

ANNUAL REPORT 2005



Delegations for the 17th Annual Consultation on Fisheries Treaty between the Government of the United States of America and the Governments of Certain Pacific Island States
March 17th – 23rd 2005, Dateline Hotel, Nuku'alofa.

MINISTRY OF FISHERIES

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LIST OF ABBREVIATIONS

AB Fishermen	: Able bodied Fishermen
ACIAR	: Australian Centre for International Agricultural Research
AusAID	: Australian Agency for International Development
CITES	: Convention on the International Trade of Endangered Species
CPUE	: Catch per Unit Effort
DWFN`s	: Distant Water Fishing Nations
EU	: European Union
FAO	: Food and Agriculture Organisation
FAD	: Fishing Aggregate Devices
FFA	: Forum Fisheries Agency
VMS	: Vessel Monitoring System
FOB value	: Free-on- board – the price of the product source before freight and Insurance is added
HACCP	: Hazard Analysis & Critical Control Point
ICLARM	: International Center for Living Aquatic and Research and Management.
IUU	: Illegal Unrecorded Unregulated
JICA	: Japanese International Co-operation Agency
MFV	: Motor Fishing Vessels
PDF	: Project Development Fund
SMA	: Special Management Areas
SPC	: Secretariat of the Pacific Community

TC-CWP : Tuna Commission - Central Western Pacific
TCP : Technical Co-operation Programs
TIGFA : Tonga International Game Fishing Association
UNCLOS : United Nation Convention Law of the Sea

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EXECUTIVE SUMMARY

This Report provides an overview of fisheries performance for the year 2005 in Tonga and the region. The first part of the Report reflects the Ministry of Fisheries corporate management and development issues while the second part outlines the achievements regarding managing and developing Tonga's fisheries resources. The third part of the Report summarises the ongoing regional fisheries initiatives in which Tonga is an integral part of regional fisheries management and development.

1. Corporate Management and Development

The Hon. Minister of Fisheries, Hon. Tuita, provided direction and guidance to fisheries development and management with the support of the Secretary for Fisheries, Dr. Sione Vailala Matoto, who assumed his appointment early in the year.

Key policy documents guiding fisheries management and development included the Ministry of Fisheries Corporate Plan 2004-07, Fisheries Management Act 2002, Aquaculture Management Act 2003, relevant Fisheries Regulation, and regional / international legal agreements and conventions concerning fisheries conservation and management, access arrangements, IUU fishing, and trade.

The number of staff who performed at post was approximately 99 of which 17 staff were recruited as established employees, and 3 Officers were recruited through lateral transfer from other Ministries. About 30 Officers received promotions at various levels, while 5 Officers left the service due to various reasons.

The total annual budget was approximately 1.8m TOP, a 1% decline from previous year's allocation. Aid funds from AusAID, FFA, SPC, and Commonwealth Secretariat accounted for 17% of the overall budget. Budgetary performance experienced great difficulty due to the impact of the salary rise following the civil service strike.

The total revenue collection was approximately 612,559 TOP of which proceeds from the Multilateral Treaty on Fisheries accounted for 44% of total revenue. A review is currently in progress to assess the Ministry's financial performance with a view to improving collection of fees and charges from fisheries services.

Fisheries performance in the outer islands suffered from high costs of transportation and unreliable transportation schedule but the service delivery was sustained at a satisfactory level. The Fish Market at Neiafu continued to operate under the management of the Ministry and revenue collected from it was approximately 17,541 TOP. The Tonga Fisheries Project donated 10 ice making machines to the communities of Tafahi, Neiafu, 'Uiha, Pangai, and 'Ohonua.

The head office is currently under renovation in a cost sharing arrangement between the Tonga Fisheries Project and the Ministry. The refurbishment is expected to complete

early next year. Internal and external communications through the domain name *tongafish.gov.to* were maintained at a satisfactory level.

2. Fisheries Management and Development

Sectoral performance showed a minimal export growth from 6.2m TOP in 2004 to 6.6m TOP in 2005 which was largely triggered by export growth in snapper, grouper, and aquarium fisheries and the general decline can be attributed to poor catches of tuna, seaweed harvesting, and shark fins.

Total landed catch recorded for tuna species was approximately 552 tons, an equivalent of 31,494 tuna while the total capacity of snapper landed at Nuku'alofa was estimated at 187 tons, an equivalent of 81,657 snappers and groupers. Assessment of other marine stocks particularly seaweed and aquarium fisheries are currently underway.

Community development and advisory services largely focused on developing a community based management framework for Special Management Areas (SMA) for 'O'ua Island. The process commenced with a series of consultations, resource surveys, management planning workshops, and public awareness. It is anticipated that a formal declaration of the 'O'ua Island SMA be achieved early 2006.

Aquaculture effort continued to regenerate depleting stocks of giant clams, green snails, trochus, and pearls through spawning and subsequently replenishing ocean nurseries at Tongatapu, Ha'apai, and Vava'u.

Management Plans for key commercial fisheries, particularly deep water drop line fishery, marine aquarium fishery and charter vessels, were redrafted to reflect recent developments. Formations of Limu Tanga'u Exporters Association and Marine Aquarium Exporter Association established a strong link between the Ministry and the industry.

About 52 fishing licenses were issued of which 38 licenses were issued mainly for deep sea bottom fishing and tuna long line fishing while others were issued for commercial sports fishing, seaweed harvesting & processing, scientific research and training, and special license for Minerva Reef.

Monitoring and compliance strategies was stepped up following the successful prosecution of the fishing vessel Toko III and minor offences relating to captures of bech de mer and undersized lobsters, and dynamite fishing. The deployment of the VMS also contributed to tracking illegal activities in the Tonga fishing grounds and the performance of two different systems of VMS (FFA vs Argos) was satisfactory.

3. Regional Fisheries Development

SPC is continuously monitoring tuna stocks and it has reported that the status of the tuna stock, particularly the major tuna species of skipjack, yellowfin, and south pacific albacore, has shown some mixed signals. Yellowfin and bigeye tuna indicated that over-

fishing is occurring on both stocks. The status of the South Pacific albacore indicated that over-fishing is not occurring, but there is increasing effort in longline effort which could result in decreased fishery performance and profitability.

An ecosystem approach recently applied to managing fisheries has been implemented in the region which takes into account a number of environmental and human factors which may impact on fish stocks. This approach is considered relevant in application to coastal fisheries and other related fisheries.

The Tuna Commission is now in operation and the second meeting was held at Phonapei, FSM at the end of the year. Measures agreed to by Commission members included conservation and management measures for the South Pacific albacore, North Pacific albacore, and big eye and yellowfin tuna. Resolutions on Reduction of Overcapacity and Non-target species have binding implications for members, including Tonga. A Sub-Committee on Southern Pacific Tuna Albacore was agreed to be established as a subsidiary body of the Forum Fisheries Committee and Tonga will engage actively in this Committee.

Regional model legislation has been developed in support of sound, effective, and responsible fisheries management. Following the Forum leaders meeting, a dialogue between FFA and SPC has focused on measures to control deep sea trawling and a declaration has been drafted for consideration of Forum leaders.

A regional compliance strategy is currently being developed which aims at maximizing the effective use of compliance resources and assets. About 1,045 vessels registered to fish within the region. New Zealand and Australia continued to support MSC initiative in the region to combat IUU fishing.

Administration of the Treaties in the region is in order and the outcome of the 18th Annual meeting of the Parties to the Multilateral Treaty on Fisheries were largely satisfactory although there were some concerns about the following: declining number of US fishing vessels engaged in the scheme; the status of ratification by members of the Treaty amendments; and the disbursement of outstanding Treaty funds.

Regional fisheries development programs were designed to address challenges of political, socioeconomic, sustainability, and regional nature. A project for Eco-labelling will investigate certification of pacific tuna and the Marine Stewardship Council will work with pacific countries to promote their products. Certified fisheries can access markets that are otherwise closed and pacific countries can use MSC logo on their products.

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1. EXECUTIVE MANAGEMENT

Fisheries executive management largely involved leading and guiding Fisheries' strategic direction and daily operations. Executive roles were designated to the Hon. Minister of Fisheries, Honourable Tuita; the Secretary for Fisheries, Dr. Sione Vailala Matoto; and supported by the Deputy Secretaries: Mrs. 'Apisake Soakai and Mr. 'Ulunga Fa'anunu.

(i) Office of the Minister

The Hon. Minister was actively involved in various fisheries initiatives directly related to policy and regulatory initiatives. He hosted regional events such as the Annual Consultation between parties to the Multilateral Treaty of Fisheries which was convened at Nuku'alofa during March 17th to 23rd 2005.

Hon. Tuita participated in the following international events: (i) 26th Session of Committee on Fisheries and FAO Ministers meeting, Rome, Italy; (ii) Conference on the Governance of High Seas Fisheries and the United Nation Fish Agreement, Newfoundland, Canada.

(ii) Office of the Secretary

The appointment of the new Secretary for Fisheries, Dr Sione Vailala Matoto, strengthened the leadership role in the Ministry after a year of sharing duties of the head of the department on monthly rotation by the Deputy Secretaries, Mr. 'Ulunga Fa'anunu and Mrs. 'Apisake Soakai following the resignation of Mr. Manase Felemi. Dr. Matoto, formerly Principal Fisheries Officer, brought with him many years of experience in fisheries issues.

Dr. Matoto, in his capacity as the head of department, represented the Ministry and the Government of Tonga at various forums and conferences locally and abroad and a list of gatherings overseas in which the Secretary participated appears below.

1. Food and Agriculture Organisation (FAO) 26 th Session of Committee on Fisheries, March , Rome Italy
2. 17 th Annual Consultation on the Multilateral Treaty with the US Government, March , Tonga
3. Fisheries Legislation & Community Based Management, April , Honolulu.
4. Conference on the Governance of High Seas Fisheries and United Nation Fish Agreement, May , Canada..
5. Annual Session of the Officials and Ministerial Forum Fisheries Committee, June , Marshall Islands.
6. WCPF Commission and Ecosystem Considerations , July , Australia
7. Preliminary Sessions- FFA members countries, Scientific Working Groups (SWGS), Scientific Committee, August , Noumea
8. Consultation for Future Cooperation between Japan and FFA and Informal Consultation toward WCPFC2, September , Japan
9. Fisheries Management Option workshop, 1 st meeting of UNDP/GEF project for Pacific Islands Oceanic Fisheries Management, October , Solomon Islands.

10. Forum Fisheries Committee (FFC) 60, Commission Technical Compliance Committee, WCPFC2, December , Phonapei
11. Monthly meeting on Waqa Project & Fisheries Market Management Committee, Vava'u.

The service delivery of the Office of the Secretary was supported by the staff members listed below.

Table 1.1: Secretary for Fisheries Support Staff, 2005

Name	Post
Mr. 'Ulunga Fa'anunu	Deputy Secretary (Technical Services)
Ms. 'Apisake Soakai	Deputy Secretary (Corporate Services)
Ms. Katalina Tonga Fifita	Technical Office Grade II
Mr. 'Etuini Kaufusi	Driver

2. CORPORATE PLANNING AND POLICY

The current Strategic Plan for 2004-2007 reflects significant links between fisheries' goals and economic, social and environmental targets where resource exploitation must be sustainable.

(i) Organisational structure

The current organisational structure reflects a clear demarcation of corporate services and technical services, each receiving equal priority. Figure 2.1 shows the current organisational structure.

(ii) Vision statement

"We envision that through effective and efficient management and development, Tonga's living aquatic resources will continue to contribute to the sustainable development of Tonga by providing management, administration, training and research".

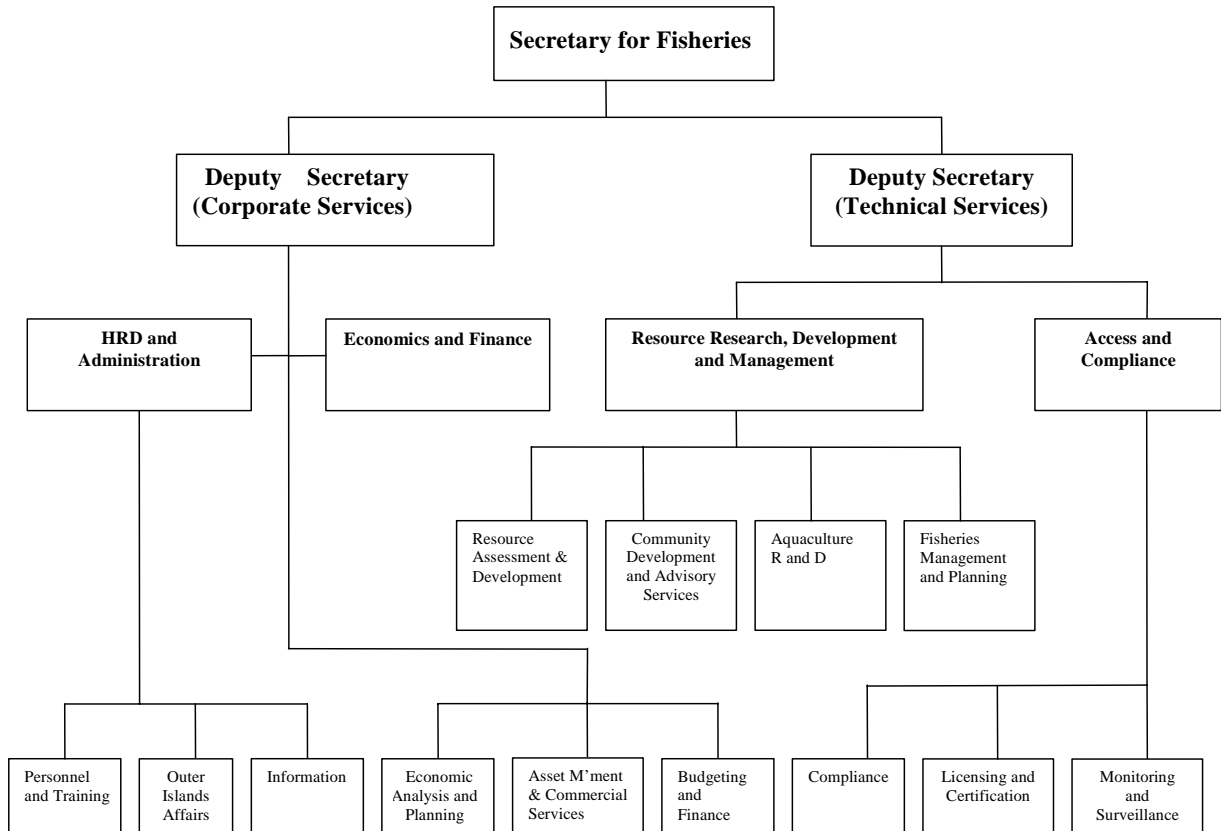
(iii) Mission statement

"To increase the effectiveness of the living aquatic resource sector's contribution to the sustainable development of Tonga by providing management, administration, training and research".

