

MINISTRY OF FISHERIES



ANNUAL REPORT

**FINANCIAL YEAR
2016/17**

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1 INTRODUCTION

This Report provides an overview of the performance of Tonga's Ministry of Fisheries from July 2016 to June 2017.

The mandate of the Ministry of Fisheries involves conserving, managing, developing, and sustainable utilization of the Kingdom's aquatic resources to ensure food security, and to improve the social and economic well-being of the people of Tonga. During the financial year (FY) 2016/17 the Ministry of Fisheries experienced a great number of challenges. Despite the challenges of technical and financial resource limitations the Ministry delivered on its mandate and met the goals of the 2016-17 Corporate Plan.

Tonga's fisheries waters stretch from the latitudes 15° south to 23.5° south, and longitude 173° west to 177° west. The extent of Tonga's Exclusive Economic Zone (EEZ) is approximately 700,000km² compared to its land area of 747km². This vast area therefore creates both a massive challenge and a huge opportunity for the effective management and development of sustainable fisheries, and maximising the economic benefits from the country's fisheries resources.

1.1 ANNUAL REPORT STRUCTURE

The layout of this report reflects the functional organizational structure of the Ministry of Fisheries.

The Ministry of Fisheries organizational structure comprises:

- the Office of the Chief Executive Officer (OCEO)
- Corporate Services Division (CSD)
- Fisheries Management and Development Division (FMDD)
- Fisheries Science Division (FSD)
- Fisheries Compliance Division (FCD)

The Office of the Chief Executive Officer comprises the following functions:

- Ministerial Support
- Donor and International liaison
- Legal
- Media

The Corporate Services Division comprises the following functions:

- Finance
- Human Resource
- Information and Communication Technology
- Assets and Engineering
- Corporate Plan, Annual Report, and Procurement

Fisheries Management and Development Division comprises the following functions:

- Management and Development Planning
- Policy
- Economics
- Statistics

Fisheries Science Division comprises the following functions:

- Offshore fisheries monitoring and science

- Aquaculture development
- Coastal Fisheries (including the Special Management Area (SMA) program)
- Inshore Resources monitoring and science
- Outer islands and extension services (outer islands consist of Niuas, Vava'u, Ha'apai, and Eua)

Fisheries Compliance Division comprises the following functions:

- Enforcement
- Vessels Monitoring System
- Observers
- Licensing

2 FOREWORD

The Ministry of Fisheries Annual Report for Financial Year 2016/2017 provides an overview of the challenges and achievements for the year under the direction and leadership of the Honourable Semisi Tauelangi Fakahau, Minister for Agriculture, Food, Forests and Fisheries.

In July 2016, the Cabinet approved the Tonga Fisheries Sector Plan (TFSP) for implementation, subject to two conditions. First, a review of stakeholder engagement, and second the development of a National Fisheries Policy to address policy questions raised in the TFSP. The NZ Ministry for Foreign Affairs and Trade (NZ MFAT) has supported the review of policy issues, and the Forum Fisheries Agency (FFA) supported a review of stakeholder engagement.

Applications were made through the Global Agriculture and Food Security Program (GAFSP), and the Pacific Islands Regional Oceanscape Program (PROP) to finance the implementation of the TFSP with the assistance from the World Bank on preparation the proposal.

During the financial year 2016/2017 the TFSP phase 1 commenced especially the development of the implementation plan. Key activities in the sector plan have also progressed, in particular the Special Management Area program has progressed rapidly with the support of the Asian Development Bank, and a review of Special Management Areas has been conducted by the Food and Agriculture Organisation (FAO) of the United Nations.

The Royal Agriculture Show's theme for 2016/17 was "Tonga Mo'ui lelei mo Fiefia". The Ministry's participation in the Royal Agriculture Show commenced in Niuatoputapu, and continued in Niufo'ou, Vava'u, Ha'apai, 'Eua and Tongatapu, with the presence of their Majesties King Tupou VI and Queen Nanasipau'u as Guests of Honour, and to address ceremonies and award prizes to the winners of judged events in the respective islands. The Government Ministries, District and Town Officers, private sector, farmers, women, fisherfolk, youths, and communities worked closely together and their efforts made the Royal Agriculture Show a successful national event. The Ministry of Fisheries acknowledges the teamwork and effort of all participants.

The Ministry's budget was increased from \$2,059,400 in 2015/16 to \$2,808,000 in 2016/17. Revenue collected from target sources increased by \$657,800, from \$1,048,200 in 2015/16 to \$1,706,000 in 2016/17.

This was the first full year of the Ministry's operations after its separation from the Ministry of Agriculture, Food, Forests and Fisheries, and whilst the total number of permanent posts was 64, only 50 posts were filled.

The total marine product export, excluding aquarium products, during 2016/17 was 2,611 metric tons. This is a 50% increase from the total marine products exported in the last financial year. All fish exports in this financial year were valued at TOP\$15 million which is a 46% increase from the value of fish exported in the last financial year.

The three-main export marine products from Tonga are tuna, snapper, and aquarium species. A total of 2,372 metric tons of tuna was exported in this financial year which is a 55% increase from the last financial year. The total tuna exported within this period was valued at approximately TOP\$13.2 million, which is a 35% increase from the previous period.

The snapper fish export was 157 metric tons and valued at TOP\$1.02 million. The total aquarium products exported in this period was 124,383 pieces, valued at approximately TOP\$0.48 million.

The market survey, in Vava'u, Ha'apai and the four main fish markets in Tongatapu, estimated a total of 109 metric tons of marine resources were recorded in this financial year which are approximately valued to TOP\$886,309.70.

Under the exemption scheme of duty and consumption tax on fuel, fishing gear and bait, it was estimated that a total of TOP\$4.2 million of government revenue was forgone.

The total catch of commercial fish species namely, albacore, bigeye, yellowfin, and skipjack tuna by the domestic fishing fleet was 556 metric tons. The catches were dominated by yellowfin (66 %).

Seven (7) foreign fishing vessels were licensed to fish in Tonga during the year. The total catch of these seven vessels was 2,453 metric tons. Albacore tuna was the highest caught species with 1,429 metric tons (58% of primary species catch).

The total catch by weight for all deep-water snapper fish species was 278.2 metric tons. The catches were dominated by Palu Tavake (*Etelis coruscans*) (40%).

The fishing trial on Bluenose by the National Institute of Water and Atmospheric (NIWA) under a NZ funded project to determine its abundance in the southern waters of Tonga EEZ was continued but unfortunately the project has so far only resulted in low catch rates.

Pearl oyster farmers expanded from 8 to 11 operators in Vava'u, from 2 to 3 operators in Ha'apai, and 3 new operators in Tongatapu. Hatchery production increased to 200,000 spats which were transferred to the ocean nursery before being distributed to farmers. Pearl Oyster Farm owners have established a National Pearl Farming Association (NPFA) with assistance from the Ministry of Fisheries, and the Ministry of Labour and Commerce.

Hatchery production of giant clams (*T.maxima*) continued successfully in this financial year and approximately 6 million fertilized eggs were produced with survival rates of 10 – 30%.

The majority of seaweed (*kappaphycus sps*) seed plants were destroyed by cyclone Winston and consumed by rabbit fish. SPC has offered technical assistance to reestablish the development of the seaweed culture in Tonga. This activity is focused in Vava'u. Seaweed farming was further badly damaged by Cyclone Ula. In late December 2016 the Ministry was able to plant 3,080 seaweeds but during Christmas break a strong wind washed away most of the seaweed with only a few seedlings left. Seaweed farming was revived with a focus on re-establishing and increasing seedling production.

Local species of Sea Urchins- *pneustes gratila*) were spawned with 500,000 larvae, and sandfish (*Holothuria lesson*) were spawned producing approximately 500,000 larvae.

The Special Management Area Program has been expanded rapidly and toward the end of this financial year a total of 28 SMAs had been established.

Stock assessments of sea cucumber were conducted in Vava'u, Ha'apai and Tongatapu from October to November 2016. The assessments revealed that sea cucumber population at each of the three island groups to be in a poor state. At each island group, sea cucumber assemblages were

dominated by low-value species. Densities of individual species were generally well below regional reference density levels for healthy stocks.

There has been an ongoing monitoring program to continuously collect information and understand the status of the Fanga'uta lagoon regarding the fisheries resources including the species available and abundance throughout the lagoon. The result of the survey indicates a very low abundance of fisheries resources.

Ciguatera fish toxin monitoring was conducted by collecting samples at key sites. Fish poisoning has been a concern with a frequent fish poisoning incidents reported in Ha'apai. It is highlighted in the report that majority of the fish poisoning occurred in Ha'apai.

The main aquaculture activity in Ha'apai is pearl oyster culture. This activity is progressing well. Farmers have moved to the production process through training of farmers in seeding of nuclei.

A total of forty (40) fishing vessels had valid licenses to fish within Tonga's EEZ during July 2016 to July 2017. There were seven (7) foreign fishing vessels, five (5) local tuna fishing vessels, four (4) commercial sport fishing vessels, and twenty-four (24) snapper fishing vessels. During the reporting period, one foreign fishing vessels and one commercial sport fishing vessels license expired and have not been renewed.

The Ministry acknowledges the on-going effort and support of the international development partners and regional agencies, as they contribute significantly towards the advancement of the development of fisheries in Tonga, in particular the New Zealand Ministry of Foreign Affairs and Trade, Australia's Department of Foreign Affairs and Trade, the Australian Centre for International Agricultural Research (ACIAR), the Forum Fisheries Agency (FFA), the Pacific Community (SPC), the Government of China, the Government of Japan, the Western and Central Pacific Fisheries Commission (WCPFC), the Food and Agriculture Organisation (FAO) of the United Nations, the World Bank, and the Asian Development Bank (ADB).

3 OFFICE OF THE HON MINISTER

The Minister responsible for Tonga's fisheries is the Honourable Semisi Taelangi Fakahau, Minister for Agriculture and Food, Forests and Fisheries. The Minister has a long and internationally recognised level of expertise in fisheries development and management, with experience in national, regional and international fisheries situations.

Significant achievements for the Minister's office during the year were the provision of policy directions for the overall management and operation of the Ministry of Fisheries. The good leadership of the Hon. Minister provided avenues for the great achievement of the Ministry of Fisheries for the financial year 2016/17. Part of the achievements were the Hon. Minister led Tonga's delegations in important regional and international fisheries and ocean forums. These included the:

- 13th annual session of the FAO Council's Committee on Fisheries, **Port Vila, VANUATU**
- 32 Committee of Fisheries meeting (COFI), **Rome, ITALY**
- Our Ocean One Future Conference hosted by John Kerry, US Secretary of States, **LA, USA**
- Commonwealth Marine Economics Program, Marine Workshop, **Suva, FIJI**
- Signing MOU Agreement on Treaty with USA, **Nadi, FIJI**

- Workshop on Strategic Regional Fisheries Cooperation for Minister responsible for Oceanic Fisheries, **Honiara, SOLOMON ISLAND**
- Sustainable Development Conference, **Suva, FIJI**
- 1st Meeting on FAO Port State Measures, **Oslo, NORWAY**
- United Nations Ocean Conference, **New York, USA**
- 1st High Level Pacific Blue Economy Conference, **Suva, FIJI**
- 48th Forum Pacific Island Leaders, **Apia, SAMOA**

4 OFFICE OF THE CHIEF EXECUTIVE OFFICER

Background

The Office of the Chief Executive Officer (OCEO) is headed by Dr Tu'ikolongahau Halafihi. The Office of the CEO's key areas of focus are Ministerial support, donor liaison, international relationships, legal, and communications and media.

The first Corporate Plan 2016/17 -18/19 for the Ministry of Fisheries was prepared in 2016 with the assistance of the Fisheries Executive Advisor funded by the NZ Ministry of Foreign Affairs and Trade. The plan is part of a national approach to planning and is directly linked to the Tonga Strategic Development Framework.

The Corporate Plan provides a renewed focus on the development and management of the country's sustainable fisheries. The plan supports the establishment of community based special management areas, and fosters sustainable and profitable commercial fisheries and aquaculture.

The Tonga Fisheries Sector Plan (TFSP) was finalised during the reporting period. The TFSP was developed with technical and financial assistance from the World Bank and the International Fund for Agricultural Development, and provides a solid foundation for seeking financial assistance from development partners for high priority projects. The implementation of the TFSP is on-going with potential funding from the World Bank Pacific Islands Regional Oceanscape Program (PROP) to implement major areas of TFSP activities.

The Ministry is appreciative of the efforts and support provided by the international development partners and regional agencies, which contribute significantly towards the development of fisheries in Tonga, in particular the New Zealand AID, AusAID, the Australian Centre for International Agricultural Research (ACIAR), the Forum Fisheries Agency (FFA), the Pacific Community (SPC), the Government of China, the Government of Japan, the Western and Central Pacific Fisheries Commission (WCPFC), the Food and Agriculture Organisation (FAO) of the United Nations, the World Bank, and the Asian Development Bank (ADB).

Hon. Cabinet Ministers approved the new position of Chief Executive Officer (CEO) for the Ministry of Fisheries and Dr Tu'ikolongahau Halafihi was appointed and commenced in his new role in mid-June 2016. The greatest achievements in the CEO Office were the implementation of policy directions from the Hon. Minister, execution of planned activities in fisheries plans, effective liaisons with Public Service Commission, Ministry of Finance and National Planning and other Government Ministries, effective liaisons with development partners and donors, and the overall management and operation of the Ministry of Fisheries. The CEO for the Ministry of Fisheries represented the Ministry and the Government of Tonga at the following meetings:

- Tokelau Arrangement Workshop, **Nadi, FIJI**

- Special Officials Forum Fisheries Committee Ninth Meeting, Annual Ministerial Forum Fisheries Committee Thirteenth Meeting, **Vanuatu**
- Participants to the Tokelau Arrangement Meeting with key partners Tevaka moana participants, Management Options Consultation Special Officials, **HONIARA**.
- WCPFC 13th Thirteenth Regular Session (WCPFC13), **Fiji**
- Tenth SPC Heads of Fisheries meeting and related project meetings
- Pre-FFC official meetings (Niue Treaty Subsidiary Agreement, Tokelau Arrangement, Global and Regional Oceanic Fisheries Conventions and Related Instruments in the Pacific Small Island Developing States (OFMP2)
- Forum Fisheries Officials 102, **AUSTRALIA**
- The annual Tevaka Moana Governing Council Meeting, **AUCKLAND, NZ**
- 1ST Meeting of the Parties to the 2009 FAO Agreement on Port State Measures to be held in **Oslo, NORWAY**
- The United Nations Ocean Conference to support the Implementation of SDG 14, **New York, USA**
- Pre-FFA Meeting & 13 Regular Session of the Scientific Committee, **Rarotonga COOK ISLAND**

Staff

There were three (3) staffs at the CEO's office, including the CEO and are listed below in Table 1.

Table 1: CEO support staff for financial year 2016/17

Name	Post
Dr. Tu'ikolongahau Halafihi	Chief Executive Officer
Ms. Alice Helu	Senior Fisheries Officer
Mrs. Pelenaise Tuiano	Technical Officer Grade II

4.1 LEGAL

Background

The Legal Section is tasked with providing legal advice and support across the Ministry on all matters relating to the legal affairs of the Ministry. In addition to providing legal advice, it also supports all divisions of the Ministry in their activities, including:

- Supporting the facilitation of compliance training for authorised officers and for coastal communities with a Special Management Area (SMA).
- Supporting the facilitation of consultation for drafting of Fisheries Management Plans and policies and Standard Operating Procedures (SOPs).
- Drafting and reviewing of Ministry contracts.
- Vetting of license applications to ensure compliance with legal requirements.
- Providing support for warnings and prosecutions for non-compliance with fisheries legislation and regulations.

As the section responsible for administering and overseeing all Acts, Regulations, and relevant policies and procedures under which, or for which, the Ministry has responsibility for implementation it has commenced reviewing the Fisheries Management Act 2002 and its supporting regulations as a way of addressing national fisheries related issues and updating of the legislation to ensure compliance with relevant regional and international legal instruments. During the reporting period this section was able to draft, consult, finalise and submit the following legislative documents with support from Divisions of the Ministry, technical assistance from FFA and SPC, and the Attorney General's Office

- Fisheries Management (Amendment) Bill 2016 (currently with the Legislative Assembly's Law Committee)
- Fisheries (Coastal Communities) (Amendment) Regulations 2016 (enacted on 16 December 2016) and
- Fisheries (Coastal Communities) (Amendment) Regulations 2017 (enacted 29 June 2017)

This section also supports the development and implementation of the CEO's Office Annual Management Plan and supports effective administration of the CEO's office.

Staff

The Ministry has one Legal Officer Position listed in Table 2.

Table 2: Fisheries Legal staff for financial year 2016/17

Name	Post
Ms.Salote Koloamatangi	Legal Officer

4.2 MEDIA

Background

Fisheries media aims to provide effective communication on Ministry activities through television, radio, print media, website, social media, and printed communications material to the people of Tonga. Media delivers television and radio programs once a month to ensure transparency in fisheries activities and issues to the people of Tonga.

Listed below are Media achievements for the reporting period:

- Fisheries activities
 - Special Management Areas (SMA) activities with communities including outer islands
 - Compliance activities with communities including outer islands
 - Ministry's planning week (budget, Corporate Plan, and Annual Management Plan (AMP))
 - Annual Royal Agricultural Show schedules and programs
 - Fish sales
 - Educational programs for schools and public in Tongatapu
 - Training and workshops (in-house and external in-country)
 - End of year function presentation to Hon. Minister of Fisheries
- Press releases
 - National Fisheries Policy and Sector Plan Workshop
 - e-licencing workshop
 - Port State Measures Workshop
 - FAO SMA review
 - Biosecurity Planning Workshop
 - Catch Documentation Schemes
 - FMAC meeting
 - Tonga Aquaculture Commodity Development Plan workshop
 - VMS training
 - Royal Agricultural Show

Staff

The Media team consists of two staffs listed in Table 3.

Table 3: Media staff for financial year 2016/17

Name	Post
Mrs. Siosi'ani Matangi	Fisheries Trainee
Ms. Kilisitina 'Akimeta	Media Assistant (daily paid)

5 CORPORATE SERVICES DIVISION

Background

The Corporate Services Division (CSD) is headed by Deputy CEO, Mr Vilimo Fakalolo. The CSD is made up of five sections; Finance, Human Resources, Information and Communication Technology, Assets and Corporate Plan, Annual Report and Procurement Section.

5.1 FINANCE SECTION

Background

This Section is responsible for the Ministry's Finance activities and services including responding to relevant Ministries such as Ministry of Finance, and Ministry of Revenue and Customs.

Staff

The Finance section consists of three staff listed below in Table 4.

