	大使
松原　　昭氏	参事官
今村　　徹氏	一等書記官

別添資料４　修正要請書

Supplementary information and justification for a Fisheries Training and Extension Centre at Pointe aux Sables.

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1. Background.

Training of Mauritian fishers and trainers started in the early eighties under the "Formation Itinérante de pêche" with technical and financial assistance from the French government.

Due to over exploitation of the lagoon, the government of Mauritius decided to relocate fishermen to an outer lagoon fishery on a voluntary basis. Since experimentation on fish aggregating devices were conclusive, training on fishing techniques around FAD's were imparted to fishers as from 1985. The programme was funded by the government of Mauritius and the Regional Tuna Project of the Indian Ocean Commission.

The FAD fishery training programme was further reinforced with the help of the Overseas Fishery Cooperation Foundation (OFCF) in 1991. The training of fishers was diversified with the introduction of the hydraulic deep sea reel fishing techniques by staff of the OFCF in 1992.

Training programmes were conducted with a small number of fishermen(5/6) as the place available at the fishing port has always been a constraint for the proper running of courses. Due to this constraint, the training of bank fishermen is carried out at the Sea Training School (STS). It should be pointed out that the STS is not always available and training courses for bank fishermen can be organised only when no other courses are being run by the STS. This causes a major handicap to our training programmes.

In 1996, the Ministry of Fisheries introduced a buy back package for net fishers (290 net fishers registered in 1999). One of the components of this package is the training and relocation of these fishers to an outer lagoon fishery. Furthermore, due to the damages caused to the lagoon ecosystems by sand removers, government decided to stop all sand removal from the lagoon by the year 2001. Out of 1200 sand removers concerned, it is expected that about 400 will take up fishing as a living and they have to be trained. Since they possess their own boats and engines, the FAD fishery could be one alternative. It should be noted that refresher courses are an integral part of our training strategy.

There is an urgent need for a training centre to cater for the training of fishers, staff and students and to create an awareness of the fisheries management in the general public. In that context, it should be noted that the research centre receives more than 10,000 students and members of the public annually. The Fisheries Training and Extension Centre will provide training facilities for fishermen from Rodrigues and may also be used as a venue for regional training.

The Original Project.

The objectives of the original project:

(a). The construction of a fisheries development and training centre with associated facilities such as a slipway and a jetty at the Trou Fanfaron Fishing Port. The building would have housed a fisheries post for the Port Louis region.

(b). The construction of 2 new fisheries posts and the renovation of 3 existing posts together with the supply of equipment for 13 fisheries posts.

(c). Construction of an exhibition hall at Albion to cater for the ever increasing number of visitors at AFRC.

A project formulation mission from JICA led by Mr. Sasaki, visited Mauritius from the 9th to the 16th November 1999 to discuss the project. The mission found that there is a need for the rationalisation of facilities into a single establishment housing the fisheries training centre, a marine conservation learning resource centre and an exhibition hall. The mission also noted the need to establish a feedback information system to provide timely resource information to fishers and the fishing industry.

The Modified project – Fisheries Training and Extension Centre.

The original project submitted in February 1999 has been modified to take into account the findings of the formulation mission and the priorities of the Ministry of Fisheries. The project now includes:

(a) Construction of a fisheries training and extension centre with associated facilities to house the training centre, exhibition hall, information counter for the public, fisheries extension and a model fisheries post for the protection of the lagoon and a workshop for the repairs of boats & engines, (details at annex 8).

(c) Construction of a jetty to facilitate the movement of our research and training boats.

The modified project is in line with the findings of the project formulation mission . It should be noted that the Ministry will have to take certain commitments with regards to the adequate number of qualified personnel to operate the training centre and that enough funding and other logistical support be provided for the running of the centre and its associated facilities. New posts may have to be created.

2. What is the Mauritian government's overall policy on the development of the fisheries sector?

The overall policy of the Mauritian government may be listed as follows:

- give the necessary support to training and to the development of the fishing industry;

- ensure that the fishery resources are exploited at sustainable level by integrating development and other objectives into rational natural resource management practices:
- secure the contribution of fisheries to national economic and social development:
- enhance the well-being of the population through provision of a nutritious food:
- protect and conserve the marine resources;
- respond to the needs of the Mauritian fishing industry through the provision of all available information and proper advice:
- work with the industry to meet consumer demands and raise quality of fish and fish products.

3. Government policy with regards to Training.

For the past few years, the government of Mauritius has laid much emphasis on training at all levels. It is the policy of government to train and upgrade the skills of workers in all spheres, mainly in the productive sectors such as manufacturing, tourism, information technology and fisheries.

Furthermore, the ten year development plan for the fisheries sector makes provision for capacity building and institutional reforms. A training need survey carried out in 1999, clearly points out the need to upgrade the skills of fishers in new and advanced technologies, providing them with the tools for sustainable exploitation of the fishery resources.

4. Current information of the fishing industry in Mauritius.

See **Annex 5**

5. The Fisheries Training and Extension Centre.

Since the submission of the grant aid project on "Upgrading and Renovation of the Management .Fisheries Development and Training Facilities for Small Scale Fisheries in Mauritius" in February 1999, there has been major developments in the field of training of fishers. The Ministry of Fisheries started the implementation of the "Development of the FAD fishery sub programme" partly financed by the International Fund for Agricultural Development,(IFAD). Emphasis has been laid on the training and relocation of fishers to the FAD fishery in the project. One of the major constraint for the good running of the project is the availability of space at the Trou Fanfaron fishing port.

With the phasing out of sand removal, there will be sand removers who may consider taking up fishing for a living. They will need to be trained in fishing around FAD's or an alternative fishery.

Taking the above into consideration, the Ministry of Fisheries would like to modify the objectives of the original project submitted to JICA in February 1999 for the following new objectives:

Modified Project:
Construction of a Fisheries Training and Extension Centre with the following associated facilities:

1. Fisheries Training centre

Ground Floor:

- Exhibition Hall
- Supervisor's room
- Information and documentation counter
- Storage
- Offices for DSO and Staff
- W.C's
- Parking facilities

Level 1: Training Centre

- Lecture Halls
- Offices for staff
- Mess rooms and storage space
- WC's. bath rooms

2. Model Fisheries Post and Fisheries Extension Centre.

Ground floor:

- stores and workshop
- Model fisheries post with dormitory. offices. Kitchenette and mess room and W.C's
- Parking facilities

Level 1: Fisheries extension Centre

- Offices for CFPO and staff
- Meeting room
- Mess room and kitchenette

3. Jetty and associated facilities for the research and training boats of the ministry.

All buildings to be fully air conditioned. equipped with furnitures. It is considered that the Fisheries Training and Extension Centre will be more useful in the present context.

6. The training curriculum.

The training curricula for seven training programmes is given at annex 1. Note the course contents and the number of hours per topic/module is also indicated. Other training programmes such as management skills for staff. the use of computer softwares and packages in fisheries etc.. will also be carried out on an adhoc basis. The number of regular trainers and resource persons are given at annex 2. along with their qualifications and some cost implications. These resource persons (from the Ministry of Fisheries and other Ministries) regularly give lectures and carry out sensitisation programmes for schools and the general public. An annual schedule of

the training programme is given at annex 3 and a list of materials and equipment required for the training centre is given at annex 4.

It should be noted that recruitment of trainers can only be made through the Public Service Commission (PSC) which is a government body recruiting personnel for government services.

7. The Site for the project

The site chosen for the construction of the Fisheries Training and Extension Centre is called Pointe aux Sable, situated at only 4.4 kilometres from Port Louis and about the same distance from the AFRC. The land has for a long time been occupied by the Fisheries Protection Service and has recently been vested to the Ministry of Fisheries.

The land area is about 4500m^2 and can easily accommodate the training centre and associated facilities. The land is well drained and no water accumulation has ever been noted. Electricity, water and telephone services are available. The ground height is 3 ~3.5m above the sea level and the land consist of basalt (of volcanic origin), hence, no piling is needed. No natural disasters such as flooding or high waves have ever been recorded. The average depth of the lagoon in front of the site is around 1~1.5m. Some dredging may be necessary to allow the free movement of our boats.

The site is found along the main road of Pointe aux Sable with easy access to the public transport from/to Port Louis and other regions. The quiet nature of the site provides for a conducive atmosphere for a training centre.

8. Who are the priority/target beneficiaries of the project

They are:

- the fishermen community (raising standard of living, provision for training on new fishing technology , fish preservation, navigation , safety at sea and retraining of fishermen);
- the fishing industry (artisanal, banks and offshore fishers);
- the consumers and the general public;
- the tourist industry (protection and preservation of the coastal environment);
- the exports sector (processing and marketing and improvement in quality control);
- students, education officers, staff of the fisheries protection service and members of the public;
- the Mauritian environment (sensitisation on Integrated Coastal Zone Management, control of pollution and protection of the marine flora and fauna).

9. Budget allocation.

The following tables gives the budget allocation (AFRC) for the last five years.

Year	1999/2000	1998/99	1997/98	1996/97	1995/96
	Rupees in millions				
Recurrent	81.5	77.0	65.6	60.6	56.9
Capital	15.0	13.0	8.0	14.0	12.0
Training	0.7	0.1	-	-	-

Budget allocation for training is also taken from the item fishermen welfare from the recurrent budget.
Note that for the financial year 2001/2002, a sum of Rs.10 million is being proposed for the new fisheries training and extension centre.

10. Why Japan Grant Aid ?

Since the creation of the centre, the Government of Japan has always financially and technically assisted the Mauritian Government through grant aid projects.

In 1982, the first two blocks (North wing) of the AFRC was inaugurated , all infrastructures were constructed and furnished through JICA.

In 1992, the Japanese government provided technical and financial help for the Outer Lagoon Fisheries Development Project, through the Overseas Fishery Cooperation Foundation.(OFCF).

In 1995, the South wing comprising the marine conservation centre was inaugurated. Funding were channelled through JICA.

JICA has also provided many experts to carry out and train our local staff on various projects with regards to aquaculture and the marine sciences.

The Japanese government has always helped the fisheries sector of Mauritius and we have no doubt that our close collaboration will provide further impetus for the funding and implementation of the present project.

Annex 1

Prog. 1: Training programme for the FAD fishery

Training Course	Duration (hr.)
1. The FAD Fishery 1.1 Introduction to the fishery + video film 1.2 Construction and setting operation 1.3 Physical fitness and FAD recovery 1.4 Fishing around FAD 1.5 Current, lunar phases and tides 1.6 Species composition 1.7 Fish behaviour around FAD 1.8 Migration of pelagic species 1.9 Food and feeding habits	4
2. The Marine Environment 2.1 Pollution prevention 2.2 Protection of the reef and lagoon	2
3. Fishing techniques around FAD 3.1 Mounting of gears (1 day) 3.2 Practical training on fishing gears at sea (4 days)	46
4. Handling, preservation and marketing of catch	6
5. Basic coastal navigation	9
6. Safety at sea + video film	6
7. First Aid and hygiene	6
8. Outboard engine: maintenance and minor repairs 8.1 General description of outboard engine 8.2 Criteria for selecting an outboard engine 8.3 Safe operation procedures 8.4 Principal and function of engine 8.5 Trouble shooting 8.6 Periodic maintenance and servicing	12
9. Seamanship	6
10. Fisheries legislation 10.1Role of Fisheries Protection Service 10.2Provisions of legislation 10.3Eligibility for loan application	3
11. Meteorology	3
12. Loan procedures and disbursement conditions from DBM	3
Total No. of hours	**106 hrs. (15 days)**

Prog. 2: Training programme for the semi-industrial fishery – Swordfish

	Topic	No. of Hours
1.	Introduction to the sword fish fishery + video film Feeding habits Migration Fishing zones Boat type Investment and operations	7
2.	The semi-industrial long line technique Description of the gears Fishing equipment Mounting of gears	7
3.	Practical training at sea Shooting operation Hauling operation Handling and preservation Sampling of catch	48 (2 days)
4.	Commercial fishing and marketing	7
	Total No. of hours	**69 hours (5 days)**

Prog. 3: Training programme on the Deep water Shrimp fishery

	Topics	No. of hours
1.	Introduction to the fishery Feeding habits Distribution and fishing areas Boat type Investment and operation costs	7
2.	Pot fishing techniques Description of the gear Fishing equipment Mounting of gear	7
3.	Practical training at sea	24 hours (2 days)
4.	Commercial fishing and marketing	7
	Total No. of hours	**45 hours (5 days)**

Prog. 4: Training courses, which may be coupled to training prog. 2 and 3.