(iv) Goal

"The development of Tonga's living aquatic resource industries to the highest level of use compatible with ecological sustainability with structures of ownership, participation and technology that maximise the benefits to the people of Tonga."

Figure 2.1: Organisational Structure, 2005



(v) Values

We will develop and maintain a participative work environment in which our people will feel valued and able to contribute to the best of their abilities. We will maintain the highest levels of professional behaviour by: (a) fulfilling legislative obligations with professionalism; (b) undertaking our official duties, honestly and efficiently; (c) respecting the right of our work colleagues, stakeholders and the public; and (d) not engaging in any private activities that will bring the Ministry into disrepute or involve a conflict of interest.

(vi) Fisheries Legal Framework

All fisheries initiatives are subject to the Fisheries Management Act 2002, Aquaculture Act 2003 and relevant regulations thereunder. In addition to national legislations Tonga’s Fisheries is also bound by regional agreements and international conventions relating to IUU fishing, resource conservation, and standards for resource harvesting, processing, and trading of fisheries products. Well known international conventions include UNCLOS, CITES, WCPF, plus many others.

3. HUMAN RESOURCE DEVELOPMENT AND ADMINISTRATION

Human resource development and general administration involved the following functions: (i) Personnel & Training; (ii) Information; and (iii) Coordination of Outer

Island Affairs, particularly Vava'u, Ha'apai, Eua, Niuatoputapu, and Niuafo'ou. The Principal Fisheries Officer, Mr. Vilimo Fakalolo, was in charge of achieving targets for HRD and general administration.

The Ministry had a total of 107 established posts for the year and at the end of the year only 99 posts were filled. The remaining 8 vacant posts resulted from resignation, retirement and dismissal of staff from the service. Details of the approved posts and vacancies for 2004/05 are shown in Table 3.1 below.

Table 3.1: Permanent Posts as at December 31, 2005

Level	Post Title	Post Abbreviation	No. of Post	No. of Vacancies
L/1	Secretary for Fisheries	SF	1	-
L/2	Deputy Secretary	DS	2	-
L/5	Principal Fisheries Officer	PFO	5	-
L/7	Senior Fisheries Officer	SFO	2	-
	Senior Computer Programmer	SCP	1	-
L/9	Fisheries Officer	FO	11	-
	Technical Officer Grade. I	TOI	3	-
	Computer Programmer	CP	1	-
	Accountant	A	1	-
L/11/9	Technical Officer Grade II	TOII	12	-
	Computer Operator Grade I	COI	1	-
L/12	Master (FV Ekiaki)	MA	1	1
	Engineer (FV Ekiaki)	E	1	-
	Computer Operator Grade III	COIII	1	-
	Senior Fisheries Assistant	SFA	13	2
	Fisheries Assistant	FA	17	3
	Mate	M	1	-
L/13	Computer Assistant	CA	2	1
L/14	Fisheries Trainee	FT	29	1
L/14A	Drivers	D	2	-
Total Established Posts			107	8

(a) Personnel & Training

The Fisheries Officer, Mrs. 'Eva 'i Pomana Tu'uholoaki was appointed as the officer in charge of personnel and training initiatives. Names of support staff engaged in personnel services and training is listed in Table 3.2 below.

Table 3.2: Staff of the HRD Section

	Name	Post
1	Mrs. 'Eva 'i Pomana Tu'uholoaki	Fisheries Officer
2	Mrs. Makeleta Vaikaka	Fisheries Trainee
3	Mrs. Silia Soakai	Computer Assistant

1. Staff Appointments, Promotions and Retirements

Tables 3.3 to 3.5 below outline staff appointments, promotions, resignations, retirements, and dismissals during the year.

Table 3.3: Staff Appointments 2005

	Name	Post
1	Mrs. 'Eva 'i Pomana Tu'uholoaki	Fisheries Officer
2	Miss. Salome Tupou	Fisheries Officer
3	Mrs. Lehape Latu	Technical Officer Grade II
4	Miss. Kalolaine Manuopangai	Technical Officer Grade II
5	Miss. Lesieli Vaka	Fisheries Trainee
6	Miss. Ruby Kolo	Fisheries Trainee
7	Mr. Feauini Vito Salesi	Fisheries Trainee
8	Mr. Tonga Tuiano	Fisheries Trainee
9	Mr. Vai'uli Kohinoa	Fisheries Trainee
10	Mr. Sione Uasike	Fisheries Trainee
11	Mr. Ki'i Tonga Via	Fisheries Trainee
12	Mr. Penisimani Faleako	Fisheries Trainee
13	Mr. Saia Peu	Fisheries Trainee
14	Mr. Kolo Fe'ao	Fisheries Trainee
15	Mr. 'Aivenihou Tukuafu	Fisheries Trainee
16	Mr. 'Ofa Napa'a	Fisheries Trainee
17	Mr. Tevita 'Alatini	Fisheries Trainee

Table 3.4: Staff Promotions, 2005

	Name	Designation	New Post
1	Mr. Tevita Finau Latu	Senior Fisheries Officer	Principal Fisheries Officer
2	Mr. Pau mo Levuka Likiliki	Fisheries Officer	Senior Fisheries Officer
3	Miss. 'Ana Finau Taholo	Computer Programmer	Senior Computer
4	Mr. Uanoa 'Ahoafi	Technical Officer Gr. I	Fisheries Officer
5	Mr. Martin Wesley Finau	Fisheries Assistant	Fisheries Officer
6	Mr. Tevita Lautaha	Technical Officer Gr. I	Fisheries Officer
7	Mrs. Silika Ngahe	Technical Officer Gr. II	Technical Officer Gr. I
8	Mr. Tevita 'Ahoafi	Technical Officer Gr. II	Technical Officer Gr. I
9	Mr. Tevita Taulafo	Technical Officer Gr. II	Technical Officer Gr. I
10	Mrs. Lavinia V. Vaipuna	Computer Operator Gr. I	Computer Programmer
11	Mr. 'Elaona Ve'a Kava	Senior Fisheries Assistant	Technical Officer Gr. II
12	Mr. Sailosi 'Alofi	Senior Fisheries Assistant	Technical Officer Gr. II
13	Mr. 'Inoke Mapuhola	Senior Fisheries Assistant	Technical Officer Gr. II
14	Mr. Tala'ofa Loto'ahēa	Senior Fisheries Assistant	Technical Officer Gr. II
15	Mrs. Sosefina Vili	Senior Fisheries Assistant	Technical Officer Gr. II
16	Mrs. Losilini Loto'ahēa	Computer Operator Gr. III	Computer Operator Gr. I
17	Mrs. Sisilia Soakai	Computer Assistant	Computer Operator Gr. III
18	Mr. Feauini Vi	Fisheries Assistant	Senior Fisheries Assistant
19	Mr. Koliniasi Hafoka	Fisheries Assistant	Senior Fisheries Assistant
20	Mr. Sosaia Niumeitolu	Fisheries Assistant	Senior Fisheries Assistant
21	Mr. Sione Mailau	Fisheries Assistant	Senior Fisheries Assistant

	Name	Designation	New Post
22	Miss Veisia Fakalelu	Fisheries Assistant	Senior Fisheries Assistant
23	Mr. Moana Nau	Fisheries Trainee	Fisheries Assistant
24	Mr. Mafi Makasini	Fisheries Trainee	Fisheries Assistant
25	Mr. Moana Nau	Fisheries Trainee	Fisheries Assistant
26	Mr. Fotu Tu'i'onetoa	Fisheries Trainee	Fisheries Assistant
27	Mr. Sese Malimali	Fisheries Trainee	Fisheries Assistant
28	Mr. 'Amanaki Tu'itupou	Fisheries Trainee	Fisheries Assistant
29	Miss Telesia 'Uhatafe	Fisheries Trainee	Fisheries Assistant
30	Miss 'Emeline Tupou	Fisheries Trainee	Fisheries Assistant
31	Mrs. 'Ana Tapu Latu	Fisheries Trainee	Fisheries Assistant

Table 3.5: Resignations, Transfer, Retirement, Termination & Dismissals, 2005

	Name	Post	Reason
1	Mr. Viliami Mo'ale	Principal Fisheries Officer	Lateral transfer -Immigration Department
2	Mr. Tu'ikolongahau Halafihi	Senior Fisheries Officer	Lateral transfer- Ministry of Education
3	Mrs. Lehape Latu	Technical Officer Gr. II	Terminated
4	Mrs. Mele Holo'ia	Technical Officer Gr. II	Lateral transfer - Ministry of Lands, Survey and Natural Resources
5	Miss. Lesieli Vaka	Fisheries Trainee	Terminated
6	Mr. Sonatane Ha'unga	Fisheries Trainee	Dismissed
7	Mr. Sitiveni Sefesi	Fisheries Trainee	Dismissed
8	Mr. Tevita Tonga Valu	Fisheries Trainee	Dismissed

2. Short-Term Training, Workshops, Local & Overseas Meetings

Staff continued to benefit from participation at short term training courses and meetings organized and funded by regional and international organizations. Table 3.6 below lists local and overseas training courses and meetings in which staff participated.

Table 3.6: Training Courses and Meeting during 2005

	Courses/Meeting/Workshop	Duration	Location
1	MCS/VMS Training	1 week	Australia
2	8 th MCS Working Group Meeting	1 week	Solomon Is
3	12 PIMRIS Steering Committee meeting & Attachment to PIMRIS	2 weekdays	Fiji
4	Forum Fisheries Committee 59 th Meeting	1 week	Marshall Is
5	Foreign Trade Development II	2 months	Japan
6	WCPF Commission and Ecosystem Consideration	1 week	Australia
7	8 th FAO Roundtable meeting for Pacific Countries on WTO Agreement Provisions	1 week	New Zealand
8	Seminar on Fisheries Management for South Pacific Countries	2 weeks	China
9	Live Reef Fish Trade (Aquarium) Attachment	3 weeks	New Caledonia
10	IUU Fishing Workshop	1 week	Fiji
11	3 rd Licensing Officers Workshop	1 week	Solomon Is

	Courses/Meeting/Workshop	Duration	Location
12	Marine Organism Culture	3 weeks	China
13	Enterprises Development	3 weeks	Fiji
14	Regional Workshop to Develop a Legal Strategy of assistance for next 5 years	1 week	Vanuatu
15	Pearl Culture	1 week	Fiji
16	26 th Session of Committee on Fisheries Meeting	1 week	Italy
17	Regional Clarification workshop on Multilateral Trade Negotiations on Agriculture and Fisheries	1 week	Samoa
18	Fisheries Legislation & Community Based Fisheries Management	2 weeks	Hawaii
19	Conference on the Governance of High Seas Fisheries and the United Nation Fish Agreement Moving from words to action	1 week	Canada
20	Preliminary Sessions FFA member countries	2 days	New Caledonia
21	Preliminary Sessions SWGS	2 days	New Caledonia
22	1 st Sessions of the Scientific Committee	2 weeks	New Caledonia
23	Consultation for Future Cooperation between Japan and FFA and Informal Consultation toward WCPF2	1 week	Japan
24	Fisheries Management Option Workshop	1 week	Solomon Is
25	1 st Meeting of the UNDP/GEF Pacific Island Oceanic Fisheries Management (OFM) Project	2 days	Solomon Is
26	FFA MCS/VMS Training	1 week	Australia
27	60 th Forum Fisheries Committee Meeting	1 week	Phonapei
28	Commission's Technical Compliance Committee	1 week	Phonapei
29	2 nd Regular session of the Commission (WCPFC2)	2 weeks	Phonapei
30	Tonga's Accession to the International Maritime Organisation (IMO) Conventions	1 day	Tonga
31	Environment Camp Training	1 week	Tonga
32	Mini Long-line Training	2 weeks	Tonga
33	Managing Change Workshop	2 days	Tonga
34	Record Management Workshop	2 days	Tonga
35	Workshop on Fisheries, Climate and Weather	1 day	Tonga
36	Customer Care Training	1 day	Tonga
37	National Consultation International Trade Issue	2 days	Tonga
38	Interviewing and Selection Techniques Training Program	2 days	Tonga
39	Interview and Video Editing Training	3 days	Tonga

3. Staff Movement during 2005

Table 3.7 provides details on staff movement achieved during 2005 in response to manpower requirement in the various regional offices. The Ministry's general policy requires Officers to serve a term of three years in any one station before s/he is relocated to another.

Table 3.7: Staff Movement During 2005

	Name	Post	Pre-Location	New Location
1	Mr. Talia'uli Napa'a	Fisheries Assistant	Ha'apai	Nuku'alofa

	Name	Post	Pre-Location	New Location
2	Mr. Moana Nau	Fisheries Assistant	Pangai	Ha'afeva
3	Mr. Tu'atalatau Tonga'onevai	Senior Fisheries Assistant	Ha'afeva	Pangai
4	Mr. Mosese Moala	Fisheries Trainee	Vava'u	Pangai

4. BUDGETING AND FINANCE

Budgeting and financial role involved planning and managing of fisheries financial resources to ensure that operations are efficient and cost effective and most importantly those financial resources are sustainable. The annual budget allocation contained recurrent funds allocated by Government of Tonga and development funds received from aid agencies for fisheries development projects. The list of staff support for budgeting and financial service delivery appears in Table 4.1 below.

Table 4.1: Budget and Finance support staff, 2005

	Name	Post
1	Mr. Tevita Talakai	Accountant
2	Mrs. Mele Holo'ia	Technical Officer II
3	Mr. 'Amanaki Tu'itupou	Fisheries Assistant
4	Mr. Sekope Tiueti	Fisheries Trainee

(i) Recurrent and Development Estimates

The total expenditure for the Financial Year 2004/05 decreased by 0.95 % compared with the previous year. The following budget items received an increase from previous year's allocation: (i) Staff salary by 1.97 % (from \$899,356 in 2004/05 to \$911,804 in 2005/06); (ii) Travel and Communication by 2.45 %; and (iii) Purchase of Goods and Services by 54.52%. Allocations which received budget cuts include: (i) Un-established staff by 1.27 %; (ii) Maintenance and Operations by 24.7 %; and (iii) Capital Expenditure by 33.92%. Comparison of the current financial performance with previous years is provided in Table 4. 2 and Table 4.3 below.