Table 4: Finance staff for FY 2016/17

Name	Post
Mr. Tevita Talakai	Principal Accounting Officer
Mrs. Katalina T Fifita	Technical Officer Grade II
Mrs. Mele Holo'ia	Technical Officer Grade II

Achievements

Listed below are achievements assembled for the reporting period:

5.1.1 BUDGET

The total Budget for Expenditure increased from **\$2,059,400** in 2015/16 to **\$2,808,000** in 2016/17. Revenue collected from target sources increased **\$657,800**, from **\$1,048,200** in 2015/16 to **\$1,706,000** in 2016/17.

The salary allocation accounted for FY 2016/17 is the largest share of the budget accounting for 55.3% of the approved budget; the operating budget accounted for the remaining portion i.e. 44.7%. The details of the budget allocation are provided in Table 5.

Table 5: Funding by major component, 2015/16 -2016/17

Expenditure by Major Component	2015/16 (T\$)	2016/17 (T\$)	Variance
Established staff	1,299,100	1,553,600	254,500
Un-established staff	35,000	38,000	3,000
Travel and Communication	133,000	280,800	147,800

Maintenance and Operations	261,700	356,800	95,100
Purchase of Goods and Services	272,100	439,300	167,200
Grants and Transfers	58,500	73,000	14,500
Assets		66,500	66,500
Total	2,059,400	2,808,000	748,600

Table 6: Recurrent Expenditure Performance for FY2016/17

Recurrent	Total Original Budget (T\$)	Transfers and *Contingency fund	Year End Budget	Total budget committed for this output	Percentage of utilisation
Program 1					
Office of Minister and CEO	203,600	-23,065	180,535	152,370	84
Corporate Service Division	883,100	210,850	1,093,950	889,679	81
Program 2					
Fisheries Management and development Division	272,800	-85,470	142,330	115,532	81
Fisheries Science Division	1,198,500	73,316	1,271,816	1,110,148	87
Fisheries Compliance Division	295,000	42,969	337,969		90
Total	2,808,000	218,600	3,026,600	2,571,357	85

** Note, additional Fund from Contingency fund at \$218,600.*

Table 7: Development Expenditure Performance for FY2016/17

Development	Total Original Budget (T\$)	Transfers	Year End Budget	Total budget committed for this output	Percentage of utilisation
Program 1					
Office of Minister and Corporate Service Division	317,847	17,704	335,551	154,823	46
	80,118		80,118	63,850	80
Program 2					
Fisheries Management and development Division					
Fisheries Science Division	153,303	91,084	244,387	98,528	40
Fisheries Compliance Division	97,339	65,605	162,944	78,631	48
Total	648,607	174,393	923,000	395,832	48

5.1.2 REVENUE PERFORMANCE

Total revenue reported was **\$2,721,795**, of which **\$1,626,542 (59.8%)** was received as proceeds from the Multilateral Treaty on Fisheries with the USA; \$215,321 (7.9%) was received from Fishing Licenses, \$830,221 (30.5%) received from Rental and the remaining 1.8% from the sale of produces and products.

Table 8: Revenue Performance, Revenue sources with collection for FY 2015/16 -2016/17

Revenue Sources	FY 2015/16	FY2016/17	Variances
Target Sources	1,048,204	1,048,200	-4
Sales of produce and product	58,026	73,192	15,166
FFA (US Treaty)	1,622,699	1,069,386	-553,313
Rentals	208,374	485,115	276,741
Licences	216,018	213,938	2,080
S/Total	2,105,117	1,841,631	-263,486
Non-Target Sources			
Consumption Tax	48,322	90,864	42,542
Fish Bond	1,700	1,100	-600
Development projects	175,056	120,147	-54,909
S/Total	225,078	212,111	-12,967
G/Total	2,330,195	2,053,742	-276,453

5.2 HUMAN RESOURCE DEVELOPMENT AND TRAINING

Background

This Section is responsible for human resources development and planning and coordination of staff training.

Staff

The Human Resource section consists of five staff listed below in Table 9.

Table 9: HR support staff for FY 2016/17

Name	Post
Mrs. Makeleta Mahe	Technical Officer Grade II
Mrs Ruby Kolo	Fisheries Trainee
Ms. 'Ana 'Akau'ola	Fisheries Trainee (sadly passed away in April 2017)
Mr. 'Uluaki Vaipuna	Driver
Mr. Lui Makaafi	daily paid

Achievements

Listed below are achievements assembled for the reporting period:

5.2.1 CORPORATE PLAN, ANNUAL MANAGEMENT PLAN AND ANNUAL REPORT

The HR team submitted the Ministry's Corporate Plan (CP) and Annual Management Plan (AMP) according to deadline. The HR team collaborated and combined the Ministry's individual divisional

CP and AMP components, along with the Ministry's budget for submission to Finance. The Annual Report for Financial Year 2015/16 was also finalised in June 2017 towards submission to Cabinet and Legislative Assembly in July 2017.

5.2.2 STAFF MOVEMENTS

Throughout the reporting period, the Ministry's staff encompassed 15 movements listed in Table 10.

Table 10: Staff movement for July 2016-June-2017

Name	Designation	Movements
Mele 'Atuekaho	Deputy CEO	Promoted
Poasi Ngaluafe	Deputy CEO	Promoted
Sisimata'itohi Mafile'o	Fisheries Officer	Transferred from PSC
Makeleta Mahe	Fisheries Officer	Promoted
Ruby K 'Onesi	Technical Officer Grade II	Promoted
Tonga Tuiano	Technical Officer Grade II	Promoted
Viliami Fatongiatau	Senior Fisheries Assistant	Promoted
Alice Helu	Senior Fisheries Officer	Appointed
Hulita Fa'anunu	Fisheries Officer	Appointed
Siaosi Vi	Senior Fisheries Assistant	Appointed
Frank Taufu	Senior Fisheries Assistant	Appointed
'Elaona Vea Kava	Technical Officer Grade II	Resigned
Katalina Tonga Fifita	Technical Officer Grade II	Retired
'Ana Tapu Tavake	Senior Fisheries Assistant	Resigned
'Ana 'Akau'ola	Fisheries Trainee	deceased
Siosifa Fisi'ipeau	Senior Fisheries Assistant	deceased

5.2.3 LONG-TERM STUDY

During the reporting period Mr. Martin Finau (Fisheries Officer) and Mrs. Losilini Loto'ahea (Fisheries Officer) were on study leave, undertaking Master's Degree studies. Mr. Finau commenced his Master of Science in Marine Conservation program at Victoria University of Wellington with effect from January 2017; Mrs. Loto'ahea commenced her Master of Management at Massey University, New Zealand with effect from June 2017.

5.2.4 SHORT-TERM TRAINING, WORKSHOPS, LOCAL AND OVERSEAS MEETINGS

Staff continued to benefit from short term training courses and meetings organized and funded by regional and international organizations. Refer to attached Annex 2 which shows overseas training courses and meetings which enabled the Ministry of Fisheries to develop staff skills and knowledge in various disciplines.

5.2.5 WORKFORCE

The Ministry has a total of 56 permanent staff posts that were approved under the budget for 2016/17. During the Financial Year 2016/17 all permanent posts were filled. There were 8 labourers hired in late 2016/17 due to challenges with under-staffing faced by the Ministry. Details of the approved posts for 2016/17 are as shown in **Table 11**.

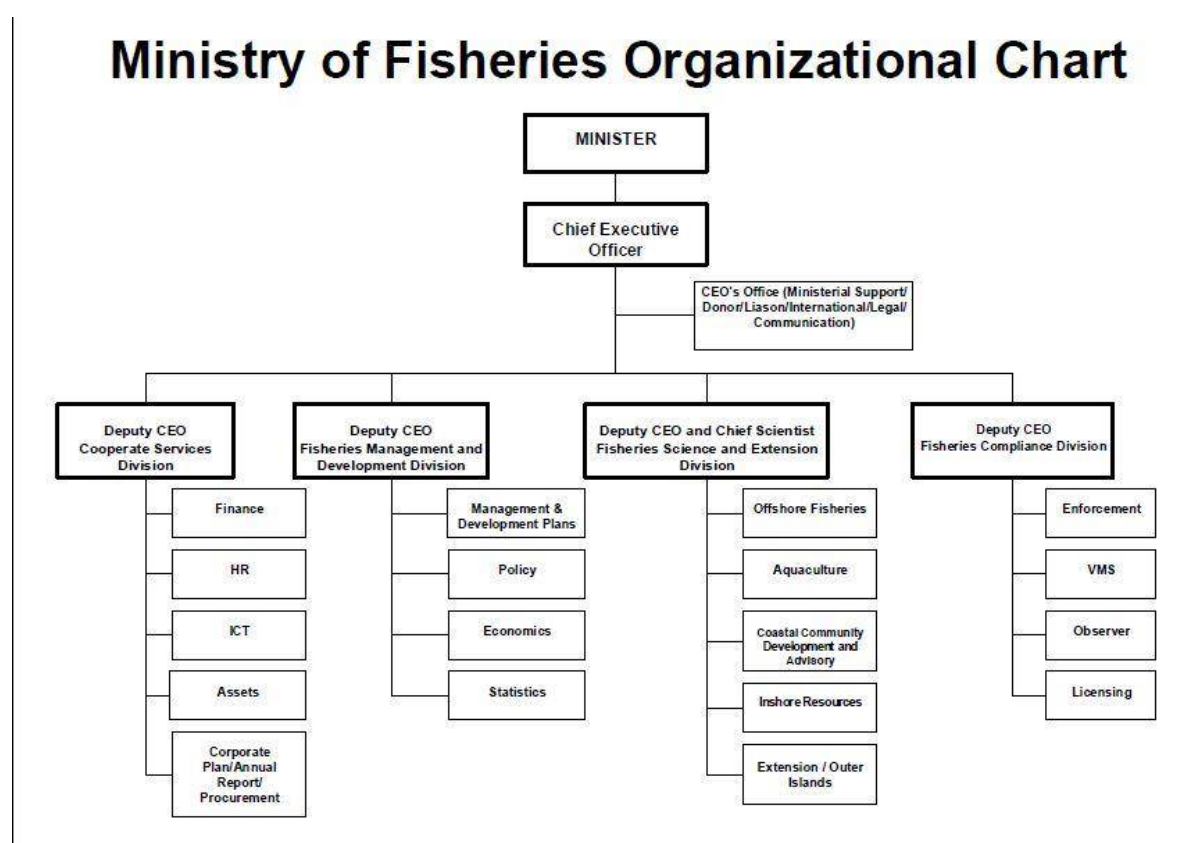
Table 11: Permanent Posts as at 30 June 2017.

Band	Post Title	Post Abbreviation	No. of Post filled	No. of Vacancies
E	Chief Executive Officer	CEO	1	
G (2) H (3)	Deputy CEO	DCEO	3	2
I (3)	Principal Accounting Officer Principal Fisheries Officer Legal Officer	PAO PFO LO	3	
J (3)	Principal Fisheries Officer	PFO		3
K (9)	2 x Senior Fisheries Officer 4 x Fisheries Officer Computer Programmer Senior Technical Officer Licensing and Certification Officer	SFO FO CP STO LCO	6	2 1
L (10)	8 x Fisheries Officer Accountant Technical Officer Grade 1	FO AO TOGr.I	5	4 1
M (11)	Technical Officer Grade II Assistant Research Officer	TOGr.II ARO	10	1
N (4)	Senior Fisheries Assistant	SFA	3	1
Q (5)	2 x Senior Fisheries Assistant 2 x Fisheries Assistant Computer Assistant	SFA FA CA	5	
R (8)	3 x Fisheries Assistant 4 x Fisheries Trainee Driver	FA FT Driver	8	
S (4)	Fisheries Trainee	FT	4	
Sub Total			48	15
TOTAL			63	

5.2.6 ORGANISATIONAL STRUCTURE

Ministry of Fisheries organisational structure as at Financial Year 2016/17 is shown below in Figure 1.

Figure 1: Organisational structure as at financial year 2016/17



5.3 INFORMATION COMMUNICATIONS AND TECHNOLOGY (ICT)

Background

The Section continues in pursuing its goal to provide ICT support services for MoF in networking systems, database management systems, monitoring and development, website monitoring, and email services for internal and external purposes. This includes storing, maintaining, and monitoring of official records and publications in electronic formats for historical purposes and future references. In addition, the Section plays another key role in keeping the public and stakeholders informed through publishing and updating fisheries developments and events through social media such as the fisheries website and the Ministry of Fisheries Facebook page.

Staff

The ICT section consists of two staff listed in Table 12.

Table 12: Information and Communication Technology staff for 2016/17

Name	Post
Mrs Lavinia Vaipuna	Computer Programmer
Mr Ofa ki Navuso Faletau	Fisheries Officer (Network System)

Achievements

Listed below are achievements assembled for the reporting period:

5.3.1 TOFISH NETWORK/COMPUTER SERVICES (LAN)

The Local Area Network (LAN) runs under 4 servers, with many PCs and laptops. Despite many limitations experienced during the year the section still managed to facilitate the heavy work flow and maintain effective communications networks.

Computer services largely involved: (i) operation and maintenance of the Ministry's 4 servers, (ii) operation and maintenance of computer hardware and software; (iii) operation and maintenance of the Ministry's internet connection, email services and websites; (iv) development and maintenance of databases required for planning and management purposes; and (v) training of Fisheries personnel on use of computer equipment and software applications. Services were available to all staff at Tongatapu, Pangai, Neiafu, Niuatoputapu and 'Eua.

5.3.2 INTERNET SERVICES/WEBSITES/EMAIL (WAN)

The Internet, Websites and Email services facilitates the Ministry's communication inside and outside the office. During the year the Section expanded its social media services by developing a Facebook page – “Ministry of Fisheries Tonga”, with a few staff as administrators to update daily events and activities as a way of promoting the Fisheries to the whole world. The email service allows staff to access their emails remotely. The Ministry of Fisheries maintains its official website www.tongafish.gov.to.

5.3.3 E-LIBRARY SERVICES

During the reporting period, the service was not in operation. Although the services are online there are still old physical publications in the library that need scanning and uploading to the website. It is planned to develop a project proposal seeking funds on assisting us in performing these duties in the future.

5.4 ASSET AND ENGINEERING SECTION

Background

The asset function is to record and monitor all government assets under the Ministry of Fisheries including; list and identify of assets unused towards tender and write-off, and asset registers and stock take at the end of every financial year. The engineering function is to monitor, repair and maintain the Ministry's outboard motors, refrigeration, vehicles, and buildings.

Staff

The Asset and Engineering section consists of two staff listed in Table 13.

Table 13: Assets and Engineering staff for 2016/2017

Name	Post
Mr Sioeli Pasikala	Fisheries Officer
Mr Pala'a Mausia	Senior Fisheries Assistant

Achievements

Listed below are achievements assembled for the reporting period:

- Repair and maintenance of Fisheries Vehicles and outboard motors.

- Support the design and estimate costing of procurement for Tu'imatamoana Fish Market Processing Phase 2 (Freezer, Storage and Ice making machine).
- Complete renovation works for main office building.
- Transfer 2 x 23' fibre glass boat and 2 x 40 HP outboard engines for Niuatoputapu and Niuafu'ou islands.
- Demolishing of old engineering workshop at main office.
- Renew fisheries fence.

Table 14: Inventory of all vehicles in operation in 2016/17.

Year Purchase	Register Number	Type	Location	Standard	Fund	Remarks
1994	P 1026	Toyota Hiace	Sopu	Not operating	PDF	* To be write-off
1997	P 1120	Toyota Hilux	Sopu	Not operating	JICA	* To be write-off
1997	P 152	Toyota Hilux	Sopu	Operating but poor Condition	PDF	* To be write-off
2004	P 1351	Toyota Hiace	Sopu	Operating but poor Condition	PDF	* Need to replace
2007	P 1497	Toyota Hilux	Vava'u	Fair Condition	TFP	
2013	P 1774	Toyota Hiace	Sopu	Fair Condition	FD	
2013	P 1775	Toyota Hiace	Sopu	Fair Condition	FD	
2013	P 1776	Toyota Truck 2Ton	Sopu	Fair condition	FD	
2007	P 1478	Toyota Hilux	Sopu	Operating but poor Condition	TFP	
2013	P 1736	Toyota Hilux	Pangai Hp	Good Condition	PDF	New Vehicle

**Note: some of the Ministry's vehicles are over 10 years in operation. That said, it is very expensive in maintenance and repair and our recommendation is replace and tender.*

5.5 CORPORATE PLAN, ANNUAL REPORT AND PROCUREMENT

Background

The Corporate Plan, Annual Report and Procurement functions for the reporting period were undertaken within the Human Resource Section and it is a priority to be filled in the upcoming financial year 2017/18.

6 FISHERIES MANAGEMENT AND DEVELOPMENT DIVISION

Background

The Fisheries Management and Development Division (FMDD) is headed by Deputy CEO, Mrs Mele 'Atuekaho. The FMDD is made up of four sections; Management and Development Planning Section, Policy Section, Economics Section, and Statistics Section.

The Fisheries Management and Development Division of the Ministry of Fisheries is responsible for delivering the ministry's program of fisheries management and development planning and policy for aquaculture, coastal and offshore fisheries. These are the core statutory functions of the division that in turn drive the compliance and science programs.

The functions of the Fisheries Management and Development Division (FMDD) include:

- Formulations and review of Fisheries Management and Development Plans
- Fisheries policy development and review
- Economics of fisheries
- Market and trade reports
- Statistics
- Data management
- Project oversight and reporting

6.1 MANAGEMENT AND DEVELOPMENT PLANNING SECTION

Background

Fisheries Management and Planning (FMP) Section of Fisheries Division is tasked by Section 7 of the Fisheries Management Act 2002 to *"progressively prepare and keep under review plans for the conservation, management, sustainable utilization and development of fisheries in the fisheries waters and ensure implementation of such fishery plans."* This provides the platform to progress fisheries management and development in Tonga. These FMPs provided the basis for the formulation of the Regulation for Conservation and Management of the fisheries resources.

The core function of the Management and Development Planning Section is to formulate, review and implement the management and development plan for aquaculture, coastal and offshore fisheries. These management plans provided the basis for the formulation of the legislation for Conservation and Management of the fisheries resources. The following tasks are included in drafting Fisheries Management Plans:

- Looking at the status of the stock
- Establishing Fisheries Management Measures
- Establishing recommendations for the management of the fisheries
- Establishing limitations
- Establishing management committees

Staff

The Fisheries and Management Development section consist of two staff listed in Table 15.

Table 15: Fisheries Management and Development Plan staff for FY 2016/17

Name	Post
Mrs. Mele 'Atuekaho	Deputy Chief Executive Officer
Ms. Sisimata'itohi Mafile'o	Fisheries Officer

During the 2016/17 Financial Year, the Fisheries Management and Planning Section continued to implement projects and activities under the Tuna Management and Development Plan (TMDP) 2015 – 2017 and the newly approved Deep-water Management Plan 2017 – 2019. A new Sport Fishing Management Plan 2018 – 2022 has been drafted during this reporting period and four Fisheries Management Plan (FMP) been reviewed which includes the Marine Aquarium Management Plan, Aquaculture Management and Development Plan, and National Plan of Actions for sharks. FMDS also commenced the review of the TMDP 2015 – 2017.