		No. of Hours
1.	Coastal navigation	15 (3 days)
2.	Safety at sea	7
3.	First aid and hygiene	7
4.	Seamanship	7
5.	Fisheries legislation	3
6.	Meteorology	3
7.	Maintenance and repairs and engine	14 (2 days)
8.	Aquaculture	6

Prog. 5: Bank fisherman training course

	Topics	No. of Hours
1.	Introduction and survival at sea	3
2.	Accident prevention	3
3.	Fishing gears and fishing techniques	3
4.	Meteo	3
5.	Safety at sea	6
6.	Fire fighting	6
7.	Rope works	6
8.	First aid	6
9.	Handling and storage of catch	3
10.	Outboard engines	3
11.	Emergency procedures	3
12.	Toxicity	3
13.	Funds management	3
14.	Human values	3
15.	Communications	3
16.	AIDS – prevention	3
	Total No. of Hours	**60 Hours (10 days)**

Prog 6: Training for FPS officers

No.	Module	No. of hours
1	Fisheries Legislation	30
2.	Basic navigation, boat handling and equipment (with Practicals)	30
3	Safety at sea and life saving (with practicals)	12
4.	Swimming (practicals)	12
5.	Engine Trouble shooting (With Practicals)	6
6	Dealing with the public and human values	6
	Total	**96 (16 days)**

Courses will be given in modules. FPS officers will be required to complete all modules within 2 years.

Prog. 7: Marine awareness training programme
(for fishermen, students and teachers)

		No. of Hours
1.	**Marine ecosystems**	
	Introduction + video film	1
	Coral ecosystem	3
	Sea grass ecosystem	2
	Mangrove ecosystem	3
2.	**Marine pollution**	
	Introduction + Video film	1
	Types of pollution	1
	Land based activities affecting marine life	3
	Pollution prevention	3
	Oil Spills + case study	3
3.	**Marine resources**	
	Introduction + Video film	1
	Lagoon	2
	Outer lagoon	2
	Banks	3
	Tuna	2
	Sustainable use of the resource	1
	Management measures	1
4.0	**Fish toxicity**	
	Introduction + Video film	1
	Toxic fishes / legislation	1
	Causes of toxicity / prevention	1
	Total No. of hours	**35 (5 working days)**

Annex 2

Staff for the operation of the Training Centre

Training Staff Members	Subject	B.Sc	M.Sc	Dip./Cert.
1. Mr. S.P Beeharry	FAD fishery/Sword fish Fishery development Deep water shrimp fishery. Fish handling, preservation and marketting	*	*	
2. Mr. D.Boolaky	Fishing techniques, FAD construction, setting and maintenance	* B.Ed		Diploma in personnel Mgnt &Industrial Relation
3. Mr N.Dussoa	Coastal navigation, Outboard engines Fishing techniques			Diploma in Fisheries
4. Mr. M. Cunee	Fishing techniques, FAD construction and deployment			
5. Mr.P. Daby	Fish quality control, import and export of fish Fish handling & preservation			Diploma in Fisheries
6. Mr.S.Hanoomanjee	Safety at sea. Funds management	*	*	Diploma of the Imperial college
7. Mrs. M.D.Hurbungs	Fish Toxicity & eco-toxicology	*	*	
8. Mr. D. Mauree	Resource economics		*	
9. Mr.S.C.Bauljeewon	Fisheries Statistics	*	*	
10. Mr. R. Hossenbaccus	First aid and hygiene	*		
11. Mrs.Y. Basant Rai	Marine environment: pollution prevention	*	*	
12. Mr. J.I.Mosaheb	Marine environment: Protection of corals	*		
13.Mr. A. Venkatasami	Fisheries legislation/ management		*	
B.Technical staff				
8 supporting staff for the repairs, maintenance and running of training boats				*

C. Administrative Staff				
1. Secretary				*
3 support staff for the general administration of the training centre				

Note: Other resource persons will be requested to deliver lectures and practicals where applicable (DBM, Meteorology,Sea training school, etc.,)

Estimation of Training Cost for the FAD Fishery programme (IFAD) per session

Batch of 12 fishermen
Duration of training :15 days

	Items	Unit Price (Rs)	Total (Rs)
1.	Fishers allowance	250/day	45 000
2.	Tea /Refreshments		1 950
3.	Materials for training – FAD fishery		24000
4.	Training materials – fishing		2 000
5.	Boat (fuel and oil)		18 000
6.	Transportation for sea trips		5 720
7.	Crew (salary and overtime)		11 000
8.	Bait		1 000
9.	Instructors fees Graduates Non graduates	 Rs. 275/session Rs. 175/session	9 500
10.	Instructors fees – Sea trip		11 200
	Total		**105 370**

Annex 3

Training Schedule

Training Programmes	J	F	M	A	M	J	J	A	S	O	N	D
1	******			***						***	***	***
2			***	***							***	
3			***							***		
4					***				***			
5							***	***	***			
6	***				***	***						***
7		***				***						

1. Expected total number of trainees per year:

Fishermen	220
FPS officers	100
School students	150
Total	**470**

2. Total number of working days : 230

3. Note that half/one day seminars has not been included at (1) above and will be treated separately.

Tentative list of project's facilities
for the Training and Extension Centre:

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	Seating	Remarks / Notes
1. Fisheries Information & Documentation Center with Exhibition Hall		**Total Area : around 360m2**
Reception		
Exhibition Hall	50	display boards, fishing gears, legal/illegal implements display statistics, audio visual supports
Office Supervisor's room	2+ α	access externally
Storage 1		
Information & Documentation corner		
Information & Documentation Officer's corner	2	open planning
Information & Documentation staff's corner	2	open planning
Storage 2		
Divisional Scientific Officer's room	2	
Divisional Scientific Office's secretariat's room	1	
Toilet(for male & female)		
Staircase		
2. Fisheries Training Center		**Total Area : around 360m2**
Reception		
Lecture room 1	25	at least 25 trainees, audio visual support
Lecture room 2	15	at least 15 trainees, audio visual support

Storage 1		
Senior Technical Officer's corner	1	open planning
Scientific Officer's corner	1	open planning
Resource Person's corner	1	open planning
Secretariat's room	2	open planning, photocopy facilities, computers
Instructor's room	4	
Storage 2		
Mess room with Kitchenette	10	
Shower room		1 shower
Toilet (for male & female)		
Staircase & Stairwell		
3. Pointe aux Sables Model Fisheries Post with Workshop		**Total Area : around 480m2**
Reception area with Public counter		information board etc.
Fisheries Protection Officer's corner	1	open planning
Fisheries Protection staff's corner	10	open planning
Laboratory		sinks and tables
Communication/Computer room		
Dormitory	10	30 lockers & 10 beds
Mess room with Kitchenette	11	
Shower room		
Toilet(for male & female)		
Store for exhibits		
Store for engines		
Staircase		to Head Quarter of Fisheries Protection Service
Workshop	15	Ice-making plant, storage, tables, engine hanger, chain block
Mess room with Kitchenette for Workshop		

Storage		material for FAD, training, spare parts, fishing equipment
Toilet(for male & female) with Shower room		demarcation with external showers ? 2toilets and 2 shower rooms
external showers		5 showers
Roof for sea-watch		with stair-case
4. Head Quarter of Fisheries Protection Service		**Total Area : around 360m2**
Reception		
Chief Fisheries Protection Officer's room	1	
Principal Fisheries Protection Officer's corner	1	
Senior Fisheries Protection Officer's corner	4	
Fisheries Protection Officer & Supporting staff's room	6+8	6 officers and 8 clerks & typists
Storage		
Data room		2 PCs
Meeting room	14+ α	
Mess room with Kitchenette	16	
Toilet(for male & female)		2+2
Staircase & Stairwell		
5. Arcade & Court yard covered by roof-shed		multi-purpose use (demonstration/training/waiting/etc.)
6. Touch pool		
7. Store for Fuel		
8. Septic tanks		
9. Security Guard Post		
10. Jetty		
11. Slipway		
12. Boatyard		

Tentative list of materials and equipment for the Training and Extension Centre:

****

Item		Quantity	Appox. Value
A.	**Information and documentation centre**		
1.	Display panels(double sided)	12	
2.	Wall panels	12	
3.	Audio equipment	1 set	
6.	Chairs for exhibition hall	60	
7.	Benches for waiting room	20	
7.	Touch pool & accessories	1	
8.	Projection screen wall mounted	1	
9.	PC's and accessories	6 (may be networked for the whole building)	
10.	PC's for public consulting	6 (may be networked)	
11.	Fax machine	1	
12.	Photocopier	1	
13.	Video & video projector	1 set	
B.	**Fisheries Training Centre.**		
1.	Trainees tables and chairs	25	Lecture Room 1
2.	Trainees tables and chairs	15	Lecture Room 2
3.	White board	3	
4.	Projection screen	2	
5.	LCD projector(Video & computer)	1	
6.	Overhead projector	2	
7.	Slide projector	1	
8.	Display panels (2M * 1.5M)	6	
9.	Basic lecture room safety and navigation equipment	1 set each	
10.	Vehicle (Minibus 15 seater)	2	
11.	Photocopier	1	
12.	DVD camcorder	1 (for production of films for training purposes)	

C. Fisheries Post & Fisheries Extension Centre

1.	Communication equipment	1 set
2.	Benches for visitors	20
3.	Speed boat for Patrol (fully equipped)	1 (8/10 metres shallow water craft)
4.	Bedding for dormitory	10
5.	PC's and accessories	6 (may be networked)
6.	Fax machine	1
7.	Photocopier	1
8.	Binoculars	6
9.	Display boards	12
10.	Vehicle (4*4)	4
11.	VHF & HF Radio	1 set each for ground station.

D. Workshop

1.	Basic tools and equipment	1 set
2.	Ice flake making machine	
3.	Freezer (small)	1
4.	Outboard engine for Demonstration (training) purposes	2
5.	Trolleys (Heavy duty)	3

E. Jetty

1.	Electric Winch (1 tonne)	1

F. General

1.	Freezer for storage of fish and bait 2
2.	Live bait tank 1
3.	PABX system (10 lines) 1 set
5.	Fire fighting equipment
6.	Furniture's for both buildings (to include desks, chairs, metallic cupboards, filing cabinets, computer tables, racks, shelves, partitions, etc.).
7.	Air conditioning for both buildings

INFORMATION ON FISHERIES IN MAURITIUS (1999)

1. Mauritius claims an Exclusive Economic Zone of around 1.9 million km^2 including its outer islands of Rodrigues, St Brandon, Agalega, Tromelin and Chagos Archipelago as center points. However, it has a limited shelf around the islands except for larger shelf areas on certain banks situated far to the north.