Table 4.2: Total expenditure Estimate by Major Components, 2003/04 – 05/06

Expenditure by Major Component	2003/04 (T\$)	2004/05 (T\$)	% Change	2005/06 (T\$)	% Change
Established staff	1,286,892	899,356	-1.09	911,804	1.97
Un-established staff	36,001	33,000	-0.002	25,000	-1.27
Travel and Communication	108,307	103,076	-0.004	118,577	2.45
Maintenance and Operations	495,405	387,060	-0.09	230,583	-24.75
Purchase of Goods and Services	470,605	107,000	-0.30	451,710	54.52
Operational Grants & Capital Expenditure	654,003	300,022	-1.78	85,517	-33.92
Total	3,051,213	2,047,179	-3.26	1,823,191	-0.95

It should be noted that as a direct impact of the civil service action, an allocation of \$120,000 from the operational budget was transferred to accommodate the 60%, 70% and 80 % salary increase. As a result the operational budget was severely affected.

Table 4.3: Expenditure Estimate by Funding Source, 2003/04 – 05/06

Funding Source	2003/04	2004/05	2005/06
Government of Tonga Fund	1,048,579	1,164,413	1,209,521
Government of Tonga: Revolving Fund	201,009	222,501	295,936
Overseas Donor Funding (Cash/Token)	801,110	660,265	317,734
Overseas Donor Funding (In-kind)	1,000,515		1505
Total	3,051,213	2,047,179	1,824,696

(ii) Revenue Collection

The total revenue collected during January 2005 to December 2005 was approximately T\$612,559.05, and T\$273,973.46 of which was received as proceeds from the Multilateral Treaty on Fisheries with the United States; \$97,780.50 receipt from revolving fund; \$90,659.09 from FFA; \$26,983.55 from the Commonwealth Funds for Technical Cooperation; and the remaining balance of \$123,162.41 was collected from sales of aquarium products, fishing licenses, service fees, sundry sources and Consumption Tax as detailed below in Table 4.4.

Table 4.4: Revenue Sources for January - December 2005

Revenue Sources	Amount collected
General Revenue	
Consumption Tax	\$18,182.07
Sundry Revenues	\$65,347.51
Market Fee	\$7,000.00
Sales of produce and products	\$3,595.90
Miscellaneous License	\$29,036.93
FFA Treaty	\$273,973.50
S/Total	\$397,135.91
General Development	
Receipt from Revolving Fund	\$97,780.50
Receipt from FFA (Forum Fisheries Agency	\$90,659.09
Commonwealth Fund	\$26,983.55
S/Total	\$215,423.14
G/Total	\$612,559.05

(iii) Multilateral Treaty on Fisheries with the United States of America

Tonga remains party to the Multilateral Treaty between the governments of certain pacific countries and the government of the USA with a total of US\$21 million paid to the FFA (Treaty Administrator) in 2004. The annual fund is shared by the parties in an agreed formula and Tonga received from the Treaty an annual share of 15% paid directly to the Government's General Revenue. The PDF annual share for Tonga for the 15th to the 17th (the current licensing period) is shown in the Table 4.5 below.

Table 4.5: Tonga's PDF Annual Share for Licensing Period 15th – 17th.

Licensing Period (Yr)	15 th June 02– 03	16 th June03-04	17 th June04 –05
Amount (US\$)	147,321.72	147,357.28	147,310.43
T \$	309,564.45	285,478.33	273,973.46

In terms of Tonga's share of the PDF, Tonga received equal share with other parties/members from the annual allocation. Tonga's balance at the end of December 2005 was approximately US \$258,334.70 and distribution of this allocation is expected in June 2006.

To date the financial benefit from the Treaty was approximately \$4,150,796.39 (15%). This fund is administered by the FFA and disbursed only by approval granted by the Government of Tonga and approval for utilizing the PDF remains the discretion of Cabinet.

Tonga hosted the 17th annual consultation between the parties on Treaty of Fisheries. Prior to the consultation the Pacific island party met two days prior to discuss treaty issues and position itself in the annual arrangement.

5. ECONOMIC ANALYSIS AND PLANNING SECTION

The fishing industry played a key role in the local economy in terms of export earnings, employment, trade, and food security therefore it was essential to monitor growth and development of the fishing industry to determine its annual contribution to the overall economy.

Fisheries economic analysis and planning involved on three core functions: (i) statistics and economic analysis; (ii) project development; and (iii) policy and planning. The names of supporting staff engaged in fisheries economic and planning are listed below in Table 5.1.

Table 5.1: Economic Analysis and Planning support staff, 2005.

	Name	Post
1	Mr. Samisoni Naupoto	Principal Fisheries Officer
2	Mrs. Mandie K Finau	Fisheries Officer
3	Miss Salome Tupou	Fisheries Officer

(i) Statistics and Economic Analysis

Main activities concerning data and economic analysis involved recording and updating fisheries economic data; coordinating the publication of fisheries economic data and its dissemination; cost benefit analysis of current fisheries operation; and feasibility studies of potential areas for fisheries development.

A compilation of fisheries statistics from the previous five years was initiated which will form the first Fisheries Statistical Abstract. The document is expected to be published next year.

(ii) Development Projects

Developing, implementing and monitoring fisheries projects was considered a critical role requiring special attention mainly due to significant funds contributed by aid donors and the need to ensure that projects are managed properly was recognized.

A remedial project was proposed for Vava'u Fish Market aiming for infrastructure support for a boat hoist, fenders and an ice machine. The proposal has been accepted by the Vava'u Management Committee and has been forwarded to the EU for consideration.

(iii) Policy and Planning

An internal policy was drafted for Vehicle Use which outlined measures and conditions relating to staff use of, and staff responsibilities for, vehicles.

(iv) Fisheries Information Quarterly Reports

The publication of Fisheries Information Quarterly Reports was a new initiative aimed at enabling all stakeholders to view annual trends of all commercial fisheries and to compare current performance with previous years. Production of the reports is supported by Management Planning, Resource Assessment, and Compliance services. The Reports, widely distributed to local stakeholders and regional organisations, detailed harvest and export information for each commercial fishing industry.

6. INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) SERVICES

ICT services facilitated Fisheries' need to transmit and disseminate information internally and externally to individuals and agencies at local, regional, and international settings.

Conveyance of various means of Fisheries' communications is articulated by a diverse application of technology particularly computer applications, mass media (via printing, broadcasting, and television), and face to face consultations. In addition, at the core of ICT service provision remains the necessity to store relevant information for Fisheries' historical and management purposes.

Services currently available to Fisheries' staff and stakeholders include a computer network that links staff internally and with the outside world, library services, and media link with the local community. Staff and stakeholders alike are informed about Fisheries development in terms of social and economic progress.

ICT capacity was affected early in the year when Mr. Sosaia Tulua, Senior Computer Programmer and head of ICT services resigned. However, Mrs. Lavinia Vaipuna was subsequently appointed to the post of Computer Programmer and subsequently assumed the responsibility for managing ICT services. A list of staff engaged in ICT services is provided in Table 6.1 below.

Table 6.1: ICT Staff, 2005

	Name	Post
1	Mrs. Lavinia Vaipuna	Computer Programmer
2	Mrs. Losilini Loto'aea	Computer Operator Grade I (Media Officer)
3	Mr. Vai'uli Kohinoa	Fisheries Trainee (Media Assistant)
4	Miss 'Emeline Tupou	Fisheries Assistant (Librarian)

(i) Computer Services

Computer services largely involved: (i) operation and maintenance of all computer hardware and software; (ii) development and maintenance of databases in specifications required for planning and management purposes; and (iii) training of Fisheries personnel on use of computer equipment and software applications. Services were available to all staff at Tonga tapu, Pangai, and Neiafu.

1. Information Network Services

The TOFISH network system continues its operation since its upgrade in 2004 and maintains one Domain file server. Backing up of all fisheries data was upgraded using a computer device called external sub-system.

2. E-mail Server

A system domain of *tongafish.gov.to* facilitated staff email access. Staff at Vava'u and Ha'apai Fisheries offices were also linked with the head office via this e-mail network. Due to increasing demand for faster and more efficient service, plans to change from the existing service provider to a new system that can manage heavy email traffic was pursued but existing local email providers cannot meet the requirement therefore plans for improvement was affected.

3. Connection to Treasury Department

Connection to Treasury Department was maintained which allowed staff to access the Internet at any given time.

4. Computer Hardware

The following table lists current hardware applications by types of hardware/computer equipment with its specifications deployed in the Ministry.

Table 6.2: Inventory of Computer Equipment, 2005

Specification	Quantity
AMD Sempron	6
AMD System	9
Pentium IV	9
Compaq Presario	1
Pentium 116	5
Pentium II	1
Notebook PIV	5
HP 5L	1

Specification	Quantity
HP LaserJet 1100	2
HP Deskjet 5160	1
Hp LaserJet 1000	1
Hp Laserjet 1015	2
HP LaserJet 1200	2
HP DeskJet Canon	1
HL-2600 CN	1

5. *Computer Software*

The following table lists computer software applications deployed to ensure that computer services continue to be reliable and efficient.

Table 6.3: Inventory of Computer Software, 2005

Type	Program Name
Operating System	Server 2003, Window XP Professional
Mapping	MapInfo
Graphics	Photo Editor, Adobe Photoshop 5
Office	Office XP
Antivirus	Vet
E-mail Server	FTGate
Databases	Microsoft Access.

(ii) **Media and Public information**

Media and public information function is instrumental to dissemination of Fisheries information via radio and television programs, including published materials.

Media equipment including laptop and media software were provided by AusAid funded Tonga Fisheries Project which has contributed to improving the quality of community awareness and public relations programs. It also enabled production of media programs on site.

Achievements of the year included: (i) production of 24 radio and television programs; (ii) art competitions for primary schools on dynamite fishing; (iii) publication of 1000 copies of marine conserve bumper stickers and Fisheries calendar 2006; (iv) video production of Lobsterman Part II.

(iii) **Library services**

This year the Library service was relocated from the small building situated by the engineering services to the main building. The Librarian attended the PIMRIS Steering Committee Meeting which was held at USP Suva, on the 31st of May 2005 and subsequently assumed a one week attachment on the cataloguing database used is INMAGIC DBTextworks. There are currently 241 records in the database.

Due to importance of maintaining links with resource centers abroad, the Tonga Fisheries Project paid membership fees for the International Association of Aquatic and Marine

Science Libraries and Information Centre. This membership allows free flow and share of information, publications, reports and various published material.

7. ASSET MANAGEMENT COMMERCIAL SERVICES

Asset management and commercial services involve strategic management of fisheries infrastructure and assets in Tongatapu, Vava'u, Ha'apai, and Niua toputapu. Core services include engineering; boat building; carpentry; maintenance and operation of MV Ekiaki; and management of Tu'imatamoana Market.

(i) Engineering

The engineering service is central to the overall repair and servicing of Fisheries vessels (particularly FV Ekiaki and Vete); community ice making machines; vehicles; including repair and maintenance of private fishing boats. In 2005 the following major activities were achieved: technical support for Waqa Project and refurbishment work of head office; replacement of old vehicles with four new mini bus; installation of 10 new ice making machines (small scale size): 2 each at Tafahi, Niuatoputapu; Neiafu, Vava'u, and 'Uiha, Ha'apai; 3 at Pangai Hp; and 1 at 'Eua; ongoing provision of stand by power to main office building; regular repair and servicing of Fisheries' vehicle.

Names of staff engaged in asset management and commercial services are listed in Table 7.1 below. Mr. Viliami Tonga Vaka, Technical Officer and Mr. Lisiate Pola, Fisheries Trainee were transferred to Fisheries' Pangai Office, Ha'apai Group.

Table 7.1: Engineering Support Staff, 2005

	Name of Officer	Post
1	Mr. Lomio Tonga	Fisheries Officer
2	Mr. Viliami Tonga Vaka	Technical Officer Grade II
3	Mr. Siosifa Fisi'ipeau	Senior Fisheries Assistant
4	Mr. Pala'a Mausia	Senior Fisheries Assistant
5	Mr. 'Uluaki Vaipuna	Fisheries Assistant
6	Mr. Fonuakite Fanua	Fisheries Trainee
7	Mr. 'Etuini Kaufusi	Driver
8	Mr. Mosese Tonga Poteki	Driver

The Table 7.2 below reflects an inventory of all Fisheries' vehicles in operation in 2005, all of which are in good condition.

Table 7.2: Transportation pool, 2005

Year	Reg No	Type	Location	Standard	Fund	Remark
1992	P 1118	Toyota Hillux	Sopu	Poor Condition	JICA	Tender
1992	P 149	Toyota Hillux	Sopu	Poor Condition	PDF	Tender
1994	P 1026	Toyota Hiace	Sopu	Fair Condition	PDF	
1997	P 1120	Toyota Hillux	Sopu	Good Condition	JICA	
1997	P 152	Toyota Hillux	Sopu	Fair Condition	PDF	
1997	P 39	Toyota Hillux	Vava'u	Fair Condition	PDF	

Year	Reg No	Type	Location	Standard	Fund	Remark
1997	P 103	Toyota Hillux	Pangai Hp	Good Condition	PDF	
2003	P 1296	Toyota Hiace	Sopu	Poor Condition	Leiola Duty	
2004	P 1328	Mazada Mini				
2004	P 1329	Mazada Mini				
2004	P 1350	Toyota Hiace	Sopu	Good Condition	PDF	
2004	P 1351	Toyota Hiace	Sopu	Good Condition	PDF	

(ii) Boat building and Carpentry

Services focused mainly on repair and construction of small fishing vessels as well as renovation of the existing building at Fisheries head office, Sopu. Work achieved included: Refurbishment of the Head Office Building; Support to Waqa Project, Vava'u; Support to Waqa Project, Pangai Ha'apai; and Repair of workshop roofing.