Achievements

Listed below are achievements assembled for the reporting period:

6.1.1 TONGA TUNA MANAGEMENT AND DEVELOPMENT PLAN (TMDP) 2015-2017

The TMDP is the umbrella policy that manages the sustainable use and conservation of the Kingdom's tuna fisheries. It reflects the government priority areas in this sector and serves to ensure sustainable growth in the fishery consistent with domestic laws. The Fisheries Management Act 2002 stipulates that the Secretary establishes and keeps under review plans for the conservation, management and sustainable utilization and development of fisheries in fisheries waters of the Kingdom.

The Ministry of Fisheries implemented projects and activities under the Tuna Management and Development Plan (TMDP) 2015-2017. The current TMDP contains 37-projects implemented over the course of 3-years 2015-2017. The expected timeline for completion differs between the projects recognising several activities such as training, data collection, and reporting which are ongoing each year. The projects on updating and revising policies and legislations and the data management and MCS activities are key achievements while there remains delay in several fisheries development related projects.

New policies drafted and approved in this FY 2016/17 are shown below. The statuses of implementing of other projects in the TMDP are reported by other responsible divisions; the Fisheries Compliance Division and Fisheries Science Division.

- (i) Bareboat Charter Policy approved to provide clear directions with respect to charter fishing in the Kingdom's fisheries waters. The policy also informs legal drafting of relevant amendments to the Fisheries Management Act and regulations that cater for fishing vessels that are chartered for fishing purposes.
- (ii) Review of current effort limitation and number of fishing vessels authorized to fish in Tonga waters. To date a total of six (6) FFV have been licensed to fish in Tonga's EEZ. The government of Tonga sees Non-Communicable Disease (NCD) as one of the major causes of

the increasing rate of mortality among the people of Tonga. The Ministry of Fisheries wished to collaborate with other government ministries in addressing this issue by changing the current policy of limiting the number of FFV to six (6) vessels and issue a fishing license for a 7th foreign fishing vessel to fish in Tongan waters, to increase the supply of fresh fish available to the community.

The purpose of this change to FFV policy is to provide an increase in the supply of fresh fish at local markets to cater for the needs of the people and encourage a healthier diet amongst the people of Tonga. A Memorandum of Understanding was signed by the vessel operator of this foreign fishing vessel and the Ministry of Fisheries on the prices of by-catch offload by this vessel and sold into the domestic market and distributed to villages.

The Ministry of Fisheries commenced the implementing of this policy in this financial year. A total of 16 metric tonnes which is valued at \$133,976.08 of by-catch offloaded from Foreign Fishing vessels and sold by the ministry to the public under this project.

6.1.2 TONGA DEEP-WATER FISHERIES MANAGEMENT AND DEVELOPMENT PLAN (DWFMP) 2017 – 2019

The Deep-water Fisheries Management and Development Plan 2017 – 2019 review was completed in this financial year after a series of meetings were conducted to discuss the management measures to be incorporated into the new plan. The stakeholders have agreed on the measures and the final draft was approved by the Minister for implementation.

The Tonga Deep-water Fishery Management Plan 2017 - 2019 will guide the management and development of the deep slope resources of snapper, grouper and emperors in Tonga fisheries waters in the three year period of the plan. The Tonga Deep-water Fishery Management Plan 2017-2019 is the third plan for this fishery and builds on the Tonga Deep-water Fisheries Management Plan 2014 -2016; and the Snapper Fisheries Management Plan (SFMP) 2007. This management plan has been established through consultations and cooperation with stakeholders.

6.1.3 TONGA SPORT FISHING MANAGEMENT AND DEVELOPMENT PLAN 2018 – 2022

The Sport Fishing fishery is an important industry for the tourism sector in Tonga. The Government through the Ministry of Fisheries (MOF) whose mandate is to conserve, manage, ensure sustainable utilization and development of fisheries in the Kingdom plays a key role in ensuring the sustainability of the industry.

Since the sport fishing sub-sector appears to lack a coordinated and directed management approach, the Ministry of Fisheries initiative is to formulate a management plan for this sub-sector to provide a framework to guide MOF and its stakeholders in the industry and ensure sustainability while at the same time maximising the social and economic benefits to Tonga and its people from the Sport Fishing or Game Fishing Industry.

The first draft of the Tonga Sport Fishing Management and Development Plan 2018 – 2022 was completed and the first stakeholder consultation was held in Vava'u in April 2017.

6.1.4 MARINE AQUARIUM MANAGEMENT PLAN 2017 – 2021

The Marine Aquarium Fishery in Tonga has been developed over the last 25 years, providing both economic and social benefits in terms of trade and jobs for the country. Marine aquarium fish include small ornamental (inedible) fish, corals, invertebrates and live rocks, occurring almost exclusively inshore and on surrounding reefs.

The review of the 2008 plan was completed in this financial year with the assistance of the Pacific Community (SPC) and Ministry of Primary Industries (MPI) New Zealand and was approved by the Minister in March 2017. The Marine Aquarium Fishery Management and Development Plan 2017 – 2021 (the Plan) is the second management plan for this fishery, and is based on the Marine Aquarium Fishery Management and Development Plan 2008. The Plan has been established through consultation and cooperation with stakeholders, including other government departments, as stipulated under section 7 of the Fisheries Management Act 2002.

The Marine Aquarium Management Plan, 2017 – 2021 will guide the management of Tonga's Marine Aquarium fish for a period of five years.

6.1.5 NATIONAL PLAN OF ACTION (NPOA) FOR SHARK 2018 – 2022

The Tonga revised National Plan of Action for Sharks (Shark Plan), 2018 - 2022 is the second plan formulated and reviewed by the Ministry of Fisheries with the assistance of the Pacific Islands Forum Fisheries Agencies (FFA) which provides a comprehensive set of policies aimed at guiding the efforts of the Ministry of Fisheries in the conservation and management of oceanic sharks in Tonga's fisheries waters. These efforts are consistent with the directions of Forum Leaders to promote stock sustainability and ensure maximum economic benefit from marine resources.

There is a need for Tonga to have a National Plan of Action (NPOA) for shark to guide and manage the activities of those engaged in the tuna long-line fishery in which shark is a by-catch. The catch of relevant oceanic shark species is, at current (accidental) catch levels and it will continue to increase which may be detrimental to the future development of Tonga's domestic tuna fishery.

In the 2016/17 financial year, the NPOA for shark was also reviewed and the final draft of the plan is completed and currently in the process of final approval before implementation.

6.2 FISHERIES POLICY SECTION

Background

The Fisheries Management and Development Division mandate also includes the formulation, review and implementation of fisheries policies to ensure sustainable management and development of marine resources.

Staff

The policy section consists of two staff listed in Table 16. Both staff also covers activities within the Management and Development Plan section.

Table 16: Policy staff for FY 2016/17

Name	Post
Mrs. Mele 'Atuekaho	Deputy, Chief Executive Officer
Ms. Sisimata'itohi Mafile'o	Fisheries Officer

Achievements

Listed below are achievements assembled for the reporting period. Note: this policy is to ensure management and development of the fisheries resources:

6.2.1 BAREBOAT CHARTER POLICY

Bareboat charter arrangements are an initiative to promote domestic tuna fisheries development. This was a priority area of work in the Tuna Management and Development Plan 2012 – 2015. Tonga sought assistance from FFA to prepare policy and legislative frameworks in support of implementing a bareboat charter arrangement to promote the domestication of the tuna fishery. Bareboat Charter policy was approved in October 2016.

The purpose of the policy is to guide the operators and provide clear directions with respect to charter fishing in Tonga's fisheries waters. The policy will inform legal drafting of relevant amendments to the Fisheries Management Act and regulations that cater for fishing vessels that are chartered for fishing purposes.

The policy also provides additional information to raise awareness relative to innovative approaches, developing and managing partnership arrangements such as charters, lease or joint ventures in the Kingdom. The policy intends to promote best practices and in consideration of binding measures and decisions set out under regional and international fisheries instruments, however supporting national development priorities and aspirations.

6.3 FISHERIES ECONOMICS AND STATISTICS SECTION**Background**

Providing a sound economic analysis to monitor growth and development of the fishing industry, and to determine its annual contribution to the overall economy is also a mandate of the Fisheries Management and Development Division. The section was incorporated within the Statistics Section due staff constraints. The Economics Section also includes marketing activities.

Staff

The Fisheries Economics and Statistics section consists of two staff listed below in Table 17.

Table 17: Fisheries Economic and Statistics staff for FY 2016/17

Name	Post
Mr. Samuela Pohiva	Fisheries Officer (Statistician)
Mr. Fotuika Vailea	Fisheries Officer (Marketing)

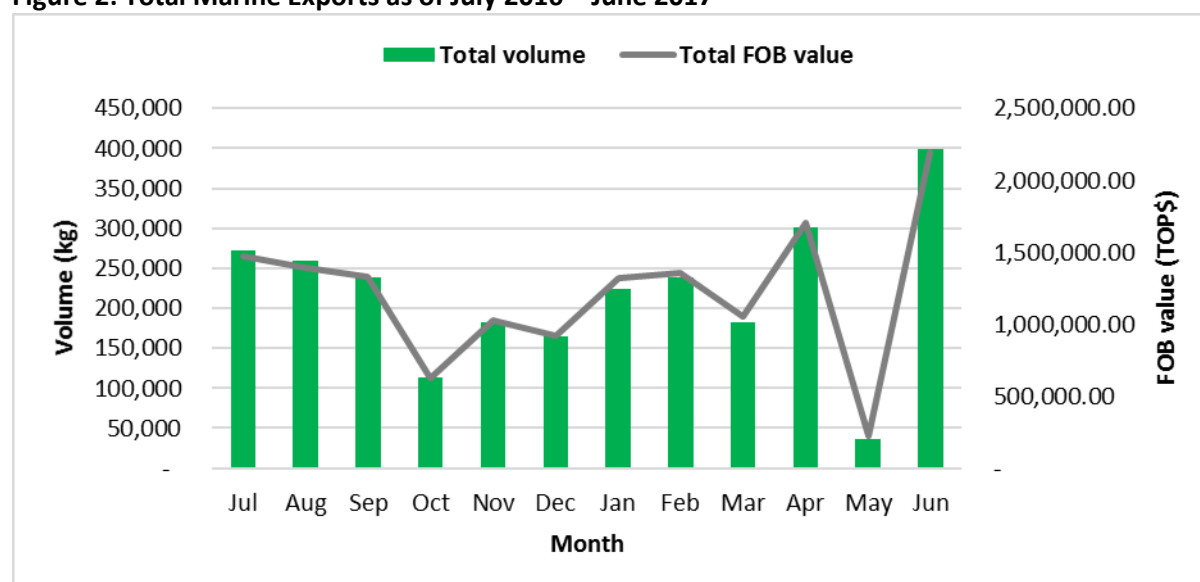
Achievements

Listed below are achievements assembled for the reporting period:

6.3.1 EXPORT PERFORMANCE

The total marine product exported (not including aquarium products), during this period was 2,611 metric tons. This is a 50% increase from the total marine products exported in the last financial year which was predominantly due to substantial increase in tuna exports. All fish exports in this financial year were valued at TOP\$15 million which is a 46% increase from the value of fish exported in the last financial year.

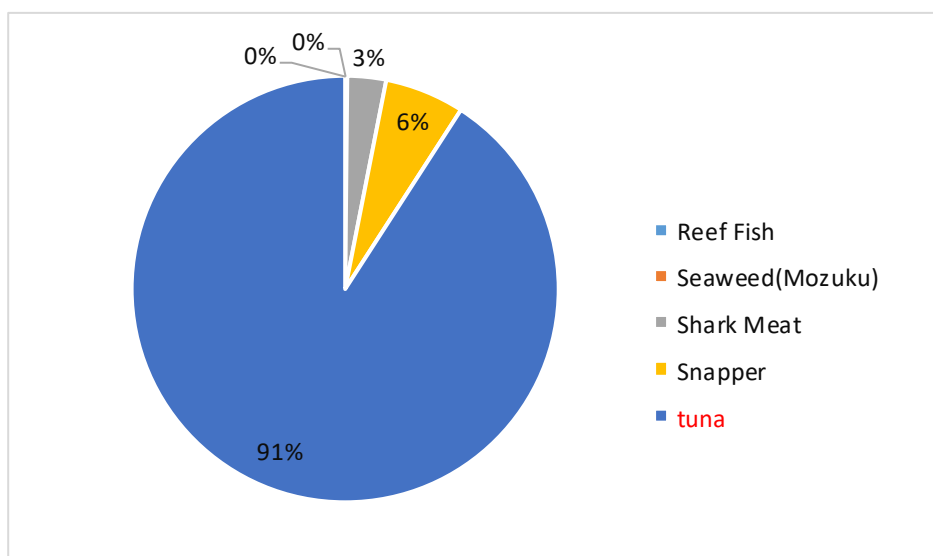
Figure 2: Total Marine Exports as of July 2016 – June 2017



6.3.2 TUNA FISHERY

A total of 2,372 metric tons of tuna was exported in this financial year which is a 55% increase from the last financial year. Tuna was the main contributor to the total amounts of marine products exported, making up 91% of the total marine export for this financial year. The total tuna exported within this period was valued at approximately TOP\$13.2 million, which is a 35% increase from the previous period.

Figure 3: Total Tuna Exported by weight (kg), July 2016 – June 2017



6.3.3 DEEPWATER LINE FISHERY (DWLF)

A total of 157 metric tons of snapper was exported in this financial year, which is an increase of 65% from the last financial year and contributing 6% to the total quantities of marine products exported. It was valued at approximately TOP\$1.02 million which is an increase of 59% from the last financial year. The export of snapper was dominated by flame snapper (P. Tavake).

Figure 4: Total Snapper Exported by weights (kg), July 2016 – June 2017



6.3.4 SEA CUCUMBER FISHERY

The annual closure season for harvest and export of Sea cucumber is the 1st of October to the 31 of March every year. The Ministry of Fisheries submitted to Cabinet an application for a five-year moratorium on the harvest and export of bech-de-mer based on analysis of the status of the stock.

Cabinet ministers approved a 5 year moratorium for the fishery commencing in October 2015. Currently, the sea cucumber fishery is remained closed.

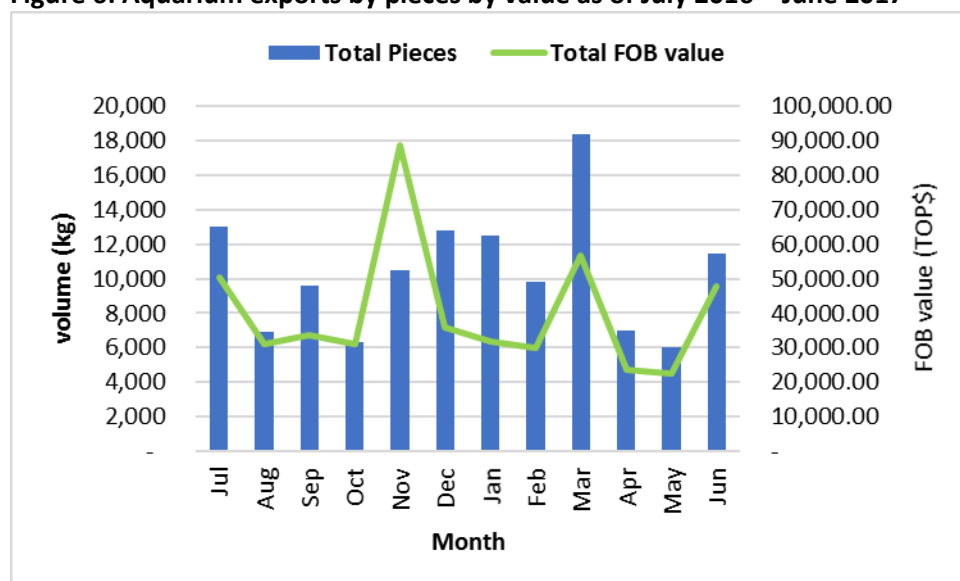
6.3.5 AQUARIUM FISHERY

The total aquarium product exported in this period was 124,383 pieces, was valued at approximately TOP\$0.48 million. This was a 14% decrease in quantities and associated with 8% decrease in value from aquarium exports in the same period last year. The aquarium export was dominated by low value invertebrates in terms of quantity as can be seen in the table below. The main market for exported aquarium products is the United States.

Figure 5: Aquarium exports as of July 2016 – June 2017

Species Group	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
INVERTEBRATE	6,308	2,812	5,051	3,092	5,005	8,247	8,163	5,890	11,004	4,014	3,087	5,120	67,793
LIVE HARD CORAL	2,808	1,769	1,788	1,558	2,949	2,123	1,666	1,839	3,254	1,728	1,375	2,914	25,771
LIVEFISH	1,166	731	1,366	449	619	749	890	428	2,001	134	419	1,045	9,997
SHELLFISH	466	40	40	160	431	111	245	280				200	1,973
SOFT CORAL	2,283	1,541	1,369	1,091	1,476	1,559	1,564	1,358	2,124	1,124	1,168	2,192	18,849
Total Pieces	13,031	6,893	9,614	6,350	10,480	12,789	12,528	9,795	18,383	7,000	6,049	11,471	124,383

Figure 6: Aquarium exports by pieces by value as of July 2016 – June 2017



6.3.6 DOMESTIC MARKET SURVEY

A market survey is conducted once every week in certain local fish markets with the aim of gathering information based on marine resources market price and estimated volume sold in local markets. This survey includes Vava'u, Ha'apai and four main fish markets in Tongatapu.

A total of 109 metric tons of marine resources was recorded in this financial year which is approximately valued at \$TOP 886,309.70. This is a 42% increase from the quantity of marine products recorded in the last financial year.

