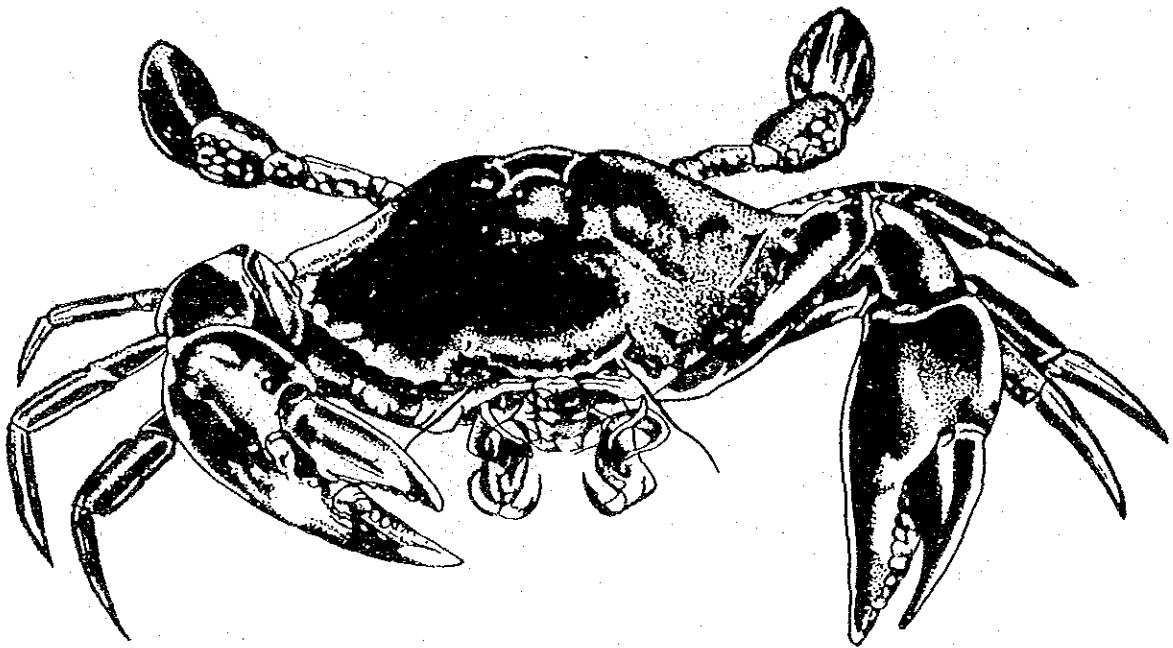
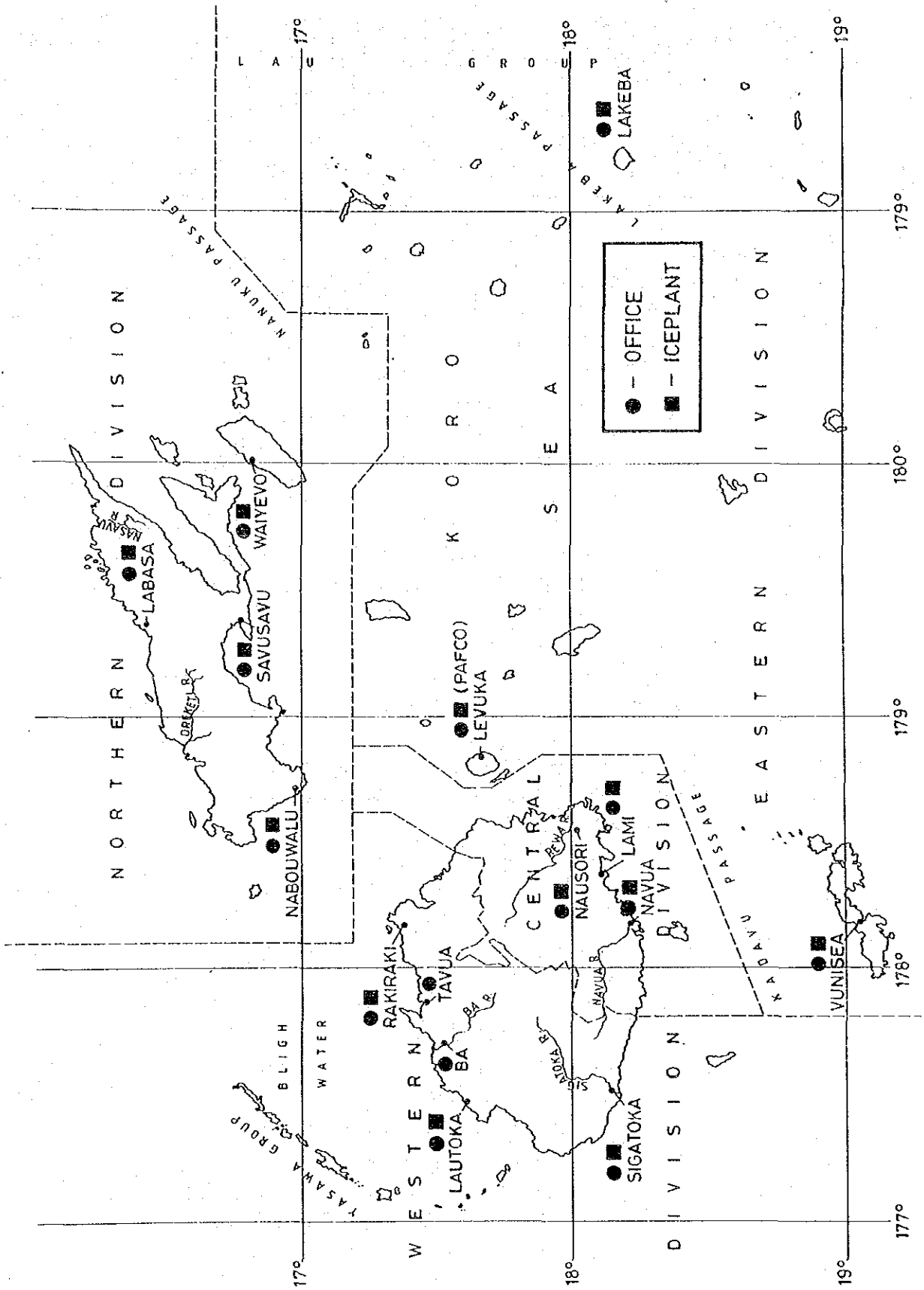


FIJI FISHERIES DIVISION



ANNUAL REPORT 1988

MINISTRY OF PRIMARY INDUSTRIES
SUVA



ANNUAL REPORT - 1988

CONTENTS

1.	INTRODUCTION	1
2.	THE FISHING INDUSTRY	2
2.1	THE INDUSTRIAL TUNA FISHERY	2
	TUNA LANDINGS	
2.1.1	POLE AND LINE VESSELS.....	2
2.1.2	LONGLINE VESSELS.....	2
2.1.3	PACIFIC FISHING COMPANY.....	2
	TUNA PROCESSING AND SALES	
2.1.4	CANNED TUNA.....	3
2.1.5	FISHMEAL PRODUCTION.....	3
2.2	THE ARTISANAL FISHERY	3
2.2.1	PRODUCTION.....	3
2.2.2	MARKETING.....	4
2.3	THE SUBSISTENCE FISHERY	4
2.4	AQUACULTURE	4
2.5	EXPORTS.....	5
2.6	IMPORTS.....	5
2.7	SUMMARY OF LOCAL FISH PRODUCTION.....	6
3.	THE FISHERIES DIVISION	7
3.1	ADMINISTRATION.....	7
3.1.1	PERSONNEL.....	7
3.1.2	AID PERSONNEL.....	7
3.1.3	TRAINING.....	7
3.1.4	FINANCE.....	9
	EXPENDITURE	
	REVENUE	
3.1.5	VESSELS.....	9
3.1.6	VEHICLES.....	9
3.1.7	BUILDINGS & PLANT.....	10
3.2	TECHNICAL SERVICES/EXTENSION	10
3.2.1	BOAT BUILDING PROGRAMME.....	10
3.2.2	FIJI DEVELOPMENT BANK LOAN ASSESSMENT.....	10
3.2.3	FISHING GEAR SALES.....	10
3.2.4	ICE PRODUCTION.....	10

3.2.5	REGULATORY WORK.....	11
3.2.6	FISH PROCESSING UNIT.....	11
3.2.7	TRAINING.....	11
3.3	EXTENSION SERVICES.....	12
3.4	RESOURCE ASSESSMENT AND DEVELOPMENT	12
3.4.1	COLLECTION OF PRODUCTION DATA.....	12
3.4.2	CATCH STATISTICS.....	12
3.4.3	FISHERY RESOURCE MANAGEMENT.....	12
3.4.4	COASTAL ZONE MANAGEMENT.....	12
3.4.5	FAD DEPLOYMENT.....	12
3.4.6	DEEPWATER SNAPPER.....	13
3.4.7	SMALL SCALE LONGLINING.....	13
3.4.8	GIANT CLAM PROJECT.....	13
3.4.9	SEAWEED CULTURE.....	13
3.4.10	FRESHWATER FISHERIES.....	13
	AQUACULTURE	
3.4.11	MACROBRACHIUM CULTURE.....	13
3.4.12	PRODUCTION OF MAJOR CARPS.....	13
3.4.13	RED TILAPIA.....	14
3.4.14	RURAL AQUACULTURE PROGRAMME.....	14
3.5	INFORMATION AND LIBRARY SERVICES	14
3.6	INTERNATIONAL LINKAGES	14

LIST OF TABLES

Table 1.	PAFCO LANDINGS	2
Table 2.	FISHERMEN BY DIVISION	3
Table 3.	VESSELS BY DIVISION	3
Table 4.	LOCAL FISH PRODUCTION	6
Table 5.	STAFF STRUCTURE	7
Table 6.	DIVISIONAL EXPENDITURE	9
Table 7.	DIVISIONAL REVENUE	9
Table 8.	FISHING GEAR SALES	10
Table 9.	ICE PRODUCTION	11

1. INTRODUCTION

This report provides details of fisheries sector production during the calendar year 1988, together with a summary of the activities of the Fisheries Division during this period.

1988 was the third year of the Development Plan 9 period (1986-1990). The major thrust of Government policy during DP8 was to encourage fisheries development for subsistence, commercial and industrial purposes. The objectives of the fisheries sector during DP9 are to

- generate further employment opportunities in the exploitation and processing of marine products.
- increase production to satisfy local demand for fish and other marine fish products.
- increase value added to fish production for export.
- regulate and control the exploitation of fin and non-fin fishery products.

Despite political upheavals, DP9 remains our guideline, although it is obvious that some changes in emphasis will be necessary. Cuts in government funding and overseas aid during 1988 reduced capital works in the provision of slipways and other infrastructure for the small-scale artisanal fishery, and the upsurge in exploitation of inshore resources, particularly for the export trade, will necessitate a higher level of resource assessment activity.

During 1988 small scale commercial (artisanal) fisheries production increased by 3.0% to 6868 tonnes, and the value increased by 12.5% to approximately F\$14.9 million. Increases in both fish and non-fish production were recorded. No fish sales were recorded by the NMA for the year 1988 due mainly to the takeover in operation by the Auxiliary Unit at NMA operation centre.

In the industrial sector, the local tuna catch increased by 47% to 9175 tonnes, due both to good performance from Ika Corporation and increased activity from licensed foreign longliners. The PAFCO tuna cannery at Levuka increased its throughput yet again (to 15,825 tonnes) and sold a record F\$46.6 million worth of canned fish, mainly to the export market. An increase in the local market was also seen which measured 48,000 cartons valued at \$1.4 million.

The deepwater snapper industry (producing high-quality chilled fish for the US market) continued to develop, and demand for low-quality beche-de-mer in south-east Asia, continued to grow with exports of 717 tonnes in 1988. Upheavals continued in the seaweed industry as farmers remained reluctant to grow the commodity due mainly to the unavailability of a fixed market. However, the National Marketing Authority in conjunction with the Fisheries Division came to the rescue of the industry and a market was arranged. Although target were not fulfilled a creditable 60.5 tonnes were produced by the 33 farmers in operation.

The economic hardships remaining from 1987 having forced the many people to turn to fishing thus maintaining their livelihood. It is the task of the Fisheries Division to channel this effort, and to make sure that the more vulnerable inshore resources are not overfished. Further commercial development should ideally be concentrated on the outer-reef and oceanic fisheries, and the Division must make fishermen aware of the possibilities and provide support in the form of training, vessels, infrastructure and fish-aggregation devices. Aquaculture is another approach, with impressive growth prospects, and of particular benefit to the inland population, but which needs a lot of development work.

1989 will be another challenging year for the Fisheries Division as staff shortages coupled with increasing demand for the management of marine resources increase in significance.

2. THE FISHING INDUSTRY

The Fishing Industry is generally divided into four primary sectors, although the distinction between these is becoming less clearcut as they develop and diversify. They are:

- The industrial fishery, which operates on a large scale and is primarily export oriented. This involves mainly the PAFCO tuna cannery at Levuka, and tuna capture and supply by both local and overseas vessels. The deepwater snapper fishery is now starting to fit into this category.
- The artisanal fishery. This sector includes most small-scale commercial production for domestic sale. It is a significant source of domestic fish supply and employment.
- The subsistence fishery, involving catches for self-consumption, with the occasional sale of surplus catch.
- Aquaculture is receiving increased attention in Fisheries development, but remains largely experimental. Aquaculture has the advantage of not being based on limited natural fish resources, but requires a comparatively large investment in many cases.

2.1 THE INDUSTRIAL TUNA FISHERY

TUNA LANDINGS

2.1.1 POLE AND LINE VESSELS

The IKA Corporation fleet of 8 vessels, 4 IKA owned, 2 chartered Hokuku Marine and 2 other privately owned continued to fish in Fiji waters.

3 pole and line vessels 2 from Kiribati and 1 from New Zealand (a local vessel bought by a NZ Co) also unloaded 649.9 tonnes of tuna (caught in Fiji waters) in 1988.

A total of 4286 tonnes of tuna was landed and sold to Pacific Fishing Company for \$4.0 million (see Appendix 1 for details). This was a 10% increase in pole and line landings over 1987.

2.1.2 LONGLINE VESSELS

A total of 27 Taiwanese longline vessels were contracted by PAFCO during 1988. Total landings of fish were 4,886.98 tonnes. Landings were up by 107% compared to the 1987 catch of 2361.44 tonnes.

2.1.3 PACIFIC FISHING COMPANY

PAFCO received a total of 15,824.67 tonnes of fish (including other species apart from tuna) in 1988, while the actual tuna landings (excluding other species) were 14,651 tonnes. This was the big-best volume ever on record. 6649 tonnes of this fish were imported pole and line fish from regional countries (mainly Solomons). Total landings at PAFCO increased by 43% compared to 1987.

Table 1 PAFCO LANDINGS

Source	Tonnes	% of Total	1987(mt)
Pole and Line vessels	4288.02	10.4	3885
Longline vessels	4886.98	107	2361.4
Imported Pole and Line	6649.5	38	4832.6

(See Appendix Tables 1 and 2)

TUNA PROCESSING AND SALES

2.1.4 CANNED TUNA

A total of 888,688 cartons (48 x 7oz equivalent) of canned fish were produced; an increase of 26% over 1987. During the year, 840,688 cartons of tuna valued at \$46.68 million were exported (including 150,000 cartons of petfood), and 48,000 cartons valued at \$1.4 million were sold locally.

2.1.5 FISHMEAL PRODUCTION

In 1988, 1411.6 tonnes of fishmeal were produced, a 26% increase over 1987. All of this was sold locally.

2.2 THE ARTISANAL FISHERY

The artisanal (small-scale commercial) fisheries sector is an increasingly diverse one, ranging from village fisherwomen collecting shellfish in rivers, to larger vessels fishing offshore for deepwater snappers for export. Production data for this sector is collected by the Fisheries Division and all persons taking fish by way of trade or business are required, under the Fisheries Act, to obtain a license. Table 2 lists the number of licensed fishermen by administrative division and Table 3, the number and type of licensed fishing vessels per Division. This serves as a crude index of the level of artisanal fishing activity.

Table 2. FISHERMEN BY DIVISION - 1988

Division	No of Licenses		Total crew
	IDA*	ODA	
CENTRAL	250	263	2109
WESTERN	582	8	1326
NORTHERN	576	55	1384
EASTERN	43	10	53
Total	1451	336	4872

* IDA - Inside demarcated (customary fishing rights) areas

ODA - Outside demarcated (customary fishing rights) areas

This is an increase in license issues of 25.2% relative to 1987, mainly due to an increase in the number of license issued in the Northern and Western Divisions.

Table 3. VESSELS BY DIVISION - 1988

	CENTRAL	WESTERN	NORTHERN	EASTERN
Punts	220	12	128	13
Outboard Punts	209	152	360	27
Half Cabin	134	356		6
Launch	162	33	116	9
Tuna Vessels	5			
TOTAL	730	553	604	55

2.2.1 PRODUCTION

An estimated 4,748 tonnes of fresh or frozen and smoked and salted fish worth \$12.00 million were sold through various outlets in 1988, an increase in weight by 0.2%, and a increase in value by 4.75%, over 1987. The predominant fish families in the catch were emperors (*Lethrinidae*) 882 tonne, mullets (*Augilidae*) 1087 tonnes, mackerels & tuna (*Scombridae*) 463 tonnes, and groupers (*Serranidae*) 453 tonnes. These 4 categories together made up 61% of the total artisanal fish catch (see Appendix Table 8). Figures on production by area are difficult to obtain, but the majority of the fish were sold through the Central Division (59%). The Western and Northern Divisions took 23 and 18 percent respectively of the market.

Non-fish sales (i.e. shellfish, crustaceans, molluscs, holothurians, seaweed etc.) totalled 2,120 tonnes, worth \$2.86 million. This was an increase of 10% by weight and 63.45% by value over 1987. The freshwater kal (*Balissa* spp) accounted for 62% of this production by volume, with mangrove crabs (*Scylla* spp.) 124 tonnes and rock lobster (*Paralithys* spp.) 38 tonnes contributing disproportionately to the total value (see Appendix Table 9). Appendix Table 3 provides a guide to common Fijian fish and non-fish names.