Staff engaged in boat building and carpentry services was Mr. Sione Fine, Fisheries Assistant and Mr. Tevita Tonga Valu, Fisheries Trainee was later dismissed from the service.

Due to budgetary constraints, maintenance and repair of office buildings and staff quarters in outer Island could not be fulfilled. However, it is expected that necessary work will be carried out in 2006/07 financial year.

(iii) Ekiaki Management and Operation

The FV Ekiaki was most often engaged for research and training purposes including deployment of FADs in outer island fishing grounds. Names of crew members of the FV Ekiaki are listed below in Table 7.3.

Table 7.3: FV Ekiaki Staff, 2005

	Name	Post
1	Mr. Haani Lave	Captain
2	Mr. 'Atunaisa Vea	Chief Mate
3	Mr. Paea Mapu	Chief Engineer
4	Mr. Kolo Fe'ao	AB Fisherman
5	Mr. 'Ofa Napa'a	AB Fisherman
6	Mr. Tevita 'Alatini	AB Fisherman
7	Mr. 'Aiveni Tukuafu	AB Fisherman

During the course of the year, Mr. Haani Lave, Captain was dismissed from the service and Mr. 'Aiveni Tukuafu, AB Fisherman, was transferred to the technical services.

The Tonga Fisheries Project took over the management and operation of FV Ekiaki since 2001 and due to changing roles for the FV Ekiaki and escalating operational and maintenance costs serious consideration is given to leasing the vessel to interested local commercial fishers.

(iv) Tuimatamoana Market Operation

The Ministry continued to manage the operation of the Tuimatamoana Fish Market for the fifteenth year. The Market is critical to the fishing sector where it is a permanent and secure site for fishermen to sell and trade their daily catches.

A team of six officers were responsible for Tuimatamoana's upkeep and their names are listed in Table 7.4 below.

Table 7.4: Support Staff at Tuimatamoana Market, 2005

	Name	Post
1	Mr. Uanoa 'Ahoafi	Fisheries Officer
2	Mrs. Makalita Mafile'o	Senior Fisheries Assistant
3	Mr. Mafi . T. Havea	Fisheries Assistant
4	Mr. Penisimani Faleako	Fisheries Trainee
5	Mr. Sione Uasike	Fisheries Trainee
6	Mr. Ki'itonga Via	Fisheries Trainee

The Tuimatamoana Fish Market was built about 15 years ago, equipped with freezers, cool storage room, ice making machine and fully furnished trading area to facilitate local fish trade, storage and the production of ice for fishing vessel. However the facility has deteriorated due to lack of maintenance funds.

The total revenue generated during the year appears in Table 7.5 below.

Table 7.5: Tuimatamoana Market Revenue: January – December, 2005

Month	Ice block	T/Rent	H/Scale	Cooler	Other	R/Mar	C/Tax	Total
Jan	3241.00	604.12	178.00	108.00	180.95	-	-	4312.07
Feb	2558.00	533.50	162.00	71.00	133.95	2000.00	-	5458.45
Mar	2940.40	706.04	262.00	156.00	126.00	-	-	4190.44
Apr	2569.00	463.06	214.00	173.00	120.00	-	448.55	3987.61
May	3385.99	527.52	184.00	112.00	191.51	-	660.73	5061.75
Jun	3766.00	910.16	272.00	155.00	251.94	3000.00	786.30	9141.40
Jul	1667.72	353.70	140.00	60.00	84.21	1,850.00	495.44	4651.07
Aug	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Sep	1982.00	420.98	160.00	37.00	19.78	1150.00	693.66	4463.42
Oct	1688.73	746.31	312.00	245.00	187.18	-	461.30	3640.52
Nov	406.00	536.94	324.00	117.00	26.38	4000.00	211.38	5621.70
Dec	3344.11	619.11	170.00	70.00	188.70	-	657.51	5049.43
Total	27,548.95	6,421.44	2,378.00	1,304.00	1,510.60	12,000.00	4,414.87	55,577.86

1. Fish Landing

The market recorded a total of 214.17mt of fish landed for sale in 2005 as compared to 206.97mt in 2004. Most of the landed fish at Tuimatamoana Market were from the outer islands. The growing number of fishermen engaged in the industry accounted for the increase of catch for the year 2005. About eighty five to ninety percent (85 – 90%) of the

landed catch were snappers and reef fish while ten to fifteen percent (10 – 15 %) were Tuna species.

2 *Ice Production*

The market produced approximately 27.55mt of ice for sale. Only one ice making machine (with a maximum production capacity of 2.7mt per 24 hours of operation) continued to supply daily demand for ice blocks. This was considered insufficient to meet the existing demand and consideration should be given to adding another ice – making plant, if the market is expected to continue this service to the fishing community and the general public. There would therefore be a need for consultation with the fishing community and general public to ensure that such a service is necessary and that the Government should continue to be involved in its operation.

Table 7.6: Status of the Refrigeration facilities at Tuimatamoana Market, 2005

Items	Status of assets
Air blast Freezer No. 1	Broken since 1998, need to replace.
Air blast Freezer No. 2	Broken since 2000
Freezer Store No. 1	Broken since 1999
Freezer Store No. 2	Broken since 1998
Freezer/Chiller	Broken
Chiller Room	Operational
Ice Store	Operational
Ice machine	Broken since 2000

3 *Fish Handling and Processing Equipment.*

A list of fish handling and processing equipment currently being used at Tuimatamoana Fish Market is provided in Table 7.7 below. These equipments were also available for rental and hire purposes.

Table 7.7: Tuimatamoana Equipment, 2005

Items	Status of assets
6 Heavy duty trolley	All broken, need replacement
2 Cutting bandsaw	One works well, one need replacement
1 Small C/ bandsaw	Broken, need replacement
4 Manual pallet truck	All broken need replacement
24 Blue cooler (ice box)	Some need repair
4 Hanging weighing scales	Operational
2 Platform weighing scales	One operational, one needs replacement

4 *Vehicle*

Two vehicles (a forklift and a double cab van) supported the market's transportation needs. Each vehicle is in good working condition.

5 *Fish Processing and Packing Room*

The packing and processing facility is currently being rented by the South Pacific Resources Company from the Ministry of Fisheries at a monthly rental fee of T\$1,000.

6 Constraints

The effective operation of the fish market is constrained by the following factors: break down of all cold storage equipment; lack of qualified refrigeration engineer; shortage of ice; structure of market building doesn't meet hygienic and overseas market requirement (e.g. HACCP); fish retail area is very hot during summer month, due to close down of eastern end by the processing and packing room; regular power failure; and escalating power costs.

7 Future Needs

Future needs include the following: need a new air blast freezer of – 30 to – 50°C temperature, one storage freezer of – 20°C temperature and one chiller room to replace the broken facilities; a new ice machine of maximum production capacity of 3 m/ton production capacity per 24 hours; improve the market building structure especially fish retail area, to lower the temperature and to equip with more hygienic and proper equipment. Also the roof of the main building needs repair due to rust and leakage; a water blast compressor is required for the cleaning of the market; and a standby generator is essential to securing power supply at the Market.

8. OUTER ISLAND AFFAIRS

Fisheries support is extended to the outer island regions of Vava'u, Ha'apai, and Niua toputapu to ensure that fisheries developments in these regions are sustainable. However, fisheries development is severely disadvantaged by remoteness, limited transportation network, high costs of transportation, limited infrastructure and manpower capacity.

8.1 VAVA'U FISHERIES

The Vava'u Fisheries Office supports fisheries development in the region of Vava'u and the northern island groups where necessary. A list of staff engaged at Vava'u is provided in the following table.

Table 8.1.1: Vava'u Fisheries Support Staff, 2005

	Name	Post
1	Mrs. Silika Ngahe	Technical Officer Grd. I
2	Mr. 'Otenili Fisi'ikava	Technical Officer Grd. II
3	Mr. Toma Kauvaka	Technical Officer Grd. II
4	Mr. Koliniasi Hafoka	Senior Fisheries Assistant
5	Mr. 'Aisea Vailea	Fisheries Assistant
6	Mr. Sese Malimali	Fisheries Assistant
7	Mr. Sauaki Talasinga	Fisheries Trainee
8	Mr. Tekiteki Vailea	Fisheries Trainee
9	Mr. Mosese Moala	Fisheries Trainee
10	Mr. 'Ioane Finau	Fisheries Trainee
11	Miss 'Akosita Leakona	Computer Assistant

(i) Staff Training & Development

The Officer in Charge participated in a three months training on gender role in fishing communities. She also attended a one week retreat held at 'Eua for Fisheries senior management team.

(ii) Vava'u Fisheries Assets

The following office equipment are maintained at the Vava'u Office: 4 computers; 1 Printer; 1 fax machine; 10 Tables; 6 Office chairs; 7 Stools; 1 TV set; 1 White Board; 1 Filing cabinet; 3 Multi plugs; 1 HF & SSB radio; 1 Overhead projector.

(iii) Budget and Revenue Performance

The following table reflects the annual expenditure for the calendar year.

Table 8.1.2: Budgetary performance for Vava'u Fisheries, 2005

	Allocation	Expenses	Balance
Salaries	\$19100.00	0	\$19100.00
Over time	\$3000.00	\$907.84	\$2092.16
Meeting fees	\$2200.00	\$2200.00	0
Telecom charges	\$1000.00	0	\$1000.00
Freight	\$700.00	0	\$700.00
Maintenance of office equipment	\$2000.00	\$1918.08	\$81.92
Maintenance of computer systems	\$382.34	\$174.00	\$208.34
Fuel	\$1000.00	\$257.10	\$742.90
Maintenance office building	\$1700.00	0	\$1700.00
Printing & stationary	\$300.00	0	\$300.00
Technical equipment & supplies	\$2000.00	\$16.75	\$1983.25
Uniforms	\$2000.00	\$58.56	\$1941.44
Office supplies	\$300.00	\$207.94	\$92.06
Water	\$200.00	\$115.16	\$84.84
Electricity	\$36000.00	\$11652.80	\$24347.20
New computers	\$3000.00	0	\$3000.00
	\$74882.34	\$17508.23	\$57374.11

The total revenue for the year was approximately T\$5721.20 mainly from fees for fishing vessel licenses, fish fences, home consumptions, cutting timber and hiring of the Fisheries boat. It should be noted that separating the Fisheries Vava'u office account from the Fish market operation accounted for the declining revenue collection.

(iv) Fish Market

The Fish Market was approved by Cabinet to operate under a Board but the Ministry continues to manage the market by request of the Board until it is ready. The total revenue collected by the fish market during year 2005 was approximately T\$17,541.73, mainly from sales of ice, hiring of scales, hiring of cooler boxes and wharf fees. Revenue performance for Vava'u is shown in the table below.

Table 8.1.3: Revenue Performance for Vava'u Fish Market, 2005

	Stall KG	\$	Ice blocks KG	\$	Scales \$	Wharf fees \$	Cooler \$	C/Tax \$
Jan	2506.09	75.20	7984.1	1437.13	74.00	5.00	0	0
Feb	3447.35	122.79	7881.0	1418.58	61.50	77.00	0	0
Mar	3301.65	132.09	6600	1188.00	75.00	33.50	0	0
Apr	3031.79	121.23	3616.7	651.00	70.00	0	19.20	29.95
May	2861.02	114.43	8466.7	1524.00	17.50	12.00	10.40	15.44
Jun	2332.74	93.29	10455.6	1882.00	42.50	61.00	24.00	202.41
Jul	1859.71	74.39	4377.8	788.00	52.50	0	28.80	134.40
Aug	4921.48	196.47	4522.2	814.00	105.00	0	61.20	165.73
Sep	1663.3	66.54	1766.7	318.00	32.50	10.20	16.80	78.08
Oct	3608.99	144.37	656	118.08	82.50	113.00	44.44	60.60
Nov	1805.5	73.35	11857.5	2134.35	50.00	179.00	76.80	399.76
Dec	3468.0	139.00	13219.4	2379.50	55.00	0	45.60	392.24
Total	34807.62	\$1353.15	81403.7 kg	\$14652.64	\$718.00	\$490.70	\$327.24	\$1478.61

(v) Aquaculture and Research

Aquaculture farming and research services experienced limited activities because only a few farmers were actively involved therefore two officers were available to continue providing technical support.

(vi) EU-funded Vava'u Regional Development Program

Under the Vava'u Regional Development Program funded by the European Community, the following fisheries projects were completed in October 2005 after a one year warranty. Additional projects still in the process include: (i) new local Fish Market including Ice-block machine; (ii) new fishermen wharf; (iii) new boatyard building and dry dock facilities.

(vii) Licensing Local Fishing Vessels

Six local fishing vessels were licensed and three additional boats will be licensed in 2006 when these boats are fully equipped with necessary equipments. Four boats failed to renew their licenses due to VMS problem. The following table lists vessels which were licensed to operate during the year.

Table 8.1.4: Licensed Fishing Vessels in Vava'u, 2005

Name of Vessel	Owner	Registration No.	License No.
Lesina I	Pafilio Tangitau	LFV036 (VMS)	BT018 NK
Lesina 2	Pafilio Tangitau	LFV061(VMS)	BT043 NK
Maikolo	Taniela Koli	LFV04(VMS)	BT04 NK
Tavake	'Ulaiasi Vaisima	LFV064	BT043 NK
Praise	'Ahongalu Fulivai	LFV011	BT11 V
Dora Maria	Paul Mead	LFV03	BT03 V

Licenses were also issued to vessels engaged in sports fishing and a list of vessels with valid licenses appears below.

Table 8.1.5: Commercial Sport Fishing Vessel

Name of Vessel	Owner	Registration	License No.	Expiry Date
Kiwi Magic	Keith Opat	LFV 02	CSF 001	27.11.06
Target One	Henk Gross	LFV 06	CSF V06	05.10.06
Reel Devotion	Steve Cambell	LFV 015	CSFV 015	02.05.06
Reel Addition	Steve Cambell	LFV 016	CSFV 016	02.05.06
Hakula	Jeff Le Strange	LFV 053	CSFV001	05.06.06

(viii) Duty Free Diesel Fuel

Government of Tonga continued to subsidise fishing operation through the fuel exemption scheme. Vessels operating in Tonga tapu are also eligible to receive fuel while fishing in the Vava'u region. A list of vessels benefiting from this scheme appears below.