The average market price of fin fish was at range of \$3 to \$4 per kilogram and sold at price of \$20,

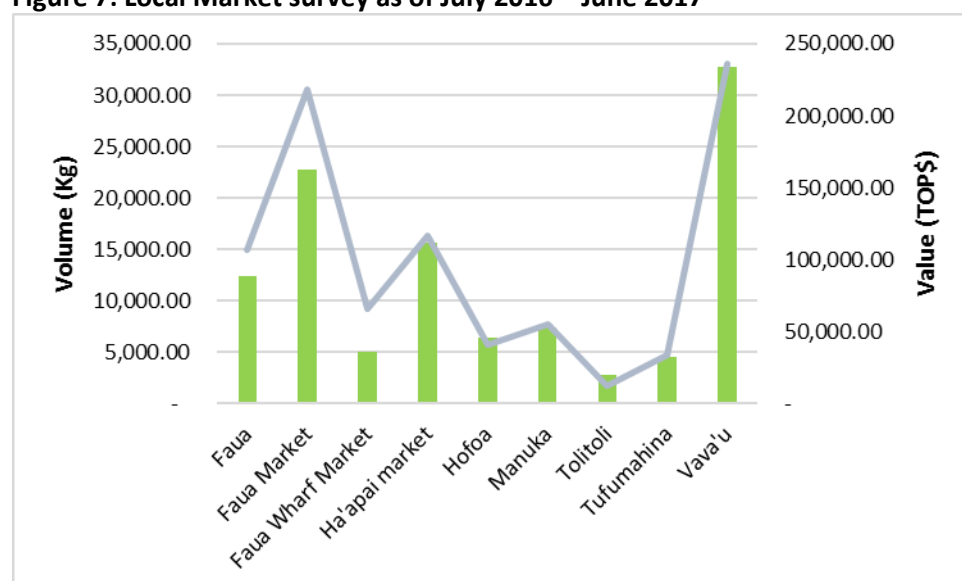
\$30, \$50 and up to \$60 and \$70 per bag. The market price of other species varied according to production cost and a change in fish market price were determined by the quantity of marine products available in the market in a certain time. However, middle men also influence the price of marine products depending on the quantity available in the market especially the main fish market at Fuaa.

The quantity of fish sold at the local market is usually dominated by Fuaa market followed by Vava'u market. Last financial year was exceptional since Vava'u domestic market dominated the highest volume of fish sold in the market. The data collected are from inshore fishing only.

Table 18: Market survey as of July 2016 – June 2017

Market	Volume (kg)	Value (TOP\$)
Fuaa	12,396.00	107,253.00
Fuaa Market	22,766.10	218,548.00
Fuaa Wharf Market	5,098.54	65,595.00
Ha'apai market	15,712.60	116,848.60
Hofoa	6,408.80	40,870.00
Manuka	7,435.60	55,255.00
Tolitoli	2,838.80	12,105.00
Tufumahina	4,583.70	33,710.00
Vava'u	32,753.00	236,125.10
Total	109,993.14	886,309.70

Figure 7: Local Market survey as of July 2016 – June 2017



6.3.7 DUTY FREE AND CONSUMPTION TAX (CT) EXEMPTION SCHEME

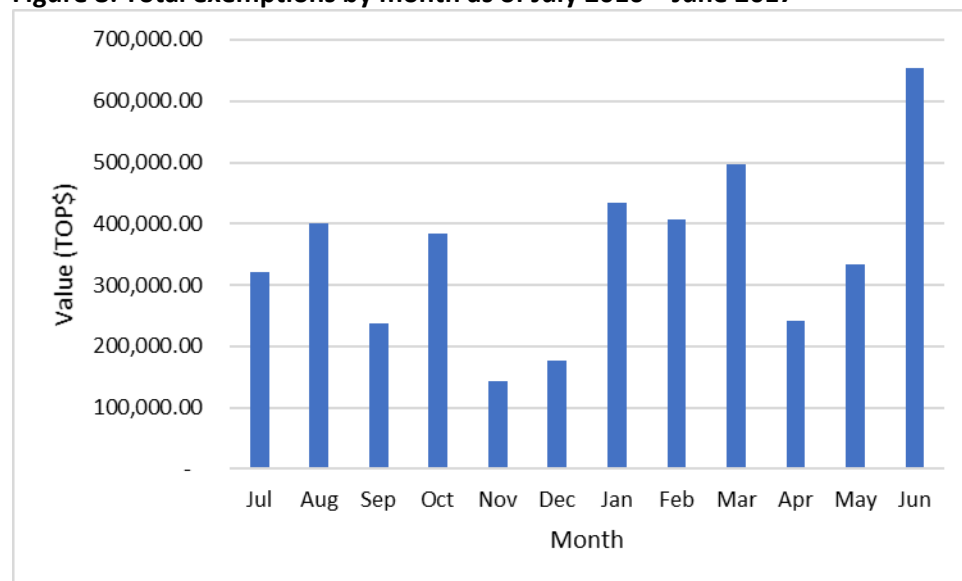
This scheme was established with the aim to assist fishermen in the development of the fishing sector. Under this scheme, duty and CT on fuel, fishing gears and bait and other fishing inputs were exempted in accordance with Cabinet approval.

An estimated total of TOP\$4.2 million of government revenue was forgone under this Scheme for this financial year of which 95% was from CT and 5% from duty free. Fuel accounted for 86% of the total exemption with the remaining 14% accounted for by fishing gear and bait.

A total of 43 fishing vessels were eligible under this scheme and they were predominantly tuna and snapper boats. The total value of exemption was increased by 40% from the last financial year and was due to increase in the number of fishing vessels from 39 to 43 in this financial year.

The graph below shows the total exemptions by month in this financial year.

Figure 8: Total exemptions by month as of July 2016 – June 2017



6.3.8 MARKET UNIT

The Ministry of Fisheries has recruited a new marketing officer to facilitate market research and provide marketing information for fishermen. A market research plan for deep-water snapper has been formulated by the marketing officer. The final draft plan is currently in the process of approval before it can be implemented.

7 FISHERIES SCIENCE DIVISION

Background

The Fisheries Science Division (FSD) is headed by Deputy CEO, Dr Siola'a Malimali. The FSD is made up of five sections: Offshore Fisheries, Aquaculture, Coastal Community Development and Advisory, Inshore Resources and Extension/Outer Islands (Niuas, Vavau, Ha'apai and Eua).

7.1 OFFSHORE FISHERIES SECTION

Background

The Offshore Fisheries Section aims to assess Tonga's utilized and unutilized offshore fisheries resources (mainly tuna and deep-water snapper species) and to provide advice to executive management on the status of stocks, and the conservation of these resources with relation to fisheries management and development. The two-major offshore commercial fisheries for Tonga are Tuna and Deep-water Snapper fisheries.

Staff

The Offshore section consists of four staff listed below in Table 19.

Table 19: Offshore staff for FY 2016/17

Name	Post
Mr Martin Finau	Fisheries Officer
Mr Sione Uasike	Fisheries Assistant
Mr Mafi Havea	Fisheries Assistant
Mr Peni Faleako	Fisheries Trainee

Achievements

Listed below are achievements assembled for the reporting period:

7.1.1 TUNA FISHERY

Tonga has a small commercial Tuna fishery. The fleets use long-line fishing gear and consist of national and foreign fleets. In 2016-2017, there were five Tongan flagged long-line vessels and eight foreign flagged long-line vessels, operated entirely within Tonga EEZ.

7.1.1.1 NATIONAL FLEET

7.1.1.1.1 Total catch by primary species

In 2016-17, the total catch and effort estimated, by primary species for the national longline fleet fishing throughout the Tonga fisheries water (EEZ) is summarized in Table 20 below. Primary species refers to the main tuna species which are albacore (ALB), bigeye (BET), yellowfin (YFT) and skipjack (SKP), and four main marlin species including blue marlin (BUM), black marlin (BLM), striped marlin (MLS) and broadbill swordfish (SWO). The total estimated catches of primary species was 556 mt (Table 20).

Table 20: The total catch (mt) and effort (hooks, no. of vessels and no. of trips) estimates for the National Fleets (Tonga flagged longline vessels), by primary species, July 2016 to June 2017.

Year	Month	Vessels	Sea days	Trips	100s of Hooks	Catch in Metric Tons								TOTAL
						ALB	BET	YFT	SKJ	BLM	BUM	MLS	SWO	
2016	Jul	4	78	16	1021	6	3	14	0	2	2	1	1	30
	Aug	4	89	18	1142	5	1	21	2	1	2	1	2	36
	Sep	4	71	14	853	2	1	10	0	0	4	1	1	19

	Oct	4	90	18	1254	2	2	13	0	2	5	5	10	40
	Nov	4	88	18	1319	4	2	23	1	2	8	2	6	48
	Dec	4	66	14	1030	5	2	22	1	0	5	0	7	42
2017	Jan	5	89	22	1273	2	2	116	0		8	0	3	132
	Feb	5	83	26	1250	3	2	60	0	1	5	0	2	72
	Mar	5	116	22	1743	3	7	24	0	2	6	0	4	46
	Apr	5	79	17	1231	2	2	21	0	1	5	0	1	32
	May	4	62	15	1018	1	1	17	1	0	1	0	1	23
	Jun	5	77	15	1292	2	1	28	2	1	2		1	37
TOTAL			988	215	14426	36	26	369	7	12	54	11	39	556

Tuna catches were dominated by yellowfin 66 %, albacore was 7%, bigeye 5% and skipjack 1%. For the other key species; Swordfish was 7%, blue marlin was 10%, black marlin was 2 %, and striped marlin was 2 % (Table 20).

7.1.1.1.2 *Annual catch estimates of non-target, by-catch associated and dependent species*

The provisional estimated total catches of non-target, associated and dependent species for the national longline fleets are provided in Table 21. The species composition of the catch by weight was dominated by dolphin fish (*Mahimahi*) totalling 125 mt followed by mako sharks with 19 mt and wahoo with 14 mt, *sailfish* (7 mt) and *short bill spearfish* (4mt).

By-catches are obtained from logsheets and also from observer records as well as port sampling data. Observer records are important for estimating catches of the less valuable species that are less likely to be retained or recorded. Observers have reported high retention rates of target tunas, including those that are discarded due to shark damages. *Wahoo*, *mahimahi*, *moonfish* and billfishes also had high retention rates as these are valuable components of the fishery especially the local market.

Table 21: The estimated catches (mt) of non-target and by-catch species, including sharks, by the National longline Fleets, in the Tonga EEZ, for years 2016/17 FY (Source: Dorado reporting tool, report 12)

Non-Target Species	2016						2017						Total
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Barracuda	0	0	0	1	1	1	1	1	1	0	0	0	6
Mahimahi	19	21	10	13	16	6	8	7	10	5	3	8	125
Mako Sharks	3	4	2	3	1	1	0	0	1	1	1	2	19
Sailfish						0	1	1	1	0	0	1	4
Spearfish	2	2	1	1	1	0	0		0	0	0	0	7
Wahoo	1	1	1	1	2	2	3	1	1	1	0	1	14
Others	1	0	1	0	1	1	0	0	0	0	0	0	6
Total	26	28	14	19	22	11	13	10	14	8	5	11	181

7.1.1.2 FOREIGN FLEETS

7.1.1.2.1 Total Catch by Primary species

Tables 22 and 23 below provide catch and effort (hooks and vessels) by foreign-flagged vessels licensed to fish in Tongan water over the 2016/17 FY. The overall catch for the primary and non-target species were total up to 2,453 mt (Tables 22 and 23). All licensed foreign fishing vessels shall offload all catch in the authorized ports of Tonga.

Table 22: Catches (metric tonnes) and effort (hooks) of the primary species for Foreign Fishing Vessels during the period of July 2016 – June 2017.

Year	Month	Vessels	Trips	Fishing Days	100s of Hooks	Catch in Metric Tons								Total
						ALB	BET	YFT	SKJ	BLM	BUM	MLS	SWO	
2016	Jul	6	10	137	3743	178.2	16.7	50.0	4.7	0.1	5.1	1.4	0.7	257
	Aug	7	9	162	4397	172.9	11.0	137.1	2.4	0.4	5.3	1.1	2.2	332
	Sep	8	9	196	5099	100.5	12.2	37.5	1.4	2.4	4.5	1.2	1.5	161
	Oct	8	11	184	4909	76.5	11.6	38.5	2.7	0.9	5.5	1.2	2.3	139
	Nov	9	9	207	5722	102.3	14.7	42.7	1.7	0.1	6.1	4.1	1.7	174
	Dec	8	9	218	6220	190.1	15.0	51.2	4.1	0.2	9.4	4.0	5.8	280
2017	Jan	9	14	176	4812	88.8	10.5	60.0	1.0	0.6	10.0	0.4	2.8	174
	Feb	8	9	182	4635	74.2	10.5	48.3	1.3		8.7	0.1	1.8	145
	Mar	10	15	167	4179	51.1	11.0	39.9	1.2	0.2	6.4		1.2	111
	Apr	9	10	220	5900	85.3	14.9	52.4	1.6	0.3	5.9	0.4	1.8	163
	May	7	8	176	4793	132.9	14.7	62.2	1.1	0.1	7.6	0.1	0.4	219
	Jun	6	11	138	3654	176.3	9.2	100.6	8.0	0.1	3.0	0.4	1.0	298
Total			124	2163	58063	1429	152	720	31	5	78	14	23	2453

FFV's were using freezer holds to maintain the quality of fish and to allow longer trips. Albacore tuna was the highest caught species with 1429 mt (58% of primary species catch) followed by yellowfin 720mt and bigeye 152mt. For non-target species, catch was dominated by wahoo 74mt followed by blue sharks 361mt with lesser portion of other species described in Table 23.

Table 23: Catches (metric tonnes) for non-target species for the Foreign Fishing Vessels for the period of July 2016 – June 2017

Non-Target Species	2016						2017						Total
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Great Barracuda				0	1	0	1	1	1	0	1	1	6
Mahi-mahi	2	2	2	1	2	1	1	1	1	1	1	2	17
Mako Sharks	3	6	4	2	2	2	2	0	0	1	1	1	25
Blue Sharks	4	3	2	1	3	4	4	5	3	4	2	2	36
Moonfish	1	0		0		0	0		0	0	0	0	2
Sailfish	2	2	2	1	1	1	1	0	0	0	1	1	12
Spearfish	0	0	0	0	0	0	0	0	0	0	1	1	5
Wahoo	6	8	7	8	7	8	7	4	3	3	6	5	74
ESCOLAR					1	1	1	0	0	1	1	0	5
OILFISH	3	4	3	5	4	4	2	2	2	3	2	2	

Others		0		0	1	5	1	1	1	2	0	0	
Total	21	26	19	19	23	26	20	15	11	15	17	16	183

7.1.1.2.2 Overall catches for primary species

The total catch for the primary species obtained from tuna longline vessels operated entirely throughout Tonga EEZ for the period July 2016 – June 2017 was 3009 mt. There is an increase in catch of the primary species due to an increase in fishing effort in terms of the number of local fishing vessels and the number of hooks.

7.1.1.2.3 Overall catches for non-target species

Similarly, the total catch for the non-target species from all tuna longline vessels operated in the Tongan waters for the period of July 2016– June 2017 was 364 mt.

7.1.1.3 CATCH BY FLAGGED VESSELS

The catch by flagged vessels for the period of July 2016 to June 2017 was dominated by foreign flagged vessels with 78%, followed by Local vessels with 22%.

7.1.1.4 FISHING EFFORT – NUMBER OF HOOKS

The total number of hooks were set in Tongan waters for the period of July 2016 – June 2017 were 72,489, dominated by FFV with 80%; only 20% of total hooks were set by local vessels.

7.1.2 DEEP WATER SNAPPER FISHERY

The total catch by weight (mt) for all species of deep water snapper for the period of July 2016 – June 2017 were 278.2 mt (Table 24). The catches were dominated by Palu Tavake (*Etelis coruscans*) with 40% followed by Palu mutumutu (*Paracaesio kusakarii*) with 9% then Palu malau (*Pristipomoides filamentosus*) 8% and Palu Hina and Palu Sio'ata 7% and Palu Polosi (*Aphareus rutilans*) with 5%. Palu Tavake is still the main target species for commercial fisheries with lesser amounts of Palu Malau and Palu hina. There is potential for other species, including Palu Mutumutu, Palu Polosi and other species once markets for these species are identified.

7.1.2.1 BLUENOSE TRIAL

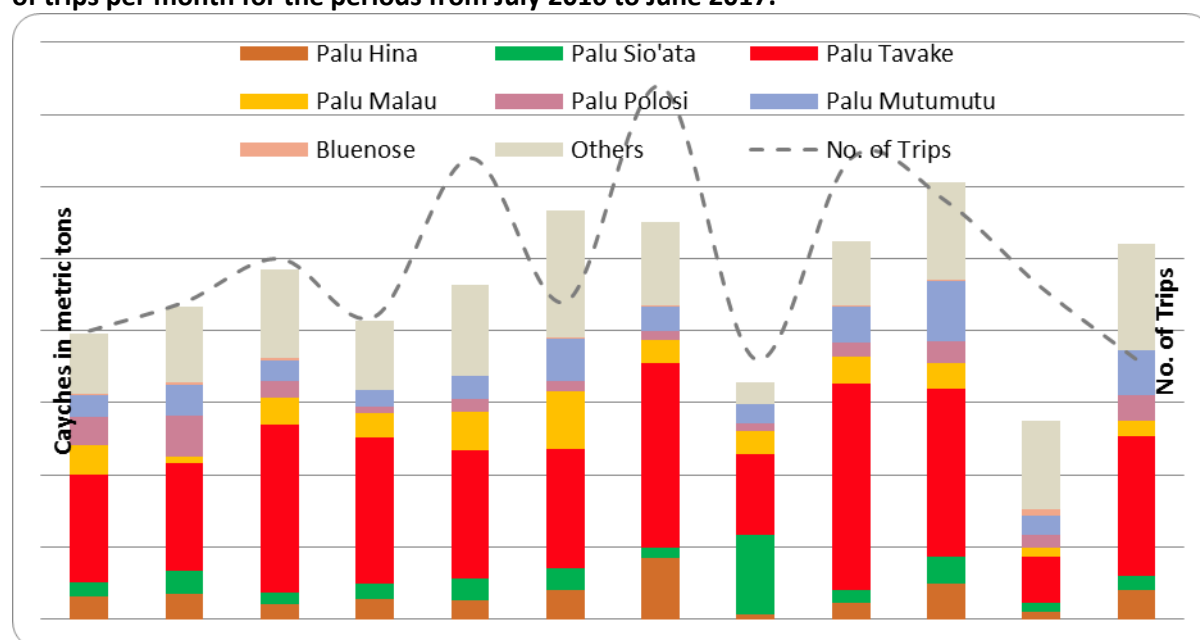
A fishing trial under NIWA project continues on bluenose species (*Hyperoglyphe antarctica*) to determine its abundance in southern area of Tonga's EEZ and also it's potential for commercial markets. A total of 0.4% of bluenose was unloaded in 2016-17.

