



Fisheries Department
Ministry of Natural Resources
Government of Tuvalu



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Ministry of Natural Resources
Government of Tuvalu

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Acronyms and Terms

AA	Access Agreement	MFED	Ministry of Finance and Economic Development
AG	Attorney General	MNR	Ministry of Natural Resources
AIS	Automated Information System	MPI	Ministry of Primary Industries (of New Zealand)
ALB	Albacore tuna	MRA	Marine Resources Act
AUD	Australian Dollar	MSC	Marine Stewardship Council
AWP	Annual Work Plan	MT	Metric tonnes
BET	Bigeye tuna	MTU	Mobile Transmission Units
CFC	Community Fishing Centre	NAFICOT	National Fisheries Corporation of Tuvalu
CFP	Ciguatera Fish Poisoning	NAPA	National Adaptation Programme of Action
CMM	Conservation and Management Measure (of the WCPFC)	NFD	Non-fishing Days
CP1	TFD First Corporate Plan (2014–2016)	NGO	Non-government Organisation
CP2	TFD Second Corporate Plan (2017–2019)	NPOA	National Plan of Action on IUU fishing
EEZ	Exclusive Economic Zone	NZAID	New Zealand Agency of International Development
EU	European Union	NZAP	New Zealand Aid Programme
FAD	Fish Aggregation Device	O&D	Operations and Development Section (of the TFD)
FCA	Funafuti Conservation Area	OFCF	Overseas Fishery Cooperation Foundation, Japan
FFA	Forum Fisheries Agency	OI	Outer Island
FFV	Foreign Fishing Vessel	OICD	Outer Island Data Collector
FIMS	Fishery Information Management System	PADI	Professional Association of Diving Instructors
FMMC	Fisheries Monitoring and Management Consultations (4 meetings as FMMC1-FMMC4)	PAE	Party Allowable Effort (under the VDS)
FO	Fisheries Officer	PERMU	Public Enterprise Reform Management Unit
FOFA	Fishermen of Funafuti Association	PFO	Principal Fisheries Officer
FRFSP	Funafuti Reef Fisheries Stewardship Plan	PIFS	Pacific Islands Forum Secretariat
FSM	Federated States of Micronesia	PIRFO	Pacific Island Regional Fishery Observer
FSMA	FSM Arrangement (for concessional fishery access between PNA domestic purse seiners)	PL	Pole and Line
GEF	Global Environment Facility	PLB	Personal Locator Beacon
GEF	Global Environment Facility	PNA	Parties to the Nauru Agreement
GFA	Grant Financing Agreement	PNAO	Parties to the Nauru Agreement Office
GIS	Geographic Information System	POA	PNA Observer Agency
GoT	Government of Tuvalu	PROP	Pacific Regional Oceanscape Programme
GRT	Gross Registered Tonnage	PS	Purse Seine
HRD	Human Resources Department	PWD	Public Works Department
IDA	International Development Association	R2R	Ridge to Reef Project
IFA	Inshore Fisheries Advisor	RFSC	Regional Fisheries Surveillance Centre (at FFA)
IMO	International Maritime Organisation	RFV	Register of Fishing Vessels
IRCS	International Radio Call Sign	RIMF	Regional Information Management Framework
IT	Information Technology	RSP	Regional Surveillance Picture
IUU	Illegal, Unregulated and Unreported fishing	RTMCF	Regional Technical Meeting on Coastal Fisheries
JV	Joint Venture	SC	Science Committee
KOFA	Korean Overseas Fisheries Association	SDF	Special Development Fund (of the Government of Tuvalu)
LL	Longline	SDG	Sustainable Development Goal
LMMA	Locally-Managed Marine Area	SFO	Senior Fisheries Officer
MCS	Monitoring, Control and Surveillance	SKJ	Skipjack tuna
MCSWG20	MCS Working Group, FFA	SMC	Senior Management Committee
MFAT	Ministry of Foreign Affairs and Trade	SOP	Standard Operating Procedures
		SPC	Pacific Community

SRP	Sub-Regional Pool (of the VDS)
STCW	Standards of Training, Certification and Watchkeeping for Seafarers
TA	Technical Assistance
TCC	Technical and Compliance Committee
TDF	Tuvalu Development Fund
TFD	Tuvalu Fisheries Department
TFSP	Tuvalu Fisheries Support Programme (MFAT)
TKIII	Te Kakeega III: National Strategy for Sustainable Development 2015–2020
TMTI	Tuvalu Maritime Training Institute
TNOP	Tuvalu National Observer Programme
TNPF	Tuvalu National Provident Fund
TOR	Terms of Reference
TTFH	Tuvalu Tuna Fong Haur
TUSA	Tuvalu Sajo Joint Venture
UNDP	United Nations Development Project
UST	United States Tuna Treaty
UVC	Underwater visual census
VD	Vessel Day
VDS	Vessel Day Scheme
VMS	Vessel Monitoring System
VOI	Vessels of Interest
VSAT	Very Small Aperture Terminal
WB	World Bank
WCPFC	Western and Central Pacific Fisheries Commission
WCPO	Western and Central Pacific Ocean
WS	Workshop
YFT	Yellowfin tuna

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1 Background

1.1 The Tuvalu Fisheries Sector

Tuvalu is situated in the South Pacific Ocean between latitudes 5 and 9 degrees South and longitudes 176 and 179 degrees East, encompassing an Exclusive Economic Zone (EEZ) of 900,000 km² and a land area of 26 km². The islands of Tuvalu, all low lying atolls, are home to around 11,000 persons with over half the population living in the capital, Funafuti.