2.2.2 MARKETING

The product is sold through a variety of outlets which can be broadly grouped into five categories as follows:

- Municipal market
- Hotels, Restaurants and Cafes
- Butchers and Fish Merchants
- Retail shops and Supermarkets
- Roadside stalls and the Auxiliary Unit of the Fiji Military Forces.

Price information is obtained by interview for market sales, but is not generally available for other outlets. The relative importance of these various outlet categories varies by Division, as Appendix Table 12 demonstrates. Notable features are the importance of the unique wholesale butchers in the Central Division, municipal markets in the Western and Northern Divisions, and roadside sales in the Central Division.

Sales of fish through Municipal Markets have steadily declined, both in the Central and Western Division. In the Northern Division also, increasing quantities of fish are diverted to Central Division outlets for sale. Only 20% of fish sales were made through Municipal Markets in 1988 (compared with over 40% in 1981) although this market share appears to now be steady. On the other hand, municipal markets still handle most non-fish sales (57% share), although this is overwhelmingly kal.

Weighted mean prices for most products have shown relatively small increases from 1982 to 1986, but the latter part of 1987 appeared to presage a slightly higher rise in price. These price rises continued into 1988 and then 1987. The total average price of fish for 1988 was 11% higher than 1987. Rises were experienced by many of the more valuable non-fish products, although high volume staples, such as kal, remained at 1987 levels. (Appendix Tables 6 to 11 provide details of artisanal fish and non-fish production for 1988 in municipal markets and other outlets).

2.3 THE SUBSISTENCE FISHERY

Reliable estimates of the subsistence catch (fish and non-fish) are not available. An estimate of 14,000 tonnes per annum, obtained in 1980 from an interview survey of approximately 9% of Fijian coastal villages, is normally used, with an annual increment of 200 tonnes.

2.4 AQUACULTURE

The Raviravi prawn farm, operated by a Fiji Development Bank-France Aquaculture joint venture, Prawns (Fiji) Ltd., produced 10.8 tonnes of penaeid prawns (*Penaeus* and *Farfantepenaeus*) during 1988, well below the projected target which suggests that 70 tonnes is possible from the existing area. The joint venture is presently under review, and it is necessary to expand the present pond area to cater for export volumes, now that water-quality problems have been overcome, for the project to become a commercial success.

180kg of *Macrobrachium rosenbergii* prawns were produced during experimental culture at the Fisheries Division's Naduruloulou Research Station and the Division will be looking to promote small-scale commercial trials of this species in the coming year.

60.3 tonnes of dried *Eucheuma* seaweed were exported to Denmark for final processing during the year.

2.5 EXPORTS

Exports were dominated by canned tuna (6965 tonnes valued at \$39.8 million) but included increasing quantities of beche-de-mer (717 tonnes valued at \$2.85 million), Trochus shells (398 tonnes valued at \$2.01 million), Crustacean and Molluscs (361 tonnes valued at \$1.68 million), Fish Pastes (224 tonnes valued at \$1.4 million) and fish fresh chilled (172 tonnes valued at \$0.84 million). Appendix Tables 13 and 14 list the Bureau of Census and Statistics figures for exports and re-exports from Fiji. Of those categories surveyed, exports totalled \$51.2 million (a 90% increase over 1987) and re-exports totalled \$2.3 million.

2.6 IMPORTS

Appendix Table 15 lists the Bureau of Census and Statistics figures for imports into Fiji during 1988. The total value of those fishery products listed was \$29.7 million (a 74% increase over 1987), of which the largest part was fish fresh and frozen and canned fish.

2.7 SUMMARY OF LOCAL FISH PRODUCTION

Table 4 summarises local fish production (both for local consumption and export) over the years 1984-1988. Artisanal fish production has increased by 0.2% in that period, and non-fish production by 10% over 1987.

TABLE 4

SUMMARY OF LOCAL FISH PRODUCTION 1984 - 1988

CLASSIFICATION	1984		1985		1986		1987		1988	
	Wgt MT	Value \$1000	Wgt MT	Value \$1000	Wgt MT	Value \$1000	Wgt MT	Value \$1000	Wgt MT	Value \$1000
ARTISANAL FISH										
Municipal Markets	925.30	1625.20	980.93	1638.20	963.11	1916.59	969.91	2247.90	897.97	2289.83
MMA	276.00	277.13	379.33	656.93	240.53	478.65	122.38	279.03		
Other Outlets	2728.00	5353.74	2691.04	5727.20	3113.77	6196.40	3617.94	8863.95	3811.96	9580.57
Smoked Fish	21.30	43.99	27.30	61.00	16.33	35.93	24.95	67.23	32.47	95.06
Salted Fish	9.70	38.63	5.10	20.50	4.45	21.49	2.13	5.81	5.83	43.35
Sub - total	3960.30	7338.69	4083.70	8103.83	4338.19	8649.07	4737.31	11463.92	4748.23	12008.81
ARTISANAL NONFISH										
Municipal Markets	1547.16	766.39	1175.70	643.83	1259.18	681.19	1336.88	718.86	1217.91	935.34
MMA & Other Outlets	233.40	910.37	423.38	359.40	544.55	856.11	590.31	1035.21	991.67	1931.69
Sub - total	1780.56	1676.76	1599.08	1003.23	1803.73	1537.30	1927.19	1754.07	2119.58	2867.03
INDUSTRIAL FISHERIES										
Pole & Line	4572.80	3900.00	3252.00	2325.10	3119.34	2220.00	3885.00	2800.00	4238.02	4000.00
Purse Seine	577.26	436.80	693.00	497.10						
Long Line	1832.90	2200.00	2105.60	3751.50	1237.20	1730.00	2361.44	8400.00	4886.98	12600.00
Other (Import)	1987.30	1594.30	2374.20	1620.50	5924.00	5224.62	4832.64	4400.00	6649.55	10900.00
Sub - total	8970.26	8131.10	8424.80	8194.20	10280.54	9174.62	11079.08	15600.00	15824.55	27500.00
Bait (Pole & Line)	95.18		57.20		59.70		50.00		55.00	
SUBSISTENCE (est.)	14800.00		15000.00		15200.00		15400.00		15600.00	
CANNERY PRODUCTION										
Canned Fish (ctn)	592484.00		436315.00		602281.00		706860.00		888688.00	
Fish Meal	682.18		652.18	324.70	771.00	394.45	1118.00		1411.69	
EXPORTS by mt										
Shark fin	8.00	64.00	10.82	108.20	8.32	84.36	6.33	44.33		
Trochus	340.10	646.19	274.00	534.30	233.66	738.99	250.44	986.78	398.47	2010.42
NOP	23.60	84.96	16.10	56.00	12.34	45.12	23.18	147.04	57.50	465.16
Beche-de-Mer	53.70	451.35	66.20	660.00	229.38	886.67	640.39	2233.46	717.41	2852.27
Frozen Crab			0.04	0.18						
Frozen fish -OTHERS	4.60	46.00	26.60	133.90	88.77	399.66	120.45	653.95	72.24	423.25
-PAPCO	633.80	674.90	1823.00	3300.00	186.00	180.68	926.03	2950.00		
Chilled Fish	3.08	5.62	18.66	67.24	38.51	147.50	42.82	277.90	172.41	841.30
Dried Seaweed					173.41	135.29	216.89	136.87	60.30	21.11
Smoked Fish	0.02	0.10			0.04	0.11	11.24	44.32	1.66	8.05
Fish dried salted	3.53	36.08	10.13	106.97	8.32	84.36	36.21	153.67	55.56	411.90
Crustaceans & Molluscs	7.87	73.20	17.21	118.19	15.85	85.99	240.71	883.30	362.20	1709.95
Fish Meal	3.70	6.25	0.01	0.01	10.79	15.41	0.90	15.20	156.40	483.72
Canned fish	4491.85	14361.81	3088.51	10884.71	4570.49	16679.99	4767.97	20780.80	6964.59	39757.46
Sub - total	5573.85	16450.46	5351.29	15968.80	5329.88	18610.02	7283.56	29307.62	9018.74	48984.59
EXPORTS by miscellaneous unit										
Aquarium Fish (no)	16234.00	29.38	59404.00	96.48	71840.00	103.33	83109.00	143.73	72044.00	329.14
Canned Fish (ctn) PAPCO	589543.00	16088.50	450198.00	12497.10	615994.00	19500.00	669943.00	25780.00	840688.00	46600.00
Corals		12.38					117.34	136.36		159.28
Worked shells		17.12					152.69	248.03		318.60
Sub - total		16147.38		12593.58		19873.36		26308.12		47407.02
Domestic canned ctn	8678.00	116.82	7400.00	108.86	8192.00	162.98	17634.00	373.81	48000.00	1400.00

THE FISHERIES DIVISION

The Fisheries Division, of the Ministry of Primary Industries, has its headquarters at Lami, on the western outskirts of Suva. The four administrative Divisions of Fiji are the primary organisational units, and Fisheries has Divisional offices in Lautoka (Western Division), Labasa (Northern Division), Nausori (Central Division) and Lami (Eastern Division). Respectively, these service subsidiary offices in Rakiraki, Tavua, Ba and Sigatoka (Western), Tavuni, Savusavu and Nabouwalu (Northern) and Lakeba, Yunisea and Levuka (Eastern).

3.1 ADMINISTRATION

3.1.1 PERSONNEL

At the end of 1988, 107 of the 117 established posts were occupied. 10 posts are present in Administration, 81 in Technical Services and Extension and 26 in Resource Assessment & Development. Staffing increased by 0.9% over 1987 levels.

Table 5. FISHERIES DIVISION STAFF STRUCTURE

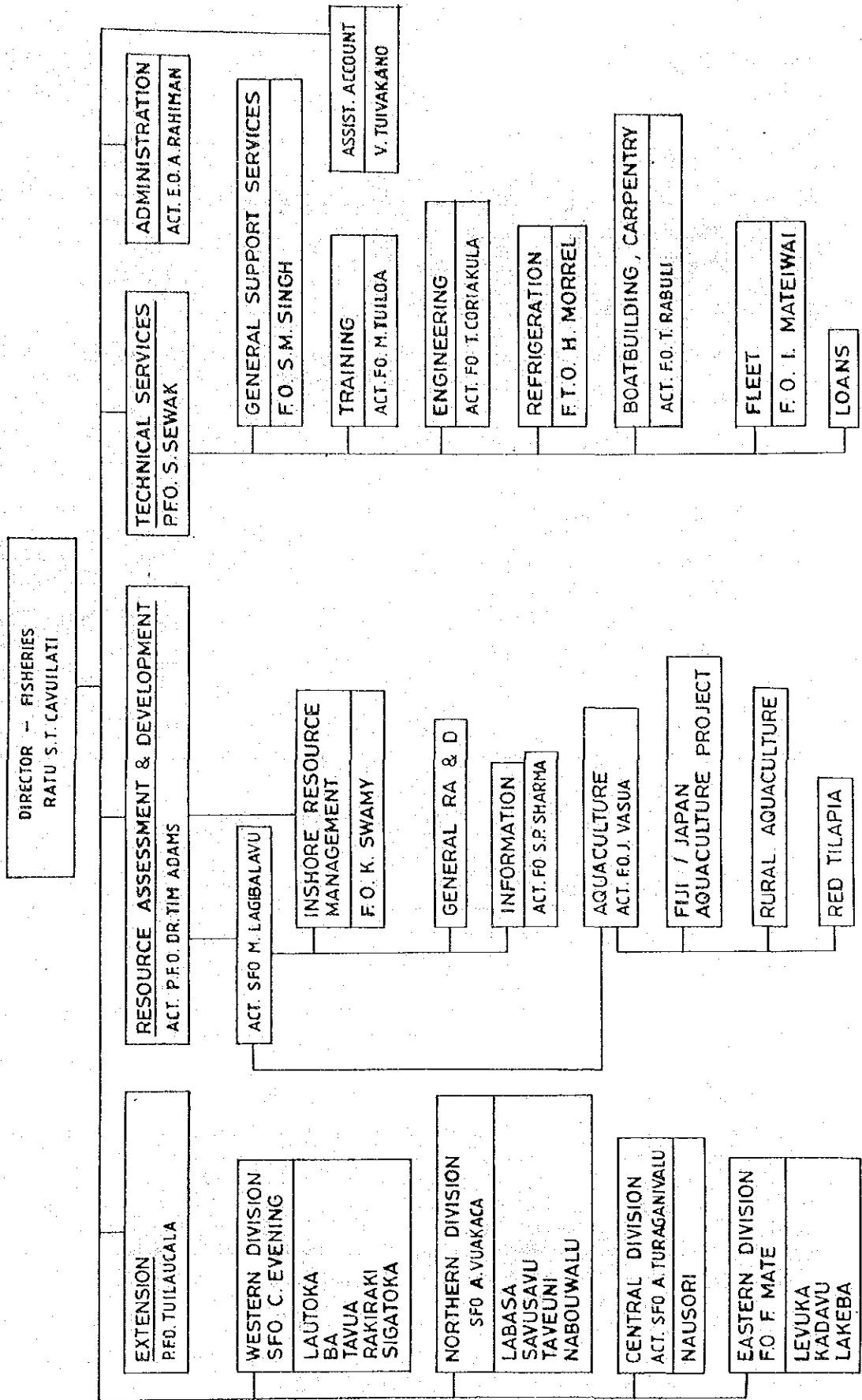
DESIGNATION	SCALE	ESTABLISHED	FILLED	VACANCIES
Director of Fisheries	USO3	1	1	.
Principal Fisheries Officer	NSO1	3	2	1
Senior Fisheries Officer	NSO2	3	2	1
Fisheries Officer	NSO3	10	8	2
Graduate Trainee	NSO4	1	.	1
Fisheries Tech Officer	NSO5	17	16	1
Senior Fisheries Assistant	NSO6/7	73	69	4
Library Assistant	ADO6	1	1	.
Executive Officer	ADO5	1	1	.
Assistant Accounts Officer	ADO5	1	1	.
Senior/Clerical Officer	ADO6/7	2	2	.
Stenographer/ Typist	RTO6	2	2	.
Stores Officer/Storeman	SKO6/7	2	2	.
TOTAL		117	107	10

3.1.2. AID PERSONNEL

A total of 7 US Peace Corps volunteer postings were attached to the Division during 1988, mainly to help the Rural Aquaculture Programme and 1 Japanese volunteer was attached to Lami as a Fisheries Statistician.

Whilst some countries suspended their aid-funding for consultancy visits, Japan continued to provide assistance. Consultancy services was provided to ensure supply of fishing gear and boatbuilding supplies in a \$2.7 million aid package. The South Pacific Commission provided 2 Research Scientist to carry out a resource survey on beche-de-mer and improvement on tuna related computer programmes. The Forum Fisheries Agency provided an economist for a short follow-up and economic monitoring programme for 28 foot fishermen.

FISHERIES DIVISION
 MINISTRY OF PRIMARY INDUSTRIES
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3.1.3 TRAINING

A total of 23 staff members attended meetings or training courses overseas whilst 16 staff attended training courses locally.

3.1.4 FINANCE**EXPENDITURE**

Many planned capital projects had to be shelved pending the full resumption of development aid. The disbursement of funds is detailed below in Table 6. These figures are compiled from our internal ledgers and still await reconciliation with Ministry headquarters accounts.

Table 6. FISHERIES DIVISION EXPENDITURE 1988

Salaries (established staff)	\$ 754,588.17
Wages (unestablished staff)	\$ 114,304.68
Operational Costs	\$ 263,955.82
Capital Expenditure (overseas cash aid)	\$ 100,811.25
Capital Expenditure (Lautoka in kind)	\$5,000,000.00

Total expenditure (excluding Lautoka port) was \$1,233,659.92, a 20% reduction on 1987 expenditure.

REVENUE

Total revenue received for services in 1988 was \$339,890.11 a 45% decrease over 1987 due mainly to the fewer number of vessels on sale to commercial fishermen when compared to the previous year.

Table 7. FISHERIES DIVISION REVENUE 1988

Fish & Prawn sales	\$1,298.50
Fishing vessels commercial	\$48,300.00
Fishing gear	\$53,240.60
Fishing licenses & registration	\$19,293.00
Ice sales	\$216,026.00
Posters	\$1,732.00
TOTAL	\$339,890.11

3.1.5 VESSELS

A total of 16 powered vessels were used by the Fisheries Division. Eight of these were based in Lami, two in Lautoka, two in Tavuni and one each in Labasa, Savusavu, Levuka and Lakeba. Twelve of these are smaller vessels constructed by the Division. Of the four larger vessels (used for fish-collection and resource assessment work), 2 remained under the control of the Auxiliary Unit of the Fiji Military Forces, and one (the "Gonedau") underwent extensive refitting work. The Fisheries research boat was returned to the Division in the latter part of the year, and has since had to bear the workload of the Training section as well as Research.

3.1.6 VEHICLES

The Division utilized a fleet of 19 vehicles. Of these, 11 vehicles were used in the Central Division and 4 each in the Western and Northern Divisions.

3.1.7 BUILDINGS, PLANTS AND OTHER FACILITIES

The major development in this area during the year was the completion of the construction works on Lautoka Fishing Port under the Japanese aid. (The Port was built at a total cost of \$10M). Upgrades to the extension office facilities at Labasa and Savusavu were made. Little progress was seen on the construction of the Wainibokasi jetty mainly because of the re-direction of funds and the jetty is still under construction.

3.2 TECHNICAL SERVICES

3.2.1 BOAT BUILDING PROGRAMME

A total of 3 9-metre vessels were constructed in 1988, bringing the total number of such vessels constructed to 275. All were sold to commercial fishermen. In addition, one each 7 and 9 metre vessels were constructed for the rural development programme. The boatbuilding programme did not progress as expected in 1988 due to escalating costs and the unavailability of the engines normally supplied under Japanese aid. It is hoped to resume both boatbuilding and rural training courses by mid-1989.

Meanwhile work is progressing on the maintenance of existing boats and on a follow-up programme to determine the effectiveness of the FDB-assisted rural-training programme.

3.2.2 FIJI DEVELOPMENT BANK LOAN ASSESSMENT

A total of 317 loan applications were processed by Divisional Officers, and 235 applications (amounting in value to \$1,120,180) were approved in 1988. This was a 33% increase in number and 227% increase in value over 1987 loans approved.