Table 24: Monthly catches for Tonga deep water snapper fishery, for the main snapper species, for the period of July 2016 – June 2017. Other species were included in 'Others'

Year	Month	No. of Trips	Palu Hina	Palu Sio'ata	Palu Tavake	Palu Malau	Palu Polosi	Palu Mutumutu	Bluenose	Others	Total
2016	Jul	20	1.6	0.9	7.5	2.1	2.0	1.5	0.0	4.3	19.8
	Aug	22	1.8	1.6	7.4	0.4	2.9	2.2	0.1	5.3	21.7
	Sep	25	1.0	0.8	11.7	1.9	1.2	1.4	0.2	6.1	24.2
	Oct	21	1.4	1.1	10.1	1.7	0.4	1.2	0.0	4.8	20.7
	Nov	32	1.3	1.5	8.9	2.7	0.9	1.6	0.0	6.3	23.2

	Dec	22	2.0	1.5	8.3	4.0	0.7	3.0	0.1	8.8	28.3
2017	Jan	37	4.2	0.8	12.8	1.6	0.6	1.7	0.0	5.8	27.6
	Feb	18	0.4	5.5	5.6	1.6	0.5	1.3	0.0	1.5	16.4
	Mar	32	1.1	0.9	14.3	1.9	1.0	2.5	0.1	4.4	26.2
	Apr	29	2.5	1.9	11.7	1.8	1.5	4.2	0.0	6.8	30.3
	May	23	0.5	0.6	3.2	0.6	0.9	1.4	0.4	6.2	13.8
	Jun	18	2.0	1.0	9.7	1.0	1.8	3.2	0.0	7.4	26.1
Total species			19.7	18.1	111.1	21.3	14.2	25.1	1.1	67.6	278.2

Figure 9: Monthly total catches (in metric tons) for main deep-water snapper species and number of trips per month for the periods from July 2016 to June 2017.



7.2 AQUACULTURE SECTION

Background

The output for the aquaculture section is to increase relevant aquaculture research and development undertaken to underpin the development of the industries.

Staff

The aquaculture section consists of six staff listed below in Table 25.

Table 25: Aquaculture section staff for FY 2016/17

Name	Post
Mrs Tracy 'Aisea	Fisheries Officer
Mr Tonga Tuiano	Technical Officer Grade II
Mr Siaosi Vi	Senior Fisheries Assistant
Mr Siaosi Fonua	Fisheries Trainee
Mr Tevita Havea	Labour

Achievements

Following are the summary achievements under different aquaculture research and development activities on the selected aquaculture commodities including wing pearl oyster, giant clams, seaweed, micro algae, and sea urchin, sea cucumber, trochus and ark clams.

7.2.1 WINGED PEARL OYSTER

- Pearl oyster farmers expand from 8 to 11 in Vava'u, 2 to 3 in Ha'apai, and 3 in Tongatapu.
- Hatchery production managed to produce 200,000 spats which were transferred to the ocean nursery with the collectors.
- Oysters spats were distributed to farmers: In total 5,400 pcs (small size 1 – 3 months old) and 4,345 pcs (medium size 12 -16-year-old) as the result of hatchery production from 2015-16.
- More than 500 pearl oysters have been sold by farmers in local markets with average market value (local market) TOP\$150 – 800 (MABE carved necklace set).
- Completion of *pteria penguin* husbandry manual (English and Tongan version and field guides for farmers).



7.2.2 GIANT CLAMS

- Hatchery production managed to produce fertilized eggs, approximately 6 million with expectation of 10 – 30% survival, Only one species spawned, (*T.maxima*)
- There are 130 pcs of *T.maxima*, 609 pcs of *T.dersa* and 53 pcs of *T.squamosa* broodstock were transferred to the ocean nursery at Fafa Island.
- There were 544 pcs of *T.dersa*, 69 pcs *T.squamosa* and 2560 pcs of *T.maxima* sold to Aquarium trades with total of TOP \$ 11,749
- Supplied 100 pcs of *T.dersa* juvenile clams to Fafa, Taunga and Ovaka Special Management Areas (SMAs).



7.2.3 SEAWEED

Majority of seeds (*kappaphycus* spp) were destroyed by cyclone Winston and consumed by rabbit fish. SPC has offered technical assistance in developing the seaweed culture activities in Tonga. This activity is focused in Vava'u.



7.2.4 MICRO-ALGAE – LIVE FEED

- Mass culture succeeds starting from 250ml flask to 5,000 L outdoor culture system
- Cultured techniques established with also supporting staff was trained by the JICA Senior volunteer as an advantage
- Increased strains from one (*T. Iso*) into three (*Tetraselmus* and *Chetocherus* spp).



7.2.5 SEA URCHIN

- Manage to spawn local species (*pneustes gratila*) with 500,000 larvae and 25% survival with body length of 10 mm reared at the outdoor tanks in the aquaculture center.



7.2.6 SEA CUCUMBER

- Successful spawning of sandfish (*Holothuria lesson*) which produced approximately 500,000 larvae. Eight-month-old juveniles were released in to the wild.



7.2.7 TROCHUS

- A 5mm body length of juvenile trochus (*Trochus niloticus*) approximately 1,000 in total were survived from a successful spawning in Feb 2017 and reared at aquaculture center outdoor rearing tanks before release to the sea.



7.2.8 ARK SHELL AND VENUS CLAM

- These two species (*anadara antiquate* and *gafrarium pectinatum*) manage to produce 500,000 spawning larvae with 10-25% survive of juveniles. Juveniles are stocked into the fisheries facility outdoor tank.



7.3 COASTAL COMMUNITY DEVELOPMENT AND ADVISORY SECTION

Background

The Coastal Community Development and Advisory Section (CCDA) Section aims to increase the pace and roll out of the Special Management Area (SMA) program in Tonga. In July 2016 to June 2017, seventeen (17) new SMAs established with the assistance from various partners as summarise in Table 27.

Staff

The Coastal section consists of two staff listed below in Table 26.

Table 26: CCDA staff for FY 2016/17

Name	Post
Mr Latu 'Aisea	Fisheries Officer
Mr Sione Mailau	Assistant Research Officer

Achievements

Listed below are achievements assembled for the reporting period:

7.3.1 EXTENSION SERVICES AND OUTER-ISLANDS

There have been many coastal communities and farmers supported as listed below. These support activities were delivered to many communities and farmers through the Special Management Areas program, aquaculture activities, Royal Agriculture and Fisheries Show as listed below.

- ❖ 28 new and existing SMAs (see Table 27 and 28). These activities included community meeting and training workshops in various fisheries related activities.
- ❖ 17 pearl farmers were supported on different areas including training courses, technical assistance on farm management and maintenance activities as well as capacity building and marketing.
- ❖ Communities and farmers were also supported through the Royal agricultural and Fisheries Show through engaging in various competition events.

Table 27: New Special Management Areas (SMAs) established

Island Groups	Proposed SMA communities funded by Projects	Donors	Status
Vava'u	Hunga	ADB Project	Established
	'Utungake		
	Falevai		
	Talihau		
	Lape		
	Útulei		
	Ofu		
	Koloa	Tonga Health Project	Established
	Eueiki Is. Resort		Established
Tongatapu	Holonga	R2R Project	Established
	Lapaha		
	Nukuleka		
	Ha'atafu	Tonga Health Project	Established
	Pangaimotu Is. Resort		Established
Ha'apai	Matuku	Tonga Health Project	Established
	Fonoi		
	Mango		

Table 28: Number of Existing Special Management Areas (SMAs)

Island Groups	Existing SMAs	Status
Vava'u	Ovaka (2008)	Regulated and Monitoring
	Taunga (2013)	Monitoring
Ha'apai	'O'ua (2006)	Regulated
	Felemea (2008)	Regulated
	Ha'afeva (2007)	Regulated
	Nomuka (Kelelesia and Tonumea) (2011)	Monitoring
	Kotu (2015)	Monitoring
Tongatapu	'Atata (2008)	Regulated
	'Eueiki (2008)	Regulated
	Fafa Island (2014)	Regulated
	Kolonga (2015)	Monitoring

**Note: while continuing to monitor the existing SMAs and establish new SMA, there are more communities interested in joining the program, and the list is increasing. Photos below were taken from community consultations on the SMA program.*

**Table 29: Number of communities interested in the Special Management Area (SMA) Program**

Island Groups	Interested SMAs	Year of application
Vava'u	'Eueiki	2015
	Kapa	2016
	Vaipua	2016
	Makave	2016
	Koloa	2016
Ha'apai	Mo'unga'one	2009
	'Uiha	2011
	Ha'ano	2011
	Fakakai	2011
	Pukotala	2012
	Muitoa	2012
	Faleloa	2012
	Tungua	2012
	Lofanga	2013
	'Eua	2014
Tongatapu		

7.3.2 FISH AGGREGATE DEVICE (FAD) FISHERIES PROGRAM IN TONGA

The use of Fish Aggregate Device (FADs) is an initiative to help reduce fishing pressure on the coral reefs and coastal areas, and enhance livelihoods. There were FAD activities planned including deploying more FADs, and training fishermen on FAD fishing, however, there were only 2 FADs deployed in 2016-17 financial year due to some difficulties, including the impact of cyclones. Table 30 below summarised the current status of the FAD deployed in Tongan waters.

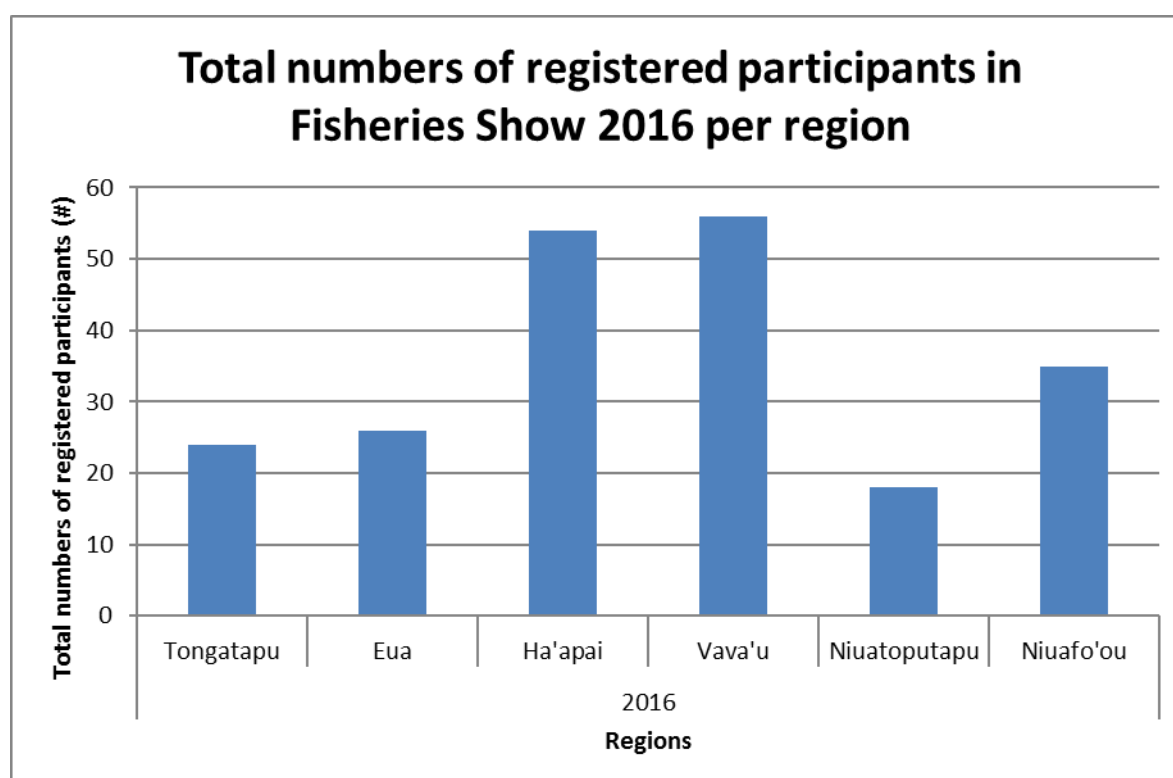
Table 30: Fish Aggregate Devices (FADs) deployed, location, and status

'Aho na'e fokotu'u ai 'i tahi	Latitude	Longitude	Tukunga
20/09/2016 Atata	21 02 34.8'S	175 18 34.3'W	Maumau'i 'e he tofua'a
20/09/2016 Atata	21 02 03.9'S	175 17 31.6'W	Kei ngaue'aki

7.3.3 ROYAL AGRICULTURAL, FISHERIES AND INDUSTRIAL SHOW 2016

In 2016, the Royal Show was started in July from the Niuatoputapu on 26 July, Niuafu'ou on 27 July followed by Vava'u on 29 July, Ha'apai on 3 August, 'Eua on 8 August and Tongatapu on the 12 and 13 of August 2016. The theme for the Royal Show is "Tonga Mo'ui lelei mo Fiefia". Figure 10 below showed the number of registered participants for the fisheries sector in the Royal Agriculture and Fisheries show for the year 2016.

Figure 10: Total Number of Registered participants in Fisheries Show for 2016 in Tonga.



7.4 INSHORE RESOURCES SECTION

Background

The Inshore and Resource Section (IR) mainly focuses on SMA baseline and sea cucumber survey.

Staff

The inshore resources assessment section consists of two staff listed below in Table 31.

Table 31: Inshore staff for FY 2016/17

Name	Post
Miss Hulita Fa'anunu	Fisheries Officer
Mr Viliami Fatongiatau	Senior Fisheries Assistant

Achievements

Listed below are achievements assembled for the reporting period:

7.4.1 SMA BASELINE SURVEY INSHORE RESOURCES

Biological baseline survey is desirable because it provides the data needed for management of the fisheries resources. It is an important part of resource assessment work that needs to be done by the Ministry for estimating stock sizes (how many fishes and invertebrates are available on the reefs). SMA baseline surveys for SMAs communities were undertaken in 7 communities under the ADB project on Climate Resilience Sector Project. The data were collected to provide a clear picture on the status of the resources for each of the SMA communities, to assist with their fisheries management.

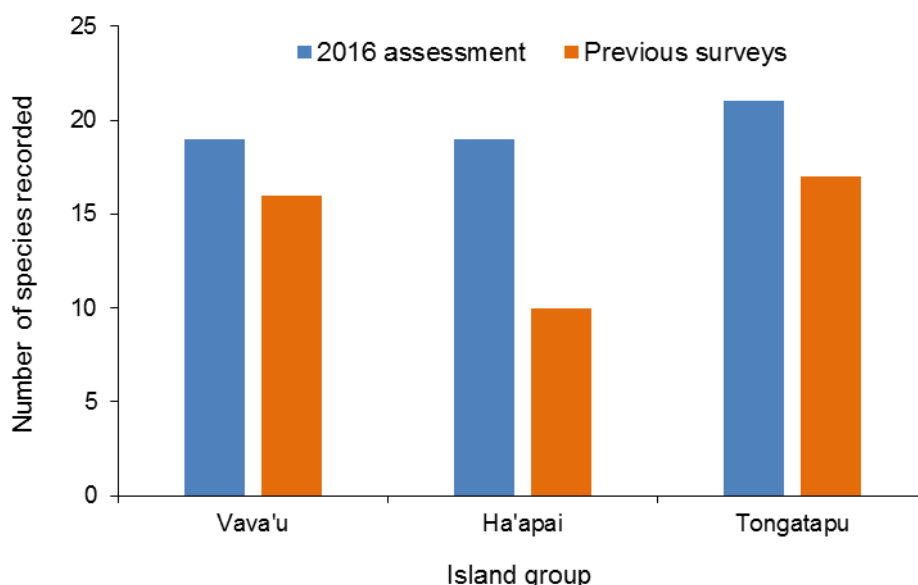
7.4.2 SEA CUCUMBER SURVEY

In-water resources assessment were conducted at Vava'u, Ha'apai and Tongatapu in October to November 2016 to assess the status of seacucumber stocks. The assessment revealed sea cucumber population at each of the three island groups to be in a poor state. At each island group, sea cucumber assemblages were dominated by low-value lollyfish and to a lesser extent, greenfish, pinkfish, snakefish, curryfish and brown sandfish. High value species were rarely encountered. Densities of individual species were generally well below regional reference density for healthy stocks. The Figure 11 below illustrates the result of the 2016 survey in comparison to the previous surveys.

Table 32: Total count of seacucumber, by species from each island group and site during the 2016 assessment. Total count and the relative composition of each species to the total number of individuals observed are provided in the right-hand column.

Common name	Vava'u		Ha'apai		Tongatapu		Total	
	Open	SMA	Open	SMA	Open	SMA	n	%
Lollyfish	7,399	2,890	1,105	5,473	6,336	234	23,437	77.48
Pinkfish	1,440	98	7	74	897	136	2,652	8.77
Greenfish	616	345	471	268	246	292	2,238	7.40
Brown sandfish	223	257	6	52	85	3	626	2.07
Snakefish	304	13	4	36	71	19	447	1.48
Tigerfish	90	26	31	21	43	8	219	0.72
Curryfish	64	7	0	3	59	40	173	0.57
Amberfish	49	15	42	3	21	11	141	0.47
Elephant trunkfish	29	6	14	9	32	12	102	0.34
Tiger-tail sea cucumber	21	0	0	0	12	14	47	0.16
Golden sandfish	9	0	0	4	30	1	44	0.15
Dragonfish	25	0	1	2	4	0	32	0.11
Surf redfish	14	0	0	1	0	5	20	0.07
Prickly redfish	3	2	6	2	2	2	17	0.06
White teatfish	1	1	3	3	4	4	16	0.05
Black teatfish	7	0	1	4	3	1	16	0.05
Deepwater redfish	0	3	0	0	2	0	5	0.02
Deepwater blackfish	0	0	0	1	0	4	5	0.02
Spotted-worm sea cucumber	2	0	0	0	2	1	5	0.02
Stonefish	0	0	0	1	2	0	3	0.01
Hairy blackfish	2	0	0	1	0	0	3	0.01
Chalkfish	0	0	0	0	1	0	1	<0.01
Flowerfish	0	0	1	0	0	0	1	<0.01
Totals	10298	3663	1692	5958	7852	787	30,250	100

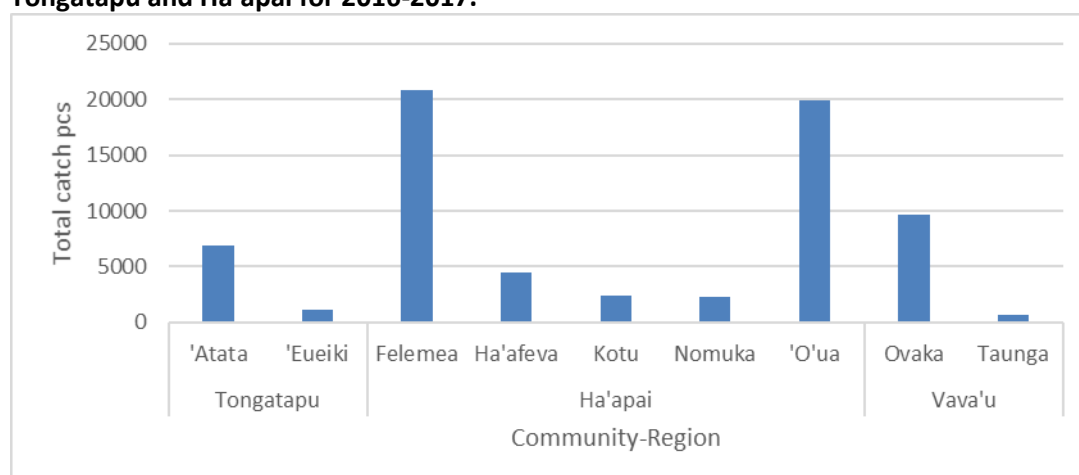
Figure 11: Comparison of the numbers of sea cucumber species recorded during the 2016 assessment and previous surveys of Pakoa et al. (2013a, for Vava'u and Tongatapu) and Pakoa et al. (unpublished, for Ha'apai).