Table 8.1.6: Fuel Scheme Performance, 2005

Vessel	Diesel	Lubricant (SAE 30)
Lesina 1	7,700 ltrs	20 ltrs
Lesina 2	3,000 ltrs	-
Tavake	2,550 ltrs	20 ltrs
Maikolo	2,800 ltrs	-
Praise	100 ltrs	-
'Akina	2,000 ltrs	25
Haumoana	7,200 ltrs	28 ltrs
Langahengihengi	800 ltrs	-
Stella Maris 3	900 ltrs	-
Odyssey	6,900 ltrs	15 ltrs
Total	33,950 ltrs	108 ltrs

The following table reflects the performance of vessels in the scheme in terms of their catches and revenue.

Table 8.1.7: Catch and Revenue Performance of Vessels involved in the fuel scheme, 2005

Vessel Name	Quantity (local sales)	Quantity kg (exports)	Total revenue
Lesina 1	17,835.66	247.3	T\$100,768.18
Lesina 2	11,029.7	382.3	T\$539,88.63
Maikolo	9,009.96	706.7	T\$48,908.80
Tavake	2052.2	1178	T\$138,29.73
Praise	6,321.89	-	T\$26,472.56
TOTAL	46248.71kg	2514.3kg	T\$243,967.90

(ix) Fish Fences

There were two new fish fence licenses issued and one renewal during the year additional to operators listed below. A review of existing license holders will be carried out next year.

Table 8.1.8: Fish Fence operating at end of 2005

Name	Address	Location	No. of fish fence
Siale Mikaele	Makave	Tapanga	1
Koniseti Toli	Tu'anuku	Muilamali	1
Semisi Ngu	Kapa	Kapa	1

Name	Address	Location	No. of fish fence
Ve'a Tupou	Ha'akio	Okoa	1
Ului Satuala	Tu'anuku	Teleki	1
'Iasinito Finau	Fungamisi	Kenutu	1
'Alisoni 'Aloua	Pangaimotu	Pangaimotu	1
Total			7

(x) Engineering

One officer supported the need for repair and maintenance of the Ministry's boats, outboard engines and vehicle. Assistance was also extended to private fishing vessels.

Most often the engineering officer is preoccupied with maintaining the ice-block making machine. Two small ice-block making machines were installed at the market by an officer from head quarter. These two new ice machines were tested and the record of ice production for each machine is approximately 8.5kg in every thirty minutes. The new machines operated separately from that of the market and about 238kg of ice was collected daily.

(xi) Community Survey

A household survey was carried out by the Tong Fisheries Project to determine household involvement in fishing activities and the outcome of the survey is yet to be published.

(xii) Landed Catch at the Vava'u Fish Market

The total fish and its weight landed at the Vava'u Fish Market during 2005 appear in the table below.

Table 8.1.9: Catch landed by Fish Type by Quantity and Weight, 2005

Species Name	Pcs	Kgs
Crimson jobfish	1286	2111.4
Golden eye jobfish	955	2177.8
Short tail snapper	766	4643.2
Long tail snapper	462	686.9
Rusty jobfish	887	3800.1
Saddleback snapper	1481	3994.5
Grouper	62	389.6
Long nose emperor	326	462.3
Comet grouper	861	1162.9
Sweet lip emperor	92	48.6
Others	2420	3716.3

(xii) Major Assets at the Fish Market

Equipment and tools at the fish market include: 8 fish stalls; 1 electric scales; 2 hanging scales; 5 stainless filleting tables; 2 wheel burrows; 3 cutting boards; 4 rubbish bins; 2 shovels; 1 water hose; 2 brooms; 1 hand trolley; 1 office table; 4 ice machines.

(xiv) Boatbuilding and Slipway

Support continued to be provided to community by two officers, although one officer was permanently transferred to Fisheries Ha'apai towards the end of the year. The Waqa project continued again in October 2005, where one fishing boat is still under repair and expected to be completed by 2006.

The slipway remained closed due lack of necessary equipment and it is anticipated that the EU office will consider funding the outstanding work.

(xv) Fishermen Wharf

Fishermen wharf remained opened to fishermen for loading ice and unloading their catches. Wharf is useful for docking boats during idle time.

8.2 HA'APAI FISHERIES

The Ha'apai Fisheries supports and engage continuously in developmental programs in remote island communities and eight officers were involved in supporting fisheries services at Ha'apai, all of whom are listed in Table 8.2(i) below.

Table 8.2.1: Ha'apai Fisheries Support staff, 2005

	Name	Post
1	Mr. Tevita Mafi 'Ahoafi	Technical Officer Grade 1, (Officer-in Charge, Pangai)
2	Mr. Tu'atalatau Tonga'onevai	Senior Fisheries Assistant, (OIC, Ha'afeva) Transferred to Pangai on 12 July, 2005
3	Mr. Fotu Tui'onetoa	Fisheries Trainee, (OIC, Nomuka)
4	Mrs. Sosefina Vili	Technical Officer Grade 2
5	Mr. Tevita 'Atana	Senior Fisheries Assistant
6	Mr. Talia'uli Napa'a	Fisheries Assistant (Transferred to Tongatapu on 31/10/2005)
7	Mr. Moana Nau	Fisheries Assistant (Transferred to Ha'afeva on 30/6/2005 as OIC)
8	Ms. 'Asela Lausi'i Sauaki	Fisheries Trainee
9	Mr. Mosese Moala	Fisheries Trainee (Transferred from Fisheries Vava'u on 5/9/2005)

(i) Aquaculture and Research

No survey was carried out due to discontinuation of the function. There were no new green snails and trochus released at Ha'apai in 2005. Oysters stock declined quickly due to old age and attacks by other predators.

(ii) Law Enforcement

There were two prosecutions at Ha'apai in 2005 related to undersized lobster and lobster with eggs. One of the perpetrators received a fine with a 6 months disciplinary measure and the second one received a fine of \$100.

(iii) Fish Fences

A total of 13 fish fence licenses were issued at Ha'apai which was an increase from 2 fish fences in the previous year.

Table 8.2.2: Location of Fish Fences Licensed at the Ha'apai Office, 2005.

Location	Number
'Uiha	2
Faleloa	3
Fakakai	2
Ha'ano	5
Holopeka	1
Total	13

(iv) Boatyard and Engineering

The first phase of the Waqa Project repaired 18 boats; constructed 11 new boats fully constructed with 1 new outboard engine supplied for one fisherman. The second phase of the project repaired 8 boats and the remaining fishing vessels will be considered next year. Ongoing support was provided to communities in terms of repair of outboard engines and boats, re-charge of batteries, and welding of anchors for local fishing boats.

(v) Training and Survey

Trainings and surveys accomplished in 2005 are reflected in the tables 8.2(iii), 8.2(iv) and 8.2(v) below.

Table 8.2.3: Ha'apai Community Training, 2005

Name of training	Month	Location	Target
Small longline for small scale fishers	April, November	'O'ua, 'Uiha	Fishermen
Special management area and fish smoking	November	'O'ua, 'Uiha, Felemea	Community

Table 8.2.4: Staff Training, 2005

Name	Training	Date	Location
Mr. Lisiate Pola	Gender Equality	September	Pangai
Mrs 'Asela Sauaki	Youth & Environment	September	Pangai
Mrs. Sosefina Vili	Small Initiative Fund	October	Pangai
Mr. Tevita 'Ahoafi	Staff Appraisal	November	Tongatapu

Table 8.2.5: Surveys at Ha'apai region, 2005

Survey details	Location	Month
Coral survey, team led by Mr. Paumolevuka Likiliki	Lifuka & Lofanga	May
Recording & monitoring of marine life, team led by Miss Karen Vidla	Lulunga and eastern side	October
Household Survey, lead by contracted team for Tonga Fisheries Project	All villages	January

(vi) Revenue Collection at Pangai

Table 8.2.6 below reflects the total revenue generated from services for 2005 except revenues collected from Nomuka (which is paid directly to the head office).

Table 8.2.6: Revenue Collection Ha'apai, 2005

Date	Consumption tax	Sundry	Development account	Total
January		\$74.40	\$1983.00	\$2057.40
February		\$82.00	\$1080.00	\$1162.00
March		\$154.00	\$1929.00	\$2083.00
April	\$189.17	\$53.00	\$1451.80	\$1693.97
May	\$378.10	\$66.70	\$2456.65	\$2901.45
June	\$325.35	\$163.00	\$2006.00	\$2494.35
July				
August				
September	\$197.20	\$30.70	\$1284.00	\$1511.90
October	\$456.80	\$254.70	\$2788.00	\$3499.50
November	\$362.65	\$829.68	\$1588.00	\$2780.33
December	\$202.20	\$195.00	\$1153.00	\$1550.20
Total	\$2111.47	\$1903.18	\$17719.45	\$21734.10

(vii) Major Assets at Ha'apai

Table 8.2.7 below provides a summary of the major capital assets at the Ha'apai Fisheries office.

Table 8.2.7: Capital Assets at Ha'apai, 2005

Item	Quantity	Type	Condition	Remark
Staff houses	6		Good	1 x used by TFP.
Ice Block Machine	8		1 x Good (large) 1 x Broken (large) 1 x Broken (large) 3 x Good (small) 2 x Good (small)	Nomuka Ha'afeva (Feb, 2003) Pangai (Sept, 2004) Pangai (Small and cannot meet demand)
Large Deep Freezer	2		Broken	
Vehicles	2		1 x P103	Good condition
Computer	2		Good	
Photocopier	1		Fair	Old model Lanier (needs regular servicing)
Printer	1		Good	
Fax Machine	1		Good	
SSB Radio	1		Fair	Needs repair
VHF Radio	2		Good	1 at office & 1 at vessel (MV Vete)
Vessel/Engine	2 x Fiberglass vessel 1 x Vessel Inboard engine (MVVete) 1 x 40hp Yamaha 1 x 25hp Yamaha 1 x 15hp Mariner		Good Broken Good Broken Broken	Cabin needed Needs painting too In pieces and out of order. Propeller needed.

(viii) Nomuka and Ha’afeva Fisheries

The ice making machine at Nomuka was in good operation was able to supply demands for the people of Mu’omu’a district. The staff house at Nomuka needed upgrading. The water storage capacity was insufficient and repair is much needed to sustain water supply for ice making purposes.

The ice making machine at Ha’afeva experienced problems since February, 2003 and a replacement is expected to be provided under the AusAID funded Tonga Fisheries Project in 2006. In addition there was also a need to repair the water storage system.

8.3 NIUATOPUTAPU FISHERIES

Fisheries development activities in Niuatoputapu were managed by a single Officer. Due to its remoteness, uncertainty of transportation, and costs involved, it has not been easy to regularly monitor fisheries development on the island.

Two new ice machines were installed on the island in December 2005 which was funded by Tonga Fisheries Project and these were powered by a diesel generator. Fisheries development in Niuatoputapu is not as progressive as in other island groups. Fishing operations mostly target home consumption and potential for commercial is limited.

8.4 ‘EUA AND NIUAFO’OU FISHERIES

To date, the Ministry has not been able to set up an office at ‘Eua and Niuafou’ou islands due to funding constraints. However, the Tonga Fisheries Project donated ice block making machines for ‘Eua Island which is managed and operated by the ‘Eua Fishermen Cooperative. Developing fisheries for ‘Eua Island were coordinated and monitored by staff at the head office in Nuku’alofa.

9. RESOURCES ASSESSMENT AND DEVELOPMENT

Resource assessment and development aims at assessing Tonga’s utilized and unutilized fisheries resources and to provide advice to executive management on the conservation of these resources with relation to fisheries management and development. The development and monitoring of ecological performance indicators with relation to each of Tonga’s major fisheries is to ensure sustainability of fishing activities and this is therefore an ongoing function of resource assessment and development.

(i) Staffing

All staff engaged in resource assessment and development programs is given in Table 9.1 below.

Table 9.1: Resources Assessment and Development Staff, 2005

	Name	Post
1	Mr. Tu’ikolongahau Halafihi	Senior Fisheries Officer
2	Mr. Tala’ofa Loto’ahoa	Technical Officer II
3	Mr. Siua Tuamei’api	Fisheries Trainee
4	Mr. Mosese Mateaki	Fisheries Trainee

(ii) Data Collection of Tuna Resources

This program is funded by the Secretariat for the Pacific Communities (SPC). The data are collected and sent to SPC for analysis on both a country and a regional basis. The total landing of tuna during 2005 is given in Table 9.2 and 9.3 below.

Table 9.2: Quarterly Total catch by Weight (Kg) by Species, 2005

Species	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Albacore	7829	58208	55677	56583
Big eye	5180.4	30215.4	13063	28837.5
Yellow fin	26089.4	36072	25375.5	27011.2
Stripe marlin	36	895	3823.6	15868.4
Blue marlin	203	896	2305	1121
Black marlin	754	1601	1323	7002
Swordfish	611	3469	3671.2	14768.1
Other	5908	24625	36683.7	56679.6
TOTAL (Kg)	46610.8	155981.4	141922	207870.8

Table 9.3: Quarterly Total catch by Number by Species, 2005

Species	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Albacore	421	3,248	3,722	3,108
Big eye	183	1,105	432	919
Yellow fin	1,044	3,508	1,242	1,028
Stripe marlin	1	24	96	310
Blue marlin	13	25	26	137
Black marlin	3	35	74	12
Sword fish	13	90	68	241
Other fish	718	1,800	2,978	4,870
TOTAL (pcs)	2,396	9,835	8,638	10,625

(iii) Data Collection of Snapper resources

A revised and detailed data collection program relating to the snapper fishery started at the beginning of the year. This data allows comparison with previous stock assessments to determine the current status of the resource to guide the formation of an effective management and development plan. The quarterly total catch by number/species in and by weight/species (respectively) is given in Table 9.4 and 9.5 below.

Table 9.4: Quarterly Total Landing of Snapper by Number per Species

Species	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Crimson jobfish	1,342	1,286	456	1,684
Golden eye jobfish	1,191	855	169	822
Long tail snapper	9,085	14,922	15,906	15,941
Short tail snapper	351	859	1,095	1,055
Comet grouper	71	143	55	646
Eight bar grouper	66	162	153	176
Sweet lip emperor	568	759.5	421	1,193
Longnose emperor	10	207.5	8	297
Rusty jobfish	332	279	372	536
Species	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter

Saddleback snapper	426	832	366	842
Other	1,900	1,730	944	1,143
TOTAL (pcs)	15,342	22,035	19,945	24,335

Table 9.5: Quarterly Total Landing of Snapper by Weight (kg.) per Species.