3.2.3 FISHING GEAR SALES

Fishing gear worth a total of \$53,240.60 was sold to fishermen through the Fisheries Division outlets at cost. This activity operates on a revolving-fund basis and continues to be hampered by the limited size of the fund approved. Although the private sector is starting to become involved in fishing gear sales, the Fisheries Division remains the only comprehensive source of gear, particularly for the rural sector. Sales increased by 23% over 1987.

Table 8. **FISHING GEAR SALES**

OFFICE	VALUE (\$)
Lami	26,456.09
Labasa	9,853.50
Savusavu	3,480.33
Taveuni	860.08
Nabouwalu	788.62
Lautoka	3,948.18
Ba	1,915.39
Rakiraki	2,843.74
Tavua	1,672.72
Sigatoka	1,421.95
TOTAL	53,240.60

3.2.4 ICE PRODUCTION

In 1988 a total of 3699.2 tonnes of ice was produced, with commercial sales valued at \$216,022. Despite operational problems at nearly all iceplants except for Lautoka, an increase of 6.5% in production was seen.

Table 9. ICE PRODUCTION

OFFICE	PRODUCTION kg	SALES \$
Lami	434,788	26,688
Wainibokasi	780,226	38,706
Navua	139,550	7,155
Lautoka	571,285	28,921
Sigatoka	2,107	2,832
Valeka	4,615	4,144
Labasa	1,296,957	82,750
Savusavu	218,962	11,451
Nabouwalu	20,938	1,485
Taveuni	103,532	5,249
Lakoba	24,400	1,551
Kadavu	101,800	5,090
TOTAL	3,699,160	216,022

3.2.5 REGULATORY WORK

In 1988, 1,787 licensed fishermen and 4,872 crew were involved in fishing activities, utilising 1,942 fishing vessels (including towed punts). This was an increase of 25.3% in licensed fishermen, 45.6 % in crew, and an increase of 21.8% in the number of registered fishing vessels. Of the total number of licenses issued, 18.7% were for outside demarcated areas (ODA - see Tables 2 & 3). The regulatory work of the Division includes:

- the investigation of fish suspected of being captured by the use of explosives or other illegal fishing methods (poisoning by duva or bleach etc.)
- seizing of fish, shellfish and crustaceans deemed undersized by the Fisheries Act.
- confiscation of illegal fishing gear (undersize gillnets etc.) during regular patrol work
- inspection of trochus exports prior to shipment.
- issue of export licenses.
- collection of detailed catch records for export shipments of aquarium fish and ornamental coral. This is soon to be extended to all inshore resources covered by the Cabinet-approved exploitation guidelines and the forthcoming Fisheries Regulation.

3.2.6 FOOD PROCESSING UNIT

The Fisheries Division continued to provide assistance to rural communities in the production of salted mullet and beche-de-mer through visits and on-site instruction. Several courses were held in collaboration with the Auxiliary Unit of the Fiji Military Forces to train youth groups in the processing of beche-de-mer.

Several Fishing Groups were assisted, and the finished product handled on behalf of the groups in some cases.

3.2.7 TRAINING

A fisherwomen's course was held for a total of 16 participants, under FAO/UNDP funding. These women were recruited from different parts of Fiji and were at Lami for a period of three weeks. In addition, a total of 158 fishermen benefitted from the rural fishermen training programmes. These training programmes were usually for a duration of one to two weeks and were held in Kadavu, Central Division, Lakeba, Vanuabalavu, Lomaliviti and Rotuma. The fishermen were taught the basics of deep sea fishing methods, outboard engine, engineering, marketing, practical fishing using 28 foot vessels, fish handling and icing, business management and the Fisheries Act.

3.3 EXTENSION SERVICES

The Extension Section continued to provide the link between the Fisheries Division and the fishermen. As well as their role in mediation, and the transfer of technology to fishermen, the 40 staff (spread over 14 stations) were fully involved in licensing and regulatory activities, ice and gear sales, loan processing, fish processing, advisory services and lectures, and practical demonstration to school and fishing groups.

3.4 RESOURCE ASSESSMENT AND DEVELOPMENT

3.4.1 COLLECTION OF PRODUCTION DATA

Municipal markets were surveyed at least four days per month (always including the highest volume day of the week) and the sampling was applied to market-masters records to obtain a complete summary. With the shift in the distribution of fish and fishery products to roadside outlets these were covered in depth at least six days a month, and all other outlets quarterly. A system of confidential logbooks for the recording of purchases by these outlets was instituted, which should greatly improve the accuracy of data obtained.

The purchases/sales by species, weight and, if possible, price for the production estimates for the artisanal sector, and are detailed in the Appendices.

3.4.2 BAITFISH AND TUNA CATCH STATISTICS

Catch statistics, supplied on standard forms by Ika pole and line and other industrial vessels, are analyzed monthly and cross-referenced to PAPCO landings. Information summaries are set to SPC for inclusion in the regional tuna stock assessment program.

3.4.3 FISHERY RESOURCE MANAGEMENT

In addition to the above, detailed catch/production data were obtained on aquarium fish, ornamental coral and deepwater snapper, and the harvest of sedentary resources vulnerable to over-exploitation (e.g. giant clam, black coral, trochus, beche-de-mer) is monitored. Resource profiles and a fish commodity profile have been produced to assist planners and investors, and these have been partially updated in 1988. Draught legislation has been prepared, but awaits finalisation. Cabinet Guidelines for the exportation of some of the important sedentary resources (trochus, MOP, beche-de-mer, vasua) were approved.

3.4.4 COASTAL ZONE MANAGEMENT

Fisheries assessments of proposed foreshore reclamations are routinely carried out. Four applications (totalling 18ha) were received in 1988, and surveys performed. Five cases of 'fish-kill' were reported during the year, 2 in the Northern Division and 3 in the Central Division.

3.4.5 FAD DEPLOYMENT

Ika Corporation and Hatsu Maru boats have deployed 9 Fish Aggregating Devices during 1988. The Division has routinely serviced the FAD'S deployed by the Division. Assistance was provided by IMR for deployment of several FADs and a joint catch monitoring programme was initiated to determine FAD effectiveness and identify future placement sites.

3.4.6 DEEPWATER SNAPPER

The semi-industrial fishery for deepwater snapper reached what is estimated as full capacity in 1988, and the Division continued to provide advisory service on gear development and exploratory fishing. The Division, however could not carry out any vigorous stock assessment work due to unavailability of the research vessel, but commercial catches were monitored.

3.4.7 SMALL SCALE LONG LINING

The Division and Institute of Marine Resources ran a joint project to assess the viability of commercial operation of 28 footers in small scale pelagic longline fisheries. For small scale pelagic longlines some modification of the 28 footers is required. Further investigation is required to give a reasonable indication as to the economic viability of the methods for 28 footer vessels. A chief economist from the Forum Fisheries Agency was also attached to the Division to investigate on the economic viability of 28 foot vessels. Several larger vessels entered the fishery supplying sashimi grade yellowfin and bigeye to overseas markets.

3.4.8 GIANT CLAM PROJECT

The Project has been concentrating mainly on hatchery work and setting up of Makogai as a mariculture station. Extensive resource surveys showed that *Tridacna derasa* (vasua dina) is grossly overfished, and as a result a ban on export of vasua has been imposed until such a time when the resource is felt to have recovered.

The new quarantine/mariculture facility on Makogai was used to successfully spawn two species of giant clam, *Tridacna derasa* and *T. squamosa*, and the project is expected to run for another 3 years.

3.4.9 SEAWEED CULTURE

The inconsistent supply of dried seaweed led to the closure of Coast Biologicals, the sole buyer of seaweed since the start of the industry. From 260 farms operating in 1987, only 33 had been operating during 1988 producing 60.5 tonnes of dried seaweed. NMA in conjunction with the Fisheries Division is now responsible for buying all dried seaweed. Exports is made to Denmark. Due to poor repayments, the FDB was hesitant to lend farmers further funds restricting the expansion of farms. However, further large-scale commercial involvement is expected in the near future as world prices have risen above break-even levels once more.

3.4.10 FRESHWATER FISHERIES

Continued monitoring of the impoundments stocked with fish in previous years (Vaturu and Monasavu) showed very promising growth, particularly of the Bass. Reports were prepared on the biology of several species, and their status in Fiji, and a protocol was developed for investigating fish-kills.

AQUACULTURE

3.4.11 MACROBRACHIUM CULTURE

Hatchery production of 90,000 post larvae were achieved during the year the Naduruloulou Hatchery. These were used for poly-culture trials with tilapia and grass carp. The trials will continue for the year 1989.

3.4.12 PRODUCTION OF MAJOR CARPS

Weed control programme by the use of grass carp in the rivers continue to be achieving success. The year 1988 saw alot more Western rivers infested with water-hyacinth. These were stocked with grass carp. A total of 55,600 fingerlings were released. The programme is continually monitored.

3.4.13 RED TILAPIA CULTURE

Experimental trials are continuing, and during the year several commercial sales from the pilot-farm were made with very good results.

3.4.14 RURAL AQUACULTURE PROGRAMME

27 rural aquaculture farms were in production in 1988. 24,426 tilapia fry were supplied through the research station producing aproximately 2.5 tonnes of fish.

3.5 INFORMATION AND LIBRARY SERVICES

A wide range of books, periodicals and publications on relevant topics were made available to Fisheries staff, USP students and interested people through the Fisheries Division Library, and the branch libraries set up in Lautoka and Labasa continued to serve the public.

Monthly news bulletin (Qitawa), research reports, radio broadcasts (in 3 languages-English, Hindi and Fijian), newspaper supplements and displays during national awareness programmes such as the World Food Day were produced to enhance public awareness of the fishery sector and support extension and research activities. Despite staff shortages in the latter part of the year, public awareness reports and broadcasts continued to increase in scope and quality, but much more needs to be done particularly in educating the public and the fishermen on the need for resource management and conservation.

3.6 INTERNATIONAL LINKAGES

The Fisheries Division actively participated in a range of regional activities during 1988, including the participation in the two inaugural meetings i.e. The Standing Committee on Tuna and Billfish (SCTB) in Noumea and the Western Pacific Consultative Committee (WPFCC) in Manila Philippines.

In addition the Division participated in the 20th SPC Technical Meeting and other several meetings with PFA to negotiate US Multilateral Treaty with Japan.

Other participation in conferences included the Pacific Inshore Fisheries Resource (SPC), International Coral Reef Symposium (Australia), and the Seventh Session of the Indo-Pacific Fisheries Committee (IPC) on Aquaculture held in Thailand.

Regular contacts is maintained with all regional fisheries organizations, including SPC, FFA, SPEC, ICOD, FAO/UNDP regional fisheries programme.

APPENDIX -- FIGURES

FIGURE	PAGE
Figure 1 Volume of fish sales at various municipal market outlets in 1987 and 1988.....	16
Figure 2 Volume of non-fish sales at various market outlets in 1987 and 1988.....	16
 MONTHLY EXPORTS 1988	
Figure 3 Canned Fish.....	17
Figure 4 Beche-de-mer.....	17
Figure 5 Trochus shells.....	18
Figure 6 Crustaceans and Molluscus.....	18
Figure 7 Fish/Fresh Chilled.....	19