7.4.3 MONITORING OF THE SMA CATCH DATA

SMA program activities are progressing well and one of the activities is collecting fish catch data from the SMA communities. This is a very important activity in monitoring the impact of the SMA program as well as the management capacity of the community.

Figure 12: The total estimated fish catch by pieces at some SMA communities in Vava'u, Tongatapu and Ha'apai for 2016-2017.



7.4.4 FISHERIES MONITORING SURVEY OF FANGA'UTA LAGOON

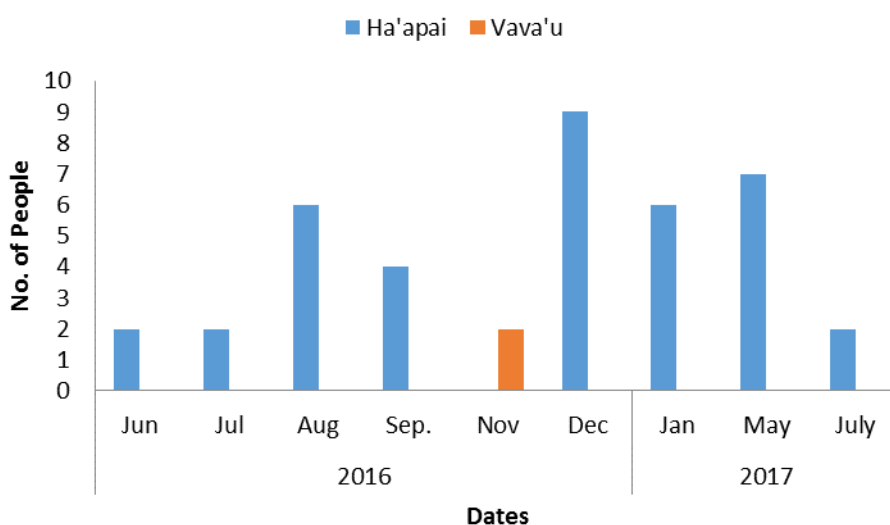
There has been interest to restore and rehabilitate the lagoon to a state where it can sustain and provide the goods and services required. Hence, an ongoing monitoring program is needed to continuously collect information and understand the status of the lagoon. This monitoring survey provides basic information regarding the fisheries resources including the species available and abundance throughout the lagoon. The result of the survey showed a very low abundance of fisheries resources in Fanga'uta.



7.4.5 MONITORING OF FISH POISONING

Ciguatera fish poisoning monitoring started to make progress this year and included collection of samples at some sites in Tonga. Fish poisoning has been a concern with frequent fish poisoning incidents reported in Ha'apai. An effort to collect data on fish poisoning incidents has been initiated and become an activity undertaken under this section. Figure 11 below summarize the number of fish poisoning incidents reported during 2016 -2017 financial year. It is highlighted in the figure that a majority of the fish poisoning occurred in Ha'apai.

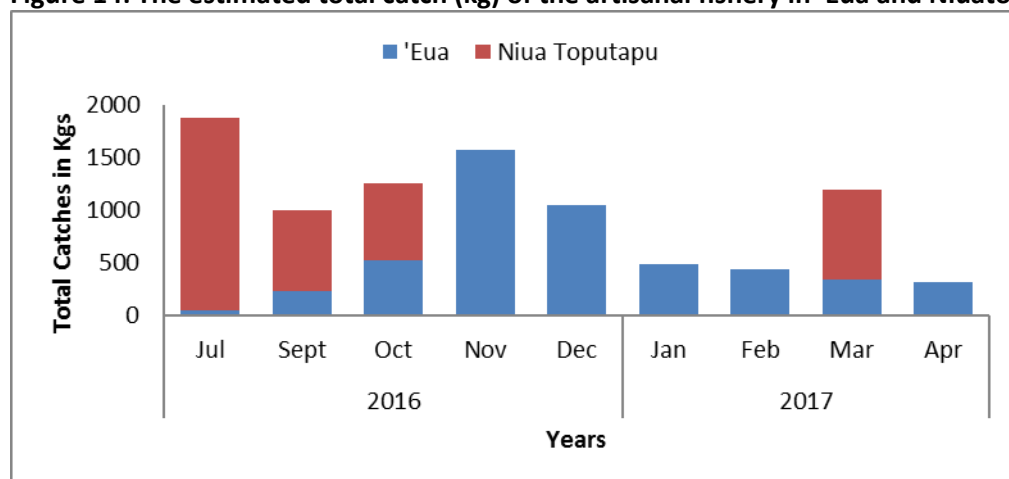
Figure 13: Total number of people reported with fish poisoning incidents in Vava'u and Ha'apai.



7.4.6 ARTISANAL TUNA DATA COLLECTION

Artisanal fisheries are a critical portion of the fisheries sector and consist of the majority of the small scale fishery activity in Tonga. Collecting catch data from artisanal fishermen is very important in trying to better manage the fishery. This activity has been conducted in 'Eua and Niuatoputapu and is progressing well.

Figure 14: The estimated total catch (kg) of the artisanal fishery in 'Eua and Niuatoputapu.



7.4.7 SOCIO-ECONOMIC BASELINE SURVEY FOR SMA COMMUNITIES

Socio economic surveys are an important activity under the SMA processes. This survey collected information from the SMA's household regarding their livelihood, fishing activities, impact of the SMAs, and community resilience. This survey was conducted in 8 communities in Vava'u, 3 in Ha'apai and one in Nuku'alofa fund by ADB and Tonga Health Project in collaboration with the Ministry of Fisheries.

7.5 EXTENSION/OUTER-ISLANDS SECTION

Background

The Extension/Outer Islands Section focus is on the oversight of extension services and support to our Outer Island branches. For the reporting year, there are no staff for this section in Tongatapu hence activities are distributed to current staff including Deputy CEO for FSED, IR and CCAD sections.

7.5.1 VAVA'U FISHERIES

Staff

The Vava'u Fisheries office is supported by the staff members listed in Table 33 below.

Table 33: Vava'u Fisheries office, FY 2016/17

Name	Post
Mrs Silika Ngahe	Senior Technical Officer (officer-in-charge)
Mrs Silia Soakai	Technical Officer Grade I
Mr 'Otinili Fisi'ikava	Technical Officer grade II
Mr Akosita Leakona	Computer Assistant
Mr Peni Lolohea	Labour
Mr 'Aisea Vailea	Labour

Achievements

Listed below are achievements assembled for the reporting period:

7.5.1.1 **AQUACULTURE AND RESEARCH**

The two main aquaculture activities carried out are the pearl oyster and seaweed farming.

7.5.1.1.1 *Pearl Oyster farming:*

There was no new pearl farms established for the year 2016-2017, however, the pearl activities were progressing well with focus in improving the marketing of the farmers product as well as to sustainably maintain the farmers. Currently, there are 11 pearl oyster farmers operating in Vava'u i.e. 'Alamoti Fuavao, Diane Clarke, 'Esitimoa Hubb, Havea Lolohea, Leonati Fakatava, Pimi Malungahu, Sailosi Malungahu, SioeliMafi, Fonokalafi Vaillea, Semisi Fa'uavao and Siokivaha Lolohea. These farmers have established a Pearl farm association to assist themselves producing good products for a better market. The association also responsible for the Pearl centre in Vava'u.

7.5.1.1.2 *Seaweed farming:*

Seaweed was not in a good condition in late 2016 due to the results of the Cyclone Ula with only a few seedlings surviving. Seaweed farming was restarted at Vaipua with initial results very promising. Some problems were found that the seaweed was not healthy the location was changed to Umuna and Lekeleka as new sites using a raft farming technique. In late December 2016 we were able to plant 3,080 seaweeds but during Christmas break a strong wind washed away most of these seedlings. Seaweed farming was revived with a focus on re-establishing and increasing seedling production, and by June 2016, there were 540 seaweed seedlings under trial cultivation.

7.5.1.2 **AGRICULTURAL SHOW**

The Royal Agricultural Show was successfully completed in Vava'u with participants from various parts of the fisheries sector in Vava'u, including five communities, and 56 individual fishers.



Note, the outcome of the Royal Agriculture Show for Vava'u island is listed in Annex 3.

7.5.1.3 **BOTTOM FISHING VESSELS**

There were one bottom fishing vessel licensed during the year. This vessel supplied fish both for export and domestic market. Other bottom fishing vessels were under repair.

Table 34: Licensed Fishing Vessels in Vava'u 2016 – 2017

Name of Vessel	Owner	Registration No.	License No.	Expiry date
Malo'i	'Ulaiasi Vaisima	FV02VV	BT093NK	23/02/2017
				Renew in 2 nd of June 2017

7.5.1.4 **SPORT FISHING**

Licenses were also issued to vessels engaged in sports fishing. There were 7 fishing vessels licensed in this category.

7.5.1.5 **DUTY FREE DIESEL FUEL**

The fuel exemption scheme is where fishing operators received duty free fuel. Only one fishing vessel in Vava'u benefits from this assistance. Other fishing boats are under repair.

7.5.1.6 **FISH FENCES**

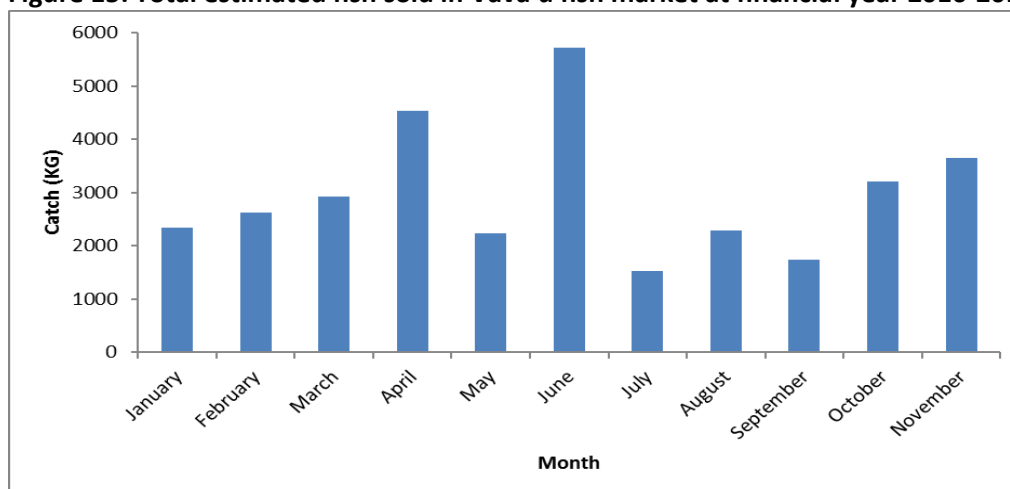
Among the licenses issued by Vava'u fisheries are the fish fence licences. There were 9 fish fence licenses issued during this period.

7.5.1.7 **SPECIAL MANAGEMENT AREA (SMA) PROGRAM**

The main activities under this program were the implementation and monitoring of existing SMAs, and the establishment of new SMAs. There were 9 new SMAs established in 2016-17 financial year. These include Hunga, Lape, Falevai, Talihau, 'Utungake, 'Utulei, Ofu, Koloa and 'Eueiki Island. The expansion of the SMA network in Vava'u was due to the assistance of the Climate Resilience Sector Project, and the Tonga Health project.

7.5.1.8 **DATA COLLECTION (OFFSHORE AND COASTAL)**

Data was collected from the only deepwater fishing vessel, and other vessels at Vava' Data was transferred to Tongatapu for analysis. In addition, market surveys, and home consumption siurveyus were conducted weekly. Figure 13, is the estimated amount sold at fish market in Vava'u for 2016-2017 financial year.

Figure 15: Total estimated fish sold in Vava'u fish market at financial year 2016-2017.

7.5.1.9 **TRAINING**

In early 2017 compliance and enforcement training was held here in Vava'u for all line ministries and fisheries staff. Later same training was held for all SMA communities to help their committee members to understand the Fisheries Management Act, SMA laws, and fisheries regulations.

7.5.2 **HA'APAI FISHERIES**

Background

The Ha'apai Fisheries focus in Aquaculture activities and research, Compliance, and Special Management Area program.

Staff

Ha'apai Fisheries consists of five staffs including allocated staff at Nomuka Island are listed below in Table 35.

Table 35: Ha'apai Fisheries staff for FY 2016/17

Name	Post
Mrs Sosefina Vili	Technical Officer Grade II (Officer-in-charge)
Mr Sailosi 'Alofi	Technical Officer Grade II
Mr Tu'atalatau Tonga'onevai	Senior Fisheries Assistant
Mr Mosese Moala	Fisheries Assistant
Mr 'Ofa Napa'a	Fisheries Trainee (Based in Nomuka)

Achievements

Listed below are achievements assembled for the reporting period:

7.5.2.1 **AQUACULTURE ACTIVITIES**

The main aquaculture activity in Ha'apai is the pearl oyster culture. This activity is progress well and increased from 2 to three farmers. Also, the farmers moved to the production process through training of farmers in seeding of nuclei.

7.5.2.2 **SPECIAL MANAGEMENT AREA (SMAS) PROGRAM:**

The Special Management Area program in Ha'apai has been expanded from 5 to 8 SMA communities. The new SMAs include Matuku, Fonoi and Mango community.

The main activities under this program are the monitoring of the existing SMA management plans. In addition, there are numbers of interested communities considering an SMA, including 'Uiha, Lofanga, Mo'unga'one and Kauvai island group.

7.5.2.3 **DATA COLLECTION (MARKET SURVEY)**

Fisheries data are collected weekly at the Taufa'ahau wharf.

7.5.2.4 **AGRICULTURAL SHOW:**

Royal Agricultural Show was successfully completed in Ha'apai with participants from various parts of the fisheries sector in Ha'apai.

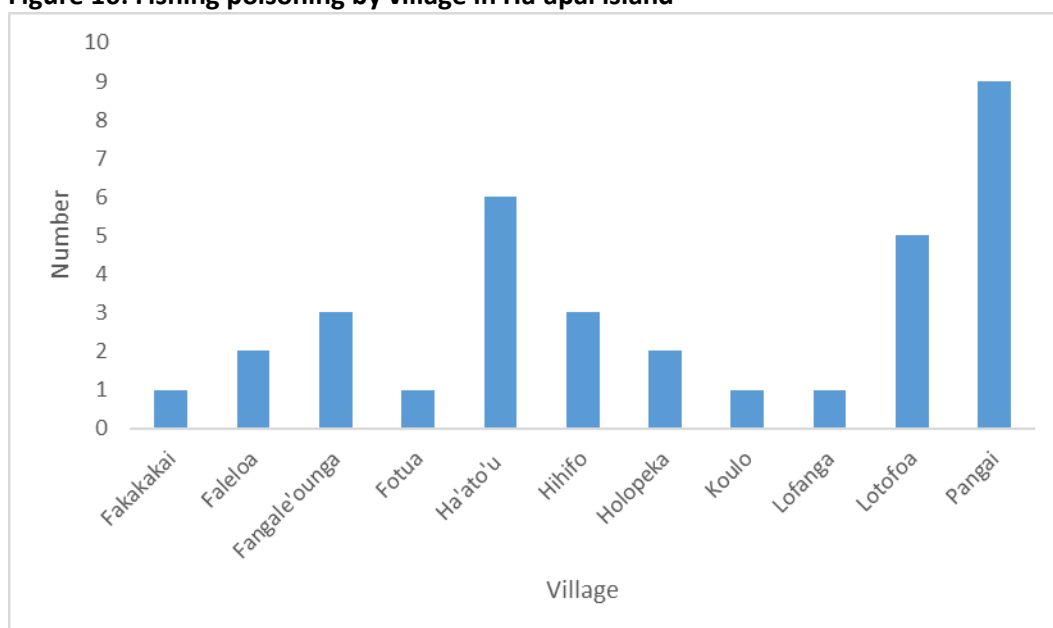


Note, the outcomes for the Royal Agriculture Show for Ha'apai Island are listed in Annex 3.

7.5.2.5 **FISH POISONING:**

Fish poisoning (ciguatera) has been reported regularly in Ha'apai and Figure 16 below showed the number of fish poisoning cases reported.

Figure 16: Fishing poisoning by village in Ha'apai island



7.5.3 **NIUATOPUTAPU FISHERIES**

Background

Fisheries at Niua focus on extension services and organizing for the Royal Agriculture and Fisheries Show.

Staff

Niuatoputapu Fisheries is managed by one staff member listed in Table 36 below.

Table 36: Niuatoputapu fisheries staff for FY 2016/17

Name	Post
Mr 'Ioane Finau	Senior Fisheries Assistant

Achievements

Listed below are achievements assembled for the reporting period:

7.5.3.1 AGRICULTURAL SHOW:

The Royal Agricultural Show was successfully completed in Niuatoputapu with participants from various parts of the fisheries sector in Niuatoputapu. There were 26 participants who registered and participated.



Note, the Royal Agriculture Show outcomes for Niuatoputapu and Niuafu'ou islands are listed in Annex 3.

7.5.4 'EUA FISHERIES

Background

Fisheries at 'Eua focus on Fisheries extension services, FAD fishing, compliance activities, artisanal fisheries, fish market, data collection and organizing for the Royal Agriculture and Fisheries Show. Fisheries at 'Eua collaborates closely with the 'Eua fisherman's association.

Staff

'Eua Fisheries office is managed by only one staff member listed in Table 37 below.

Table 37: 'Eua Fisheries office, FY 2016/17

Name	Post
Mr Siosiua Vaiangina	Fisheries Assistant

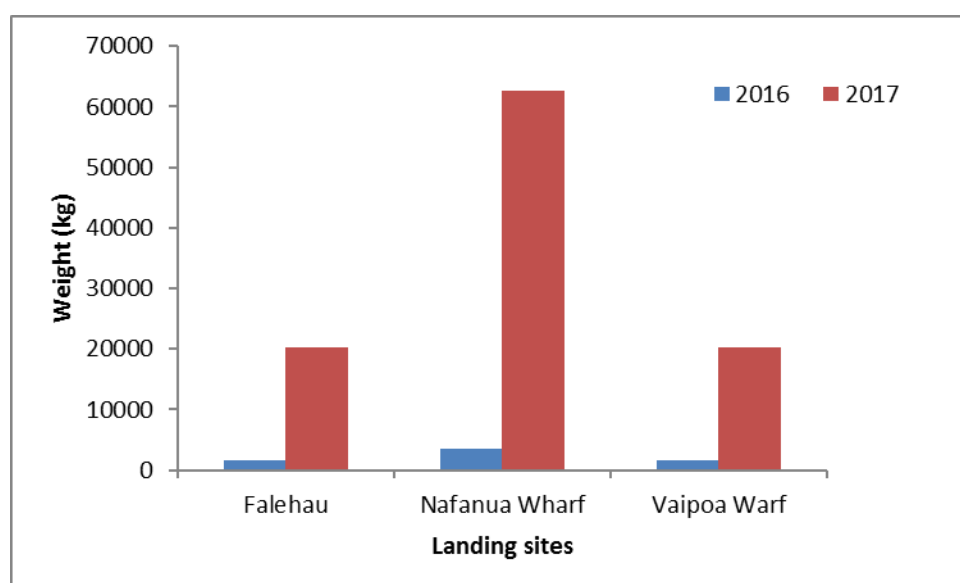
Achievements

Listed below are achievements assembled for the reporting period:

7.5.4.1 FAD FISHERY

FAD fishing is one of the main fisheries in 'Eua. This fishery has been promoted and developed to assist with 'Eua fisheries development. Figure 16 below illustrated the estimated amount of fish landed in 'Eua during 2016-2017 financial year.