Species	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Crimson jobfish	3,891.8	4,197.1	1,213	3,494.9
Golden eye jobfish	1,343.9	1,025.8	166.4	1,162.2
Long tail snapper	18,895.3	32,006.2	37,933.3	34,016
Short tail snapper	704.4	2,077.6	2,434.5	2,529.6
Comet grouper	205.4	340.1	111.7	1,052.4
Eight bar grouper	1,266.3	3,213.2	3,152	4,192.9
Sweet lip emperor	1,080.3	905	877.6	2,351.9
Longnose emperor	6.5	166.5	12	175
Rusty jobfish	1,052.9	970	1,685.8	1,997
Saddleback snapper	1,364.6	2,284.9	1,219.4	2,249.1
Other	1,967.6	2,830.2	1,389.4	2,280.3
TOTAL (kg)	31,779	50,016.6	50,195.1	55,501.3

(iv) Stock Survey of Aquarium Resources

Surveys were conducted in Tongatapu and Ha'apai during 2005, of the coral reef systems in relation to the utilization of these resources by the aquarium fishery. The surveys were carried out by the staff of the Ministry of Fisheries in collaboration with a scientist from the SPC. The objectives of the survey were:

- to survey and assess the current status of the coral reef systems in Tongatapu to reveal the effects of the aquarium industry.
- to survey and assess the status of coral reef systems in Ha'apai following a request to open an aquarium product harvesting operation there.
- to compile together the field survey data with all relevant available information, analyse and produce a report with recommendations for sustainable utilisation of the aquarium resources
- to develop a management plan and harvesting guidelines for sustainable harvesting of the aquarium resources.

The data for the surveys were sent to SPC for analysis and report preparation. Two staff from the Ministry were sent on attachment to SPC to receive training in the use of a new database to gain further training and experience in data analysis. Further to this, staff also initiated a review of the existing Management Plan for aquarium industry in Tonga.

The final reports of the surveys are yet to be completed by SPC and the approval of operation in Ha'apai is pending until recommendations are finalized.

(v) Seaweed "Limu tanga'u" (*Cladosiphon sp*) and Sea grass survey

The seaweed bed and the sea grass areas around 'Atata Island were surveyed in October and December 2005. The survey team was led by Miss Pip Cohen and some staff of the Ministry. The purpose of the survey was to ensure the Ministry of Fisheries fulfills its

obligation in terms of monitoring and research as stipulated by the Seaweed management and Development Plan.

Results from the survey have enabled us to map the borderline for limu tanga'u bed and sea grass bed at the vicinity of 'Atata Island, in an attempt to further understand the nature of this resource and the effects of harvesting. Also a *Monitoring Method* for seagrass and Limu tanga'u was established as a result of this survey and Ministry of Fisheries staff have been trained in the use of these methods.

10. COMMUNITY DEVELOPMENT AND ADVISORY SERVICES

The community development and advisory services support fisheries community initiatives and development at all levels particularly the community based management of inshore resources with a view to ensure that the ocean and its resources remain an important source of food (past and present) and income for many coastal communities throughout Tonga.

The encouragement of coastal communities to manage their inshore fisheries was prompted by increasing depletion of certain species due to over fishing and application of some harmful fishing practices. Communities fished freely in the past without little appreciation for sustainability of resources within their coastal territories and such freedom to fish and ignorance towards resource sustainability had a negative impact on resources available to them for food and economic needs.

Community support also develops local fishermen's capacity to (i) adopt new fishing gear and related technology effectively and (ii) repair and maintain fishing gears and tools (outboard engines, fishing nets etc).

(i) Community Development and Advisory Capacity

Support to coastal community fisheries is provided by the following officers.

Table 10: Community Development and Advice Support Staff, 2005.

	Name	Post
1	Mr. Tevita Finau Latu	Principal Fisheries Officer
2	Mr. Sailosi 'Alofi	Technical Officer Grade 11
3	Mr. Sione Mailau	Senior Fisheries Assistant

It should be noted that the Senior Fisheries Assistant, Mr. Sione Mailau was assigned as project counterpart for the AusAID funded Tonga Fisheries Project to support constructions of mini longlines, construction and deployment of Fish Aggregation Device, and sea safety awareness raising and training.

(ii) Community Based Fisheries Management

In Section 15 of the Fisheries Management Act 2002, the Minister for Fisheries may in consultation with the coastal committee, designate any local community in Tonga to be a coastal community for the purposes of community based fisheries management and may

allocate a Special Management Area (SMA) purposely for the conservation, management, sustainable utilization and development of fisheries resources. This provision in the Act is the cornerstone of community initiatives.

During the year, with the support of the Tonga Fisheries Project, three pilot communities 'O'ua, Felemea and 'Uiha in the Ha'apai group were selected (based on expression of interest in the program) as communities appropriate to receive support for designating and managing a SMA.

(1) 'O'ua SMA

The process involving setting up a SMA at 'O'ua island include setting up a community management committee following numerous consultations, drafting a management plan, raising public awareness about the new initiative before the SMA is gazetted.

To date 'O'ua community had established a Coastal Management Committee and they have also drafted a management plan which provides the framework for managing their SMA. It is expected that the Fisheries Advisory Committee will consider the proposal before ministerial approval is sought.

(2) Felemea and 'Uiha SMA

Communities of Felemea and 'Uiha have completed the development process and both coastal committees will meet to develop their Management Plans. At the end of that process the Plan will be submitted to village fono for further input before it is submitted to the Fisheries Management Advisory committee for endorsement, and subsequent submission to the Hon. Minister of Fisheries for consideration.

(iii) Community Based Training

(1) Mini Longline & Fish Smoking

The Ministry of Fisheries in collaboration with the Tonga Fisheries Project conducted three training programmes on construction and setting of mini longline and fish smoking. The training programme was conducted at 'Ohonua ('Eua), 'O'ua and 'Uiha (Ha'apai). A total of fourtynine (49) fisherman participated in the mini longline training and more than fifty (50) women attended the fish smoking trainings.

Due to costs associated with purchasing of training materials, fishermen who attended the mini longline training paid \$150 pa'anga while the Tonga Fisheries Project paid the balance of \$350. The total cost for one set of fifty hooks mini longline is approximately \$450. Participants involved in the fish smoking training also received a smoke house.

(2) Servicing of Outboard Engines

Despite the absence of a permanent Fisheries Office at the island of 'Eua, support was provided to fishermen on the island. About three trips were made to 'Eua by an outboard engineer arranged by the Ministry for repair and maintenance of some fishing boats' outboard engines.

Servicing of outboard engine by the Ministry is free of charge except costs of spare parts which is paid by the fisherman. Given the need to continue supporting local fishermen's effort to continue fishing, it is anticipated that the capacity to fulfill this role is sustained.

(3) *Net Mending and Net Making*

During the year training was provided to net fishermen at Tongatapu who were unable to mend their nets or make new ones to ensure they have the skills and knowledge to sustain their net making needs.

(4) *Consultations on Fisheries Legislation*

Funds provided by the Commonwealth Secretariat's Technical Assistance Program enabled the team to meet with residents of twenty villages throughout Tongatapu to inform them about the requirements of the Fisheries Management Act 2002, and the opportunity for coastal communities to establish their SMA. At each village consultation the District Officer was appointed chairman of the meeting. Participants included town officers, fishermen, farmers, housewives and youth. The consultation also gave the communities opportunities to raise fisheries issues affecting them at any level.

11. AQUACULTURE RESEARCH AND DEVELOPMENT

Aquaculture research and development has been a long standing fisheries program aimed at regenerating depleting fisheries as well as farming new species that adds value to the industry.

Aquaculture programs include enhancement of giant clams, introduction of trochus and green snails to create new commercial fisheries, pearl oyster farming, seaweed and sea cucumber culture to earn foreign currency. Research and trials are aimed at: relieving pressure on over-exploited traditional inshore fisheries; converting unused areas of natural water or agriculturally poor areas to useful production; reviving and enhancing over-exploited resources and introducing exotic species of commercial value

(i) **Aquaculture Staff Capacity**

Staff capacity was limited due to dismissals of Mr. Sione Holopulu; Mr. Tevita Sonatane Ha'unga; and Mr. Sitiveni Sefesi from the service. However, two new officers were recruited and they were: Mr. Tonga Tu'iano and Mr. Feauini Salesi. Mr. Talia'uli Napa'a was transferred from the Ha'apai Fisheries office to head quarter.

Mr. Vea Kava and Mr. Saia Niumeitolu were promoted to the posts of Technical Officer Grade II and Senior Fisheries Assistant respectively. Mr. Martin Finau, Fisheries Assistant resumed duty on July 1st following the completion of a Bachelor of Science degree. He was subsequently promoted to the post of Fisheries Officer and is currently in charge of the aquaculture services in substitution of Mr. Siola'a Malimali, Fisheries Officer, who is currently reading for a Master of Science degree in Tasmania, Australia. A list of staff members engaged in aquaculture and research programs is shown in Table 11.1 below.

Table 11.1: Aquaculture and Research Support Staff, 2005

	Name	Post
1	Mr. Martin Wesley Finau	Fisheries Officer (Head of Section)
2	Mr. 'Elaona Ve'a Kava	Technical Officer Gr. II
3	Mr. Saia Niumeitolu	Senior Fisheries Assistant
4	Mr. Talia'uli Napa'a	Fisheries Assistant
5	Mr. Tonga Tu'iano	Fisheries Trainee
6	Mr. Feauini Salesi	Fisheries Trainee

Mr. 'Elaona Ve'a Kava and Mr. Feauini Salesi completed a one month course on Marine Organism Culture in Xiamen, China. Mr. Martin Finau participated in a workshop held at Nadi, Fiji for pearl farming.

(ii) Shellfish Culture

Giant Clam

Continuous supply of clams for the community's sanctuaries and export to aquarium markets was maintained. The overseas aquarium market offered good prices for relatively young clams. Clams with length of 1 to 20 inches shell were sold to aquarium exporters. A total of 11,988 clams (48 *T. derasa*, 6,481 *T. maxima*, 137 *T. squamosa* and 5,322 *T. gigas*) worth \$24,257.24 were sold. The selling prices of the clams and its size distribution are given at Table 11.2 and Table 11.3 below.

Table 11.2: Selling Prices per Species of Giant Clam

Shell Length	1	2	3	4	5	6	7	8	9	10
\$/ <i>T.squamosa</i>	1.00	1.50	2.25	3.5	5.0	6.75	8.75	10.00	11.25	-
\$/ <i>T.derasa</i>	1.00	1.25	2.00	3.5	5.0	6.75	8.75	10.00	11.25	12.50
\$/ <i>T.gigas</i>	1.00	1.25	2.00	3.5	5.0	6.75	8.75	10.00	11.25	12.50
\$/ <i>T.maxima</i>	1.00	1.50	2.50	3.25	4.75	6.25	-	-	-	-

Table 11.3: Size Distribution of Export Giant Clam per Species

Shell length	<1.5	2-3.5	4-6	6.5-8	8.5-10	10.5-12	>12	Total
<i>T. squamosa</i>	75	12	50	-	-	-	-	137
<i>T. derasa</i>	15	-	33	-	-	-	-	48
<i>T. gigas</i>	325	4,311	482	27	57	70	50	5,322
<i>T. maxima</i>	4,242	2,197	42	-	-	-	-	6,481
TOTAL	4,657	6,520	607	27	57	70	50	11,988

Clam export declined by 70% from 15,591 in 2004 to 11,988 and the corresponding value also declined by 60% from \$39,845 in 2004 to \$24,527 due to minimal stock cultured in the nursery for *T.maxima*, *T.derasa* and *T.squamosa* species which did not meet export demands.

Demand for *T.maxima* accounted for highest export product of 54 % of the total sale. The quantity for 1 to 1.5 inches was high due to growing demand from the foreign market where it represents 62 % of the total exported *T.maxima*. Demands for *T.maxima*,

T.derasa and *T.squamosa* in both blue and green colours were higher but due to insufficient stock available and immaturity of the stock sales had to be delayed until such time stock is mature for export. The figures in the table above, with the exception of *T. gigas*, reflects the number of stocks available to the exporters from the nursery but it does not meet the total demand for exports. The total number of exported *T. gigas* represents the actual demand of the exporter.

(iii) Spawning process

Spawning induction trials were conducted for two species, *T.maxima* and *T.gigas*. There was no serotonin available so thermo sock was applied for stimulation. *T.gigas* did not respond to spawning but *T.maxima* spawned and the larvae were transferred to settlement tank after two days. The productions are now three months old in the rearing tanks. The result of the spawning is summarized in the table 11.4 below.

Table 11.4: Spawning result

Species	Spawning date	Settlement tank	Total input
<i>T.maxima</i>	21/11/2005	C13	2,000,000
		C16	4,000,000
		C17	3,000,000

1. *Ocean nursery*

The giant clams (*T. gigas*) were transferred from the Fisheries Mari-culture Center to community's ocean nursery and Ministry's ocean nursery at Sopu and 'Atata islands and a summary is provided in Table 11.5. These clams were spawned in 2002 and more than two thousands pieces needed to transferring to make space for the production in 2005.

2. *Green Snail, Turbo marmoratus ('Elili lanumata)*

All snails have been distributed to reefs in Tongatapu, Ha'apai and Vava'u in 2004 and a survey is planned to find out their current status. There were two spawning induction trials for green snails conducted in November and December but unfortunately it was not successful. Harvesting of green snails as well as *trochus* species is still banned.

Table 11.5: Record of giant clams transferred to each ocean nursery

Species	Total Giant clams released in 2005			Remarks
	Date	Site		
		'Atata	Sopu	
<i>T. gigas</i>	12/07/05	256		Clam sizes (2-6 inches)
	20/10/05		1,780	Same
	28/10/05		912	Same
Total		256	2,692	

3. *Trochus, Trochus niloticus (Takaniko)*

About 100 young trochus (with shell diameter more than 7cm) were spawned in 2000 and were used in poly-culture with giant clams. They help to clean the weed that grows on the tank and clams.

Harvesting of *Trochus* species is still banned. However, evidences have shown that trochus harvesting for subsistent needs is practised throughout many coastal areas by

fishers. In addition, trochus shells have been sold at roadside handicraft stalls including jewellery shops.