2. Artisanal Fisheries

About 2,150 fishermen are involved in the artisanal fishery. 905 fishing boats. six to seven metres in length and made of wood or fibreglass were used by artisanal fishermen in 1998 of which 90% are powered by outboard and inboard engines. Their total catch was 1,229 tonnes in the same year. In addition 650 tonnes of pelagic fishes are caught by sports and recreational fishermen and about 300 tonnes by amateur fishermen (see table 1).

Table 1: Total Fish Landings (t)

Fishery	1993	1994	1995	1996	1997	1998	1999
Tuna	10,276	7,963	6,693	2,815	4,435	2,848	3,304
Banks	6,696	6,629	6,768	5,465	5,573	4,653	4,995
Coastal							
Lagoon & OffLagoon	1,583	1,663	1,443	1,616	1,246	1,229	1,225
Sports	650	650	650	650	650	650	650
Amateur	300	300	300	300	300	300	300
Aquaculture	83	147	170	165	117	106	81
TOTAL	**19,588**	**17,352**	**16,024**	**11,011**	**12,321**	**9,786**	**10,555**

3. Banks Fisheries

The banks (St Brandon, Nazareth, Saya de Malha and Chagos) found 250 to 1200 nautical miles to the north of Mauritius are exploited by Mauritian fishing vessels. Except for the Chagos bank these resources are fully exploited and steps have been taken to manage resources with the licensing of fishing vessels as from 1992. Management measures such as the imposition of a catch quota have been implemented as from 1994 so as to conserve resources. Twelve vessels operated on the banks during 1998 and the total allowable catch was fixed at 4,073 t for the

fishing season 1998-1999 for the Nazareth. Saya de Malha and St. Brandon (north of Albatross island) banks.

In addition seven smaller vessels ranging in length from 10 to 22m operated on the St. Brandon and northern banks.

4. Tuna Fisheries

Another oceanic fishery, the surface tuna fishery in the Western Indian Ocean has witnessed a tremendous development expanding from non-existence in 1980 to a catch of around 260, 000 tonnes per year. One Mauritian purse seiner operated in this fishery during 1998. Mauritius and other countries of the South West Indian Ocean have signed agreements with the European Union licensing its vessels to catch tunas in their waters as at the moment the coastal states do not have the means to fish the resource fully. The Indian Ocean Tuna Commission which has been set up for the management of tuna resources in the Indian Ocean was operational as from January 1998.

5. Outer-reef Fisheries Development

Efforts are being made to divert fishermen from the heavily fished lagoon to outer-reef areas. Fish Aggregating Devices have been placed around Mauritius and Rodrigues to develop fisheries for pelagic fishes. Small banks with high valued snappers have been identified. These have given the opportunity for the development of a semi-industrial fleet which produces chilled fish for the market. Bathymetric charts of waters around Mauritius and Rodrigues have been published to help fishermen identify fishing grounds. Exploration and development of techniques for fishing of deepwater shrimps have been completed. Swordfish has successfully been caught and techniques for its capture can now be demonstrated to potential fishermen.

6. Fisheries Management

Fisheries resources inside the lagoon and nearby outer-reef areas are heavily exploited and need careful protection and management for sustained production.

The Fisheries Act 1980 provides for a number of management measures such as a closed season for operation of large nets during the summer period to protect spawning fishes, regulation of the mesh size of nets, use of fishing gear and a number of fisheries reserves where net fishing is prohibited. A Fisheries Protection Service enforces provisions of the Fisheries Act. Catch quotas for the banks fisheries have been imposed as from 1994 and the number of vessels operating on the smaller banks limited through a licensing system. With a view to better manage nearshore and offshore fisheries resources the Fisheries Act has been completely reviewed and a

new Fisheries and Marine Resources Act was passed in 1998. The fisheries regulations to enable the proclamation of the Act are being finalised.

Mauritius has an agreement with the European Union to allow for tuna fishing, fishing by handline and trolling since 1991. It was renewed for another three years in 1993 and 1996 respectively. Non-European Union longline fishing vessels are also licensed to fish in Mauritian waters as from 1995.

43 European fishing vessels (including 39 purse seiners, 3 surface lonliners and one handliner) and 87 tuna longliners mostly of taiwanese origin were thus licensed during 1998.

7. Incentives and allowances

A number of incentives are given to fishermen and fishing companies to engage in fisheries activities such as duty free concessions on outboard and inboard engines, fishing gear and Fisheries Development Certificates(FDC) which comprise fiscal incentives. An allowance is also paid to artisanal fishermen when they cannot go out at sea on account of bad weather and during the close season for net fishing. Registered fishermen who are admitted to a hospital or clinic on account of sickness are paid an allowance for a period of two weeks as from July 1998.

8. Aquaculture

The contribution of freshwater and marine aquaculture in fisheries production is still small. A total of 165 tonnes was produced in 1996 (Table 1). Commercial production of *Macrobrachium rosenbergii* oscillated around 40-60 ton/yr, but in the coming years it is expected that this production would decrease substantially on account of the reduction in production of prawn juveniles as from 1997 and of the rearing of a newly introduced crustacean species, *Cherax quadricarinatus* from Australia. On the other hand, production of red tilapia reached 68 tonnes in 1996. Fingerling production of red tilapia in the country has gone up to 1 million/yr.

Marine aquaculture in barachois (coastal ponds) is still carried out on a traditional basis and production is very low. However, over the past few years, efforts have been made to introduce new culture techniques such as floating net cages and pens on a pilot scale in selected barachois of the country.

Concurrently, hatchery produced seed of marine shrimps are being released in the lagoon in the context of a marine ranching programme for enhancing the natural stocks of the lagoon.

9. Fish Trade and Consumption

Mauritius is maintaining its trend as a net fish exporter in value terms (see Table 2). Per capita fish consumption in 1996 was 18.4 Kg decreasing slightly from the previous year.

Table 2 : Fish Trade

IMPORT	1995	1996	1997	1998	1999
Quantity (MT)	22,501	31,295	30,440	33,866	30,339
Value (Rs M)	556	756.4	866.9	1 114.2	793.0
EXPORT					
Quantity (MT)	13,570	13,820	15,955	13,014	15,206
Value (Rs M)	658	780	922.4	972.2	968.0
SURPLUS(Rs M)	+102.0	+23.6	+55.5	-142.0	+175.0

YEAR	1995	1996	1997	1998	1999
Fish Consumption (Kg) per capita	19.2	19.4	18.9	20.0	20.6

10. Marine Conservation

Conscious of the necessity to preserve the marine environment from adverse impacts the Ministry of Agriculture, Fisheries and Co-operatives has implemented a Marine Conservation Programme with a view to better understand the various marine ecosystems, to conserve and manage the marine resources. A Coastal Resources Propagation and Environment Conservation Project is being implemented in collaboration with the Japan International Co-operation Agency (JICA). Presently projects such as studies and regular monitoring of the lagoon ecosystems, monitoring of sea water quality, propagation of mangroves, study of current patterns in the lagoon are being carried out. Other projects which aim at protection and conservation of the marine ecosystem include the Marine and Coastal Resources and Use mapping which aims at establishing a Geographic Information System (GIS) for marine resources and uses.

A major step to safeguard marine ecosystems has been the proclamation of two Marine Parks on 11 October 1997 in the Government Gazette No. 101 of Mauritius (proclamations No. 14 and No. 15). The 'Commission de L'Océan Indien' will set up an Integrated Coastal Zone Management programme for the South East Coastal Region of Mauritius in collaboration with public institutions including the Fisheries Division of the Ministry of Agriculture, Fisheries and Co-operatives and private organisations.

During the past years, a number of conservation and management measures have been taken to ensure the protection of the marine environment and conserve fisheries resources. Some of the measures are:

(a) banning the removal and sale of corals and shells;

(b)prohibition of mining of corals for production of lime:

(c)prohibition of all types of underwater fishing:

(d)exercising tight control on import, storage and utilisation of dynamites:

(e)phasing out of large net and gill net under a buy-back programme:

(f) observation of the closed season for net fishing;

(g)phasing out of lagoonal sand removal by year 2001 in order to protect the lagoon resources from adverse environmental effects;

(h)propagation of mangrove plants in appropriate coastal areas in order to increase nursery and feeding grounds and fish productivity:

(i) requirement of an Environment Impact Assessment for undertaking any project in the coastal zone and marine environment;

11. Perspectives

Exploitation of the traditional resources have attained high levels at which no further increase in yield can be expected. Research efforts must, therefore, be concentrated on management of resources for sustainable production whilst turning to other areas of possible development.

There exists a potential of about 26000 tonnes of small pelagic fishes on Nazareth and Saya de Malha Banks which can be exploited.

An increase in the catch around Fish Aggregating Devices (FADs) is possible with fishing techniques using live baits. More fishermen could fish around FADs.

The development of a semi industrial fleet for the sword fish fishing is to be encouraged. Recent demonstration trials have shown a potential catch of 0.6 to 0.9 kg/hook.

Taking into account the quantity of tuna caught in the western Indian Ocean tuna fishing seems to be an area where one would have expected more local involvement but the reduction in the size of the existing fleet points to a certain caution in this sector. However, as investments in this sector are high, joint ventures with foreign partners should be encouraged.

12. Ten Year Development Plan for the Fisheries Sector

The FAO/UNDP funded the elaboration of a ten-year development plan for the fisheries sector in 1997.

The main thrust of the Plan includes:

(i) Sustainable resource use and protection of the marine environment;

(ii) Maximizing returns from existing fisheries;

(iii) Possibilities of increased production through the development of under utilised resources;

(iv) Training, capacity building and institutional reforms.

The Plan makes provision for 126 projects which fall within 9 programme areas as follows:

(1) Planning and Management;

(2) Capture Fisheries Research and Management;

(3) Aquaculture Research and Management;

(4) Legal aspects;

(5) Enforcement (MCS);

(6) Processing and Trade;

(7) Support Services;

(8) Training and

(9) The Environment.

Annex 7

Records of training sessions from 1998 to 2000

1. **Artisanal fishermen**

No.	Dates	No. Of trainees
1	2-6/2/98	6
2	16-20/2098	7
3	20-24/4/98	6
4	4-8/5/98	6
5	1-5/6/98	6
6	23-27/11/98	7
7	7-11/12/98	5
8	22-26/11/99	5
9	29/11-3/12/99	4
10	6-10/12/995	5
11	13-17/12/99	6
12	10-14/1/00	4
13	24-27/1/00	3
14	7-11/2/00	6
15	28/2-03/3/00	3
16	6-10/3/00	5
17	13-17/3/00	5
18	20-24/3/00	6
19	21/8-8/9/00	12
20	25/9-13/10/00	12
	Total (1998-2000)	**143**