Figure 17: Total amount of fish landed in ‘Eua in 2016-2017.



7.5.4.2 ***'EUA FISH MARKET***

The ‘Eua fish market continued to serve the ‘Eua fishermen with their ice needs. Also, there has been work to promote the fish market and encourage ‘Eua fishermen to make use of the market. This includes the need to strengthen the capacity of ‘Eua fishermen.

7.5.4.3 ***ROYAL AGRICULTURE AND FISHERIES SHOW***

The Royal Agricultural Show was successfully completed at ‘Eua with participants from various parts of the fisheries sector in ‘Eua, and with most communities engaged in various events.



Note, the outcomes for the Royal Agriculture Show for ‘Eua island are listed in Annex 3.

FISHERIES COMPLIANCE DIVISION (FCD)

Background

The Fisheries Compliance Division (FCD) is headed by Deputy CEO, Mr Poasi Ngaluafé. The FCD is made up of four sections; Enforcement, Vessel Monitoring System (VMS), Observers, and Licensing.

The Fisheries Compliance Division (FCD) aims to ensure the regulatory controls approved by the Government of Tonga, including those that give effect to regional and international obligations, are

effectively enforced. It encompasses not only traditional enforcement activities but also the development and establishment of data collection systems, the enactment of legislative instruments, and the implementation of management plans through participatory techniques and strategies.

8.1 ENFORCEMENT SECTION

Background

Enforcing the Acts and related regulations is critical to sustainable fisheries management and development therefore the functions of the enforcement section monitor compliance with Acts and related regulations through land and sea surveillance and patrols. Tasks involve physical inspections of fish landing sites, processing and packing premises, and boarder inspections at point of departure for exports, and compliance of license holders with terms and conditions.

Staff

The Enforcement Section consists of three staff listed below in Table 38.

Table 38: Fisheries Enforcement staff for FY 2016/17

Name	Post
Losilini Loto'ahea	Fisheries Officer
Uanoa 'Ahoafi	Fisheries Officer
Frank Taufua	Labour

Achievements

Listed below are achievements assembled for the reporting period:

8.1.1 PORT STATE MEASURES ACHIEVEMENTS

Tonga signed and ratified the Food Agriculture Organisation (FAO) Port State Measures Agreement (PSMA). Ministry of Fisheries completed the Port State Measure Gap Analysis with the relevant Line Ministries. This analysis was assisted by FFA and Marine Resources Assessment Group (MRAG) with all line Ministries involved with the PSMA.

In relation to the PSMA, the FFA conducted Catch Documentation Scheme (CDS) training for the Compliance Division in May, aiming to enhance the capacity of the staff on global traceability systems to support legality of catch from point of capture to the final market.

His Majesties Armed Forces (Navy) closely work together in enforcing fisheries licensing terms and conditions. A draft MOU is under development.

Increased levels of spot checks during boarding and inspection of fishing vessels to ensure they comply with terms and conditions. Compliance staff run briefing sessions for all vessel operators upon arrival on port.

8.1.2 CONFISCATED ILLEGAL PRODUCTS

Confiscated 2,074 Sea cucumbers from Kahana Resort with Police assistance, seized 10 undersize lobsters, and 1 female turtle during the closure period.

Sea cucumber case progressed by Police; 2 warning letters were issued.

8.1.3 INSPECTION

- Issued 5 warning letters, 1 for domestic fishing vessel for not registering and licensing to fish in Tonga, and 4 for fishermen who sold illegal lobsters.
- 54 boarding and inspection.
- 34 inspections on aquarium fishing companies.
- 83 inspections on export processing (tuna and snapper exports)
- 45 land inspections
- 11 fish fence survey and inspection conducted in Tongatapu

8.2 VESSEL MONITORING SYSTEM SECTION

Background

VMS is a satellite based technology providing near real time position tracking to monitor the location of vessels equipped with a mobile transmitting unit (MTU). The main function of VMS is to monitor movements and activities of tuna fishing vessels in Tonga's EEZ to ensure compliance with fisheries regulations. VMS reports can support enforcement through the monitoring of potentially illegal fishing. The role and function of the VMS is clearly defined in the Fisheries (Vessel Monitoring System) Regulation 2009. Under the regulation, all tuna vessels must carry FFA approved MTU's.

Staff

The Ministry has one VMS staff listed in Table 39.

Table 39: Fisheries VMS staff for FY 2016/17

Name	Post
Kalolaine Manuopangai	Technical Officer Grade II

Achievements

Listed below are achievements assembled for the reporting period:

8.2.1 VMS ACTIVITIES

- Three VMS systems focusing on separate fishing grounds are currently operating side by side at the Fisheries headquarters. The Forum Fisheries Agency (FFA) VMS, RIMF and Surveillance Picture (Google Earth), and WCPFC VMS systems. They track foreign fishing vessels licensed to fish in the region, allowing Tonga to monitor foreign fishing vessels within the EEZ.
- These vessels listed below are licensed to fish in our EEZ and tracked via the FFA VMS.
 1. Fu Ying
 2. Jui Hsiang Jie
 3. Yu shun
 4. Yu Shun No.2
 5. Yu Shun No.66
 6. Yu Shun No.88
 7. Yu Shun No.668
 8. Pacific Moon
 9. Pacific Sunrise

- VMS Section continued to provide VMS information to relevant agencies such as His Majesty's Armed Forces, and providers of aerial surveillance for their routine patrol and surveillance activity.
- The FFA Surveillance Google Earth Picture continued to provide another effective tool in monitoring fishing vessels through the use of AIS as an alternative tool for monitor fishing vessels in the region.
- VMS Section was issued with an access by the Western and central Pacific Fisheries Commission (WCPFC) to view commission registered fishing vessels in the 100 nm buffer zone in the high seas adjacent to the 200 nm boundary line of Tonga to view commission vessels.
- Tonga received US\$10,210 as a supporting fund from FFA for our national VMS operation.
- FFA consultant Mr. Ramesh Chan and Steve Masika conducted VMS in-house training for Fisheries staff.
- Tonga participated in NTSA TXT exercising during the Tui Moana Operation, on testing the NTIS System.
- VMS section continues to monitor the ongoing movements and operations of fishing vessels within our EEZ.
- Daily record of VMS positions for all fishing vessels, and report to boat owners if VMS turned off.
- Provide VMS monthly tracking when required by Tonga Defence Services.
- Operation Kurukuru and Operation Tuimoana was conducted successfully in 2016 with the help of the Tonga Defence Services (TDS).

8.3 OBSERVER SECTION

Background

The section's function is to deploy observers on board licensed fishing vessels to collect information on fish catch, to observe onboard fish handling techniques, to monitor fishing technology, to deter illegal fishing by monitoring compliance of the vessel with fisheries regulations and license terms and conditions, and to record by-catch and discards for stock assessment and management purposes.

Staff

The observer section consists of two staffs listed below in Table 40. The Head of VMS Section is also in charge of the observer section.

Table 40: Fisheries Observer staff for FY 2016/17

Name	Post
Kalolaine Manuopangai	Technical Officer Grade II
Malakai Faletau	Fisheries Trainee

Achievements

Listed below are achievements assembled for the reporting period:

8.3.1 OBSERVER ACTIVITIES

- Signed Observer Memorandum of Understanding (MOU) with Cook Islands, to place our certified observers on their local fishing vessels.
- Implemented Memorandum of Agreement with FFA for observer deployment on USA Purse Seine vessels.

- Increase observer wages from \$50.00 to \$70.00 for FFV + \$10.00 administration cost; and \$50.00 for Local Fishing Vessel.
- Roll out 2 new observer trainees after participation in PIRFO Sub-Regional Training at Vanuatu Maritime College.
- Observer logistics, deployments and data screening.
- 26 observer trips from July - December 2016.
- 4 trips under MOU with Cook Island and 8 trips on UST vessels.
- Tonga's National Observer Program contracted 15 fisheries observers.
- Tonga received US\$24,045 from the Japan Trust Fund to financially support PIRFO national observer training in November 2016.
- SPC CONDUCTED a Basic Longline Observer Training for 3 weeks. 9 observer trainees were trained (7 Tongan and 2 Palau) and certified as PIRFO.

8.4 LICENSING SECTION

Background

Licensing responsibilities include screening applications for licenses such as foreign fishing vessel, local fishing vessel for tuna fishing and snapper fishing, sports fishing, fish processing establishments, aquarium fishery, fish fences, and marine products, as well as collection of 0.5%, 1% and 5% resource rent of the local value of marine products commercially exported, and other license fees. Other miscellaneous tasks of the section included preparation of permit letters for export of all marine products designated by Fisheries Act or required under CITES (Convention on the International Trade of Endangered Species), and the processing and issue of exemption duties under the Fuel Concession Scheme.

Staff

Staff

The Fisheries Compliance Division is supported by the staff members listed in Table 41 below.

Table 41: Fisheries licensing staff for FY 2016/17

Name	Post
Tevita Ahoafi	Fisheries Officer
'Amanaki Paea	Technical Officer Grade II

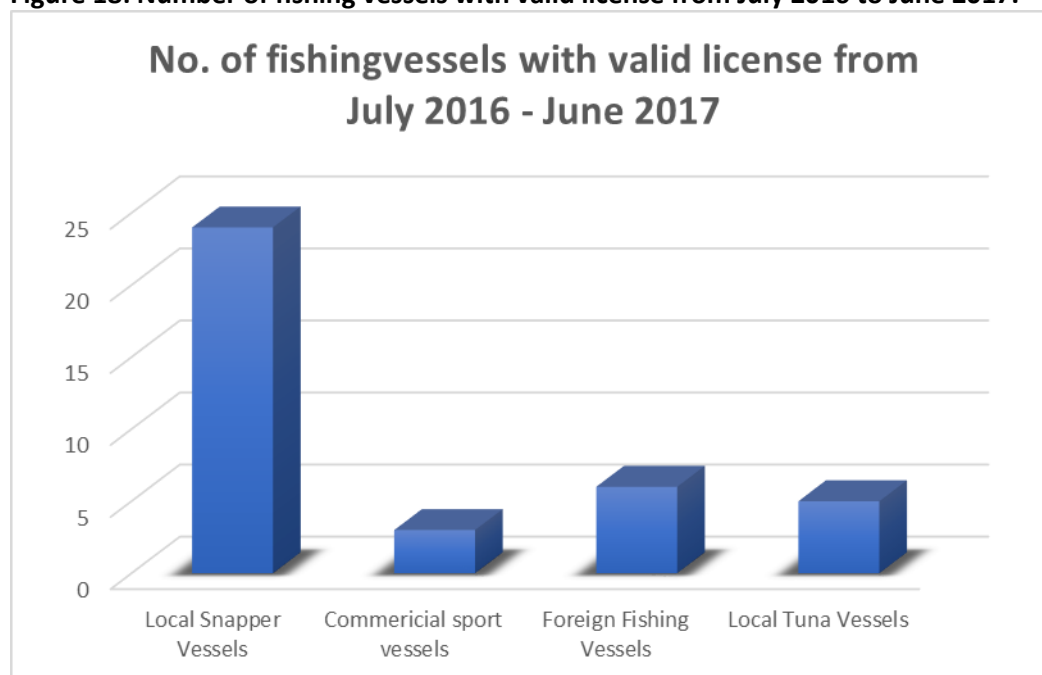
Achievements

Listed below are achievements assembled for the reporting period:

8.4.1 LICENSING ACTIVITIES

A total of forty (40) fishing vessels held a valid license to fish within Tonga EEZ during July 2016 to July 2017. There were seven (7) foreign fishing vessels, five (5) local tuna fishing vessels, four (4) commercial sport fishing vessels, and twenty-four (24) snapper fishing vessels. During the reporting period, one foreign fishing vessels and one commercial sport fishing vessels license expired and had not been renewed.

Figure 18: Number of fishing vessels with valid license from July 2016 to June 2017.



During June 2016 to July 2017, there were a total of seventy-six (76) licenses that have been issued including four (4) local tuna vessels, nineteen (19) snapper vessels, seven (7) foreign fishing vessel, three (3) export tuna /snapper/reef fish, two (2) for export of other marine products, two (2) aquarium fish and thirty-nine (39) fish fences.

There were ten (10) exporters with valid licenses, four (4) export licenses for tuna/snapper/reef fish, four (4) aquarium fishery, one (1) license for giant clam shell and one (1) seaweed export license.

8.4.2 PERMIT

The section issued a total of 17,050 permits during July 2016 – June 2017. Listed below are permits that were issued in the reporting period.

- 572 permits for export of tuna and snapper;
- 147 permits for export aquarium fishery;
- 10 permits for seaweed exports;
- 1 permit for other export;
- 16,320 for home consumption and souvenir permits at airport and cargo value to \$150,144 (revenue collected).

8.4.3 DUTY EXEMPTION

The licensing section continues to support the development of the commercial fishing sector and to enhance exports by assisting them to receive fuel and fishing equipment free of duty, and port and services tax.

During the reporting, period a total of three hundred ninety-five (395) fishing trips received fuel under the Scheme. It should be noted that the number of vessels participating in 2016-2017 is lower than the total number of vessels registered with the Ministry of Fisheries. Those that were not participating were either under service or were just not fishing during this period and hence they did not receive any fuel.

Table 42: Details of certified fishing vessels under the Fuel Concession Scheme from July 2016 to June 2017

Type of Fishery	Volume of fuel (L)
Deep sea bottom fishing	262,360
Deep sea long line	877,500
Foreign fishing vessel	2,362,000
Total	3,501,860

9 CHALLENGES FOR THE MINISTRY OF FISHERIES

The Ministry identified challenges for the Financial Year 2016/17. These challenges were considered and listed below are cross cutting issues and Divisional challenges including CEO's office:

9.1 CROSS CUTTING ISSUES

1. Implementation of the current Performance Management System
2. Shortage of staff
3. Budget limitation
4. Lack of quality technical equipment's (boat and vehicle)
5. Lack of Project Development and Management skills/experience
6. Lack of effective collaboration with other Ministry Department Agency (MDAs)
7. Lack of capacity building training (short-term and long-term)
8. Lack of infrastructure such as office buildings in outer islands

9.2 DIVISIONAL

- **FSD**
 1. Effective legislation for SMAs and commercial fisheries.
 2. Expand hatchery facilities including Vava'u to accommodate two species per hatchery run at a time.
 3. Improving live algae production for better larval survival rate.
 4. Increasing giant clam production to accommodate demand from aquarium markets.
 5. Monitoring the progress of SMA communities with regular meetings.
 6. Continue commitment to the establishment of new SMAs.
 7. Ensuring quality of fisheries data collected.
 8. Expanding the FAD network.
 9. Improved support for pearl oyster production, development and marketing.
 10. Improved support for seaweed aquaculture including for seedlings.
 11. Identify potential for training and capacity building for stakeholders in co-management, fish handling, fisheries management, and business management.
 12. SPC TUBs system and OPM system down for a significant period resulting in the late update of observer data into the system.
 13. Low percentage of data coverage for scientific data collection both for tuna and snapper fisheries.
 14. Low levels of data on artisanal and other coastal fisheries

15. Lack of biological samples (gonads and otoliths) from snapper species to enhance stock assessments
16. No update survey of seamounts within Tonga EEZ.

- **FCD**

1. Infrastructure is a key challenge in terms of monitoring coastal areas (i.e. vessels for enforcement) especially target illegal fishing (i.e. dynamite fishing, using SCUBA and hookah diving air apparatus, etc).
2. Need to certify inspection and boarding officers for High Seas.
3. Need more effective enforcement procedures for coastal areas.
4. Seeking public support for reporting of illegal fishing activities.
5. Ensuring authorised officers have capacity in enforcement and prosecution.
6. Increasing capacity in the compliance team.
7. Established task force for implementing the Port State Measures Agreement.
8. Develop National Plan of Action (NPOA) for Illegal Unreported Unregulated fishing (IUU).
9. Enforcement of licensing terms and conditions for fishing vessels, fish fences, exporters of tuna, and snapper and aquarium.
10. Expanding the VMS network to more vessels.
11. Ensuring standard operating procedures are reviewed and up to date.
12. Enforcement of licensing terms and conditions for fishing vessels, fish fences, exporter tuna and snapper and aquarium.
13. Need to build up collaboration with other Ministries with a mandate to conduct enforcement as a way forward for more effective compliance activities.
14. Observer:
 - a. To recruit and train more certified observers to accommodate all license fishing vessels in Tonga's waters.
 - b. Continue Observer MOU with the Cook Islands.
 - c. Develop a contract agreement between the Ministry and Observers.
 - d. Implement Observer Code of Conduct.
 - e. Pursue observer refresher training.
 - f. Train observers to be eligible to operate on PNA purse seine vessels, MSC certified observers.

Annex 1: Acronyms and Abbreviations

- ACIAR Australian Centre for International Agricultural Research
- ADB Asian Development Bank
- CITES Convention on International Trade in Endangered Species
- CRSP Climate Resilience Sector Project
- CMM Convention Management Measures
- CSD Corporate Service Division
- DWFMP Deep Water Fisheries Management Plan
- EEZ Exclusive Economic Zone
- EPA Economic Partnership Agreement
- FAD Fish Aggregate Device
- FAO Food Agriculture Organization of the United Nations
- FCD Fisheries Compliance Division
- FFA Forum Fisheries Agencies
- FFC Forum Fisheries Committee
- FFV Foreign Fishing Vessel
- FMDD Fisheries Management and Development Division
- FSD Fisheries Science Division
- FY Financial Year
- HACCP Hazard Analysis Critical Control Point
- IUCN International Union for Conservation of Nature
- IUU Illegal, Unregulated and Unreported (fishing)
- JICA Japan International Cooperation Agency
- MCS Monitoring Control and Surveillance
- MTU Mobile Transmitting Unit
- MPI Ministry of Primary Industries
- NPOA National Plan of Action
- RIMF Regional Information Management Framework
- RNZAF Royal New Zealand Air Force
- SMA Special Management Area
- NPFA National Pearl Farming Association
- NTIS Niue Treaty Information System
- NTSA Niue Treaty Subsidiary Agreement
- NZ New Zealand
- NIWA National Institute of Water and Atmospheric
- NCD Non-Communicable Disease
- PC Pacific Community (formerly Secretariat to the Pacific Community (SPC))
- PDF Project Development Fund
- SPC (See PC)
- SOP Standard Operating Procedure
- TFSP Tonga Fisheries Sector Plan
- TSDF Tonga Strategic Development Framework
- TVM Te Vaka Moana
- TMDP Tuna Management and Development Plan
- TCC Technical Compliance Committee
- TC Terms and Conditions
- UN United Nations
- US United States

- VMS Vessel Monitoring Device
- WCPFC Western and Central Pacific Fisheries Commission

Annex 2: Overseas meetings and workshops

The Ministry of Fisheries appreciates recognition and importance of our Ministry's involvement in key meeting and workshops to strengthen the fisheries sector in Tonga. Listed below is a summary of key meetings and workshops within the reporting Financial Year.