4. *Pearl Oyster*

The Ministry of Fisheries is currently involved in ACIAR project FIS/97/31 “Pearl oyster resource development in the Pacific islands”. As part of this project two hatchery runs have been conducted at the Sopa facility to produce *P. margaritifera* spat to support the development of pearl industry in Vava’u.

Pearl oyster (*P.margaritifera*) spawning was postponed from early 2005 to early 2006 (January or February) as directed by Mr. Paul Southgate of ACIAR.

12. FISHERIES MANAGEMENT AND PLANNING

Fisheries management and planning largely involved development of fisheries management plans and its implementation; policy advice to management; and the coordination and monitoring of commercial fisheries and its development through the analysis of statistical indicators.

Achievements of the year included: (i) publication of a Fisheries Information Quarterly Reports; (ii) formation of Limu Tanga’u Exporters Association and Marine Aquarium Exporters Associations; (iii) redrafting of Management Plans for key commercial fisheries, particularly deepwater drop line fishery, marine aquarium fishery and charter vessels; (iv) assisting in formulation and drafting of regulations for all commercial fisheries; and (v) a survey (led by the Head of Section) of Tongatapu’s coral reefs.

Ms. Philippa Cohen from Tasmania, who has assisted the Section before as an Australian Youth Ambassador returned during the year as technical support provided by the AusAid Tonga Fisheries Project.

Staff engaged in fisheries management and planning is listed in Table 12.1 below.

Table 12.1: Fisheries Management & Planning Staff

	Name	Post
1	Mr. Pau-mo-levuka Likiliki	Senior Fisheries Officer
2	Mr. Tevita Lautaha	Fisheries Officer

(i) **Draft Marine Aquarium Fishery Management Plan**

The draft Plan has experienced several transformations to better reflect all aspects of this fishery including, but not limited to, the survey conducted in May 2005. The Senior Fisheries Officer is currently working with SPC (Secretariat of the Pacific Community) to finalise the Plan and provide Technical Report of the survey.

(ii) Seaweed (Limu Tanga'u) Management Plan

The Seaweed (Limu Tanga'u) Management Plan, approved in May 2005 by the Honourable Minister of Fisheries, outlines specific authorisation to manage harvesting, processing and exporting of seaweed.

(iii) Tuna Longline Fishery

Industry operators have raised issues with regards to poor wharf management and a lack of well trained local crew availability for the domestic fleet. A sub committee of the Tuna Management Committee has been tasked with resolving these outstanding issues but progress has been limited.

One of the outputs for managing and planning this fishery for 2005 is to review the current approved management plan, and this will include assistance in resolving those issues raised by industry.

(iv) Deepwater Line Fishery

The Ministry is currently engaged in resolving management options by which this fishery will be better managed in future. Some of these management options may involve utilising the Vessel Monitoring Systems (VMS) required to be installed on all licensed Deepwater Line Fishing Vessels. This will allow data to be collected on targeted species of snapper and grouper at each specific seamount. This information is essential to understanding and managing status of stock.

Future discussions with stakeholders are planned and during which the best and most practical management options suitable for both parties will be explored. The outcome of the discussions will ultimately lead to a final draft and approval of the management plan.

(v) Draft Bech de mer (Sea Cucumber) Management Plan

This fishery remained closed in 2005. A stock survey was completed following Cabinet's endorsement of two years moratorium for bech de mer.

A management plan has recently been drafted as an exercise to best consider management options if the fishery were to re-open. This fishery is very prone to over fishing and certain management options would need to be in place to avoid over-exploitation of the resource if it were to be harvested at a commercial scale. Bech de mer is a challenging fishery to effectively manage because of the nature of the resource.

13. COMPLIANCE

Compliance is a critical element of fisheries management where those involved in harvesting marine resources for subsistence and commercial purposes must assume responsibility for ensuring that resources are sustainable.

(i) Compliance Staff Capacity

A list of compliance officers engaged in enforcing fisheries policies and regulations during the year is provided in Table 13.1 below.

Table 13.1: Compliance support staff, 2005

	Name	Post
1	Mr. Viliami Mo'ale	Principle Fisheries Officer (Legal)
2	Mr. 'Ofa Moala Fakahau	Fisheries Officer
3	Mr. Tevita Taulafo	Technical Officer Grade I
4	Mr. 'Inoke Mapuhola	Technical Officer Grade II
5	Mr. Palu Faupula	Technical officer Grade II
5	Mrs. 'Ana Tapu Latu	Fisheries Assistant
6	Mrs. Telesia Faupula	Fisheries Assistant

Tonga Fisheries Project supported the compliance effort in June by re-deploying Mr. Angus McLean, Compliance Advisor to provide technical support.

(ii) Tasks and Activities

Activities were focused mainly on the following areas: legislation development and compliance planning; law enforcement and compliance; certification and collection of resource rent; quality control, inspection and certification of marine products for export; and training.

(iii) Legislation Development and Compliance Planning

The appointment of the legal adviser, Mr. Viliami Mo'ale mid year contributed to improving performance. The following amendments to the existing legislations were submitted to Crown Law for review.

1. Corrigendum to the Fisheries Management Act 2002
2. Corrigendum to the Aquaculture Management Act 2003
3. Amendment to the Fisheries Management Act 2002 for Infringement Notices
4. Fisheries (Infringement Notice) Regulations 2005
5. Fisheries (Conservation and Management) Regulations 2005
6. Fisheries (Vessel Monitoring System) Regulations 2005
7. Fisheries (Seaweed (Limu Tanga'u)) Regulations 2005
8. Fisheries (Local Fishing) Regulations 2005
9. Aquaculture Regulations 2005

(iv) Law Enforcement and Compliance

A successful prosecution of the local fishing vessel, Toko III, for fishing without a license at Minerva Reef was achieved. On 22 June 2005 at the Supreme Court, Justice Thomas sentenced the captain, Kim Kil Nam and the owner of the vessel, G & J Fisheries Company Ltd as follows:

Mr. Kim Kil Nam

- (i) Fishing without a local fishing vessel license – Fine of \$200
- (ii) Undertaking marine scientific research without a permit – Discharge
- (iii) Operating of fish processing establishment without a license – Discharge

G & J Fisheries Company Limited (Nuku'alofa)

- (i) Fishing without a local fishing vessel license – Fine \$200
- (ii) Undertaking marine scientific research without a permit – Fine of \$1,000

- (iii) Operating a fish processing establishment without a license – Fine of \$2,500

In addition the Court ordered that all catches be forfeited to the Crown.

A one week intensive blitz on restaurants, hotels and resorts in Tongatapu was carried out to assess the outcome of a 2 day training held in the previous year for restaurant and resort owners in Tongatapu which covered an introduction to current fisheries laws and practical exercises including identification of undersize and berried lobsters. A relatively high level of non compliance was detected, most likely due to the high demand for lobster during festive months.

A summary of cases and actions taken during the year is provided in the next table.

Table 13.2: Summary of cases and actions being undertaken

Reference Number	Description of seized items.	Date seized	Case status
1005	61pcs under size clams	11/01/05	Warning letter
1006	10 undersize lobster	21/01/05	Referred to Police for action.
1007	beach-de-mer 2025pcs	22/01/05	Prosecution adjourned to Magistrates' Court for 26/01/2006
1008	11 undersize lobster (including 2 with eggs)	29/01/05	Warning letter [09/02/05]
1009	dynamite fishing mullet	11/02/05	Referred to Police for action.
1010	7 undersize lobster	20/05/05	Warning letter
1011	3 undersize lobster	15/06/05	Fined \$100 Nuku'alofa Magistrates' Court [13/09/05]
1012	16 undersize lobster	15/06/05	Fined \$100 Nuku'alofa Magistrates' Court [13/09/05]
1013	3 undersize lobster	24/11/05	Referred to Police for action.
1014	1 undersize lobster	24/11/05	Referred to Police for action.
1015	using scuba tanks for fishing	23/11/05	Warning letter
1016	2 undersize lobster	29/11/05	Referred to Police for action.
1017	1 undersize lobster with eggs	12/12/05	Referred to Police for action.
1018	2 pieces lobster tail with eggs	13/12/05	Referred to Police for action.
1019	2 undersize lobster with eggs	14/12/05	Referred to Police for action.
1020	2 lobster with eggs removed	15/12/05	Referred to Police for action.
1021	7 undersize lobster		Referred to Police for action.
1022	2 undersize lobster with eggs	16/12/05	Referred to Police for action.
1023	13 undersize lobster	16/12/05	Referred to Police for action.
1024	12 undersize lobster	17/12/05	Referred to Police for action.

(v) Seafood Exports

Commercial seafood export included seaweed, dried shark fins, aquarium fish, hard and soft corals, aquarium rocks, tuna, snapper, and grouper.

Exports for home consumption included reef and pelagic fish, octopus and mollusc shells. Turtle shells and souvenirs made from black coral and oyster shells were also exported and countries like Australia, Japan and New Zealand required certification that harvesting

of which complied with the CITES (Centre for International Trade in Endangered Species) requirements.

1. *Aquarium Fishery*

Five companies, namely Walt Smith International, Dateline Aquarium Fish Export, Jayhawk International, Coral Kingdom and South Pacific Paradise engaged in aquarium export. The total export of the five registered aquarium companies are summarised in Table 13.3.

Table 13.3: Quantity and Value of Aquarium Products Exported in 2005

Species	Total Weight	Total	Value	Total Value
Live (hard) corals		30,568	6.00	183,408
Soft corals		36,516	3.50	127,806
Live tropical fish		16,211	13.80	223,712
Aquarium rocks	498,924		3.00	1,496,772
Total	498,924	359,660		2,998,976

The value of aquarium exports increased by less than 1% from T\$2,854,271 in 2004 to T\$2,998,976 in 2005.

2. *Seaweed*

The seaweed export by five companies was approximately 565mt and details are given in Table 13.4.

Table 13.4: Seaweed Export, 2005

Products	Weight (kg)	Total (kg)	Importing Country
Frozen	313,697 118,000 48,490 40 (sample) 20 (sample) 11 (sample)	480,258	Japan New Zealand United States Australia Canada China
Salted	102 (sample)	102	United States
Dried	327 (sample) 146 (sample)	473	Japan Australia
Semi-dried	18,450	18,450	Japan
Liquid	64,872	64,872	Japan
Total		564,655	

Based on F.O.B value of T\$0.40 per kilogram the estimated export value of seaweed was approximately T\$225,662 compared to T\$478,012 in 2004. A summary of the estimated total value of all marine products exported in 2005 is provided in Table 13.5.

Table 13.5: Summary of Seafood Export in 2004 and 2005

Fish Exported	Amount(T\$) 2004	Amount(T\$) 2005	% Change	Unit Price (\$/kg)
Seaweed	478,012	225,662	-53	\$0.40/kg
Dried Shark fin	514,440	116,500	-77	\$50/kg
Snapper & Grouper	5 24,230	2,296,000	438	\$3.50/kg
Shrimp	674,400	0	-100	20.00kg

Fish Exported	Amount(T\$) 2004	Amount(T\$) 2005	% Change	Unit Price (\$/kg)
Aquarium	2,854,271	2,998,976	1	3.50kg
Tuna	1,199,615	1,053,500	-12	\$3.50kg
Total	6,244,968	6,690,638	7	

The production this year was affected by higher sea surface water temperature for seaweed compared to last year while Tuna export was also affected by poor catches.

(vi) Quality Control, Inspection and Certification of Seafood Export

All marine exporting companies in Tonga are required to meet certification requirements of international standard for Hazard Analysis & Critical Control Point (HACCP) therefore an inspection of fish export packing facilities, certification and documentation, post harvest and processing activities had to be carried out regularly.

(vii) Training

The following training courses were accomplished: Fisheries Regulation awareness training course at Ha'apai; Fisheries Regulation awareness training course Primary schools (26 to 30 April 2005): GPS Faleloa, Foa, Koulo, and Pangai; Fisheries Regulation awareness training courses for Ministry of Police Main office at Pangai, Ha'apai; and TDS Main Office at Pangai, Ha'apai.

(viii) Constraints

Constraints affecting service delivery include: shortage of a patrol vessel for conducting at sea patrols and inspections; and absence of exhibit room for storage of evidence.

14. LICENSING AND CERTIFICATION

Registration, certification and licensing are integral components of fisheries management where all commercial fishing activities are regulated and monitored closely to ensure that resource harvesting and processing is sustainable.

Licenses and permits were issued for the following commercial items: all types of fishing vessels; fish fences; fish processing establishments; aquarium fish and corals; seaweeds; and other marine products.

Names of staff engaged in licensing and certification service are listed in the following table.

Table 14.1: Licensing and Certification Support Staff, 2005

	Name	Post
1	Mr. Siliveinusi Manavahetau Ha'unga	Fisheries Officer (FO)
2	Miss. Veisia Lupe Fakalelu	Senior Fisheries Assistant (SFA)
3	Mr. Mafi Makasini	Fisheries Assistant (FA)

The work program and activities for the year involved the following:

- Assessment of applications for registration and subsequent issuance of licenses to local fishing vessels subject to the Fisheries Management Act 2002 but based on Fisheries (Local Fishing) Regulations 1995 until new regulations are enacted.
- Assessment of applications for commercial sports fishing; fish fences; fish processing establishment; aquarium fish and corals; processing and export of sea weeds; and other marine products.
- Maintenance of radio contacts with Fisheries stations in outer islands.
- Secretariat role for Fuel Concession Scheme under Fuel Concession Committee (FCC); such as
 - a) Assessment of applications for fuel concession refuel certificate
 - b) Monitoring of fishing vessels' activities by compiling log sheets and offloaded catch records.
 - c) Reconciling related data with Customs and Statistics
- Liaise closely on matters related to local or foreign fishing vessels with relevant Ministries/Organisations such as Marine and Ports, Labour Commerce and Industries and Tonga Defense Services and with Ministry of Finance, Customs and Statistics on matters related to the fuel concession regime.

(i) Registration and Licensing of Local Fishing Vessels

All fishing vessels of 6 metres and above in length are required to be registered and hold a valid fishing licence if part or whole of their catches are sold locally or exported. By the end of 2005, a total of 52 local fishing vessels with valid fishing license were recorded in the MoF register as listed in the following table.