2. **Banks fishermen**

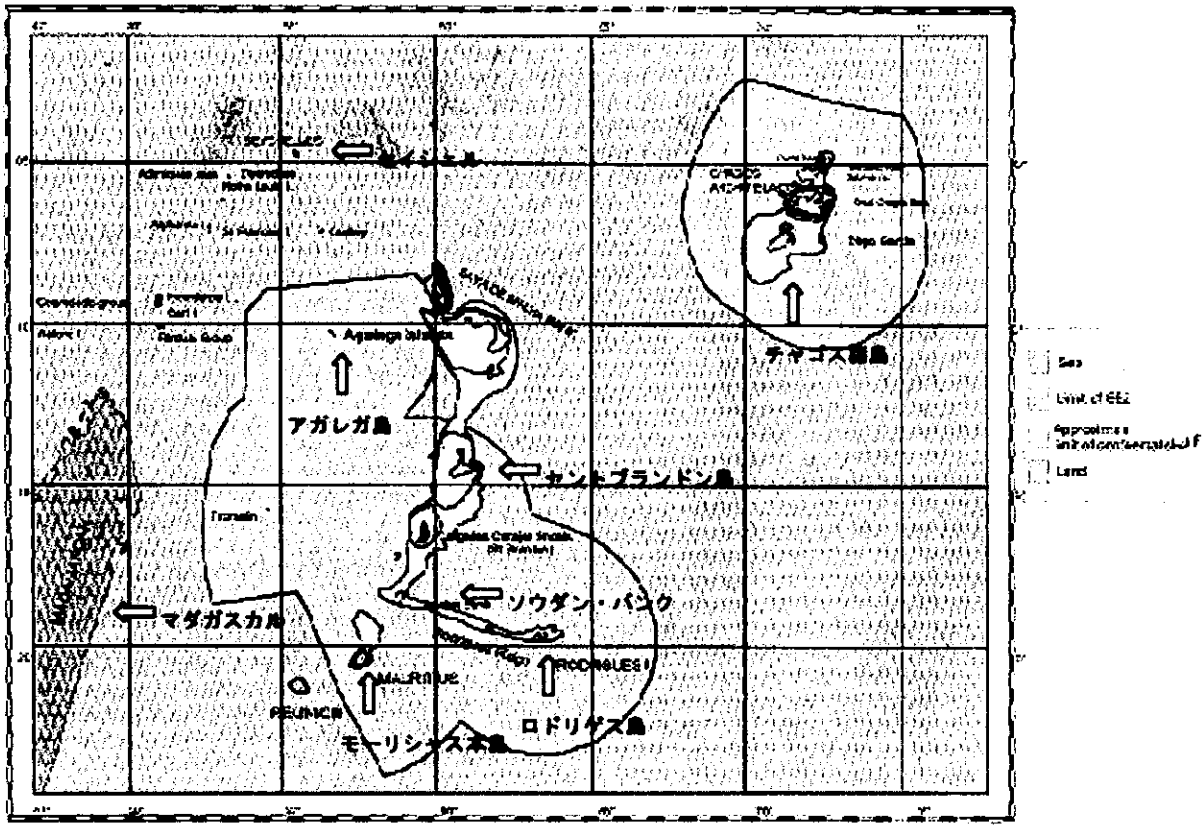
No.	Dates	No. Of trainees
1	1998	Nil
2	1999	96
3	2000	48
4		
5		
6		

Planned Schedule of Training classes for the year 2001

	J	F	M	A	M	J	J	A	S	O	N	D
Artisanal	-	-	12	12	12	12	12	12	12	12	-	-
Banks					25	25	25	25				