Table 5: Summary of Training Courses and Meetings Attended during reporting period

OVERSEAS TRAVEL	
MONTHS AND DURATION	MEETING TITLES AND HOST COUNTRIES
8th – 10th June 16	Tokelau Arrangement Workshop, NADI, FIJI
3rd – 22th June 16	International workshop on seaweed and fisheries production development, SUVA, FIJI
20th – 24th June 16	US Treaty Renegotiating Meeting, AUCKLAND, NZ
23rd – 24th June 16	Te Vaka Moana Professional Writing Workshop (focus on fisheries policies and fisheries management plans) APIA, SAMOA
4 – 8 July 16	2016 Oceania fisheries stock assessment training workshop, NOUMEA
8 – 11 Aug16	Training course on Radio and Broadcasting Techniques
4 -6 July 16	Special Officials Forum Fisheries Committee Ninth Meeting Annual Ministerial Forum Fisheries Committee Thirteenth Meeting, VANUATU
11 – 15 July 16	Global Conference on Committee on Fisheries (COFI – FAO) – Thirty-second session, Rome
11 – 22 July 16	FFA Conference Centre, HONIARA, SOLOMON
9 – 19 July 16 20- 22 July 16 11 – 15 July 16	2016 Oceania Fisheries Stock Assessment Training Workshop (Advanced Stock Assessment Workshop Improving the knowledge base for Ciguatera monitoring and protection of public health and local economics IOCTs, Pacific Island Countries and Territories, NOUMEA
13 – 2 Aug 16	Seminar on Aquaculture and Technical Extension for Developing Countries at JIANGSU, CHINA
28 – 11 Aug 16	PRE-FFA meeting, 2 nd Meeting of ER-EM Working Group and 12 th Regular Session of the Scientific Committee, BALI, INDONESIA
4 – 6 Aug 16	Review of Tevaka Moana Strategic Plan 2013 – 2018 and the Results Frame Work 2013 - 2016 and Special Fisheries Development and Governance Meeting of Non VDS membership, Auckland NZ
15 – 19 Aug 16	Pacific Regional Joint Preparatory Meeting for the Thirteenth Conference of the Parties to the Convention on Biological Diversity and the Seventeenth Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), SAMOA
29 – 02 Sept 16	WCPFC Northern Committee meeting 12 Consultation for future Cooperation between FFA and Japan, JAPAN

12 - 29 Sept 16	Twelfth Technical and Compliance Committee Meeting
12 – 23 Sept 16	Operation Kurukuru, SOLOMON
24 – 05 Oct 16	CITES COP17, South Africa
4 – 7 Oct 16	17 th PIMRIS Steering Committee Meeting, SUVA
12 – 14 Oct 16	TVM Data Analysis Workshop (R- Training), AUCKLAND
15- 29 Oct 16	Pacific Island Fisheries Officer Course, VANUATU
14 – 18 Oct 16	Regional RIMF Training Event, FIJI
26- 04 Nov 16	Participants to the Tokelau Arrangement Meeting with key partners Tevaka moana participants Management Options Consultation Special Officials, HONIARA.
26 – 15 Nov 16	2016 Seminar on Coastal Zone Biodiversity Protection for Asia and the Pacific, CHINA
31- 04 Nov 16	Sustainable Oceania Initiative (SOI) Regional Capacity Development Workshop for the South Pacific, APIA
1 – 21 Nov 16	Seminar for law enforcement, CHINA
3- 8 Nov 16	Joint Analysis of Sea Mitigation Effectiveness in Longline Fisheries, HONOLULU
8-19 Nov 16	To conduct and study prices and sizes of sea cucumber in dried seafood markets in China
14-18 Nov 16	1 st Regional RIMF Training Workshop, Suva, Fiji
5 – 10 Dec 16	WCPFC 13 th Regular Session (WCPFC13), Fiji
6 – 8 Dec 16	Observer Safety Training for Trainer of Trainee on Personal Locator Beacon, BRISBANE
12 -15 Dec 16	Tenth Meeting of the Tuna Fishery Data Collection Committee (DCC), NADI, Fiji
24-27 Jan 17	Sharks Post Release Mortality Workshop
2 – 3 Feb 17	TVM Website Workshop
6 – 10 Feb 17 13 – 15 Feb 17	17 th Regional Observer Coordinator Workshop (ROCW 17) and Regional Information Management Facility Training (RIMF)
13 – 18 Feb 17	MCS Officer Foundation Course
20 – 02 Mar	2017 Regional Training Course in Fisheries Trade, Policy and

	Investment Appraisal
24 – 27 Mar 17	Sharks Post Release Mortality Workshop, NZ
6 – 10 Mar 17	Fisheries Licensing Officer Workshop. Honiara
6 – 8 Mar 17	FFA Economic Indicators Workshop, SUVA
06 – 14 July	Pacific Island Fisheries Officer Certificate
7 – 17 Mar 17	Utilization of ICT Services and E-Application
14 – 17 Mar 17	Tenth SPC Heads of Fisheries meeting and related project meetings
12 – 11 May 17	Enhancing Capacity of Fisher's Organisation toward Responsible Fisheries
24 Mar – 13 Apr 17	1. National Compliance and Risk Assessment 27-28 Mar 2. Niue Treaty Subsidiary Agreement (NTSA) Workshop 29-31 Mar 3. 20 th MCS Working Meeting (MCSWG20) 3-7 Apr 4. 3 rd Regional Information Management Systems Workshop (RIMS3) 8 and 10 Apr 5. Deputy Director for FCD Attachment to FFA 11 – 13 Apr
29-31 Mar 17	SIDS Preparatory Meeting for Ocean Conference on SDG14
10 – 13 Apr 17	Towards effectively managed coastal fisheries areas in the Polynesian region
22 – 1 May 17	Eleventh Tuna Data Workshop (TDW-11)
24 – 28 Apr 17	Technical workshop on Aquatic BIO-SECURITY
24 – 28 Apr 17	Niue Treaty Subsidiary Agreement for Parties /NTIS, Suva, FIJI
24 – 25 Apr 17	PIFS – WTO REGIONAL WORKSHOP ON FISHERIES SUBSIDIES
03 - 06 May 17 08 - 12 May 17 15 -16 May 17	Pre-FFC official meetings (Niue Treaty Subsidiary Agreement, Tokelau Arrangement, Global and Regional Oceanic Fisheries Conventions and Related Instruments in the Pacific Small Island Developing States (OFMP2) Forum Fisheries Officials 102 (Australia) The annual Tevaka Moana Governing Council Meeting(Auckland)
07 – 29 June	Enhancing Capacity of Fisheries Organisation
13 – 22 May 17 20 – 29 May 17	2017 Oceanic Fisheries Stock Assessment Training Workshop

15- 26 May 17	Operation Tuimoana 2017
29 – 03 June	Oceania CITES Regional Implementation Workshops
23 – 26 May 17	Fisheries Policy and Management Plan Writing Workshop
26 – 12 June	Meeting of the Parties to the 2009 FAO Agreement on Port State Measures, Oslo, Norway The United Nations Ocean Conference to support the Implementation of SDG 14 New York
12th – 16th Jun 17	Attachment for the Development of an aquatic Bio-security Strategy for Tonga, SPC, Noumea
12 -15 Jun 17	Observer critical incident analysis
26 – 28 Jun 17	Regional Prosecutors and MCS advisors training, HONIARA
3-6 July 17	Tokelau Arrangement / Special Officials Pre FFC103/ 2017 Annual Ministerial Forum Fisheries Committee Meeting, Brisbane

Annex 3: Royal Agriculture and Fisheries Show 2016

TONGATAPU

Events and Winners for the Royal Agriculture and Fisheries Show in Tongatapu for 2016.

Ngaahi fe'auhi	Tokolahi 'o e kau fe'auhi	Hingoa 'o e kau ma'u pale	Kolo	Mahu'inga 'o e pale
Taumata'u vaka iiki	3	1. Lopeti Presscot 2. Meleane Kaufusi	Sopu Sopu	500.00 400.00 300.00
Toutai fakatele	2	1. Mosese Taunaholo 2. Sinipata Muli	'Atata 'Eueiki	500.00 400.00 300.00
Vaka taumata'u loloto fakahifo lahitaha ki he fakatau fakaloto fonua	3	1. FV Denisiola 2. FV Lady Sekina 3. FV North Star		500.00 300.00 200.00
Vaka taumata'u loloto fakahifo lahitaha ki he fakatau ki tu'apule'anga	3	1. FV Denisiola 2. FV Lady Sekina 3. FV North Star		500.00 300.00 200.00
Palepale toutai mamaha taa utaha	2	1. Owen Katoa 2. Pasiaka Toki	Manuka Fangaloto	1,200.00 1,000.00 800.00
Palepale toutai loloto	2	1. 'Atunaisa Falase 2. Sione Mila Falase	Ngele'ia Ngele'ia	1,200.00 1,000.00 800.00
Palepale fakakolo/Kulupu	3	1. Manuka 2. Sopu Fisheries Association 3. Kolo ko Satisi mei		1,500.00 1,200.00 1,000.00

		Sia'atoutai		
Palepale kolo SMA	2	1. 'Atata 2. 'Eueiki		1,500.00 1,200.00 1,000.00

VAVA'U

Events and Winners for the Royal Agriculture and Fisheries Show in Ha'apai for 2016.

Ngaahi fe'auhi	Hingoa 'o e kau ma'u pale
Taumata'u vaka iiki	1. 'Okusitino Falemaka 2. Pauli Fangufangu 3. 'Isime'eli Loloma
Toutai fakatele	1. 'Okusitino Falemaka 2. Molitoni Havea 3. 'Isime'eli Loloma
Taumata'u fanau iiki	1. Petelo Loloma 2. Samiuela Loloma 3. Mana-mei-langi Loloma
Toutai Vili Valo	1. Laukau Tukuafu. 2. Tipiloma 'Alamoni 3. Saimone Tulikihakau
Palepale toutai mamaha taautaha	1. 'Isime'eli Loloma 2. Pasiaka Toki 3. Palu Tutoe
Palepale toutai loloto	1. Tavake Fisheries
Palepale fakakolo	1. Lape
Palepale kolo SMA	Ovaka
Palepale suvenia lelei taha ngaohi mei he tofe	1. Dianne Clarke 2. 'Alamoti Fuavao 3. Havea Lolohea
Palepale me'atokoni mei 'oseni ngaue 'aki founga fakatolonga	1. Pasiaka Toki 2. 'Isime'eli Loloma 3. Sione Pahulu
Kato Kahi	1. Palu Tutoe 2. Sione Pahulu
Kato Tava'amanu	1. Palu Tutone
Faama Tofe lelei taha	1. Dianne Clarke 2. Sioeli Mafi 3. 'Alamoti Fuavao
Vaka toutai loloto tanaki data lelei taha	1. MV Malo'i
Kolo SMA tanaki data lelei taha	1. Ovaka 2. Taunga
Pisinisi fkmaketi ika tanaki data lelei taha	1. 'Isime'eli Loloma 2. Fe'ofa'aki Fifita 3. Saia 'Eliesa
Vaka float fkofoofa taha	1. 'Isime'eli Loloma 2. Sione Pahulu

HA'APAI

Events and Winners for the Royal Agriculture and Fisheries Show in Ha'apai for 2016.

Events	Names of the Winners
1.1 Taumata'u Vakaiiki	1. Afu Taumoepeau

	2. Maka Taulango 3. Siola'a Liuaki
1.2 Toutai Fakatele	1. Mele'elenga Vaikona 2. Siola'a Liuaki 3. Sione Sikalu
1.1 Taumata'u Vakaiiki	1. Sione Mafi 2. 'Eva Nehoa 3. Soakai Fekau
1.2 Toutai Fakatele	1. 'Esau Finau 2. Soakai Fekau 3. 'Eva Nehoa
2.2 Palepale taautaha, toutai mamaha leleitaha 'i he kalasi kehekehe 'o e me'atokoni mei 'oseni kae faka'aonga'i ki he ma'u me'atokoni	1. Pasiaka Toki 2. Koaneti Si'ulua 3. Sione Masima
2.1 Palepale taautaha, toutai loloto leleitaha 'i he kalasi kehekehe 'o e me'atokoni mei 'oseni kae faka'aonga'i ki he ma'u me'atokoni	1. Moana Si'ulua 2. Tevita Vaikona 3. Siola'a Liuaki
2.3 Palepale Taau Taha Ngaue'aki 'a e Founa Fakatolonga Tu'u Fonua	1. Kaloni 'Aholelei 2. Kalaka Si'ulua 3. Ikuna He Lotu Toki
2.4 Palepale Fakakolo pe Kulupu Lelei Taha	1. Ha'a Fakahenga 2. Faleloa 3. Felemea
2.5 Palepale Fakakolo pe Kulupu 'a e ngaahi Kolo Kau he Polokalama Feitu'u Pule'i Makaehe (SMA)	1. Felemea 2. 'O'ua 3. Ha'afeva
2.6 Palepale Fakakolo pe Kulupu Lelei Taha Ngaue'aki 'a e Founa Fakatolonga Tu'u Fonua	1. Felemea 2. Mango 3. Fono

NIUATOPUTAPU

Events and Winners for the Royal Agriculture and Fisheries Show in Niuatoputapu for 2016.

Ngaahi fe'auhi	Hingoa 'o e kau ma'u pale
Taumata'u vaka iiki	1. Vili Limoni 2. Viliami Maea 3. Iasinito Tauvaka
Toutai fakatele	1. Viliami Maea 2. Iasinito Tauvaka 3. Vili Limoni
Taumata'u fanau iiki	1. Felise Po'uli 2. Poiti Talakai 3. 'Iliati Limoni
Toutai Vili Valo	1. Lakalaka Lefai 2. Metui Afa 3. Lomano Losalu
Ta Kahi	1. Kakala 'Onesi 2. Lomano Losalu 3. Laukau Faka'osi
Tau Hapi	1. Metui Afa 2. Kolio Afa 3. Hiole Faka'osi

Palepale toutai taautaha	1. Leone Kivalu 2. Lomano Losalu 3. Muli Vaoahi
Palepale fakakolo	1. Falehau 2. Vaipoa 3. Hihifo
Palepale fakakulupu	1. Vai ko Niutoua 2. Samaletani Lelei 3. Mahina Fekite; Nukuseilala
Palepale me'atokoni mei 'oseni ngaue 'aki founa fakatolonga 'e 3	1. Luseane Moka Pongi Jr. 2. Losaline Pongi 3. Lomano Losalu
Kato fingota lelei taha	1. Setaika Vaoahi 2. Pene Talakai 3. Fisi'ihangale Vea
Tisi Me'atahi ngaohi mei he Ika	1. Fe'ofa'aki Fe'ao 2. Kakala 'Onesi 3. 'Onesi Lino
Tisi me'atahi ngaohi mei he Feke	1. Fe'ofa'aki Fe'ao 2. Losaline Pongi
Tisi me'atahi ngaohi mei he 'U'u pe ko e 'Uo	1. Fe'ofa'aki Fe'ao 2. Simione Lino
Naunau toutai tu'u fonua	1. Kakala 'Onesi 2. Kelepi Liongitau 3. Telua Pongi

NIUAFO'OU

Events and Winners for the Royal Agriculture and Fisheries Show in Niuafu'ou for 2016.

Ngaahi fe'auhi	Hingoa 'o e kau ma'u pale
Taumata'u vaka iiki	1. Saia Leua 2. 'Alani Tonga 3. Namea Folau
Toutai fakatele	1. Saia Leua 2. 'Alani Tonga 3. Namea Folau
Palepale toutai taautaha leleitaha	1. Fatui Finau 2. 'Epalahame Tau'ataina 3. Seli Kata 4. Saia Leua
Palepale toutai leleitaha fakakolo	1. Fatui Finau 2. 'Epalahame Tau'ataina 3. Seli Kata 4. Saia Leua
Fa'ahinga founa fakatolonga 'e 3 ki he ika 'o 'oua e toe si'i hifo he me'atahi 'e 3 mei he fa'ahinga takitaha. 'Ikai kau ai 'a e 'aisi	1. Sisipeli Kata 2. Lina Tamale 3. Viliami Tamale
Founa Toutai tu'ufonua- Toutai lelei taha mo ma'u taha 'I hono ngaue'aki founa toutai tu'u fonua 'o 'ikai si'I hifo 'I he founa	1. Noa Tonga 2. Maleko Kivalu 3. Sosefo 'Ulupano

toutai tu'ufonua 'e 3.	
Tisi me'atahi fakafuofua ki he ma'u me'atokoni e toko 6 ngaahi mei he ika.	1. Mateaki Tau'atina 2. Manusiu Kata 3. Sisipeli Kata
Tisi me'atahi fakafuofua ki he ma'u me'atokoni e toko 6 ngaahi mei he 'io pe 'u'u.	1. Mateaki Tau'atina 2. Manusiu Kata 3. Paea Kata
Tisi me'atahi fakafuofua ki he ma'u me'atokoni e toko 6 ngaahi mei he Lapila.	1. Mateaki Tau'atina 2. Manusiu Kata 3. Sofia Kata
Ngaahi naunau toutai tu'u fonua kalasi kehekehe lahi taha 'oua 'e toe si'i hifo 'i he naunau toutai 'e 3.	1. Mokofisi Tonga 2. Finepani Tonga 3. Sela Tonga

'EUA

Events and Winners for the Royal Agriculture and Fisheries Show in 'Eua for 2016.

Event	Winners
1. Fe'auhi Taumata'u (item 1.1)	1-Sene Falemaka- Angaha-94kg 2-Kulupu Nasili 3-Viniseni Falemaka
2. Fe'auhi Fakatele (item 1.2)	1. Malakai Pani-179kg 2. Viniseni Falemaka (Angaha)-40kg 3. Sene Falemaka- Angaha-8kg
3. Vaka toutai lelei taha he tanaki fakamatala toutai. (item 1.3)	1-Sene Falemaka-Arabon 2-Viniseni Falemaka-Time Out 3-Malakai Pani-Family