Table 14.2: Summary List of Local Fishing Vessels, 2005

Type of Fishing Vessels	Quantity	Location
Deep Sea Bottom Fishing	25	Nuku'alofa, Vava'u
Tuna Long Line	13	Nuku'alofa
Commercial Sports Fishing Vessels	4	Vava'u
Vessels involved in Sea Weeds	3	Nuku'alofa
Vessels with special license for Minerva Reef	2	Nuku'alofa
Government Research and Training Vessels	2	Nuku'alofa
Total Fishing Vessels	52	

1. Deep Sea Bottom Fishing

'Alatini Fisheries and Maritime Projects remained the leading companies in operating deep sea bottom fishing vessels with a total of 6 vessels out of the current register of 25. There were private deep sea bottom fishing vessel owners in Vava'u operating 5 vessels and the remaining vessels operate at Tongatapu including a few Ha'apai vessel owners based in Tongatapu where they remain close to the processing facilities.

Individual boat owners of deep sea bottom fishing vessels sell their catches to 'Alatini Fisheries and Maritime Projects for export. This is much easier for them then setting up their individual processing facilities.

2. *Tuna Fishery*

Tuna fishing vessels were operated by fishing companies with the exception of one vessel operated privately by Mr. 'Etimoni Palu and his family. Tuna exporters in 2005 included, 'Alatini Fisheries, South Pacific Resources and R.I.O.T Unifi Co. Ltd. Some fishing vessels spent more time in port during the year due to mechanical problems and poor catches.

3. *Commercial Sports Fishing*

This section is responsible for the licensing of Commercial Sports Fishing or widely known as Game fishing boats. All these vessels are operating in Vava'u and at the end of 2005; five (5) vessels were on the registration list.

4. *Government Research and Training Vessels*

The two listed Government Research and Training Vessels were "Takuo" and "Ekiaki". The operation of "Takuo" is managed by the Ministry of Education for training purposes while the FV "Ekiaki" was managed by MoF for deployment of FADS and other special project related events.

5. *Foreign Fishing Vessels*

Tonga as it is well known throughout the Pacific Region and worldwide has no access agreements with distant water fishing nations (DWFN) with the exception of the Multilateral Treaty of Fisheries between certain Pacific Nations and the Government of the United States of America. The Treaty allows US purse seiners to fish in waters of the Pacific nations which were party to the Treaty and Tonga allows US fishing vessels to fish in its waters.

Following the decision to open up Tonga's waters to locally based foreign fishing vessels in late 1999, local fishing companies utilised that opportunity to charter foreign fishing vessels. In April 2004, Tonga's waters were closed again to all foreign fishing vessels, except those foreign fishing vessels holding a valid fishing licence at that time of closure and those that submitted their license applications shortly before the closure.

As a result of the closure, most locally based foreign fishing vessels returned to their respective countries and this decline in foreign fishing vessels further contributed to the decrease in annual proceeds of tuna fishery. No Fishing licenses have since been issued to foreign fishing vessels since April 2004.

6. *Fish Fences*

Licensing of fish fences is subject to the Fisheries Management Act 2002, relevant regulations and code of practice later approved in 2003.

Fish fence licenses are issued a period of 12 months and each year the season starts from 01st September and ends on 31st August the following year and regardless of the date of registration during this period, all fish fence licenses expire on 31 August each year. During the period September 2004 to August 2005 there were 67 fish fence licenses

issued in Tongatapu. Unfortunately some license holders were not able to erect fish fences in their selected licensed sites for various reasons including financial difficulties.

7. *Fish Processing Establishment*

A summary of the fish processing establishments of 2005 is provided in Table 14.3.

Table 14.3. Fish Processing Establishments licensed to operate, 2005

Names	Location	Main Processed Species
'Alatini Fisheries	Small Industries Centre	Tuna, Snapper, Groupers
Maritime Projects (Tonga) Ltd	Sopu-'o-Taufa'ahau	Tuna, Snapper, Groupers
R.I.O.T. Unifi Co.,Ltd	Fanga-'o-Pilolevu	Tuna, Snapper, Groupers
South Pacific Resources Co.,Ltd	Tuimatamoana	Tuna, Snapper, Groupers

8. *Exporters of Marine Products*

Table 14.4 below provides details of companies which were registered with the Ministry and subsequently were issued export licenses.

Table 14.4: List of Exporters of Marine Products, 2005

Name of Exporter	Location	Products Exported	Yr
Dateline Aquarium Fish Export Co.Ltd.	Navutoka	Live tropical fish, invertebrates, hard and soft corals, giant clams.	1994
Walt Smith International	Ma'ufanga	Live tropical fish, invertebrates, hard and soft corals, giant clams.	1980
Maritime Projects Co.Ltd	Sopu	Snapper, grouper, shark dried fin	1980
Alatini Fisheries Co. Ltd	Small Industries Centre	Fresh tuna, snapper and grouper	1990
Vanisi International Co.Ltd	Tatakamotonga	Live tropical fish, invertebrates, hard and soft corals, giant clams.	2000
Coral Kingdom Co.Ltd	Small Industries Centre	Live tropical fish, invertebrates, hard and soft corals, giant clams.	2001
South Pacific Paradise Co.Ltd	SIC	Live tropical fish, invertebrates, hard and soft corals, giant clams.	2001
G & J Fishing Co. Ltd	Ma'ufanga	Fresh Tuna	2002
Tangle Nano	Sopu	Seaweed	2001
George Nakao Farm	Sopu	Seaweed	2002
Riot Fishing Co. Ltd	Nuku'alofa	Fresh Tuna	2002
Fung Shing Co. Ltd	Nuku'alofa	Fresh Tuna	1990
South Pacific Resources	Ma'ufanga	Fresh Tuna	2004
Health Living Co.Ltd	Nuku'alofa	Seaweed	2004

(ii) **Radio Contacts with Outer Islands**

Regular radio contacts are maintained between the ministry and the following stations: Nomuka, Ha'afeva and Pangai in Ha'apai; Neiafu in Vava'u; and Falehau in Niuatoputapu. Radio contacts are scheduled twice each working day and messages or

reports received are conveyed to the appropriate destination. The status of radio contacts is reported to the officer responsible to outer islands affairs each week or as required.

(iii) Fuel Concession Scheme (FCC)

The Fuel Concession Committee (FCC) held quarterly meetings to discuss matters related to duty free fuel issued to owners and operators of fishing vessels. FCC policies are strictly applied and issue of duty free fuels is closely monitored too to ensure that the scheme is cost effective and it achieves its objectives. Customs and oil companies were well informed of FCC policy and they also supported its strict application.

Table 14.5 provides details of fuel issued for fishing vessels qualified for refuel under the Fuel Concession Scheme in 2005 as compared with 2004. Details of catches for vessels engaged in the scheme are provided in Table 14.6.

Table 14.5: Fuel by fishing type; Fuel Concession Scheme, 2005 against 2004

Type of Fishing	Diesel	SAE 30	Hydraulic	Refrig.	Grease
	(1)	(1)	(1)	(1)	(kgs)
Bottom Fishing (2005)	184,426	1,162	0	0	100
Bottom Fishing (2004)	692,200	1,345	0	0	140
Tuna Fishing (2005)	885,217	8,924	2,265	0	400
Tuna Fishing (2004)	792,030	3,160	380	1,217.50	0
Total (2005)	1,069,643	10,086	2,265	0	500
Total (2004)	1,484,230	4,505	380	1,217.50	140

Table 14.6: Catch by species from vessels involved in Fuel Concession Scheme, 2005 as compared with 2004

Type of Fish	Landing (m/t)	Local Fish (m/t)	Export Fish (m/t)
Snappers (2005)	218.820	58.840	159.980
Snappers(2004)	753.244	504.35	248.894
Tuna (2005)	641.670	395.130	246.540
Tuna (2004)	354.254	163.007	191.246
Total (2005)	860.490	453.970	406.520
Total (2004)	1107.498	667.357	440.140

15. MONITORING AND SURVEILLANCE SERVICES

Monitoring and surveillance capability was limited to two Officers, one of which was recruited in April 2005. Staff engaged in this service is listed in Table 15.1 below.

Table 15.1: Monitoring and Surveillance Staff, 2005

	Name	Post
1	Miss 'Ana Finau Taholo	Senior Computer Programmer
2	Miss Kalolaine Manuopangai	Technical Officer Grade II

Monitoring and surveillance services revolved around two major initiatives outlined below:

(i) Vessel Monitoring System (VMS)

The Vessel Monitoring System (VMS) electronically tracks location of fishing vessels using satellite technology. At present there are two systems operating side by side each focusing on separate fishing grounds.

The Forum Fisheries Agency Vessel Monitoring System (FFA VMS) network is hosted at the Ministry of Fisheries which electronically tracks location of foreign fishing vessels licensed to fish in the region.

Alternatively, the ARGOS VMS system was approved by Cabinet in 2003 (CD 1809) and implemented in 2004 tracks local commercial fishing vessels operating in designated fisheries in Tonga.

VMS achieves two goals: (i) it closely monitors movements and operations of fishing vessels to ensure full compliance with fisheries regulations (ii) useful fishing data are collected for management purposes.

Table 15.2 and Table 15.3 provides a summary of the number of fishing vessels fishing in Tonga waters that carried ARGOS or FFA VMS during the year 2005.

Table 15.2: Fishing vessels carrying ARGOS VMS, 2005

Type of Fishing Vessel	Quantity
Tuna long line	14
Deep Sea Bottom Fishing	19
Others – Limu processing & transport & Exploratory Fishing	5

Table 15.3: Fishing vessels, based in Tonga, carrying FFA VMS, 2005

Type of Fishing Vessel	Quantity
Locally based – Limu processing vessel	1

The installation and operation of the VMS in Tonga has been instrumental in boosting compliance standard. It has also contributed immensely to moving forward compliance efforts. Positions of fishing vessels recorded on VMS are useful in validating positions recorded in the log sheets, thereby identifying and subsequently eliminating discrepancies arising between the Ministry and fishing companies.

In addition, information collected via VMS is also provided to Tonga Defence Services and the aerial surveillance agencies, particularly the Royal Australian Air Force and the Royal New Zealand Air Force, during scheduled patrol operations, to help fight IUU fishing. For management purposes, a mapping analysis of the catch distribution is carried out to identify fishing grounds with abundant fishery resources and species.

(ii) Observer Programme

The aim of the observer programme is to collect information about fish catches, onboard fish handling techniques, fishing technology, by-catches and discards for the purpose of stock assessment and management planning including monitoring of fishing vessels' compliance with fisheries legislation.

An observer from the national program was deployed on the US Treaty single purse seine vessels fishing within the region. Due to funding constraints, deployment of observers on local fishing vessels was very inactive.

16. REGIONAL FISHERIES DEVELOPMENT

Fisheries management and development in the region experienced some positive progress and at the same time faced some challenges of various magnitude.

(i) Status of Tuna Stock

SPC is continuously monitoring tuna stocks and it has reported that the status of the tuna stock, particularly the major tuna species of skipjack, yellow fin, and south pacific albacore, has shown some mixed signals.

Skipjack tuna remains in good health and there is potential for increased catches. Assessment of yellow fin and bigeye tuna indicated that over-fishing is occurring on both stocks and fishing mortality should be reduced.

The status of the South Pacific albacore indicated that over-fishing is not occurring, but there is increasing effort in long line effort which could result in decreased fishery performance and profitability.

(ii) Ecosystem Approach to Fisheries Management (EAFM)

An ecosystem approach recently applied to managing fisheries has been implemented in the region of which takes into account a number of environmental and human factors which may impact on fish stocks. This approach is considered relevant in application to coastal fisheries and other related fisheries.

One of the challenges of implementing a regional EAFM approach is the lack of ecosystem reference points which provides the platform for comparison of methodology and ecosystem health can be made.

(iii) WCPF Commission

The second meeting of the WCPF Commission was held at Pohnpei, FSM from December 12-16 and a number of decisions were adopted which have implications on Tonga's fisheries management and development.

Measures agreed to by Commission members include conservation and management measures for the South Pacific albacore, North Pacific albacore, and big eye and yellowfin tuna. Members of the Commission are obliged: not to increase the number of

fishing vessels actively fishing for albacore in area south of 20° S; and not to increase fishing effort for Northern albacore beyond current levels; not increase beyond current levels fishing effort for yellowfin and bigeye tuna in the Convention Area; and no measure agreed for sharks but as there is likely to be extensive lobbying leading up to the third Commission meeting.

Resolutions include reducing incidental catches of seabirds in longline fishery; reduce over capacity in purse seine vessels; avoid capture of all non-target species; reduction of sea turtles mortality.

A Sub-Committee on Southern Pacific Tuna Albacore was agreed to be established as a subsidiary body of the Forum Fisheries Committee and Tonga will engage actively in this Committee.

(iv) Legal matters

Regional model legislation has been developed in support of sound, effective, and responsible fisheries management. Following the Forum leaders meeting where a proposal by the Republic of Palau for a moratorium on deep sea bottom trawling and the creating of a legal framework to manage this method of fishing to protect biodiversity in the high seas, a declaration which best serves this purpose has been drafted for consideration of Forum leaders at the next meeting in Tonga.

The Declaration would commit Forum members through domestic legislation in respect of their flag vessels, to promptly ban destructive fishing practices on seamounts in geographical area and to ban destructive fishing practices in other areas of high seas until an appropriate environmental impact assessment has been carried out and conservation and management measures are implemented in respect of that location.

(v) Monitoring, Control and Surveillance

A regional compliance strategy is currently being developed which aims at maximizing the effective use of compliance resources and assets. About 1,045 vessels registered to fish within the region. New Zealand and Australia continued to support MSC initiative in the region to combat IUU fishing.

(vi) Regional Fisheries Treaties

Administration of the Treaties in the region is in order and the outcome of the 18th Annual meeting of the Parties to the Multilateral Treaty on Fisheries were largely satisfactory although there were some concerns about the following: declining number of US fishing vessels engaged in the scheme; the status of ratification by members of the Treaty amendments; and the disbursement of outstanding Treaty funds.

(vii) Eco-labelling of Tuna Products

A project for Eco-labelling will investigate certification of pacific tuna and the Marine Stewardship Council will work with pacific countries to promote their products. Certified fisheries can access markets that are otherwise closed and pacific countries can use MSC logo on their products.

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