Figure 1

VOLUME of FISH SALES
at VARIOUS MARKET OUTLETS
in 1987 & 1988

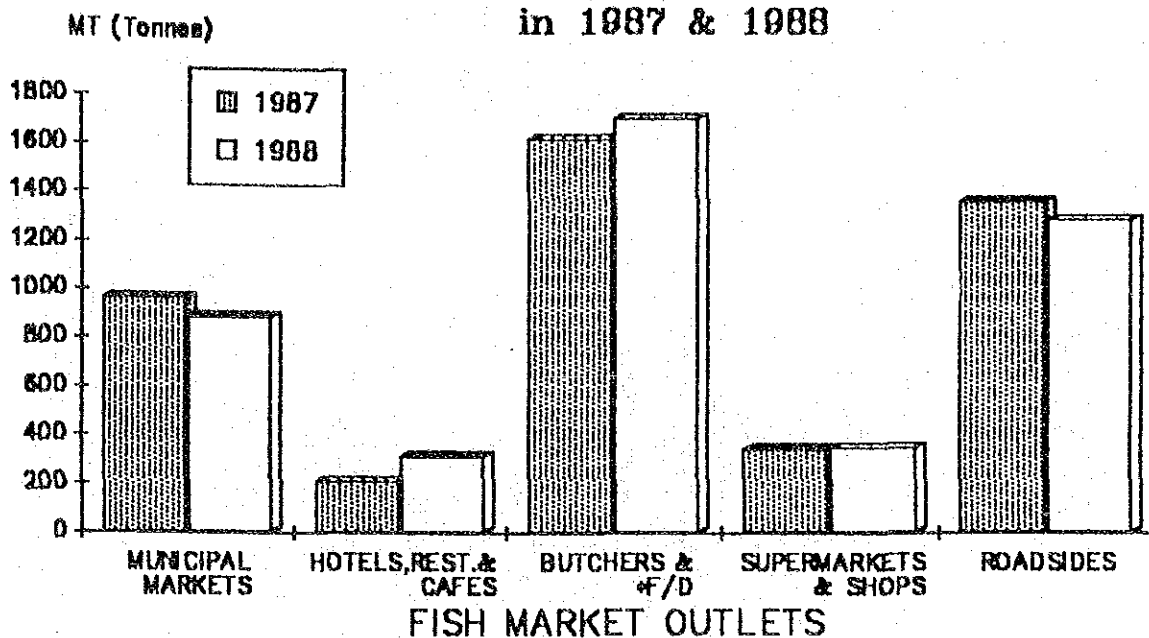


Figure 2

VOLUME of NONFISH SALES
at VARIOUS MARKET OUTLETS
in 1987 & 1988

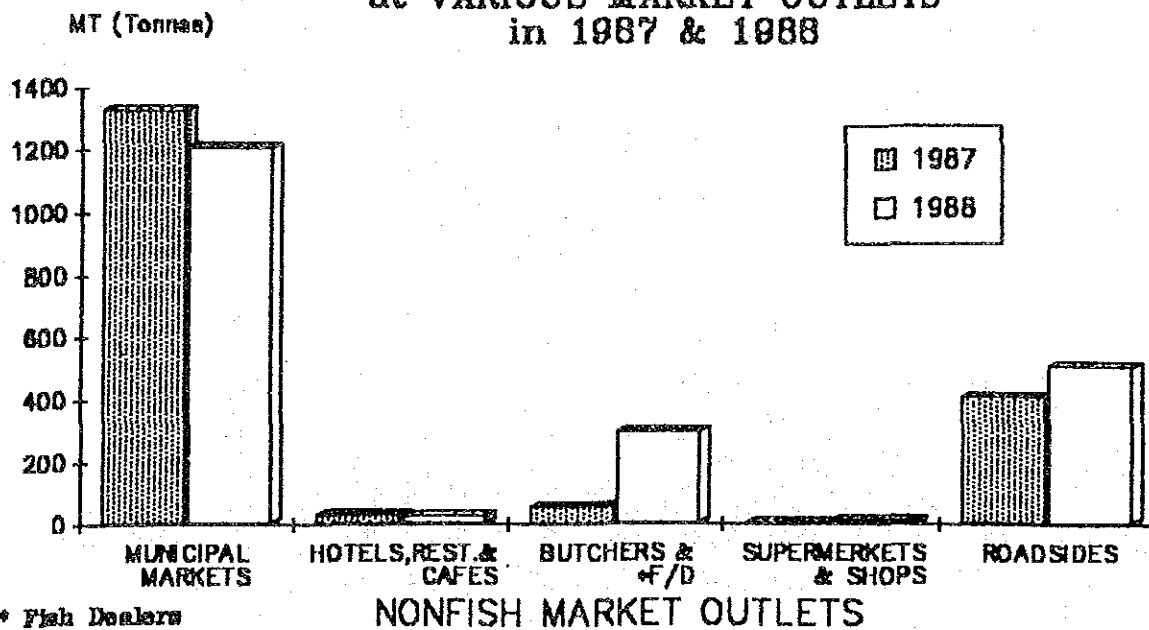


Figure 3

MONTHLY EXPORTS 1988

Canned Fish

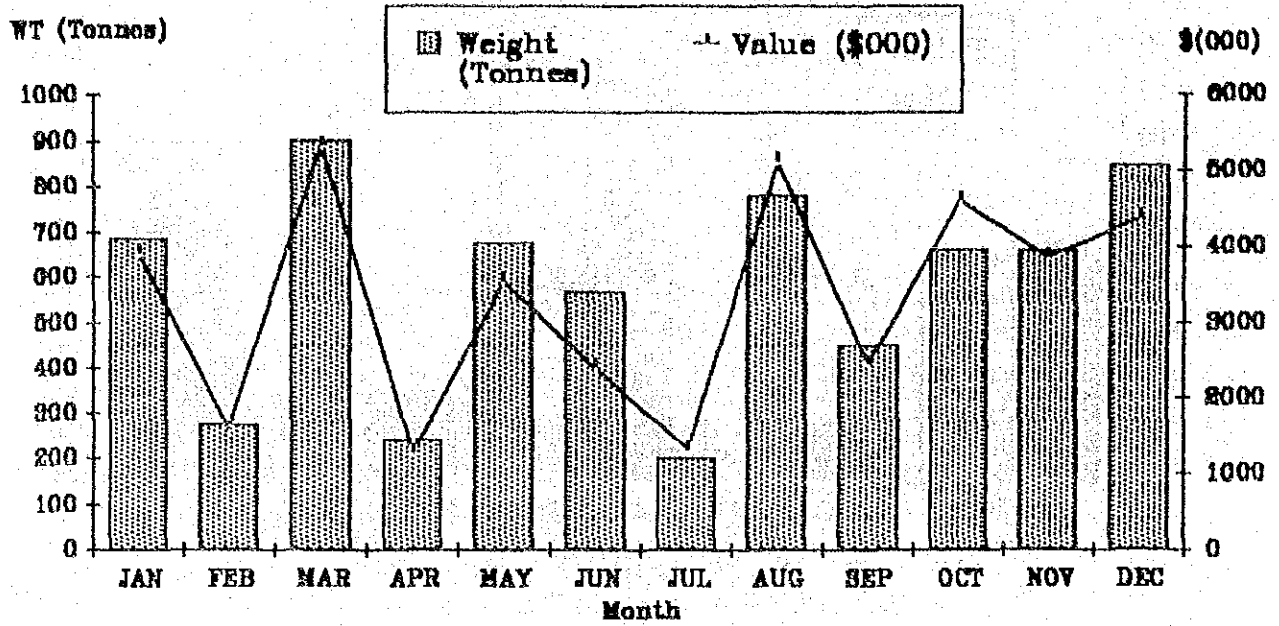


Figure 4

Beche-de-mer

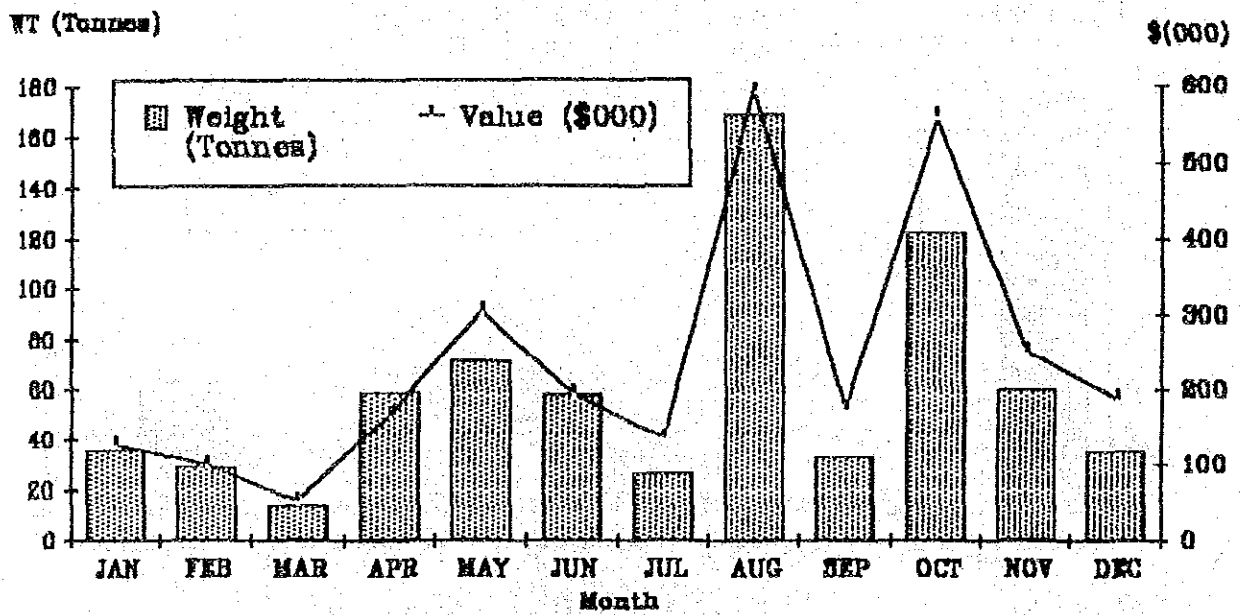


Figure 5

MONTHLY EXPORTS 1988

Trochus shells

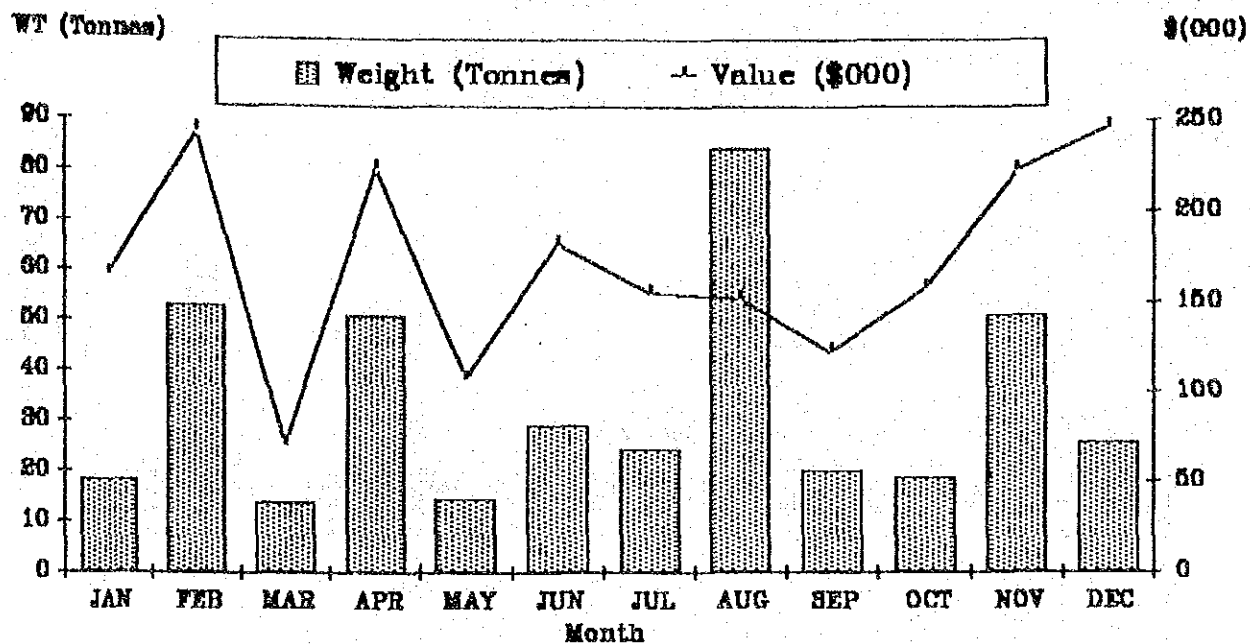


Figure 6

Crustaceans & Molluscs

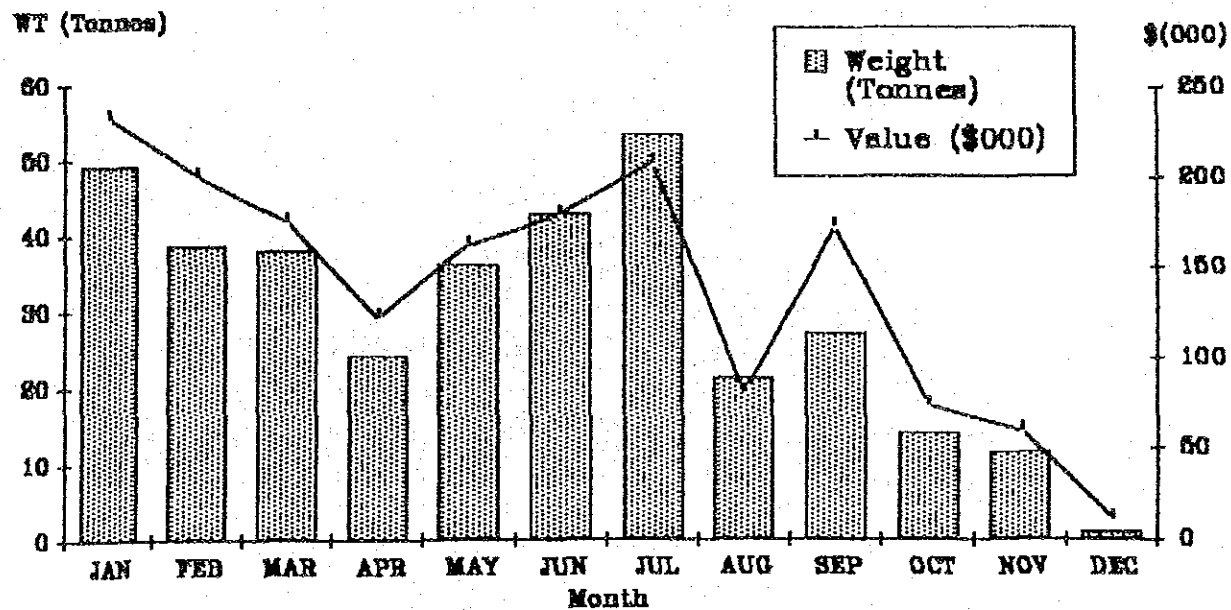
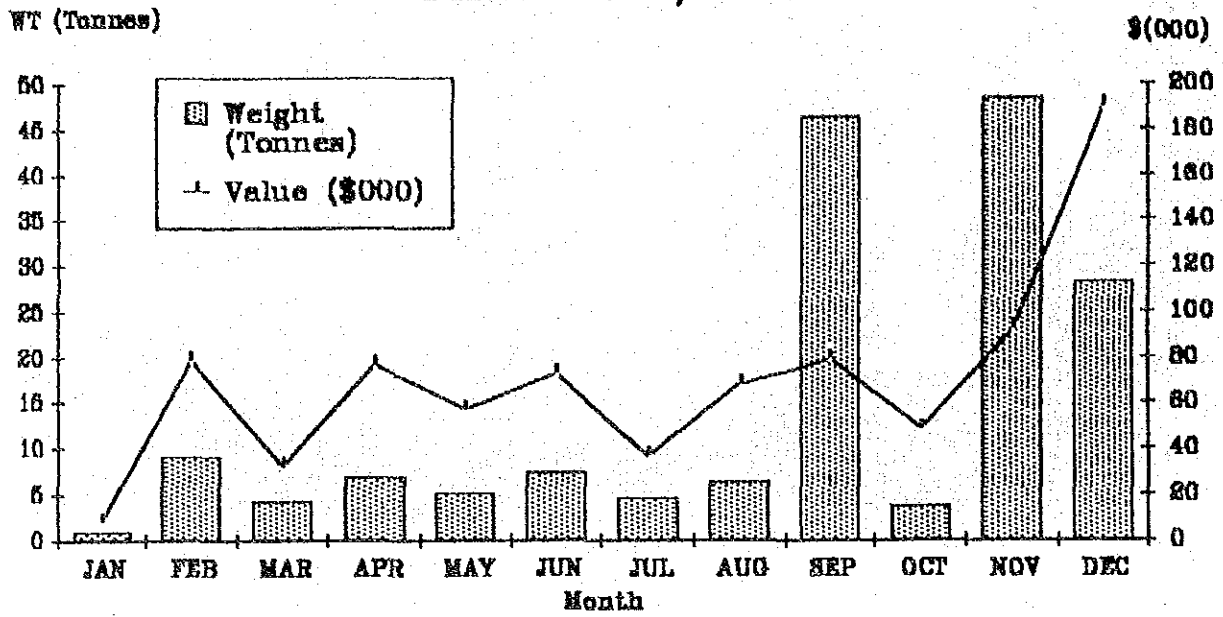


Figure 7

MONTHLY EXPORTS 1988

Fish Fresh/Chilled



APPENDIX -- TABLES

TABLE	PAGE
Table 1 Unloading quantity by boat (PAFCO) in 1988.....	21
Table 2 Unloading quantity of fish by species at PAFCO.....	22
Table 3 Food Fishes of Fiji by Family with Common Fijian Names.....	23
Table 3 Non-fish seafood of Fiji with Common Fijian Names.....	23
Table 4 Weighted mean price of fish products at municipal markets in 1988.....	25
Table 5 Mean price of non-fish products in municipal markets in 1988.....	26
Table 6 Volume of fish sales through municipal markets in 1988.....	27
Table 7 Volume of non-fish sales through municipal markets 1988.....	28
Table 8 Volume of fish sales and value per Division by major families.....	29
Table 9 Volume of non-fish sales and value per Division by major families.....	30
Table 10 Volume of fish sales through non-municipal markets 1988.....	31
Table 11 Volume of non-fish sales through non-municipal markets'88.....	32
Table 12 Commercial and Artisanal fisheries summary.....	33
Table 13 Exports of Fisheries Products in 1988.....	34
Table 14 Re-exports of Fisheries Products in 1988.....	36
Table 15 Imports of Fisheries Products in 1988.....	37

TABLE 1

UNLOADING QUANTITY BY BOATS IN 1988

BOATS \ MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
1) Long line													
SHIN KING YANG NO 3	0.00	0.00	0.00	0.00	0.00	53.89	0.00	0.00	0.00	0.00	93.82	0.00	147.71
JIN DING	0.90	127.53	0.00	0.00	0.00	115.68	0.00	0.00	0.00	0.00	119.23	0.00	362.43
SHENG YUH NO 6	0.00	111.37	0.00	0.00	106.93	0.00	0.00	0.00	0.00	0.00	70.62	0.00	288.92
SHENG WANG NO 7	113.42	0.00	0.00	106.48	0.00	0.00	0.00	108.59	0.00	0.00	110.82	0.00	439.32
HAI SHIN	125.19	0.00	64.49	45.07	0.00	0.00	119.06	0.00	0.00	0.00	104.96	0.00	458.75
HAI CHANG NO 1	0.00	116.05	0.00	0.00	0.00	84.86	0.00	0.00	0.00	65.94	0.00	0.00	266.85
HUAR CHENG NO 1	0.00	0.00	0.00	109.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	109.76
LIH FAN	0.00	0.00	99.75	0.00	66.60	0.00	0.00	0.00	81.66	0.00	0.00	0.00	248.00
SHIN CHYUN NO 7	0.00	90.63	0.00	64.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	155.07
LONG DAR NO 21	0.00	0.00	0.00	153.20	0.00	0.00	0.00	152.49	0.00	0.00	0.00	0.00	305.69
LIH SHENG	0.00	102.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	102.07
JIE YEOW NO 6	0.00	0.00	0.00	108.69	0.00	0.00	0.00	113.68	0.00	0.00	0.00	108.53	330.90
SHENG JYI NO 7	0.00	0.00	0.00	0.00	145.69	0.00	0.00	0.00	0.00	125.06	0.00	0.00	270.75
LIH PENG	0.00	0.00	0.00	0.00	81.03	0.00	0.00	0.00	93.10	0.00	0.00	0.00	174.13
TASU LOCAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68	2.29
HAUR CHUEN NO.3	0.00	0.00	0.00	0.00	0.00	0.00	147.26	0.00	0.00	0.00	0.00	0.00	147.26
LIEN CHEN NO 1	0.00	0.00	0.00	0.00	0.00	0.00	142.16	0.00	0.00	0.00	0.00	0.00	142.16
FONG CHEN YIH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.67	0.00	0.00	0.00	0.00	112.67
HUEY FAR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	151.35	0.00	0.00	0.00	0.00	151.35
HAUR CHEUN NO 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	136.13	0.00	0.00	0.00	0.00	136.13
LIEN CHUEN WANG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91.10	0.00	0.00	82.27	173.37
KAO YA NO .1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.73	0.00	0.00	71.73
Yu Mao No. 121	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	113.42	0.00	113.42
Yu Mao No. 122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98.27	98.27
Chyi Fong	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.99	77.99
SUB TOTAL	238.61	547.64	164.24	587.64	400.26	255.04	408.48	774.92	265.86	262.72	612.86	368.74	4886.98
2) Pole & Line													
H HARU NO 7	126.02	113.63	87.27	59.78	58.37	62.30	76.44	0.00	0.00	0.00	0.00	0.00	583.81
H HARU NO 8	128.21	127.63	125.68	42.18	84.96	82.17	84.59	0.00	0.00	0.00	60.32	145.86	881.01
IKA NO 5	144.93	64.86	60.64	39.45	45.15	71.96	37.72	17.69	0.00	0.00	0.00	0.00	482.39
IKA No. 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.74
IKA NO 7	85.13	65.45	65.44	21.12	22.15	30.48	0.67	0.00	0.00	21.13	34.59	104.11	450.26
IKA NO 8	106.39	73.47	92.82	32.74	44.01	16.51	33.63	7.45	0.00	0.00	40.56	20.37	467.95
INDEPENDENCE	105.55	126.52	87.05	33.08	56.00	50.53	0.00	22.72	0.00	0.00	0.00	53.95	535.40
TRAPPER	0.00	0.00	0.00	0.00	22.65	37.14	40.50	0.00	0.00	0.00	0.00	39.40	139.68
SUB TOTAL	696.24	571.56	518.29	228.35	333.30	351.09	273.54	47.85	0.00	21.13	135.47	461.42	3638.24
POLE & LINE													
IKA NO 3 (SOLANDER)	0.00	24.38	64.87	23.18	21.84	20.81	27.12	3.62	0.00	0.00	0.00	45.68	231.49
ARINTRONGG	74.32	45.03	53.85	29.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	202.98
KANEATI	64.96	33.62	72.91	24.98	18.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	215.43
SUB TOTAL	139.27	103.02	191.63	77.95	40.80	20.81	27.12	3.62	0.00	0.00	0.00	45.68	649.90
IMPORT													
AMERICA	0.00	52.67	0.00	38.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91.10
PHG	364.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	364.13
KIRIBATI (")	0.00	0.00	0.00	0.00	371.24	106.09	0.00	0.00	0.00	0.00	0.00	0.00	477.33
SOLOMON	0.00	0.00	0.00	0.00	0.00	868.52	313.42	1493.28	0.00	761.57	361.66	372.92	4171.37
NEW ZEALAND	0.00	0.00	58.72	0.00	0.00	15.23	0.00	0.00	0.00	0.00	0.00	0.00	73.96
JAPAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1471.67	0.00	0.00	0.00	1471.67
SUB TOTAL	364.13	52.67	58.72	38.43	371.24	989.85	313.42	1493.28	1471.67	761.57	361.66	372.92	6649.55
GRAND TOTAL	1438.25	1274.90	932.88	932.36	1145.60	1616.78	1922.56	2319.66	1737.52	1045.42	1109.99	1248.76	15824.67

TABLE 2

UNLOADING QUANTITY OF FISH BY SPECIES AT PAFCO:

YEAR: 1988

SPECIES \	MONTH												TOTAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1) Long line													
ALBACORE	213.018	455.064	124.685	350.164	217.140	160.402	323.638	644.744	182.806	199.678	499.526	300.330	3671.195
YELLOWFIN	0	0	0	0	0	0	0	0	0	0	0	0	0.000
BIG EYED TUNA	0	0	0	0	0	0	0	0	0	0	0	0	0.000
BLUE MARLIN	0	0	0	0	0	0	0	0	0	0	0	0	0.000
BLACK MARLIN	0	0	0	0	0	0	0	0	0	0	0	0	0.000
SWORD FISH	0	0	0	0	0	0	0	0	0	0	0	0	0.000
STRIPED MARLIN	0	0	0	0	0	0	0	0	0	0	0	0	0.000
SAIL FISH	0	0	0	0	0	0	0	0	0	0	0	0	0.000
SPBAR FISH	0	0	0	0	0	0	0	0	0	0	0	0	0.000
MAHOO	0	0	0	0	0	0	0	0	0	0	0	0	0.000
MAHI MAHI	0	0	0	0	0	0	0	0	0	0	0	0	0.000
BLUE SHARK	0	0	0	0	0	0	0	0	0	0	0	0	0.000
SKIPJACK	0.298	2.146	0.310	2.728	2.038	1.546		9.246	4.280	6.454	7.776	5.226	42.248
OTHERS	25.291	90.232	39.242	234.746	181.078	93.088	84.837	120.896	78.770	56.591	105.559	63.180	1173.510
Sub Total	238.607	547.542	164.237	587.638	400.256	255.036	408.475	774.886	265.856	262.723	612.861	368.736	4886.953
2) Pole & Line													
ALBACORE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
YELLOWFIN	38.607	71.262	68.842	51.126	47.160	92.490	78.252	19.728	0.000	4.866	25.982	28.542	526.857
BIG EYED TUNA	0.000	0.142	0.010	0.000	0.000	0.000	0.030	0.030	0.000	0.000	0.000	0.000	0.212
SKIPJACK	796.909	603.178	641.072	255.170	326.936	279.408	222.428	31.742	0.000	16.260	109.483	478.550	3761.136
OTHERS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sub Total	835.516	674.582	709.924	306.296	374.096	371.898	300.710	51.500	0.000	21.126	135.465	507.092	4288.205
3) IMPORT													
ALBACORE	0.000	52.672	58.698	38.426	0.000	15.176	0.000	0.000	0.000	159.064	0.000	0.000	324.036
SKIPJACK	242.290	0.000	0.024	0.000	370.606	907.278	287.506	1171.530	1471.668	601.378	0.000	371.727	5424.007
YELLOWFIN	108.818	0.000	0.000	0.000	0.638	61.512	24.606	320.818	0.000	0.000	150.478	1.170	668.040
BIG EYE	19.352	0.000	0.000	0.000	0.000	5.880	1.310	0.920	0.000	1.124	7.428	0.000	27.014
OTHERS	2.666	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	203.756	0.000	206.422
Sub Total	364.126	52.672	58.722	38.426	371.244	989.846	313.422	1493.268	1471.668	761.566	361.662	372.897	6649.519
GRAND TOTAL	1438.249	1274.896	932.383	932.360	1145.596	1616.780	1022.607	2319.654	1737.524	1045.415	1109.988	1248.725	15824.677

TABLE 3 CONT...

NON FISH SEAFOOD OF FIJI WITH COMMON FIJIAN NAMES

Fijian names	Scientific names	Fijian names	Scientific names
=====		=====	
PRAWN		GASTROPODS	
=====		=====	
Moci	<i>P. concinnus</i>	Yaga	<i>Lambis lambis</i>
Ura	<i>P. canaliculatus, P. monodon, M. equidens, M. rosenbergii, M. lar</i>	Sici	<i>Trochus niloticus</i>
CRAB		Tovu	<i>Trochus pyramis</i>
=====		Madrali	<i>Nerita polita</i>
Qari	<i>S. paramamosain</i>	Golea	<i>Strombus gibberulus</i>
Kukadamu	<i>S. erythroductyla</i>	Drevula	<i>Polinices flemingiana</i>
Ugavale	<i>Birgus latro</i>	ECHINODERMS	
Kukaloa	<i>M. tessor</i>	=====	
Qarivatu	<i>T. crenata</i>	Dairo	<i>Metriatyla scabra</i>
Lairo	<i>C. carnifex</i>	Loaloa	<i>Microthele nobillii</i>
Uarudina	<i>P. versicolor, P. ornatus, P. penicillatus</i>	Vula	<i>Bohadschia marmorata</i>
Mana	<i>T. anomala</i>	Cawaki	<i>Tripneustes gratilla</i>
		Sucuwalu	<i>Mirothele fuscogilva</i>
BIVALVES		SEANEEDS	
=====		=====	
Kaikoso	<i>A. cornea</i>	Nawa	<i>Caulerpa racemosa, Caulerpa sp.</i>
kaidamu	<i>Periglypta puerpera</i>	Luminawa	<i>Gracilaria verrucosa</i>
Oaqa	<i>Gafrarium tumidum</i>	MISC.	
Sigawale	<i>Atactodea striata</i>	=====	
Vasuadina	<i>T. derasa</i>	Tadruku	<i>Acanthozostera gemmata</i>
KAtavatu	<i>T. maxima</i>	Veata	<i>Dolabella auricularia</i>
Cega	<i>T. squamosa</i>	Kuita	<i>Octopus sp.</i>
Civa	<i>Pinctada margaritifera</i>		
Kuku	<i>Modiolus agripetus</i>		
Kai(f/w)	<i>Batissa violacea</i>		
TURTLE			
=====			
Taku	<i>Eretmochelys imbricata</i>		
Vonudina	<i>Chelonia mydas</i>		

TABLE 6

WEIGHTED MEAN PRICE FOR FISH PRODUCTS AT MUNICIPAL MARKETS IN 1960

	Man/Pre	Barva	Huastoti	H/craak	Laguna	Tallera	Sigatoka	Hodi	Havala	Lapuala	Da	Yava	Kahirali	Lobana	Katavava
	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
SPACIUS	2.58	2.03	2.75	2.60	2.61	2.14	2.20	2.67	2.21	2.76	2.76	2.51	2.62	1.99	1.90
Kavago	1.61	2.71	2.28	3.43	2.93	2.49	2.94	2.91	2.75	3.85	3.88	3.21	3.51	3.11	2.58
Kelita	3.21	2.56	3.33	3.43	2.85	2.63	2.70	2.43	3.30	3.43	3.29	3.31	3.10	3.74	2.29
Sobete	2.24	2.67	3.26	3.19	2.99	2.45	2.66	3.53	3.20	3.30	3.45	3.15	3.23	3.42	2.41
Edacta	2.55	2.33	2.30	2.40	2.72	2.48	2.52	2.60	2.59	2.70	2.78	2.44	2.62	1.41	1.90
Hana	2.97	2.70	2.30	3.11	2.92		2.56	3.22	3.49	3.04	3.67	2.15	1.99	2.51	2.41
Yu	2.24							2.12						2.21	2.16
Dokoniweli	3.11	2.53	2.47	2.28	2.38	2.50	2.66	3.40	3.11	3.26	3.44	2.99	2.97	2.65	2.47
Sobotudun	1.14		3.47				2.80			3.48				2.30	2.84
Sobotutala	1.50			3.50											
Karabasa	2.24	2.91	3.57	3.53	3.10	2.77	3.01	3.57	3.35	3.32	3.46	3.13	3.08	2.88	2.22
Yava	2.62			2.00		2.90		3.16	2.31	2.41	3.07	3.00	3.00	2.50	2.20
Kesala	2.44				3.33			3.54	4.00	2.50	3.41			2.41	2.51
Senikaukava	2.47	1.11	2.24	3.43	2.00	2.27	2.10	2.77	2.74	2.81	2.80	2.73	2.70		
Donu	3.43	2.50	3.23	3.43	3.11		2.74	3.91	3.31	3.46	3.65	3.14	2.92	3.52	2.95
Delabuteva	2.27			2.00										2.32	1.90
Selala	2.01	2.27	2.43	2.52	2.74	1.95		1.93	1.70	2.00	2.15	2.24	2.14	1.47	1.37
Walu	3.35	3.91	2.55	3.47	3.22		2.99	3.55	3.21	3.52	3.35	3.11	2.40	2.38	2.39
Vahoo															
Safalanitoga	1.36	1.99						2.00	1.31	1.93	2.03	1.84	1.93	1.67	
Dogtooth	2.33								2.00	2.21	2.30			2.74	1.98
Stipjack	2.09			2.28	3.26			1.44	2.02	2.03	2.27			1.76	
Yellowfin	2.29			2.51			1.60	2.50	2.29	2.44	2.15	2.50	2.30	2.51	1.87
Wackerel Tuna	2.30							2.50	2.40					2.40	
Saga	2.70	2.31		2.76	2.33	2.21	1.93	2.30	2.79	2.79	2.83	2.73	2.43	2.43	1.99
Sagaloa	2.27		3.33	3.20	2.17									2.41	
Yatole	2.47			2.72				2.00	2.33					1.51	1.30
Yorinokoli	1.70	1.48	1.93	2.00		2.97		1.50	1.69	1.64	2.06	1.65	1.58	0.91	
Rainbow Runner	2.36			3.12	3.09		1.79	1.80	2.49	2.36	2.39	2.19	1.50	1.33	1.30
Ki	2.26	2.06	2.77	2.44	2.69	2.05	2.00	2.29	2.37	2.29	2.23	2.01	2.05	1.66	1.49
Ose	2.13	1.75	2.41	2.30	2.31	1.76		1.74	2.30	2.29	2.11	2.21	2.12		
Hataroko	2.51	2.07	3.20	2.92	2.50	1.95	2.00	2.51	2.50	2.45	1.37	2.47	2.34	1.76	1.90
Kaidanu	2.42	2.11	2.40	1.77	2.05	2.00		3.40	3.19	3.23	3.02	3.46	3.44	1.94	1.94
Osau	2.71	2.05	2.72	2.76	2.69	2.19	2.24	2.87	2.40	2.92	2.99	2.83	2.50	1.77	1.95
Saci	2.22	2.00	2.57	2.26	2.31	2.09	2.35		2.51		2.46			1.64	2.06
Take	2.25	1.96	2.50	2.56	2.32	2.24	2.16	2.65	2.42	2.38	2.56	2.09	2.16	1.46	1.54
Regua	2.33		2.41	2.20	2.35				2.10			2.10			
So	1.10	2.93	2.40	1.74	2.63	2.16	2.59	3.18	3.34	3.65	3.19	3.19	3.10	2.29	1.91
Utouco	2.94			3.00				3.02	3.12	3.05	3.04	2.92	2.85	2.54	2.26
Kawidri	2.29	3.00												2.10	2.10
Uluqa	3.47							3.62	3.12	3.55	3.54	3.21	3.64		2.30
Kosinibogi	2.73													2.45	2.21
Opkapapa	2.83		3.00	3.00					2.46	3.20	3.20	2.54		2.44	2.20
Bedford	2.43													2.50	2.20
Yabaca	1.63			0.00	1.30									1.61	
Salapi	2.31	1.80	2.52	2.62	2.52	2.16	2.20	2.34	2.49	2.42	2.46	2.41	2.46	1.64	1.50
Te	2.07	1.97	2.46	2.62	2.45	2.20	1.93	2.09	1.70	2.29	2.27	1.88	2.24	1.49	
Olavi	2.01	2.15	2.41	2.56	2.59	2.29	1.94	2.35	1.87	1.94	2.22	1.84	2.02	1.56	1.40
Kalia	2.14			2.25					2.30	2.00	2.00			4.66	1.91
Kerekerewele	2.47							2.50	2.44	2.52	2.43	2.62	2.42		
Woolaha	2.37	1.16	2.14	2.56	2.41	2.31	2.00	2.31	2.12	2.49	2.25	2.19	2.14	1.41	1.41
Kela	2.24	2.04	2.20	2.49	2.33	2.18	2.60	2.82	2.44	2.97	2.97			1.99	1.74
Zota	2.00														
Kava	2.64		2.21	2.56	2.42	2.17			3.60	3.14	2.73		2.50	1.70	1.63
Kauco	2.44	2.02	2.52	2.62	2.52	2.16	2.20	2.83	2.74	2.72	2.69	2.56	2.51	2.33	2.00
Kofia	2.25		2.26	2.50	2.07	2.14					2.74	2.00			
Qitava	2.34	1.70	2.40	2.47	1.50	1.81	1.45	2.45	2.31	2.43	2.40	2.46	2.43		1.20
Kere	2.49	1.59	2.49	2.51	2.29	2.00			2.50	1.84					
Yaldia	1.43	1.22	2.47	1.89	2.26	1.80	3.19	0.92	0.74	0.84	0.99	0.81	0.81	0.59	
Shark	2.50		2.00	1.50	3.21			9.61	1.50	0.56	1.16	0.56	0.66		
Kuqa	3.36	3.07	3.31	3.17	3.42	2.00	3.85	3.57	3.39	3.47	3.30	3.22	3.33	3.33	2.45
Kere	2.24	2.00	2.27	2.52	2.02	2.34		2.46	2.20	2.43	2.30	2.37	2.28	2.74	2.00
Sabu	2.16	1.43	2.56	2.35	2.55	1.95		2.21	2.03	2.10	2.16	2.19	2.05	1.54	1.30
Yava	1.93	1.03	2.01	2.21	1.90	2.10		1.46	1.98	2.03	2.30	1.79	1.84	1.27	1.70
Ogo	2.34	2.25	2.44	2.46	2.50	2.01	2.44	2.97	2.43	2.33	2.44	2.45	2.35	2.87	1.67
Yolvol	2.46	1.47	2.41	2.26	2.54	1.99		2.40		1.56	3.21	1.30	1.00		
Yorisi	1.83	1.52	1.46	2.01	2.41	1.49	1.56	1.61	1.43	1.48	1.53	1.58	1.37	1.40	
Mehieubi	1.10			2.20				2.77	2.25					2.60	
Kaikol	2.16	1.61	2.47	2.53	2.35	2.05	1.60	2.20	2.21	2.26	2.15	3.17	2.12	1.31	1.20
Ketekeu	2.23	1.95	2.44	2.10	2.41			1.96	2.00	2.00	3.06	1.46	1.55	1.51	1.98
Kete	2.14	1.43	2.20	2.29	2.06	2.23	2.00	2.23	2.29	2.20	2.10	2.04	1.91	1.45	1.21
Kuro	1.56							2.42			3.69			2.46	1.57
Sirisirirani	2.24			2.44	2.45			2.00	2.54	2.47	2.11	2.50		2.89	1.45
Sovosova	2.59		2.20	2.23	2.40		2.47	2.44		2.30	2.96	3.04	2.53	2.25	2.00
Kuro	1.99		2.46	2.21	1.50	1.50		1.44	1.64	1.57	1.42	1.53	2.33	1.57	1.40
Yarivoco	2.07		2.50	1.83	2.50	2.00		3.14	2.45	2.52	2.25	2.70		2.19	1.93
Kalaba	2.13			2.70							3.00				
Khava	2.03	1.44	1.42	2.13	1.99	1.42		2.09	1.99	1.96	2.02	2.00			
Yauvava	1.19			2.73			2.10							1.61	1.43
Toribox (fish)	1.43			2.24						3.30				1.34	
Corecoro	2.43		2.40	2.45	2.09		2.30	3.04	2.93	2.48	2.30	2.99	0.45	1.74	
Kataba	2.17	1.71			2.30							2.30			
Khadroka	2.28	2.27		2.50					1.40	2.00					
Sohroki	1.61		2.00	2.24				1.69	1.47	1.49	1.44	1.26	1.50	1.20	
Tilapia	2.10	1.96													

TABLE 5

MEAN PRICE OF NON FISH PRODUCTS IN MUNICIPAL MARKETS IN 1988

	Wt/Mean Price	N/CRK Price	SUV Price	NAV Price	LAQ Price	NAU Price	KOR Price	SIG Price	NAD Price	LTK Price	BA Price	TAV Price	RAK Price	LAB Price	SAV Price
PRAWNS															
Noci	4.76	5.69	4.74		5.60	4.43	2.39	5.00	4.48	5.03	5.08	5.78	4.10		
Ura	6.92	5.96	5.81		6.76	6.31	5.32	7.57	10.10	8.31	8.26	8.77	9.03	6.62	5.53
LOBSTERS															
Uraudina	6.46	6.81	7.00		6.79	6.10	5.07	6.94	7.99	8.72	8.94	8.43	7.85	4.04	5.21
Mana	2.67	2.50	2.85		2.21	2.08	2.00			3.00					3.50
CRABS															
Qari	5.68	5.84	5.94	4.85	5.72	5.40	5.81	6.03	8.14	6.41	6.44	6.64	5.65	5.44	4.29
Qarivatu	4.99					2.00			2.67	10.00		2.00		2.74	
Kukaloo	2.32	2.16	2.33		2.00	2.99	2.38		1.56	1.73	1.58	1.49	1.79		
Kukadamu	1.60	2.00	2.24			2.00			1.58	1.64	1.65	1.67	1.62	1.38	1.30
Lairo	2.66		2.43	1.77		2.58	3.00		2.75	2.83	2.75	2.65	2.34	3.07	2.64
BIVALVES															
Kai	0.36	0.25	0.28	0.31	0.32	0.24	0.29	0.40	0.46	0.54	0.38	0.49	0.51	0.21	0.26
Kaikoso	0.43	0.29	0.32	0.28	0.30	0.25	0.39	0.30	0.52	0.53	0.51	0.48	0.56	0.17	0.21
Kaidawa	0.40		0.36		0.30	0.29			0.49	0.63	0.52	0.50	0.46	0.25	
Qaqa	0.99					0.36				1.67					
Kaivadra	0.50										0.50		0.50		
Sigawale	0.41	0.50				0.30			0.36	0.37		0.20	0.53		
Vasuadina	2.09	2.43	2.32	2.25		2.45	2.50		3.03	1.24			2.44	2.72	2.50
Katavatu	2.64					2.30			2.51	2.62	2.92	2.64	2.52	2.71	2.17
Qeqe	0.41	0.27	0.47						0.38	0.43			0.42	0.56	
Civa	0.56	0.46	0.75			1.00		0.60		0.54					
Kuku	0.31	0.67	0.55			0.50			0.31	0.28	0.32	0.27	0.28	0.35	1.00
Civaciva	0.57					1.00			0.68	0.52			0.50		
Kalokalo															
Bu	4.00									0.38				0.41	0.38
GASTROPODS															
Yaga	0.70	0.35	0.90			0.59	0.56		0.41	0.41	0.42	0.44	0.38	2.57	2.47
Tivikea	0.58		0.53	0.45										2.66	
Golea	0.53		0.30	1.00		1.83			0.43	0.31		0.31	0.43	2.28	1.00
Sici	2.33	1.29	2.47			2.23	1.67		0.50	0.50			2.13	2.41	2.27
Tovu	0.51	0.50							0.37	0.86	0.43	0.49	0.27	2.30	
Madrali	0.29								0.50	0.24					
Lasawa	0.33	0.50							0.34	0.27		0.34	0.38		
ECHINODERMS															
Bairo	0.45	0.53	0.89	1.04		0.53	0.91		0.52	0.40	0.45	0.28	0.53	3.16	3.26
Vula	0.40		0.40												
Loaloo	0.61	0.90							0.69	0.45					
Cawaki	0.65	0.62	0.62			0.39	0.34							2.40	
Sucuwalu	0.58									0.50			0.60		
TURTLES															
Vouudina	2.65			2.50					2.60	2.88	2.31	2.57	2.80	2.77	2.10
Taku	2.99	3.00												2.80	
SEA WEED															
Luniwawa	1.30	0.75	0.96	1.00		0.60			1.66	1.16	1.52	1.79	1.44	1.99	2.21
Sagati	1.19								1.24	1.13	1.60	1.00			
Nana	1.12	0.78	0.91	0.90		0.56	0.90		1.45	3.86	1.41	1.67	1.41	1.65	2.21
MISC.															
Tadruku	1.44	0.89	1.54			1.39	1.00		2.30	2.94				2.00	
Veata	1.70	0.50	0.91	2.00		0.75		2.37	1.91	2.70	1.52	1.60	1.64		
Kuita	1.62	2.21	2.53	1.50		1.38	2.30		2.67	3.01	2.61	2.50	2.53	3.18	3.21