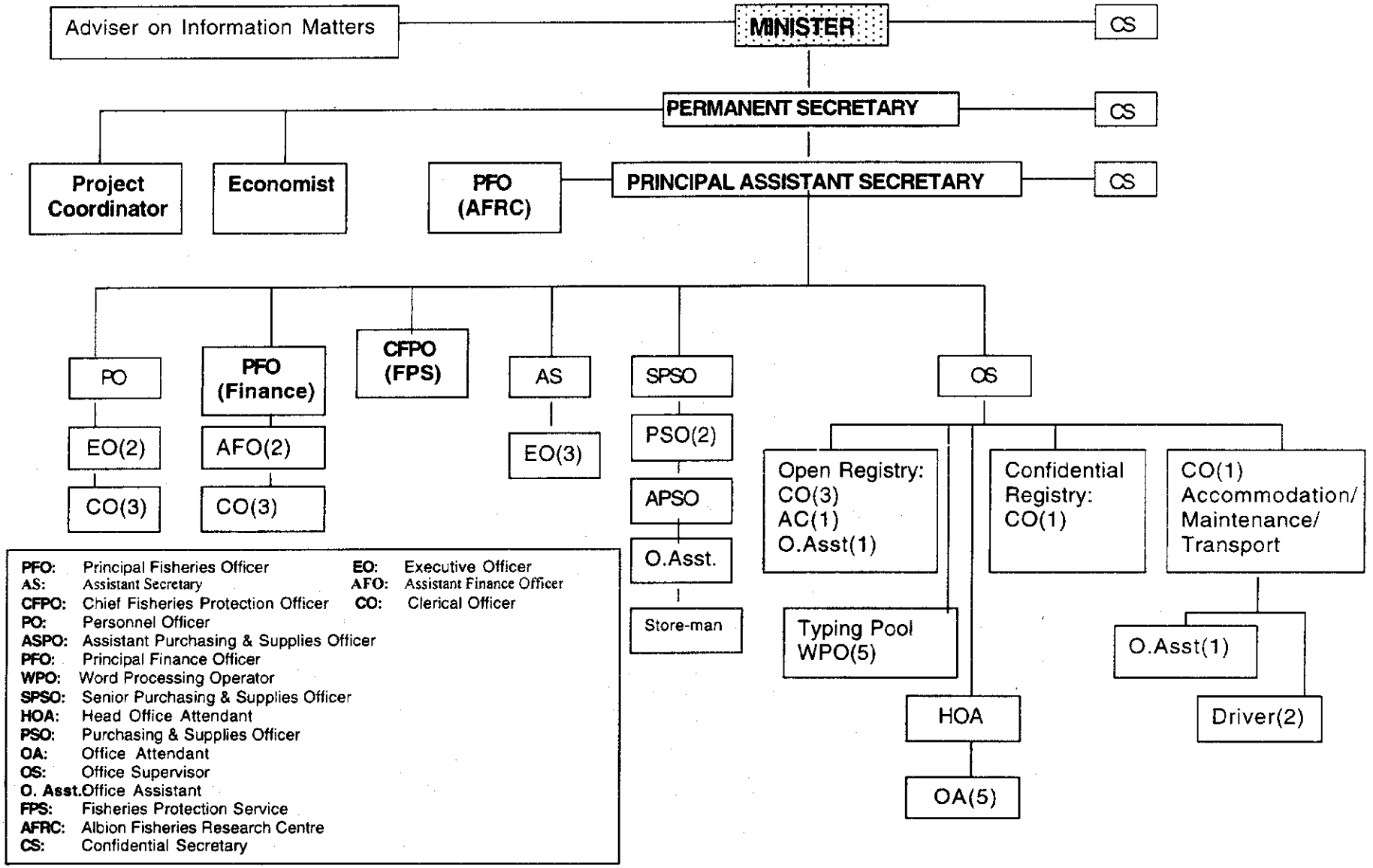
Annex 8

The EEZ of Mauritius

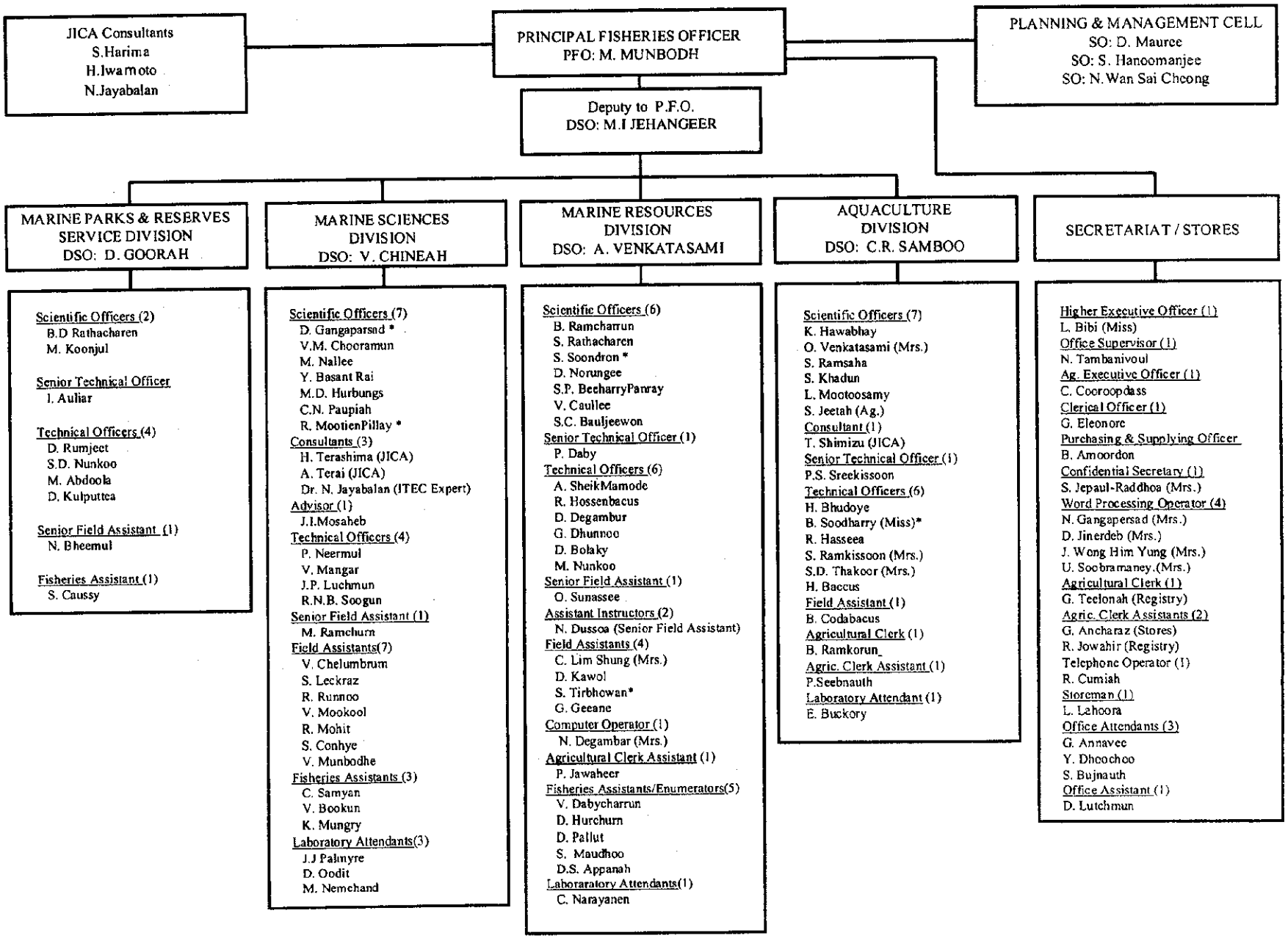


※　図中の和文書き込みは、日本側による。

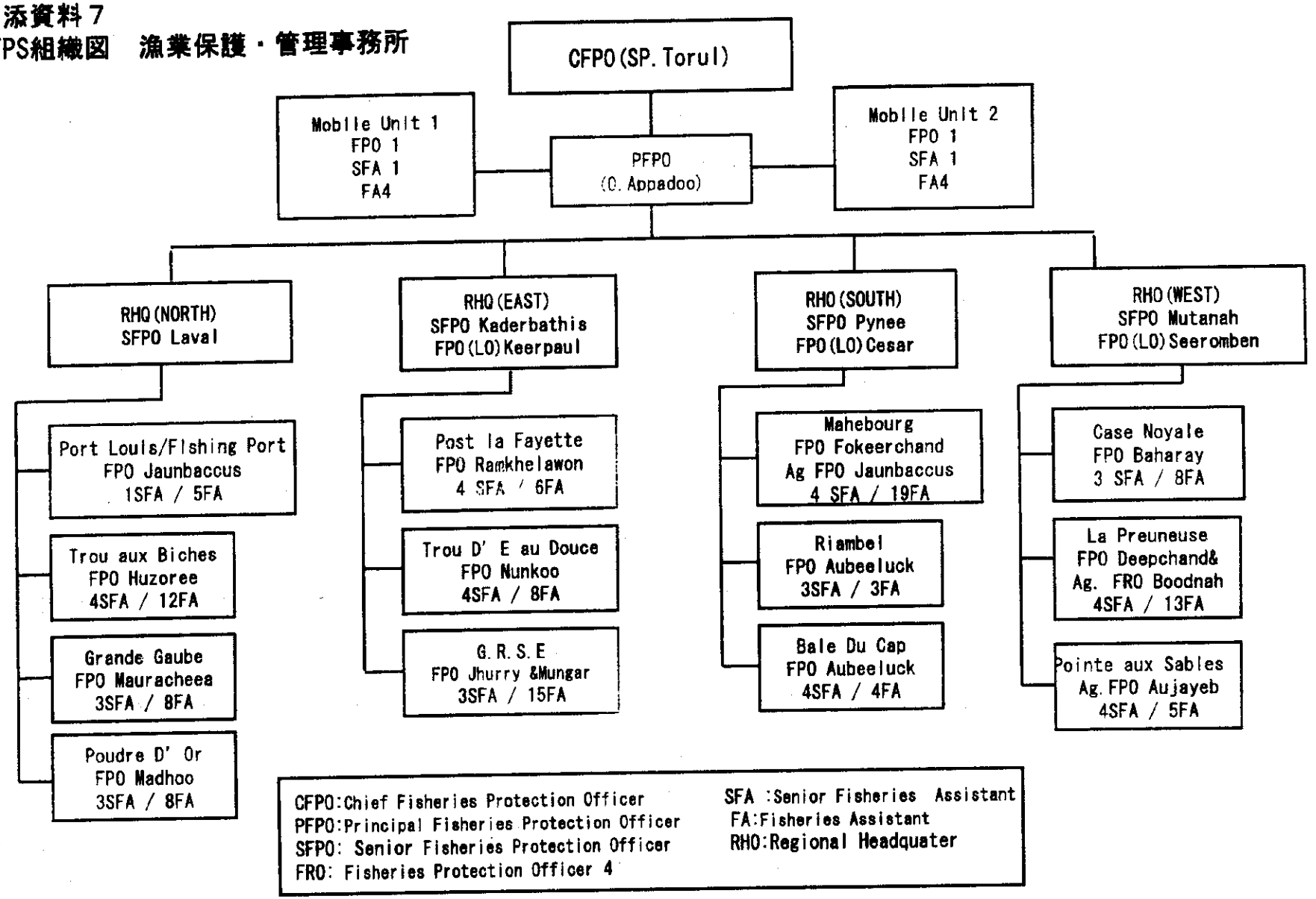
別添資料５　モーリシャス共和国漁業省（Ministry of Fisheries)組織図



別添資料６　アルビオン水産研究所　(AFRC)組織図・・・1999年現在



別添資料７
FPS組織図　漁業保護・管理事務所



別添資料８ 漁業類型

APPENDIX 11: FISHERY RESOURCE POTENTIALS OF MAURITIUS

SN	Fishing Type	Categorised as	Geographic Area	Fishing Gear	Species	Management Measures	Status and Potential
1	Shallow water banks fishery	Demersal	Saya de Malha, Nazareth, Albatros	Hand lines	Mainly Dame berri	Limited entry Licence required Quota system	Heavy exploitation. Effort to be reduced
2	Banks dropoff	Demersal	Saya de Malha, Nazareth, Albatros	Deep sea reels	Sacré chien, Gueule pavée, Vieille etc.	Licence required	To develop
3	Trawl fishery	Demersal / Pelagic	Saya de Malha, Nazareth	Trawls	Mackereb & misc.	Licence required	To develop
4	Misc.Resources on banks	Demersal	Saya de Malha, Nazareth, St. Brandon	Basket traps, others	Crabs, Shrimps, Lobsters Others	Licence required	Not mapped To develop
5	Tuna fishery	Pelagic	Ocean	Purse seine	Tuna	Licence required	Moderate to heavy exploitation. May be expanded.
				Long line	Tuna, Sharks, misc.	Licence required	Moderate to heavy exploitation. May be expanded
6	Sword fish fishery	Semi industrial pelagic	200-300 miles from port	Long line	Mainly Swordfish, Tuna, Sharks,Dorado	Licence required	To develop
7	Chilled fish fishery	Demersal	Lesser banks, Soudan, Hawkins St. Brandon	Hand lines	Dame berri, Kaya Capitaine etc.	Limited entry Licence required	Heavy exploitation strict management
8	St. Brandon fishery	Demersal / lagoon	Around St. Brandon	Hand lines Basket trap	Berri blanc, Cordonier, Cornes, Cateau, Octopus	Limited entry Licence required	Heavy exploitation strict management
9	Deep water shrimp fishery	Demersal Depths	700 1000 M	Traps	Shrimps of high value	Licence required	To develop
10	Lagoon fishery	Lagoon fishery	Shallow waters of lagoon and drop off	Lines, basket traps, harpoons and nets	All tropical fishes Vieille, Cordonier Capitaine, Muller, etc.	Strict management	Fully exploited. Strict management
11	Fad fishery	Coastal pelagic	To 15 miles from shore	Hand lines, drop lines, trolling and small long lines	Tuna, Marlins Dorado, Wahoo etc	None	Room for further development
12	Aquaculture	Aquaculture	Barachois, Lagoon Inland	Not specific	Berri Rouge,Shrimps Gueule Pavée	None	Room for further development