TABLE 6

VOLUME OF FISH TAKEN THROUGH MUNICIPAL MARKETS IN 1964

SPSPEC(SPEC)	TOTAL	Municipal Markets															
	2583.14	19.42	13.51	145.18	192.81	9.61	16.56	215.57	215.57	529.47	219.77	102.46	46.91	133.51	15.45		
		Barua	Mugosi	M'creek	Capeta	Vallera	Sigatoka	Nadi	Kanaka	Lautoka	Suva	Tavea	Kalivalu	Rabiu	Savarese		
		Wt(Mt)	Wt(Mt)	Wt(Mt)	Wt(Mt)	Wt(Mt)	Wt(Mt)	Wt(Mt)	Wt(Mt)	Wt(Mt)	Wt(Mt)	Wt(Mt)	Wt(Mt)	Wt(Mt)	Wt(Mt)		
Acuago	49.70	0.24	0.36	3.91	5.64	9.19	9.20	3.43	2.40	16.25	7.41	3.22	2.47	1.30	0.04		
Acilia	9.21	0.09	0.16	2.23	0.31	0.06	0.01	1.12	0.47	1.44	0.16	0.19	0.37	1.52	0.13		
Sabota	34.41	0.43	1.49	4.32	3.52	0.01	0.45	2.50	2.74	7.41	5.02	2.41	2.32	3.43	0.14		
Isabata	44.50	0.44	0.91	6.42	3.53	0.17	0.34	3.69	1.49	13.31	6.22	5.27	1.40	6.70	0.15		
Keze	2.42	0.02	0.12	0.62	0.12		0.22	0.23	0.05	0.20	0.44	0.06	0.13	0.22	0.05		
Ke	0.24							0.01						0.20	0.07		
Dolonayudi	15.14	0.04	0.62	1.43	0.19	0.01	0.09	1.15	1.14	3.66	2.70	0.64	1.31	1.13	0.31		
Sobotodanu	0.02		0.03			0.01								0.22	0.04		
Sobotobulu	0.00																
Isavateva	29.12	0.24	1.04	3.13	2.30	0.06	0.14	2.54	1.43	6.60	4.22	1.54	1.47	3.11	0.18		
Isau	1.25			0.32		0.66		0.10	0.12	0.32	0.17	0.02	0.01	0.15	0.04		
Isasala	9.37				0.02			0.37	0.04	1.52	0.75			3.45	0.11		
Sealivakau	3.97	0.04	0.12	0.75	0.02	0.10	0.02	0.41	0.17	1.34	0.74	0.11	0.11				
Donu	25.94	0.01	0.76	2.23	0.24		0.05	2.21	3.00	4.91	4.99	1.09	1.37	1.03	0.06		
Delabulena	0.41			0.03										0.24	0.04		
Salala	54.74	1.04	0.44	3.46	2.21	0.12		1.46	3.35	10.05	10.71	6.38	3.12	9.15	0.34		
Valu	14.46	0.02	0.02	0.21	0.40		0.15	1.94	0.43	4.95	2.27	0.34	0.31	1.32	0.44		
Vabou	0.40																
Sallestecoga	10.22	0.02						1.44	1.09	3.04	2.65	0.22	0.27	0.07	0.07		
Dogtooth	0.25								0.04	0.12	0.01			0.07	0.01		
Shipjack	6.17			0.39	0.11			0.43	0.37	2.93	0.61	0.41		0.05			
Yellowfin	2.41			0.12				0.15	0.40	0.12	0.59	0.74	0.14	0.02	0.07		
Blacktail Tuna	0.21								0.01	0.03				0.15	0.02		
Saga	58.51	1.39	1.21	4.43	4.74	0.19	0.40	7.78	2.44	13.67	9.93	2.13	2.32	5.97	0.28		
Sagala	1.49		0.10	0.05	1.59									0.15			
Tatula	0.67			0.47					0.12	0.02				0.05	0.01		
Yotinaloli	1.49	0.05	0.10	0.14		0.09		0.17	0.08	0.51	0.31	0.14	0.12	0.14			
Rainbow Runner	4.75			0.03	0.23		0.14	0.50	0.37	0.35	3.29	0.18	0.01	0.33	0.05		
Iti	49.97	0.35	0.52	1.54	0.38	0.23	0.01	1.07	0.34	1.48	0.91	0.81	0.14	1.31	0.13		
Ose	2.42	0.01	0.07	0.05	0.17	0.04		0.14	0.01	0.71	0.49	0.13	0.11				
Kacarofo	11.47	0.27	0.67	4.14	1.95	0.11	0.46	0.22	0.15	0.66	0.30	0.23	0.09	2.16	0.06		
Leiduan	7.28	0.02	0.05	0.41	1.11	0.01		0.73	0.44	1.14	1.32	0.26	0.37	0.30	0.10		
Danu	24.53	0.27	1.79	4.12	0.62	0.20	0.07	2.14	1.47	5.29	3.32	1.59	1.28	2.39	0.04		
Dati	12.77	0.02	1.72	6.94	1.27	0.01	0.02	0.40			0.03			2.33	0.04		
Iske	26.10	0.43	0.53	2.45	1.12	0.22	0.05	1.24	0.87	5.77	1.65	1.64	1.02	4.45	0.12		
Regua	1.42		0.33	1.12	0.39				0.46								
Bo	14.24	0.17	0.41	1.42	0.24	0.65	0.04	0.43	0.94	4.07	1.33	2.74	0.10	1.56	0.14		
Otonce	3.41			0.10				0.53	0.47	1.17	0.53	0.11	0.07	0.37	0.05		
Sevidri	0.03	0.01													0.02		
Olva	2.46							0.42	0.38	1.03	0.59	0.23	0.17		0.03		
Kosinibeyi	0.40													0.29	0.11		
Opakake	0.50		0.02	0.05					0.04	0.02	0.04	0.10		0.12	0.04		
Bedford	0.03													0.01	0.02		
Tobace	0.49			0.04	0.10									0.15			
Kakaji	9.26	0.10	0.39	2.45	1.12	0.05	0.02	0.50	0.24	1.47	0.24	0.52	0.21	1.43	0.10		
Ta	12.64	0.07	0.32	3.24	0.50	0.01	0.74	0.38	0.28	1.74	0.12	0.15	0.37	4.41			
Olari	27.04	0.26	0.32	4.31	2.49	0.17	0.44	1.57	0.62	4.46	0.44	0.62	0.44	5.94	0.12		
Isila	2.75			0.29					0.11	0.69	0.05			0.16	0.11		
Kerekeretecula	2.60							0.10	0.22	0.41	0.41	0.30	0.13				
Ocaluka	5.24	0.33	0.51	1.01	0.16	0.07	0.01	0.51	0.15	0.43	0.39	0.07	0.06	0.37			
Iela	4.48	0.06	0.19	0.31	0.52	0.04	0.02	0.42	0.10	0.36	0.09	0.07		1.38	0.05		
Iava	1.10	0.22	1.37	0.72	0.03				0.05	0.21	0.05			0.42	0.07		
Assace	15.32	6.45	2.25	14.19	4.10	0.27	0.14	5.74	3.43	8.02	7.49	5.57	1.91	6.43	0.24		
Hollan	5.10		0.57	1.39	3.19	0.09					0.71	0.07					
Qicava	4.18	0.26	0.50	1.31	0.26	0.20	0.04	1.24	0.43	2.34	0.91	0.45	0.22		0.02		
Kere	2.20	0.07	0.36	1.10	0.56	0.02					0.01	0.09					
Taidina	6.72	0.10	0.34	0.72	1.04	0.23	0.42	0.65	0.04	0.96	0.14	0.34	0.21	0.26			
Shark	5.20		0.01	0.07	4.40			0.32	0.52	1.00	0.14	0.16	0.04				
Muge	11.29	0.59	0.63	2.04	2.94	0.03	0.25	1.42	0.55	5.15	1.54	0.93	0.55	1.44	0.13		
Basa	15.64	0.28	0.43	1.79	0.27	0.10		1.01	0.54	1.32	4.14	1.57	0.29	6.95	0.02		
Saku	0.94	0.49	0.45	1.75	1.63	0.12		0.40	0.09	1.43	0.65	0.35	0.13	2.04	0.01		
Tava	6.18	0.40	0.21	0.10	0.75	0.01		0.72	0.33	1.52	0.91	0.54	0.15	0.44	0.02		
Ogo	57.44	0.13	0.73	3.49	0.94	0.07	0.05	4.14	3.54	14.65	12.09	3.55	3.07	6.17	0.46		
Tolivoi	4.03	0.11	0.10	1.21	1.15	0.01		0.91	0.37	0.99	0.91	0.07					
Torisi	14.27	0.47	0.52	2.24	1.94	0.30	0.27	2.14	4.22	2.44	1.44	1.24	0.27	0.72	0.02		
Habinshi	1.33			0.05				1.09	0.17								
Isikai	36.43	2.40	1.16	7.12	3.93	0.30	0.09	2.87	1.37	5.15	4.52	1.43	0.59	3.49	0.01		
Baceku	4.11	0.07	0.15	2.53	0.10			0.04	0.01	5.02	0.13	0.04	0.03	0.12	0.03		
Katu	4.05	0.16	0.41	3.45	0.70	0.14	0.02	0.37	0.10	0.94	0.54	0.25	0.23	0.94	0.12		
Cucu	0.44							0.13			0.01			0.20	0.05		
Sirisirivai	2.41			0.47	0.02			0.04	0.02	1.13	0.05	0.01		1.41	0.11		
Sotavava	13.16		0.06	1.95	0.72		0.03	0.44	1.14	2.49	0.70	0.97	1.35	3.01	0.16		
Cesu	5.36		0.15	2.17	0.02	0.01		0.19	0.07	1.01	0.29	0.15	0.14	0.41	0.03		
Papivoo	4.52		0.04	2.25	0.30	0.02		0.07	0.10	0.30	0.30	0.20		0.37	0.06		
Enlaku	0.18			0.10							0.01						
Ikasa	2.01	0.33	0.06	0.14	0.15	0.13		0.17	0.06	0.25	0.16	0.12					
Tunavasa	0.43			0.02										0.32	0.09		
Toxbox fish	0.25			0.05							0.05			0.15			
Conocoro	2.74	0.07	0.01	0.59	0.11			0.16	0.06	0.59	0.13	0.22	0.02	0.72	0.06		
Kutaba	0.31	0.02			0.03						0.02		0.01				
Ikadroka	0.07	0.03		0.02						0.01	0.01						
Sokisoki	3.49		0.02	0.43				0.19	0.06	1.32	0.14	0.20	0.02	0.03			
Tilopia																	

TABLE 7

VOLUME OF NON FISH SALES THROUGH MUNICIPAL MARKETS IN 1988

	TOTAL															
Value(000)	853.84	18.07	67.64	46.36	208.50	21.03	7.11	40.93	76.70	232.65	94.44	38.39	31.78	48.24	7.71	
		Navua	Mausori	N/creek	Suva	Laqere	Tailevu	Sigatoka	Nadi	Lautoka	Ba	Tavua	Rakiraki	Labasa	Savusav	
Weight(Wt)	1217.94	Wt(Nt)	Wt(Nt)	Wt(Nt)	Wt(Nt)	Wt(Nt)	Wt(Nt)	Wt(Nt)	Wt(Nt)	Wt(Nt)	Wt(Nt)	Wt(Nt)	Wt(Nt)	Wt(Nt)	Wt(Nt)	
PRAWNS																
Noci	2.89		0.54	0.35	1.20	0.22	0.09	0.01	0.09	0.11	0.10	0.02	0.16			
Ura	5.18	0.01	0.28	0.46	0.63	0.99	0.04	0.09	0.18	1.04	0.38	0.10	0.07	0.51	0.40	
LOBSTERS																
Uraudina	3.85		0.04	2.34	0.01	0.04	0.06	0.13	0.17	0.17	0.07	0.12	0.12	0.34	0.24	
Mana	12.07		1.62	1.92	8.14	0.23	0.09			0.01	0.04				0.02	
CRABS																
Qari	29.06	0.96	3.94	2.18	3.88	2.02	0.38	1.36	1.89	3.30	2.24	0.66	0.87	5.14	0.25	
Qarivatu	1.35		0.28						0.41	0.45		0.01		0.20		
Kukaloa	25.68		2.52	0.29	19.99	0.02	0.14		0.66	0.32	0.63	0.79	0.32			
Kukadamu	3.24		0.04	0.20	0.10				0.70	0.29	0.65	0.55	0.50	0.20	0.02	
Lairo	11.54	0.10	0.64		0.92		0.03		2.73	1.56	1.10	1.35	1.99	0.88	0.24	
BIVALVES																
Kai	883.52	44.37	116.05	2.96	227.49	0.29	8.81	49.11	63.64	187.43	126.91	31.45	19.98	4.88	0.14	
Kaikoso	102.02	0.02	4.06	4.74	24.24	2.40	0.80	0.02	3.36	49.01	2.13	3.02	3.87	3.34	1.02	
Kaidawa	15.47		6.73		1.02	0.02			1.67	2.09	0.82	1.38	0.63	1.11		
Qaqa	2.41		1.26							1.15						
Kaivadra	0.80										0.08			0.72		
Sigawale	2.43		0.02	0.05					1.01	0.44	0.12	0.10		0.69		
Vasudina	3.06	0.02	0.15	0.29	0.40		0.03		0.62	1.21			0.04	0.29	0.02	
Katavatu	5.91		0.01						0.96	2.74	0.53	0.76	0.12	0.77	0.03	
Qeqe	2.31			0.05	0.10				1.37	0.24			0.40	0.16		
Civa	0.59		0.03	0.18	0.13		0.03			0.22						
Kuku	6.72		0.01	0.06	0.24				1.26	1.41	1.41	1.30	0.92	0.10	0.01	
Civaciva	0.29		0.01						0.08	0.10			0.11			
Kalokalo	0.12								0.12							
Bu	0.35									0.06				0.26	0.03	
GASTROPODS																
Yaga	6.78		0.29	0.53	1.62		0.01		0.48	1.09	0.54	1.23	0.48	0.49	0.03	
Tivikea	9.78	0.02			9.54									0.22		
Golea	3.51	0.08	0.04		0.09				1.77	0.64	0.18	0.18	0.35	0.18	0.01	
Sici	8.05		0.20	0.26	6.22		0.17		0.16	0.08	0.08		0.29	0.48	0.11	
Tovu	2.41			0.26					0.23	0.50	0.29	0.32	0.77	0.04		
Madraki	0.52								0.05	0.23	0.24					
Lasava	1.45			0.05					0.22	0.52		0.24	0.42			
ECHINODERMS																
Dairo	39.65	0.24	0.62	0.54	2.94		0.22	3.14	5.55	9.09	4.90	8.93	3.13	0.14	0.22	
Yula	0.05				0.05											
Loaloa	0.34			0.12						0.22						
Cawaki	3.01		0.24	1.17	1.37		0.07	0.05						0.11		
Sucuwalu	0.26									0.06			0.19			
TURTLES																
Vonudina	2.58								0.57	0.68	0.31	0.56	0.08	0.32	0.06	
Taku	0.47			0.44										0.03		
SEA WEED																
Luniwawa	5.12	0.03	0.25	0.24	1.27				0.91	1.02	0.47	0.50	0.17	0.14	0.12	
Sagati	1.02								0.04	0.81	0.13	0.04				
Mana	5.88	0.04	0.29	0.12	1.83		0.07		0.75	1.20	0.56	0.30	0.26	0.33	0.12	
MISC.																
Tadruku	1.42		0.14	0.22	0.86		0.01	0.05	0.03					0.12		
Yeata	1.90	0.02	0.15	0.34	0.11				0.45	0.58	0.08	0.10	0.07			
Kuita	2.89		0.21	0.19	0.20		0.01	1.08	0.27	0.29	0.07	0.04	0.18	0.24	0.11	