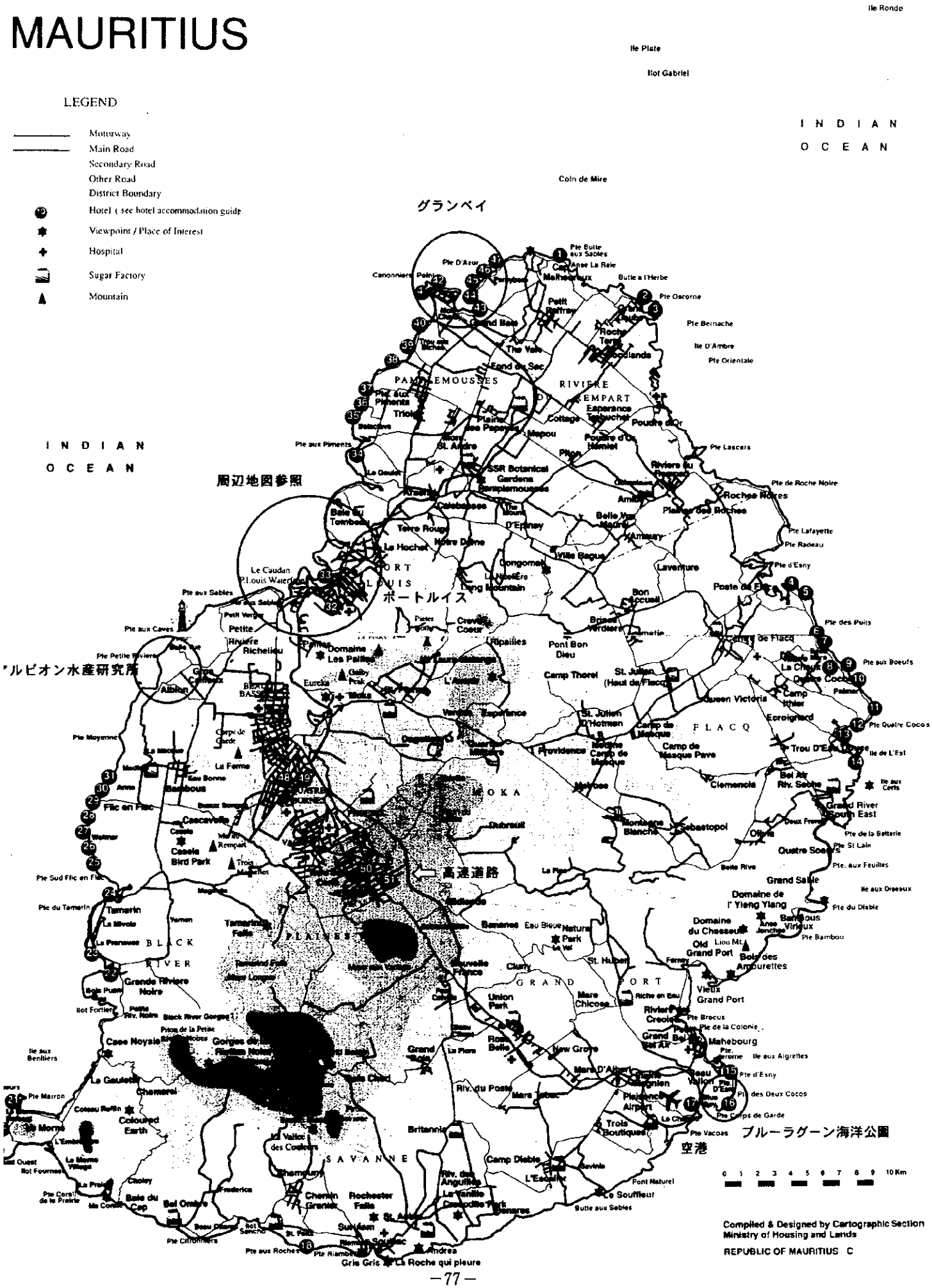
別添資料9 FAD投入実績

TABLE 2.10: LOCATION AND PARTICULARS OF FADS AS AT DECEMBER 1998

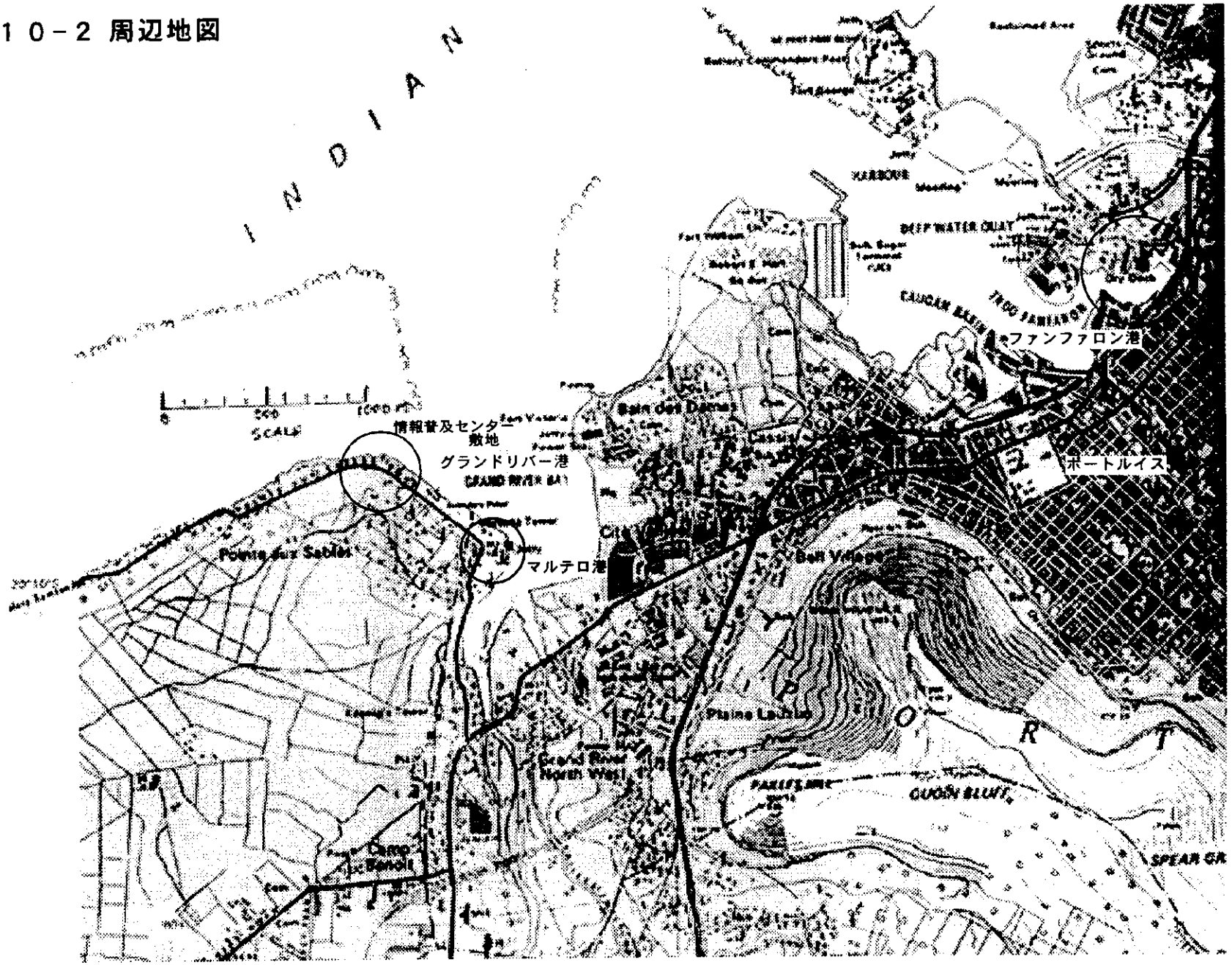
S. N	Name	Mooring depth (m)	Dist. from coast (km)	Latitude-S	Longitude-E
1.	Albion	1 340	02.5	20° 09' 29	57° 23' 28
2.	Port Louis I	3 000	12.3	20° 02' 25	57° 16' 22
3.	Tombeau Bay	1 100	02.7	20° 04' 22	57° 27' 63
4.	La Preneuse	2 400	04.9	20° 18' 12	57° 16' 46
5.	T. aux Biches I	1 100	02.5	20° 01' 07	57° 29' 75
6.	Rivière Noire I	930	04.6	20° 23' 36	57° 16' 57
7.	Médine	2 500	05.5	20° 12' 29	57° 17' 34
8.	Flic-en-Flac	1 800	02.6	20° 15' 43	57° 19' 28
9.	T d'Eau Douce	980	03.1	20° 13' 73	57° 51' 43
10.	Passe Danoise	925	05.2	20° 22' 04	57° 52' 33
11.	Roches Noires	800	05.6	20° 02' 89	57° 49' 94
12.	Grand Carreau	262	08.5	20° 21' 46	57° 55' 28
13.	Maritime	385	01.5	20° 05' 55	57° 29' 10
14.	Mont Choisy	580	01.7	20° 01' 43	57° 30' 38
15.	Tamarin	450	02.0	20° 19' 03	57° 19' 52
16.	Tomy Bank	208	23.0	19° 38' 55	57° 45' 59
17.	Milien Bank	422	13.0	19° 47' 49	57° 42' 34
18.	Bel Ombre	478	01.6	20° 32' 48	57° 24' 94
19.	T. aux Biches II	2 400	08.0	20° 02' 14	57° 22' 68
20.	Poste de Flacq	750	03.2	20° 07' 65	57° 48' 62
21.	Bel Ombre II	860	02.7	20° 33' 14	57° 23' 64
22.	Souillac II	880	02.1	20° 33' 57	57° 31' 66

別添資料１０−１ モーリシァス地図

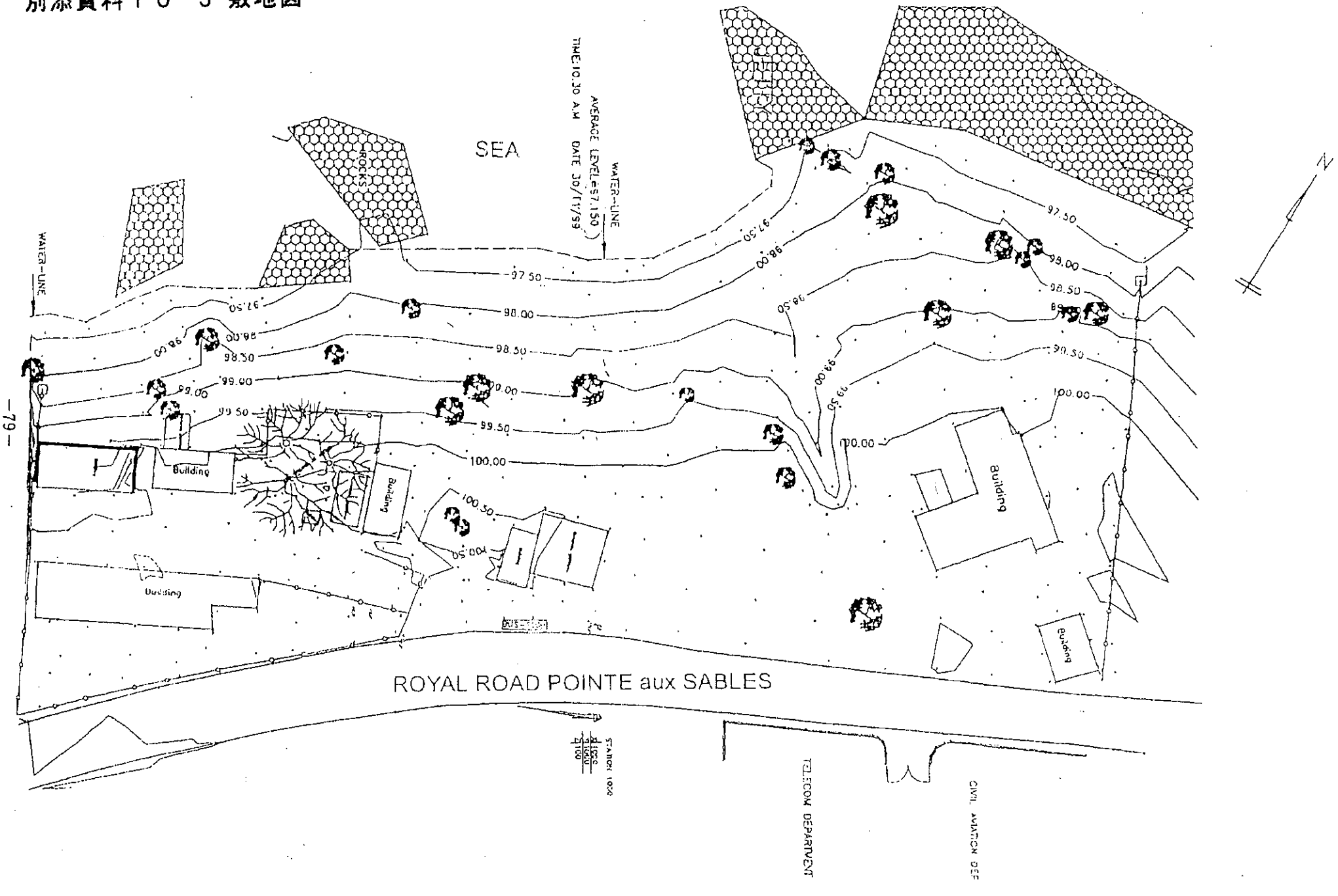
MAURITIUS



別添資料１０－２ 周辺地図



別添資料１０－３ 敷地図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WATER-LINE
97.50
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Building
Building
Building
Building
Building
ROYAL ROAD POINTE aux SABLES
STATION 1020
TELECOM DEPARTMENT
CIVIL AVIATION DEP
N

別添資料11-1

ポイントサブ建設予定地

この４枚は建設予定地位置の写真です。いずれの建物も火災で機能を失ってしまっています。今、「モ」国政府の手で解体の準備がされています。
右下が海岸部分で砂浜と玄武岩の岩礁が入り交じっています。小型のピローグは接岸出来ますが漁業省の実習船の接岸には浚渫が必要です。

ポイントサブ水揚浜

下の４枚はポイントサブの水揚浜の写真です。殆どの漁船は沖留めをしています。一部は船外機船で、右上のピローグは４～5マイル先のFADまで
行きますが、15マイルとなると少々心配な船型をしています。このクラスの漁船には２～３人が乗り込みます

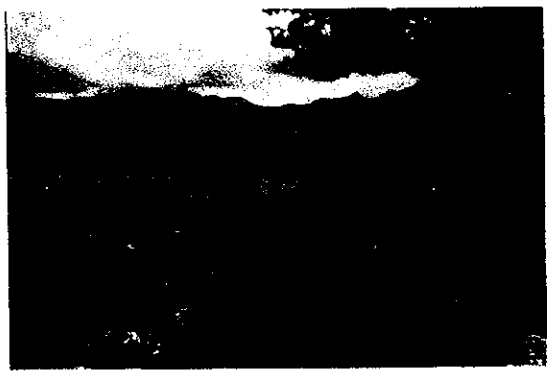
下の２枚は浜の作業場所の写真です。水揚げや漁具の補修作業は写真の樹々の下で行います。
ここにもフィッシュモンガー(仲買人)がやって来て、浜で水揚した魚を買い付けます。

別添資料11-2

マルテロ地区（造船施設がある）

この８枚の写真はマルテロという場所の写真で、ポイントサブの建設予定地から500メートル程ポートルイスに寄りに有ります。
左側最上段と下段の４枚の写真に写っている対岸はポートルイスです。

最上段右および上左の写真は河口またはグランドリバーベイの湾口部分です。沖にはポートルイス港に入る大型船が見えます。
ここからリーフ内を南西方向にに廻り込んでポイントサブ方向に進入することが出来ます。右の写真はポイントサブ方向です。



この２枚の写真は湾側から上流を見たものです。対岸に見える山はポートルイス市街地の裏山です。

この川の河口部分に写真のような民間の造船所が有り、FRF船の製造や補修をしています。

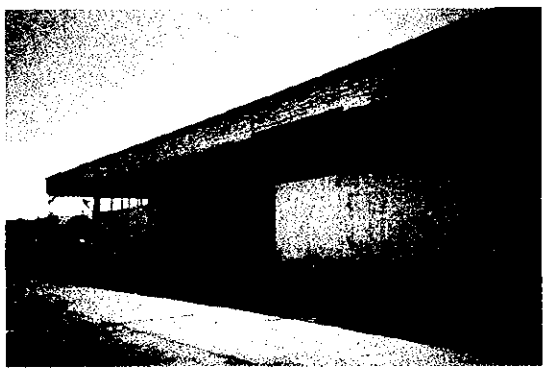
別添資料11-3

ファンファロン漁港

この８枚はポートルイスのファンファロン漁港（日本が供与）の施設です。上の２枚はまぐろ船とバンク漁業母船（大型船）です。

バンク母船には左上の黄色い小舟(ドリー)をキャッチャーボートとして積載し漁場に臨みます。右上の中型船はバンクや底魚を捕っている船です。

上は将来が期待されている
カジキ漁船でこの港に５杯程います。



上は倉庫などに使われている建物です。

漁港内施設（訓練使用部分含む）

この２枚は右上の建物の部分で、左の一角に漁業指導・管理事務所（FPSの支所）があります。
右は、その内部の倉庫の片隅のような場所で、このバイクなどを置いている所で漁業研修を実施しているのが実態です。