TABLE 3

VOLUME OF FISH SALES AND VALUE... PER DIVISION BY MAJOR FAMILIES

	CENTRAL DIVISION			WESTERN DIVISION				NORTHERN DIVISION				EASTERN DIV.		
	Markets	Outlets	Total	Value	Markets	Outlets	Total	Value	Markets	Outlets	Total	Value	Wt(Nt)	Value
	Wt(Nt)	Wt(Nt)	Wt(Nt)	\$(000)	Wt(Nt)	Wt(Nt)	Wt(Nt)	\$(000)	Wt(Nt)	Wt(Nt)	Wt(Nt)	\$(000)	Outlets	(000)
	257.17	2566.76	2823.94	7368.38	531.35	527.68	917.34	2346.97	147.86	707.83	849.14	1893.05	9.70	25.74
Lethrinidae	38.69	471.22	509.91	1531.04	106.69	152.17	166.48	540.55	14.57	95.84	110.41	252.16	1.81	5.43
Serranidae	11.73	256.34	268.07	883.56	46.32	36.56	80.19	266.85	8.78	92.35	101.13	276.45	0.81	2.67
Scombridae	10.26	97.22	197.48	279.22	69.53	154.16	179.70	345.20	12.47	119.17	131.64	277.90		0.00
Carangidae	15.31	120.78	136.09	342.17	44.42	42.84	67.78	183.71	6.83	64.37	71.20	170.06	0.85	2.14
Mullidae	10.45	59.98	69.54	190.52	8.86	1.86	19.77	24.30	4.14	11.76	15.90	28.14	0.44	1.21
Lutjanidae	27.97	176.71	204.67	503.72	52.53	38.69	88.44	241.52	13.28	71.05	84.33	162.44	1.17	2.88
Acanthuridae	6.58	61.63	70.22	179.36	6.58	8.12	9.25	21.19	6.89	23.59	30.48	45.72	0.24	0.61
Scaridae	7.83	75.35	83.18	211.29	13.76	21.80	23.56	46.76	7.58	67.05	74.63	110.42	0.46	1.17
Belonidae	3.98	3.25	7.27	17.77	2.85	0.89	8.84	20.44	2.05	9.03	11.08	17.09	0.22	0.54
Polynesiidae	3.51	21.60	25.11	62.22	3.78	2.24	12.24	15.36	2.40	4.74	7.14	13.00		0.00
Elopidae	0.71	4.27	4.98	9.02	2.04	0.15	2.81	4.39	1.28	0.93	2.21	2.08	0.02	0.04
Mugilidae	43.82	944.62	988.44	2310.95	33.03	7.33	54.85	145.12	7.17	48.50	55.67	121.78	2.03	4.75
Siganidae	5.93	29.32	26.24	85.22	10.21	3.64	21.00	69.09	1.59	9.64	11.23	36.62	0.48	1.56
Sphyracidae	5.37	94.94	100.32	247.18	45.11	22.13	61.10	145.71	6.63	33.74	40.37	67.37	0.30	0.74
Trichuridae	6.93	0.95	6.98	15.91	7.43	1.57	9.58	14.39	0.12	0.25	0.37	0.37		0.00
Leiognathidae	12.57	24.27	36.84	90.53	17.14	1.30	21.81	47.89	3.90	8.84	12.74	17.35		0.00
Gerridae	4.33	1.31	5.64	12.89	2.48	0.62	6.45	16.21	1.06	2.47	3.53	5.85	0.51	1.17
Haemulidae	2.73	20.18	22.91	53.90	7.24	2.72	16.73	46.76	3.17	16.12	19.29	43.15	0.36	0.85
Theraponidae	4.68	5.67	10.34	23.37	5.79	0.53	8.49	20.78	0.02	0.41	0.43	0.52		
Smoked Fish	0.57		0.57	1.45	5.06		5.06	15.18	26.84		26.84	78.43		
Salted Fish									5.83		5.83	43.35		
Misc.	32.14	102.03	139.17	317.20	40.52	28.36	62.23	115.57	11.26	27.98	32.73	122.79		

Grand Total Markets Markets Outlets Outlets
 Wt(Nt) \$(000) Wt(Nt) \$(000) Wt(Nt) \$(000)
 4748.09 12008.81 936.12 2428.24 3811.97 9580.57

Lethrinidae	880.98	2597.88	159.95	509.46	721.04	2397.42
Serranidae	452.90	1438.08	66.83	217.41	386.06	1220.66
Scombridae	462.82	995.67	92.27	209.44	370.55	786.23
Carangidae	295.39	746.65	66.55	175.82	228.84	570.83
Mullidae	96.59	244.04	23.45	55.68	73.14	188.36
Lutjanidae	381.39	517.07	93.77	244.64	287.61	672.43
Acanthuridae	115.64	259.22	22.05	47.47	93.59	211.74
Scaridae	193.83	394.06	29.17	59.04	164.66	335.02
Belonidae	22.31	45.76	8.88	19.21	13.43	26.55
Polynesiidae	38.26	78.41	9.69	22.58	28.57	55.83
Elopidae	9.40	14.54	4.03	5.90	5.37	8.64
Mugilidae	1086.49	2548.75	84.02	207.50	1002.48	2341.25
Siganidae	51.81	169.41	17.73	59.39	34.08	110.02
Sphyracidae	208.23	474.88	57.11	15.59	151.11	341.27
Trichuridae	16.34	29.71	13.57	25.09	2.77	4.62
Leiognathidae	68.01	148.47	33.61	73.95	34.40	74.52
Gerridae	12.78	28.32	7.87	16.92	4.91	11.40
Haemulidae	52.51	128.31	13.13	33.91	39.37	94.40
Theraponidae	17.09	39.71	10.48	24.65	6.61	15.07
Smoked Fish	32.47	95.06	32.47	95.06	0.00	
Salted Fish	5.83	43.35	5.83	43.35	0.00	
Misc.	247.03	571.48	83.66	157.17	163.37	414.31

TABLE 9

VOLUME OF NON FISH SALE & VALUE... PER DIVISION BY MAJOR GROUPS

	CENTRAL DIVISION				WESTERN DIVISION				NORTHERN DIVISION				EASTERN DIV.	
	Market Wt(Mt)	Outlets Wt(Mt)	Total Wt(Mt)	Value \$(000)	Market Wt(Mt)	Outlets Wt(Mt)	Total Wt(Mt)	Value \$(000)	Market Wt(Mt)	Outlets Wt(Mt)	Total Wt(Mt)	Value \$(000)	Outlets Wt(Mt)	Value \$(000)
	538.92	440.41	979.33	551.90	654.77	107.91	762.68	1173.16	24.22	353.35	1519.65	1141.97	0.11	0.54
Crustaceans	57.92	8.34	66.26	267.51	29.09	99.39	128.39	858.04	8.44	38.71	47.15	231.96	0.11	0.54
Bivalves	447.02	432.02	879.04	246.95	566.81	8.34	575.15	276.96	12.16	17.38	30.04	13.29		
Gastropods	19.38	0.02	19.40	23.67	11.06	0.00	11.06	5.02	1.56	14.10	15.66	38.45		
Echinoderms	7.58	0.03	7.61	5.51	35.25	0.00	35.25	13.10	0.47	277.29	277.76	839.19		
Sea weed	4.14	0.00	4.14	3.59	7.16	0.00	7.16	9.54	0.71	0.00	0.71	1.36		
Turtles	0.44	0.00	0.44	1.32	2.20	0.04	2.24	5.94	0.41	1.03	1.44	3.86		
Misc.	2.44	0.00	2.44	3.35	3.29	0.14	3.43	5.46	0.47	4.34	4.81	13.92		
	Grand total		Market	Market	Outlets	Outlets								
	Wt(Mt) \$(000)		Wt(Mt)	\$(000)	Wt(Mt)	\$(000)	Wt(Mt)	\$(000)	Wt(Mt)	\$(000)				
	2119.58 2867.03		1217.91	935.34	901.67	1931.69								
Crustaceans	241.80	1357.45	95.36	447.12	146.44	910.33								
Bivalves	1484.23	536.30	1025.99	403.02	458.24	133.28								
Gastropods	46.12	67.14	32.00	32.50	14.12	34.64								
Echinoderms	320.62	857.80	43.30	20.01	277.32	837.79								
Sea weed	12.01	14.49	12.01	14.49	0.00	0.00								
Turtles	4.12	11.12	3.05	8.25	1.07	2.87								
Misc.	10.68	22.73	6.20	9.95	4.48	12.78								

TABLE 10

VOLUME OF FISH SALES THROUGH NON-MUNICIPAL MARKETS IN 1984

Weights (MT)	CENTRAL DIVISION 2566.76				WESTERN DIVISION 521.54				EASTERN DIVISION 701.41				EASTERN	
	Total	Hotels	Butchers	Shops	Road	Hotels	Butchers	Shops	Road	Hotels	Butchers	Shops	Auxiliary	DIP
		Residual	W/Sales	Suppl	Side	Residual	W/Sales	Suppl	Side	Residual	W/Sales	Suppl		
	3811.96	27.24	1194.57	192.66	1157.29	274.06	35.20	67.12	147.19	13.99	491.99	94.99	104.46	9.70
Iwago	223.53	0.23	53.33	10.51	52.86	72.22	0.32	14.04	2.67	0.16	6.43	1.41	1.20	0.11
Iacika	51.43	0.42	24.79	0.19	9.20	1.91	0.14	0.33	0.57	0.31	9.63	2.79	1.50	0.06
Sabute	109.42	0.97	25.34	9.23	37.47	9.86	0.77	2.25	4.51	0.36	12.71	3.01	1.40	0.47
Kibacia	149.34	1.29	56.66	1.70	69.76	5.03	0.55	1.44	7.44	0.29	25.97	1.72	4.43	0.44
Kina	34.70	0.04	12.35	0.27	16.34	4.81	0.99	0.44	0.13	0.04	2.26	0.22	0.23	
ku	3.37					0.27	0.18	0.76		0.05	1.43	0.33	0.34	
Dotonivodi	93.71	1.60	14.40	1.20	55.92	3.84	1.40	0.47	1.34	0.56	4.11	2.71	1.20	0.09
Sabutuwanu	16.47	0.12	1.57	0.02	10.91	1.03		0.05	0.03	0.04	1.22	0.67	1.20	
Sabutuula	3.23					2.19	0.48	0.08			0.02	0.05	0.40	
Kwakawa	237.50	6.09	74.21	26.92	91.45	6.92	1.72	3.57	3.12	1.14	13.23	4.25	4.70	0.01
Kivu	5.23					0.52	0.03	0.02	0.09	0.07	2.65	0.57	1.20	0.01
Kasala	50.48	0.02	0.18	0.07	2.43	2.34	0.45	1.12		4.44	24.23	5.75	9.40	
Seokwaakawa	17.07	0.69	2.05	0.49	9.90	1.27		0.20	1.91		0.01		0.16	
Dove	71.58	0.49	16.20	4.40	20.32	3.77	1.20	1.49	4.23	0.56	10.45	2.32	2.10	0.43
Delabulera	3.40				0.03	0.09		0.04	0.04	0.09	1.64	0.56	1.23	
Salala	162.66	4.92	17.15	7.43	34.34	3.35	1.15	4.31	11.72	0.12	36.49	0.84	6.30	
Kahu	156.02	2.21	12.40	0.46	2.57	62.42	3.95	4.45	1.07	2.40	34.30	15.23	16.56	
Wahoo	10.21	0.10	5.76			1.75	0.75	0.40	0.50	0.62	0.36	0.11	0.06	
Salalaaitoga	23.40		0.32	0.04		19.50	0.60	1.59	0.62		0.44	0.07	0.62	
Doptooth	3.01					0.25			0.39	0.01	1.14	0.43	0.05	
Kipjack	6.33		1.54	0.01	0.36	0.40	0.05	0.04	0.52		0.99	0.09	0.09	
Yellowfin	6.15	0.15	0.94	0.04		1.49		0.12	0.44	0.04	1.55	0.41	0.45	
Kickeral Tona	1.53		0.04						0.14	0.04	1.03	0.25	0.04	
Saga	191.41	4.03	55.44	14.11	29.77	10.21	2.89	4.69	3.15	1.65	33.53	9.75	8.91	0.15
Sagaloa	9.26								2.41	0.15	4.01	2.22	0.07	
Yauke	11.74		1.24		0.39	7.23	0.65	1.65			0.59	0.13	0.03	
Yotonioili	4.91		2.66	0.34		4.05			0.42		0.75	0.03	0.02	
Rainbow Runner	7.52		0.13		3.67				1.17	0.02	2.34	0.10	0.05	
Ii	11.44		0.72	1.27	1.60			0.03	0.65		4.49	0.21	0.45	0.02
Ose	12.35				11.23			0.01	0.55		0.11	0.01	0.41	0.41
Kataroko	49.35	0.94	13.75	7.69	19.84		0.01	0.01	0.60	0.07	5.57	0.43	0.45	
Lufdau	31.49	0.74	22.89	0.52	20.35	1.17	0.02	0.25	2.07	0.20	2.60	0.45	0.24	
Dauu	74.66	0.94	17.84	4.69	31.46	1.56	0.50	0.45	3.41	0.15	9.41	1.32	1.97	0.09
Kati	31.17		9.18	0.06	20.15	0.45	0.34	0.30	0.80		1.10	0.13	1.20	0.13
Kake	61.07		24.28	4.26	10.02	0.90	0.03	0.62	3.94	0.11	14.54	0.90	0.31	0.52
Zegeu	13.04		0.15	0.01	9.44	0.64	0.04	0.35	1.43		0.10		0.42	
So	20.32		0.36		4.04	2.31	0.33	1.13	1.12	0.19	6.54	1.79	2.50	0.02
Ucuto	10.31		1.04	0.04	1.96	2.34	0.02	0.74	0.35	0.03	1.26	0.34	1.40	
Sevidri	7.52				3.99	1.50		0.24	0.30		0.75	0.20	0.50	
Oleqa	3.36				0.65	0.10		0.04	3.10		2.01	0.59	0.40	
Kosieibogei	4.23				0.24	3.32	0.02	0.24		0.09	1.40	2.26	0.60	
Opiokapa	4.40		0.22			0.62		0.01		0.19	4.07	1.92	1.30	
Bedford	10.01		6.44		0.48			0.69	0.07		1.56	0.27	0.70	
Tabace	4.79		0.41	0.03	2.03	0.03		0.01	0.41	0.02	1.44	0.07	0.05	
Baligi	16.43		2.31	0.01	4.65	0.31		0.24	1.06		6.23	0.43	0.90	0.12
Ta	71.97		20.70	0.04	31.31	2.19		0.22	3.11		11.70	1.21	1.10	0.12
Ulavi	97.05	0.02	47.31	5.27	22.14	3.65		0.37	4.03	0.09	9.91	1.04	2.70	0.46
Ualia	67.61		9.43	0.44		10.69	0.15	1.94	0.91	0.71	37.25	6.41	1.94	
Kererecola	25.44			0.16	21.40	1.45	0.06	0.43	1.57		0.01			
Uculoba	5.01		0.50	0.52	0.47			0.06	1.59	0.03	1.59	0.05	0.04	
Kela	23.52		16.24		3.67	0.43		0.03	0.13	0.03	2.59	0.41		
Koco	1.12		0.07	0.01	0.74			0.02	0.20					
Kava	22.61		7.47		11.27			0.01	1.43	0.09	1.53	0.24	0.05	0.12
Anace	955.77		493.44	67.54	361.42	0.35	0.23	1.35	2.97	3.44	35.64	3.51	6.70	1.91
Mofisa	22.91		14.77	1.03	2.39	0.09	0.03	0.10	0.55		0.02			
Gitava	3.95				3.24	0.45		0.13	0.29		0.21		0.03	
Kere	2.66				2.42			0.02	0.05		0.16		0.01	
Vaidina	3.14							2.43			0.65	0.03	0.04	
Shark	6.97				2.94				4.09					
Itge	34.04		13.23	3.01	3.99	0.42	0.10	0.23	2.49	0.31	6.67	1.35	0.51	0.44
Busa	22.20		4.26	1.24	4.41	0.05		0.14	2.44	0.26	4.51	0.31	0.54	
Saku	13.43		0.13	0.02	3.34			0.03	0.46		1.31	0.30	0.42	0.22
Tava	11.71		1.76		4.19			0.01	1.49	0.03	1.45	0.17	0.22	
Ogo	151.11		57.24	5.74	31.92	8.93	4.05	1.07	2.44	0.17	20.17	6.39	6.30	0.10
Voivoi	17.35				7.54	3.71	1.05	3.01	2.34		0.05		0.01	
Tovisi	2.77				0.95				1.53		0.74		0.01	
Kabixabi	4.74	0.12			3.10				0.64		0.79	0.10	0.03	
Jafkai	36.40		13.07	2.13	3.07			0.07	1.23	0.03	7.81	0.26	0.14	
Katekau	22.27	0.12	9.41	0.41	11.11	0.01		0.06	0.45	0.57	8.54	0.11	0.02	
Kato	4.91		0.92	0.25	0.15			0.02	0.17		1.99	0.39	0.09	0.51
Goro	2.35				1.07			0.01	0.07		0.04	0.19	0.05	
Sirisirivai	21.42		4.15		5.59			0.01	0.44	0.06	5.06	1.18	0.52	
Seravara	39.37	0.41	17.51		1.46	0.45		0.49	1.05	0.50	11.44	2.41	1.46	0.36
Cava	7.47			0.49	3.74	0.01		0.01	0.34		2.05	0.41	0.18	
Vartvoce	6.47		2.22		0.13				0.33	0.01	1.92	0.54	1.20	
Halake	0.20				0.13				0.07					
Ikaze	1.05				1.01				0.04					
Vauvava	1.69				0.01				0.06	1.05	0.41	0.09		
Yoibox (fish)	1.02				1.40				0.04		0.14			
Corocoro	1.59							0.03	0.10		0.94	0.50	0.02	
Katata	0.10							0.03	0.07					
Kadroke	0.07								0.27					
Sokisoki	0.01										0.01			
Tilapia	0.61								0.41					
Tivivivi	1.44		0.23		0.96			0.01	0.15		0.25	0.04		
Tavola	5.37		3.51		0.75			0.01	0.14		0.40	0.13		0.02
Danira	2.56				2.43				0.11					
Tava	0.01								0.01					
Senuvava														
Sharkia	0.10					0.10								