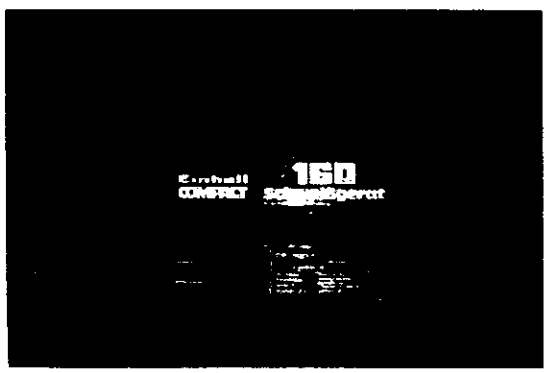
別添資料11-4

海員学校（訓練に借用）

この８枚の写真はポートルイスにある船員学校の写真です。この施設に空きの有る時、漁業省が借用漁業研修に使っているものです。
左の写真は正面から見たものですが、その右側の建物が右下の写真になります。左側の建物が教室棟で教室が２つ有ります。
中央部分は左下の写真になります。

左は左上写真の中央部分でで実習及び休憩スペースです。右の棟にはメスルーム、教員室、ワークショップ、倉庫が入っています。

下の４枚の写真はワークショップ内部です。大変良くメンテナンスされていますが、研修機材は残念ながら極めて乏しく勝つ老朽化しています。



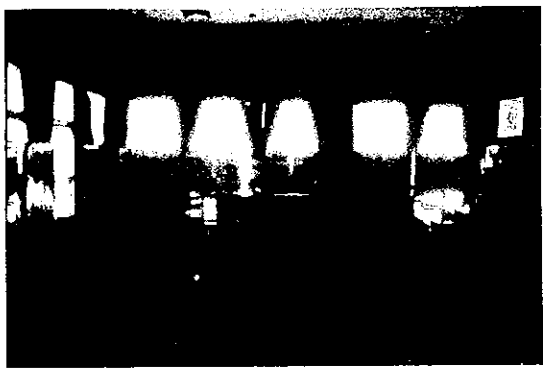
この船員学校も老朽化し機能的にも時代に合わなくなってきており、未だ目処は立っていませんが、移転が計画されています。

別添資料11-5

アルビオン水産研究所

この８枚の写真はアルビジョン水産研究所(日本が供与したもの‥‥１，２期)の写真です。

水産研究所の研修使用部分



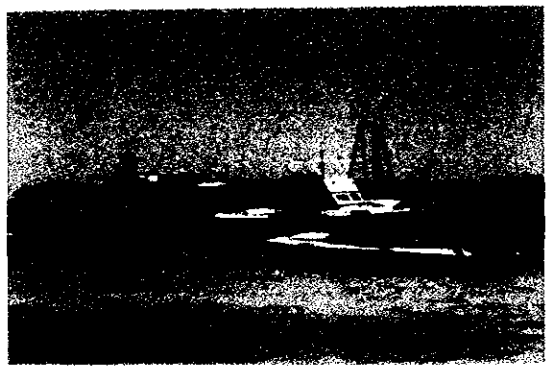
下の4枚の写真が漁業研修に借用している部分です。いずれも、水産研究所としての利用をしている時には使えません。

上左、上右および左の写真が水産研究所の会議室で、本来の目的に使用していない時には時にはAV機器を使った研修にもに使うことができます。
この部分の壁面を利用したパネル展示は漁業者のみならず、小、中学生などにも公開しています。(パネルは左上、右上に写っています。)
右下の写真のような屋外の空きスペースでは漁具補修などの研修を行っています。

別添資料11-6

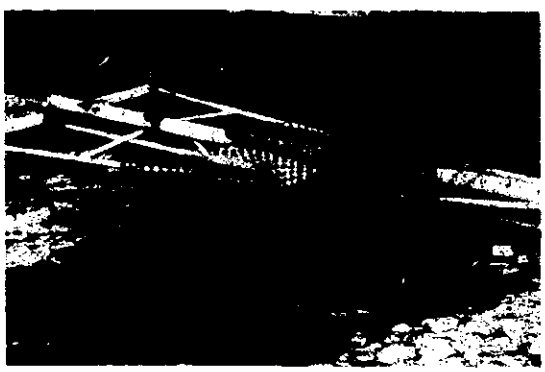
北部漁村

この８枚の写真は北部漁村のものです。上の２枚はポイントバットオサブの桟橋周辺と船揚げ装置です。



左の写真は北部最大の湾であるグランベイの水揚げ場です。右は北西海岸トロービシのリゾートで見かけたスポーツフィッシング会社の桟橋に停泊するモーターボートです。全島５カ所のリゾートに７つのスポーツフィッシング会社があり年間650トンを越える水揚げがあります。

この２枚の写真は北西海岸で見かけた沿岸漁業用の漁船です。左の写真の奥には船内機船が見えます。



左の写真は廃棄されたトラップの漁船の陸揚げ用の船台です。
右の写真は北部グランベイの水揚げ浜にある鮮魚販売所です。メインストリートに面し駐車場に隣接しています。

別添資料11-7

地方漁業保護・指導支所

この４枚は地方（マヘバーグ）の地方漁業保護・指導支所の写真です。
左の2階（塔屋）部分の内部が右下の写真になります。1階には仮眠室やメスルームなどが有ります。

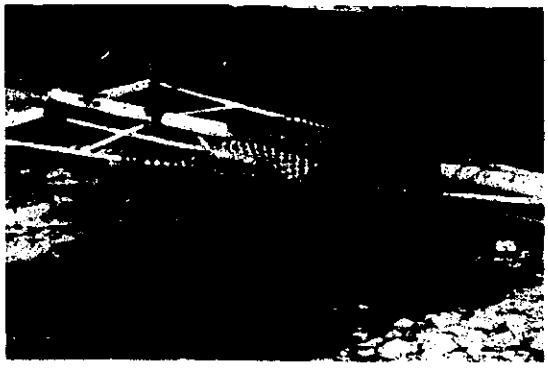
右上と左の写真の建物は左上の建物の海側に有るワークショップで、その海側にはスリップウェーが有ります。
右上と左の写真の海の部分に見えるのは、現在は使用されていないバラショア（養殖池）です。

北部漁村

この８枚の写真は北部漁村のものです。上の２枚はポイントバットオサブの桟橋周辺と船揚げ装置です。

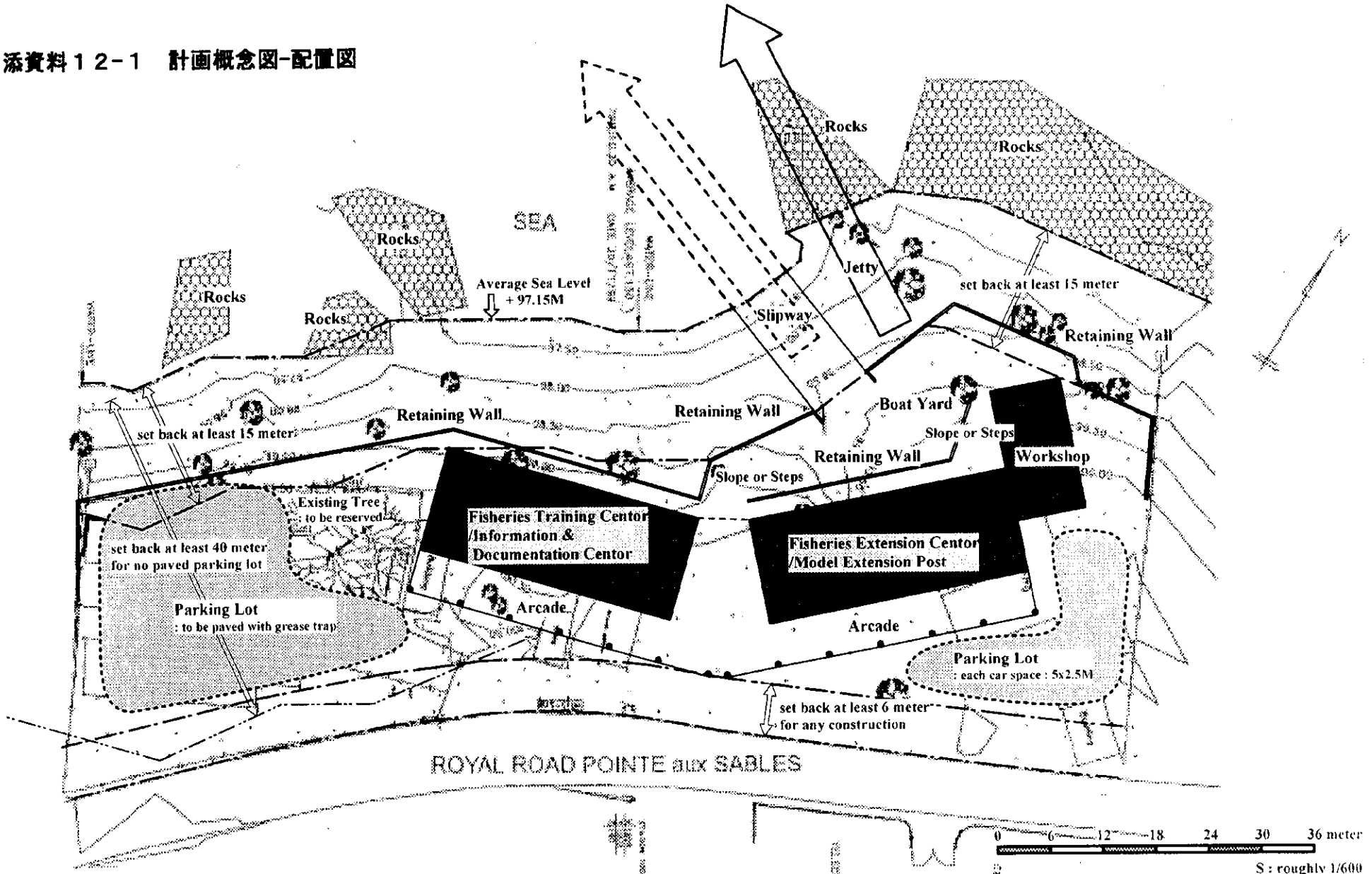
左の写真は北部最大の湾であるグランベイの水揚げ場です。右は北西海岸トロービシのリゾートで見かけたスポーツフィッシング会社の桟橋に停泊するモーターボートです。全島５カ所のリゾートに７つのスポーツフィッシング会社があり年間650トンを越える水揚げがあります。