TABLE 11

VOLUME OF NON FISH SALES THROUGH NON MUNICIPAL MARKETS IN 1988

TOTAL	CENTRAL DIVISION 440.41				WESTERN DIVISION 107.91				NORTHERN DIVISION 353.26				EASTERN	
	Shops Sukts	Hotels Rests/c	Butchers F/d	Road sides	Shops Sukts	Hotels Rests/c	Butchers F/d	Road sides	Shops Sukts	Hotels Rests/c	Butchers F/d	Aux unit	Lakeba	
901.68	1.44	1.62	0.54	436.81	0.48	26.45	0.39	80.59	13.44	2.25	304.31	33.26	0.11	
PRAWNS														
Noci	0.26			0.26										
Ura	13.84	1.09	0.58	0.07	1.09			0.34	1.16	2.17	0.64	5.86	0.84	
LOBSTERS														
Uraudina	34.62	0.35	0.57	0.47	0.68	0.48	20.82	0.05	2.46	1.46	0.67	6.18	0.43	
Slipper	0.55						0.32					0.23		
Mana	0.62		0.04		0.53							0.05		
CRABS														
Qari	94.88		0.40		1.12		4.54		69.22	4.29	0.57	12.28	2.35	
Qarivatu	0.69											0.69		
Kukaloa	0.01				0.01									
Kukadamu	0.78				0.78									
Lairo	0.32				0.32									
BIVALVES														
Kai	439.80		0.03		431.69		0.34		7.74					
Kaikoso	0.30				0.30									
Kaidawa														
Qaqa														
Kaivadra														
Sigawale														
Vasudina	11.75						0.26			0.32	0.34	9.89	0.94	
Katavatu	1.38									0.06	0.02	1.30		
Qeqe														
Civa	5.01									1.27		3.46	0.28	
Kuku														
Civaciva														
Kalokalo														
Bu														
GASTROPODS														
Yaga														
Tivikea														
Golea	1.91											1.91		
Sici	11.91				0.02					3.62		8.04	0.23	
Tovu														
Madraki														
Melanela	0.30									0.11		0.17	0.02	
ECHINODERMS														
Dairo	1.45				0.03							1.42		
Vula	0.44											0.44		
Dri	264.42											237.41	27.01	
Loaloa	2.68											2.66	0.02	
Tarasea	5.26											5.26		
Sucudrau	0.85											0.85	0.91	
Sucuwalu	2.21											2.07	0.14	
TURTLES														
Vonudina	0.89						0.02			0.04	0.01	0.82		
Taku	0.18						0.02			0.04		0.12		
SEA WEED														
Mana														
MISC.														
Tadruku														
Veata														
Kuita	4.38						0.13			0.06		3.20	0.99	

TABLE 12

Commercial & Artisanal fisheries summary

COMMERCIAL AND ARTISANAL PRODUCTION	Fresh Fish		Non - Fish		Smkd & Salted Fish		Weighted mean S/S/F	
	Weight	Value	Weight	Value	Weight	Value		
CENTRAL DIVISION MARKETS								
Suva			314.59	208.50	0.18	0.47		2.60
Nabukulau Creek	132.83	345.24	20.52	46.35	0.08	0.20	2.60	2.50
Navua	19.42	39.37	45.91	19.52			2.03	
Laqere	73.44	192.01	6.22	21.03			2.61	
Nausori	26.75	73.53	140.65	72.25	0.19	0.43	2.75	2.27
Korovou	4.56	9.61	11.03	7.11	0.12	0.19	2.11	1.61
WESTERN DIVISION MARKETS								
Sigatoka	6.63	14.56	55.07	31.83	1.14	2.62	2.20	2.30
Nadi	80.73	215.57	92.39	77.31	0.72	1.92	2.67	2.67
Namaka	42.75	115.63					2.70	
Lautoka	192.16	529.47	270.36	194.32	1.60	4.82	2.76	3.01
Ba	114.28	315.65	145.05	80.91	1.08	2.82	2.76	2.61
Tavua	56.66	142.48	54.03	38.44	0.38	0.95	2.51	2.50
RakiRaki	33.11	86.91	37.89	31.78	0.14	0.35	2.62	2.53
NORTHERN DIVISION MARKETS								
Labasa	108.14	214.49	21.02	48.24	31.60	119.14	1.99	3.77
Savusavu	6.51	12.88	3.20	7.71	1.04	2.77	1.98	2.88
Sub - total	897.97	2307.40	1217.93	885.30	38.27	136.68	2.58	
CENTRAL DIVISION OUTLETS								
Hotels Rests & Cafes	27.24	65.92	1.62	10.08				
Butchers & Fish dealers	1194.57	2890.86	0.54	3.50				
Shops & Supermarkets	192.66	466.24	1.44	9.80				
Roadsides	1152.29	2788.54	436.81	176.78				
WESTERN DIVISION OUTLETS								
Hotels Rests & Cafes	278.06	722.96	26.46	163.34				
Butchers & Fish dealers	35.20	91.52	0.39	2.60				
Shops & Supermarkets	67.12	174.51	0.48	3.10				
Roadsides	147.19	382.69	80.59	419.82				
NORTHERN DIVISION OUTLETS								
Hotels Rests & Cafes	13.99	27.84	2.25	12.78				
Butchers & Fish dealers	491.99	979.06	304.40	699.74				
Shops & Supermarkets	96.99	193.01	13.44	59.14				
Roadsides								
Auxillary Unit	104.86	208.67	33.26	39.58				
EASTERN DIVISION OUTLETS								
Kadavu								
Lakeba	9.70	17.46	0.11	0.62				
Levuka								
Sub - total	3811.86	9009.28	901.79	1600.88				

Weight = mt

Value = \$000

Price = \$/Kg

S/S/F = Smoked & Salted Fish

For total weight and value of fish and nonfish refer to family table

TABLE 13

EXPORTS OF FISHERIES PRODUCT - 1988

Item Description	Unit	Quantity	Value	Item Description	Unit	Quantity	Value
034.110 Fish Live	No.			037.110 Caviar and Caviar Substitutes			
United States of America		61170	284819	Fish-Marinades, Sausages etc	Kg		
Germany Fed rep. of		2900	15639	New Zealand		950	2903
Netherlands		1800	10914	Australia		2	14
New Zealand		4079	16170	Total		952	2917
Australia		145	320				
United Kingdom		1900	1100	037.120 Fish Pastes	Kg		
Nauru		50	175	Canada		93840	700351
Total		72044	329137	Australia		177	515
				New Zealand		14	28
034.190 Fish, Fresh or Chilled	Kg			United Kingdom		130332	703962
New Zealand		2103	7380	Total		224363	1404856
United States of America		83505	757018				
Australia		84862	70172	037.190 Other prepared or preserved			
Japan		240	1020	fish, canned etc	Kg		
Canada		846	1438	Tahiti		7514	25587
United Kingdom		852	4276	Canada		2304560	16329919
Total		172408	841304	New Zealand		115114	395064
				United States of America		1504	4057
034.500 Fish, Frozen, Incl Fillets,				Australia		15264	74456
Fresh, Chilled or Frozen	Kg			New Caledonia		4729	15072
Canada		2422	6442	Tuvalu		3854	14332
New Zealand		2745	4872	United Kingdom		4462208	22802457
United States of America		49190	316008	Nauru		170	404
Australia		7342	52945	Japan		39168	91062
Japan		3930	26803	Kiribati		340	400
HongKong		6310	15372	Nieu		10044	4370
Nauru		296	804	Tonga		122	279
Total		72235	423246	Total		6964591	39757459
035.010 Fish meal fit for human				037.290 Prepared or preserved			
consumption	Kg			crustaceans & molluscs-other	Kg		
Singapore		15120	59572	New Zealand		11	22
Tonga		18000	11960	Total		11	22
HongKong		91942	324769				
United States of America		2	21	081.420 Fish meal and Whale meal			
New Zealand		110	300	unfit for human-consumption.	Kg		
China-Taiwan		5000	27223	Japan		26112	59264
Kiribati		111	606	Total		26112	59264
Total		130285	424451				

TABLE 13 EXPORTS Conci..

Item Description	Unit	Quantity	Value	Item Description	Unit	Quantity	Value
035.031 Beche de mer	Kg			081.999 Other prepared animal feeds	Kg		
Australia		7400	90915	Tuvalu		43672	26848
HongKong		591418	2309351	Total		43672	26848
New Zealand		13945	39311				
Singapore		51360	204727	291.151 Pearl Shells	Kg		
United States of America		4979	61886	Australia		2610	16086
China-Taiwan		31625	70126	Japan		45345	392837
Aircraft & ships stores		1190	10393	Korea rep. of		6343	36761
Canada		300	2870	Ireland		500	4670
Thailand		227	10102	HongKong		2700	14807
China pec. rep of		6265	31545	Total		57498	465161
France		700	9047				
Kiribati		8000	12000	291.152 Trochus shells	Kg		
Total		717407	2852273	Australia		9600	36861
035.040 Smoked fish	Kg			Japan		286139	1637271
Australia		96	801	Italy		294	9643
New Zealand		11	58	Korea rep. of		42134	182242
HongKong		1556	7186	HongKong		41901	124721
Total		1663	8045	China-Taiwan		18400	19682
035.050 Fish, dried, salted or in brine	Kg			Total		398468	2010420
Australia		2150	24020	291.161 Turtle Shells	Kg		
Canada		244	2316	Japan		174	16571
HongKong		48136	366733	Total		174	16571
China-Taiwan		5009	18382	291.162 Other (incl. corals etc.)			
United States of America		22	396	Australia			800
New Zealand		10	50	Japan			62950
Total		55562	411897	Korea rep. of			23190
036.010 Crustaceans & Molluscs, Live	Kg			United States of America			70200
Australia		1304	26669	HongKong			2143
Canada		209	1875	Total			159283
New Zealand		136	1052	899.100 Worked turtle shells & article			
Total		1649	29596	of turtle shells			
036.020 Crustaceans and Molluscs, Chilled, Frozen, Salted, etc	Kg			Japan			257031
Australia		29271	399413	China Taiwan			2450
New Zealand		3170	32831	Korea Democ. pec rep of			59118
China-Taiwan		26220	159097	Total			318599
Singapore		19000	35950				
Canada		795	7718				
HongKong		278048	991654				
United States of America		4032	53605				
Nauru		10	120				
Total		360546	1680358				

TABLE 14

RE EXPORTS OF FISHERIES PRODUCT - 1988

Item Description		Unit	Quantity	Value	Item Description	Unit	Quantity	Value
034.110	Fish Live	No.		291.162	Other (incl. corals etc.)			
	United States of America		1900	42045	Japan			150
	Total		1900	42045	Total			150
034.190	Fish, Fresh or Chilled	Kg		899.100	Worked turtle shells & article of turtle shells			
	Australia		21960	13176	New Caledonia			10084
	New Zealand		42420	25452	Total			10084
	Total		64380	38628	Total			10084
034.500	Fish, Frozen, Incl Fillets, Fresh, Chilled or Frozen	Kg		894.621	Underwater Spearguns			
	New Zealand		9200	7620	Western Samoa			315
	United States of America		34	238	Total			315
	Australia		14438	14300				
	Japan		1323077	2001362	894.710	Fish Hooks Line Fishing rods & Tackle		
	Total		1346749	2023520	Cook Islands			1941
035.050	Fish dried salted or in brine	Kg			Kiribati			12015
	China - Taiwan		1320	19628	Tonga			2460
	Total		1320	19628	Tuvalu			3673
036.020	Crustaceans and Molluscs, Chilled, Frozen, Salted, etc	Kg			Australia			200
	Australia		250	6902	Solomon Islands			235
	Total		250	6902	Nauru			588
037.190	Other prepared or preserved fish, canned etc	Kg			New Zealand			600
	Tuvalu		5278	14728	Western Samoa			3648
	Nauru		43	991	Aircraft & Ships Stores			230
	Japan		45	135	Total			25590
	Tonga		1154	3494	657.521	Fishing nets	Kg	
	Total		6520	19348	Cook Islands		2738	22792
					F Polynesia (Tahiti)		8942	77017
					Tonga		88	1350
					Tuvalu		1545	13136
					Wallis & Futuna		170	1752
					American Samoa		303	6047
					Kiribati		89	2661
					Trust Terr. of Pacific Islands		111	1674
					Vanuatu		53	689
					Total		14039	127028

TABLE 15

IMPORTS OF FISHERIES PRODUCT - 1988

Item Description	Unit	Quantity	Value	Item Description	Unit	Quantity	Value
034.110 Fish Live	No.			037.190 Other prepared or preserved			
United States of America		600	8651	fish, canned etc	Kg		
Total		600	8651	Korea rep of		793952	1379963
034.190 Fish, Fresh or Chilled	Kg			Canada		97370	356858
New Zealand		297814	302982	Japan		902707	1840208
United States of America		5414240	177916	United States of America		90	1920
Australia		8811	10768	Australia		742	4410
Japan		11	677	Italy		14	566
Tonga		681	2753	China peo.rep of		621	3538
Tuvalu		590	2442	HongKong		1929	8002
Total		5722147	497538	United Kingdom		8	95
034.500 Fish, Frozen, Incl Fillets,				USSR		50	1139
Fresh, Chilled or Frozen	Kg			Chile		32653	53070
American Samoa		16330	7488	Nauru		16326	23705
China-Taiwan		5615939	13266461	Malaysia		5	35
New Zealand		809922	967232	American Samoa		322	360
United States of America		1549257	1233707	New Zealand		10	88
Australia		4182	8785	Total		1846799	3673957
Solomon Islands		2178014	3928934	037.290 Prepared or preserved			
Kiribati		1602236	2134964	crustaceans & molluscs-other	Kg		
Guam		4580	1145	Australia		2189	20142
Pacific Islands other		400	400	Japan		5	185
Japan		1473912	2152916	Malaysia		2390	26032
PapuaNewGuinea		364126	445317	New Zealand		32	943
Canada		364	1829	China peo.rep. of		148	3420
Others		715	715	Korea rep. of		58	958
Total		13619977	24149893	HongKong		33	488
035.010 Fish meal fit for human				Korea Dem.peo.rep. of		50	867
consumption	Kg			China-Taiwan		36	327
Western Samoa		4150	1524	India		300	3546
American Samoa		2970	1782	Israel		50	490
Japan		1	97	Thailand		10	102
Australia		220	991	Total		5301	57500
Total		7341	4394	031.420 Fish meal and Whale meal			
035.040 Smoked fish	Kg			unfit for human consumption.	Kg		
Australia		205	5973	New Zealand		8	92
Canada		212	4213	United States of America		97	733
New Zealand		50	990	Total		105	825
Total		467	11176	291.151 Pearls & demi-pearls			
				Philippines		42	943
				Total		42	943

TABLE 15 IMPORTS Conti...

Item Description	Unit	Quantity	Value	Item Description	Unit	Quantity	Value
035.050 Fish, dried, salted or in brine				291.162 Other (incl. corals etc.)			
	Kg			Philippines			10196
Australia		574	3801	French Polynesia (Tahiti)			3160
Others		798	3191	Australia			10
Aircraft & ships stores		1506	19029	United States of America			206
Japan		4	322	Total			13572
China peoples rep of		23	251	-----			
HongKong		467	2503	291.970 Natural Sponges	No.		
United States of America		9070	10136	Australia		450	719
Western Samoa		5460	10178	Total		450	719
Tranlens-China (Taiwan)		10988	19628	-----			
China - Taiwan		971	12362	667.500 Pearls not mounted, etc rough			
New Zealand		12900	15905	diamonds			
Pacific Islands Other		489	8802	United Kingdom			4785
Total		43250	106108	Total			4785
-----				-----			
036.010 Crustaceans & Molluscs, Live	Kg			899.100 Worked turtle shells & article			
New Zealand		820	3291	of turtle shells	Kg		
Total		820	3291	Australia			2902
-----				HongKong			28402
036.020 Crustaceans and Molluscs,				Philippines			43935
Chilled, Frozen, Salted, etc	Kg			United States of America			157
Australia		7975	68473	China Taiwan			6224
New Zealand		13989	73539	New Zealand			2992
China- People's Republic Of		68	1008	Tuvalu			1545
Japan		47	372	Tahiti			1055
Thailand		2130	25180	Total			87212
India		840	5243	-----			
HongKong		173	1547	657.521 Fishing nets	Kg		
United States of America		80007	72582	China peo. rep of		13207	84081
Tonga		491	9263	Japan		1344	11663
Vietnam peo. rep. of		192	3304	Korea rep. of		18247	136971
Malaysia		90	2211	New Zealand		10	96
New Caledonia		32	229	United States of America		5	44
Total		106034	262951	China-Taiwan		371	4210
-----				Total		33184	237065
037.110 Caviar and Caviar Substitutes				-----			
Fish-Marinades, Sausages etc	Kg			894.621 Underwater spearguns			
Australia		150	1769	Australia			51066
United States of America		300	1094	Japan			81
Japan		33	64	Total			51147
USSR		1	369	-----			
New Zealand		180	1782	894.710 Fish Hooks, Line Fishing rods			
Canada		24	228	& Tackle etc			
HongKong		302	1743	Australia			54987
Total		990	7049	China-Taiwan			19090
-----				Finland			4853
037.120 Fish Pastes	Kg			Indonesia			2
Australia		158	1264	Japan			179376
Total		158	1264	New Zealand			20239
-----				Norway			81853
				United States of America			112913
				HongKong			647
				United Kingdom			3985
				Korea rep. of			785
				Total			478730

MANGROVE CRAB

“QARI”

The mangrove crab or qari (*Scylla paramamosain* and *Scylla serrata*), shown on the cover is one of the most valuable food items on the tables of many households in Fiji today. When compared to other species of crabs and crustaceans it is the most important species by volume and value in the country.

Qari is most commonly found in mangrove areas, with at least some of the population occupying burrows excavated in the mud. Maturity is attained at an age 2-3 years. The legal size for capture of qari is when the carapace measures 12.5cm in width.

Most fishing for qari is done by women. The catch is bundled (6-8 crabs) and bound for market alive. Provided they are kept in moist packing, typically mangrove leaves, qari can be maintained alive for upto a week, although condition is gradually lost.

Most of the marketing for qari is done through municipal market or roadside stalls. Over 124 tonnes of this species were marketed in 1988 at an average price of \$5.68 per kilogramme.

There is current concern over the state of qari stocks. Many under size qari are reaching the market and interest from exporters can only add to the problem. In most parts of the world where it is found, qari is greatly overfished and no proven culture method yet exists.