この２枚の写真は北西海岸で見かけた沿岸漁業用の漁船です。左の写真の奥には船内機船が見えます。



左の写真は廃棄されたトラップの漁船の陸揚げ用の船台です。
右の写真は北部グランベイの水揚げ浜にある鮮魚販売所です。メインストリートに面し駐車場に隣接しています。

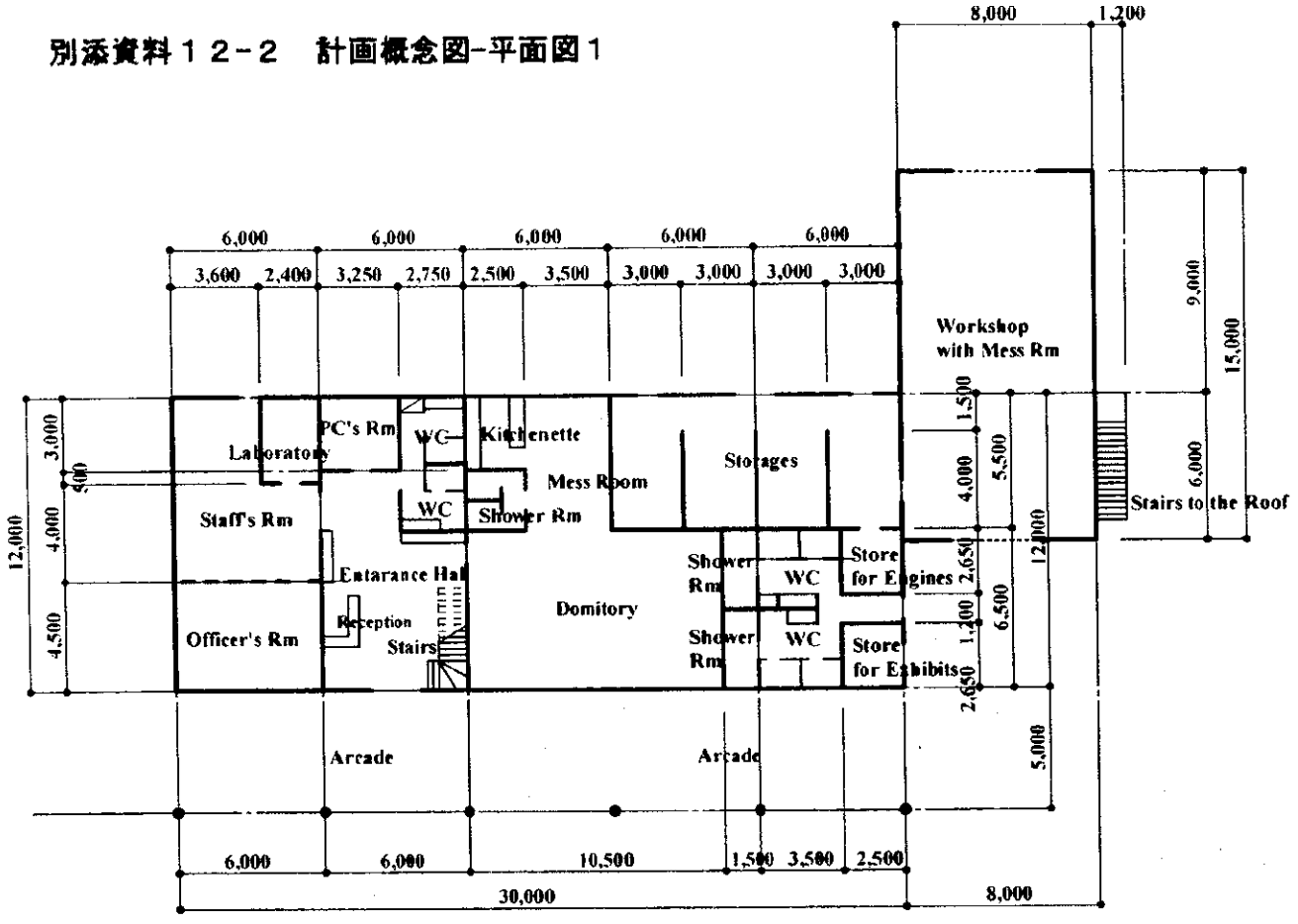
別添資料１２－１　計画概念図-配置図



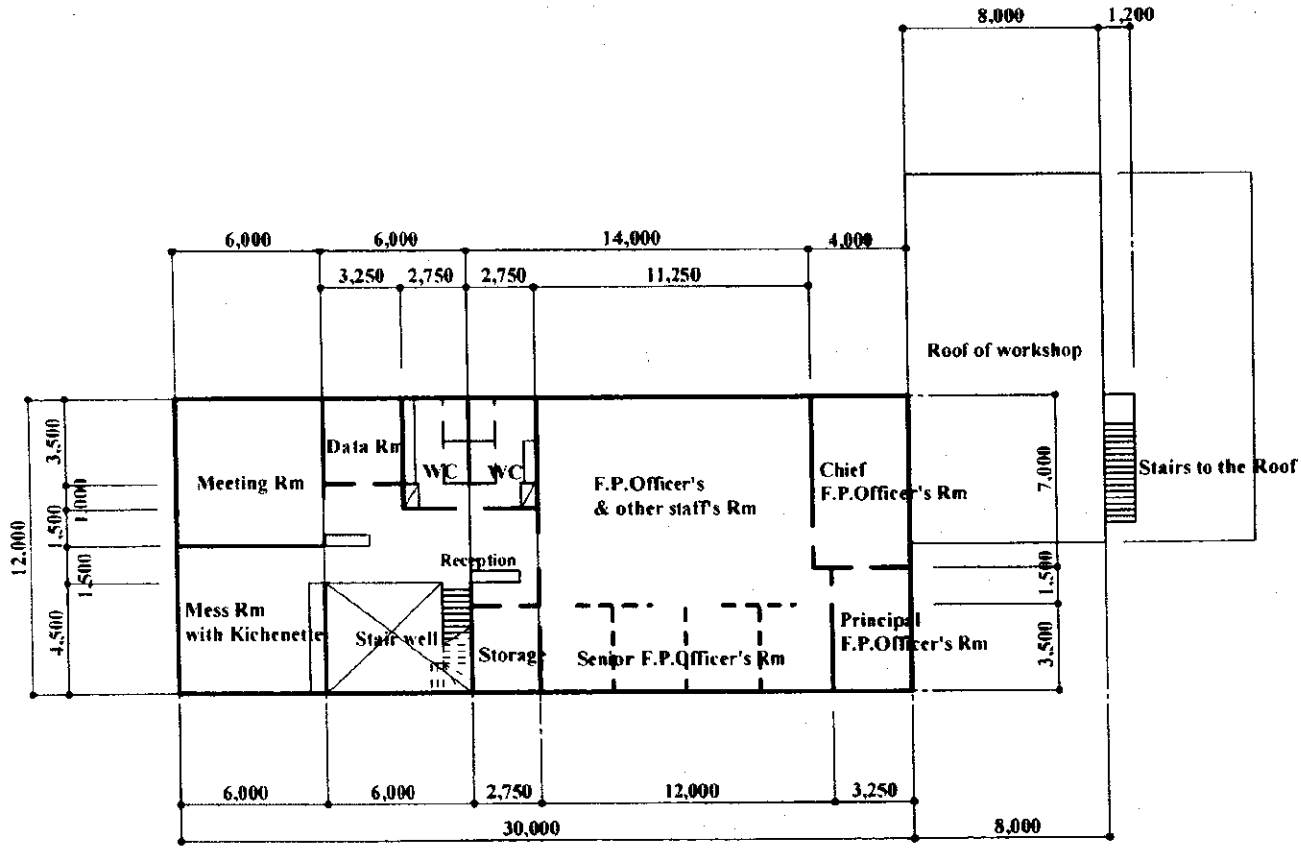
* Plot Coverage : maximum 20 per cent
* Pitched roof : to be recommended
* Boundary wall : not to be constructed over 1.5 meter
* Security Guard House, Touch Pool, Fuel Reservation Tank : to be applied
* Septic tank & Absorption pit for waste water, Trease trap for workshop and kitchenette : to be applied

SITE PLAN
for Mauritius Fisheries Extension Centor

別添資料１２－２　計画概念図-平面図１



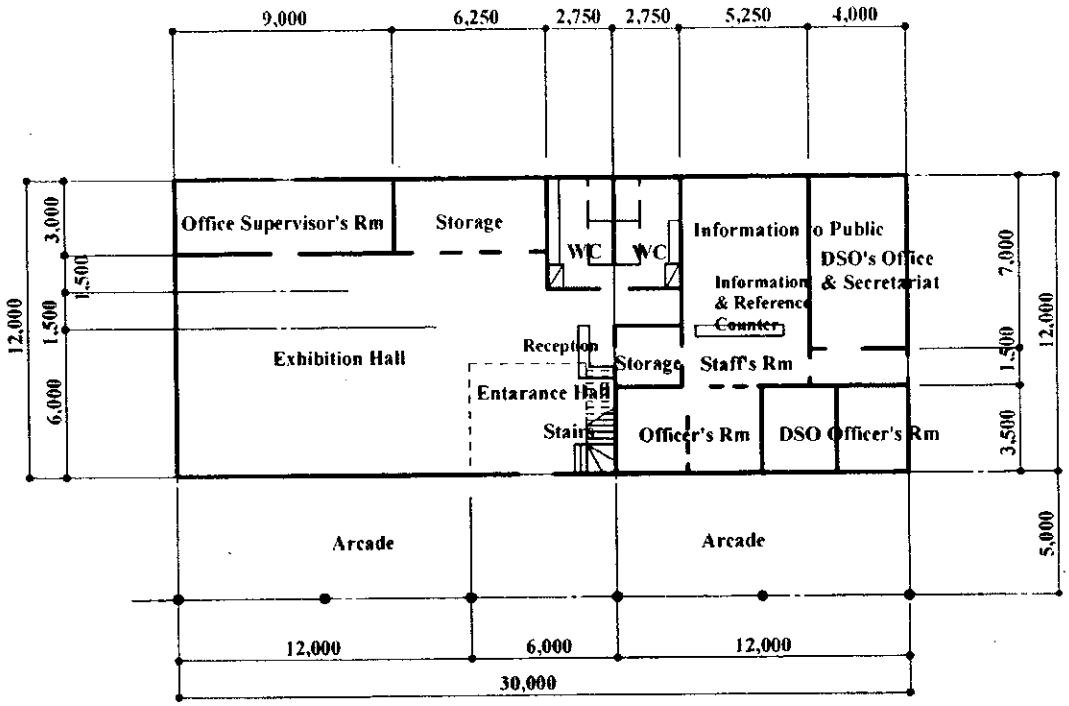
Model Fisheries Post & Workshop
S : 1 / 300



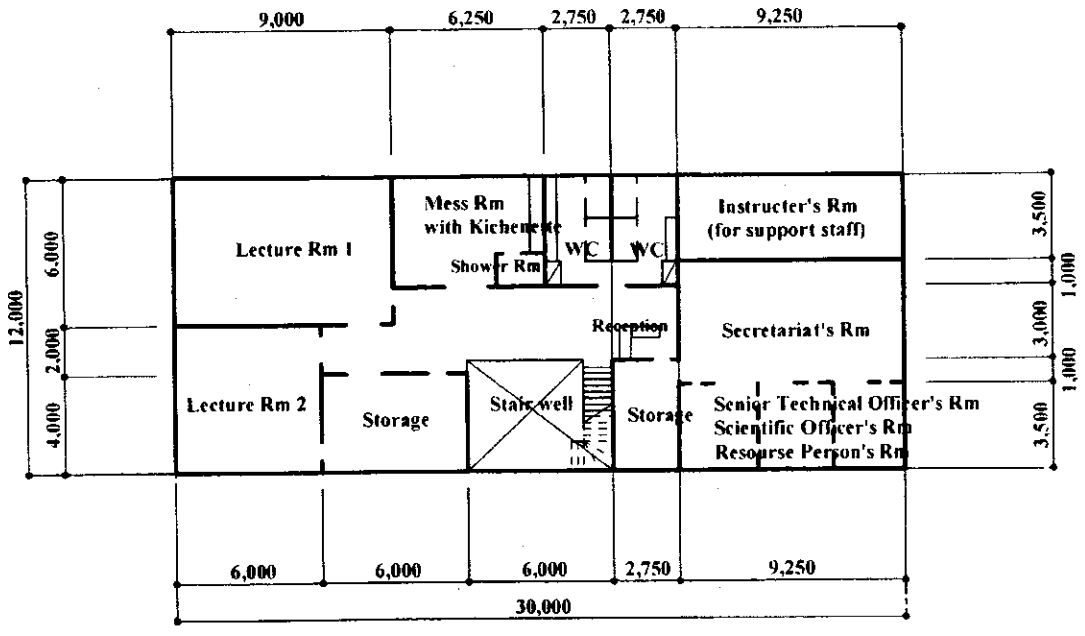
Fisheries Extension Centor
S : 1 / 300

※　現地での打合せに基づき、調査団側で作成したもの

別添資料１２－３　計画概念図-平面図２



Information & documentation Centor
S : 1 / 300



Fisheries Training Centor
S : 1 / 300

※　現地での打合せに基づき、調査団側で作成したもの