Subsistence activities dominate Tuvalu's fisheries sector. A wide variety of techniques are used throughout the island group to collect fish, crabs and shellfish, which are consumed, shared or informally bartered. In the past fisheries centres were established on most outer islands (OIs) with the intention of providing fishers with income earning opportunities, but most of these are no longer functioning. On the main island, Funafuti, artisanal fishing is limited to a small fleet of 4 to 5 m outboard powered skiffs, which mostly fish by trolling for tuna and by line fishing for reef fish.

About 75% of the fish landed in Tuvalu are ocean species; predominantly two species – skipjack tuna (SKJ) and yellowfin tuna (YFT). The remainder is made up of reef and lagoon species, with smaller amounts of bottom fish from deep slope areas. From census data it has been determined that 74% of households participate in reef fishing and 63% in ocean fishing. Studies in fish consumption over the past decade have resulted in estimates in fish annual per capita consumption of between 85 to 146 kg. Current annual fishery production, which is estimated at approximately 1,100 tonnes (or metric tons, MT), indicates that per capita fresh fish consumption in Tuvalu is of the order of 100 kg per year.

Tuvalu engages in the two key industrial tuna fisheries of purse seine (PS) and longline (LL). Fishing is generally undertaken by foreign fishing vessels (FFV) that are operating under access agreements and skipjack tuna make up the bulk of the catch. Fisheries licensing is now the major source of government revenue with a contribution of around AUD 26.3 million (47% of the 2017 budget) based on the combination of licence fees, selling of vessel days, transshipment fees, observer fees and joint venture dividends. So far it is also providing employment through the Tuvalu National Observer Programme (TNOP) and (to a lesser extent) employment of Tuvaluan crew on fishing vessels.

1.2 Purpose of this Report

This report describes the objectives, activities and results of the Tuvalu Fisheries Department (TFD) within the Ministry of Natural Resources (MNR) during 2017.

In September 2013 the Tuvalu Cabinet approved the Department's first three-year Corporate Plan (CP1) and associated reorganisation, effective as of 1 January 2014. The reorganisation led to significant changes in the Department's structure and functions. By the end of 2014 a new staff structure had been put in place (Figure 1), key corporate and operational documents had been developed, and a revised set of priority activities had been agreed.

In 2015 the Department prepared its first Annual Work Plan (AWP), consistent with CP1, to guide its activities during the year. The AWP proved over-ambitious, and was not fully delivered in 2015, hence continued to be used to guide the Department's work programme in 2016.

At the end of 2016, the Cabinet approved the Department's second Corporate Plan (CP2), covering the period 2017–2019, as well as a new AWP for the 2017 calendar year. The present report summarises the main achievements of the Department during 2017, as well as the challenges it faced, and in some cases continues to face. Where possible, activities are reported against the thematic areas identified in the 2017 AWP.

1.3 Vision

The guiding vision of the Department can be stated as follows:

- Bountiful inshore fisheries supporting livelihoods and providing healthy local food; and
- Sustainable oceanic fisheries providing strong revenue and satisfying jobs.

The physical and economic health of the Tuvalu population depends upon the health of its inshore and oceanic fisheries, which can be managed by Tuvalu. The health of oceanic fisheries cannot be managed by Tuvalu alone but requires regional and sub-regional cooperation.

1.4 Mission

The Department's mission is:

- To maximise social and economic returns to the people of Tuvalu through the sustainable management and wise use of Tuvalu's living marine resources.

On behalf of the people of Tuvalu, the Government, through its Fisheries Department, will act as a responsible custodian of oceanic or designated inshore fishery resources and fisheries rights so that they generate national revenue and sustainable employment opportunities. The Department will also support Kaupules / Falekaupules (island councils) to manage inshore fisheries to support livelihoods and provide local food security.

1.5 Objectives

The primary objectives of the Department are indicated in the second TFD Corporate Plan (CP2):

1. Tuvalu's national rights and interests are secured and protected within the regional purse seine and longline Vessel Day Schemes (VDS), whose integrity and development have been promoted by Tuvalu through cooperation with other participating coastal States.
2. Fisheries revenue to Tuvalu are maintained and further improved through the optimum allocation and pricing of Tuvalu's Vessel Days and associated purse seine and longline licences.
3. At sea employment for Tuvalu citizens (fishing vessel crew and fishery observers) has been increased significantly above present levels through the provision of appropriately trained personnel and the fullest application of local crewing licensing conditions.
4. Tuvalu is fully compliant with the requirements of the Western and Central Pacific Fisheries Commission (WCPFC) and other international fishery treaties to which it is a party.
5. Tuvalu meets the requirements of overseas market states in regard to illegal, unregulated and unreported (IUU) fishing and fishery product food safety.
6. Fishery surface patrols, aerial surveillance, observer coverage and other mechanisms are deterring and detecting IUU fishing activities, which are being effectively penalised through the Tuvalu legal system.
7. New fishery joint ventures have been negotiated between the Government of Tuvalu (GoT) and selected commercial fishing interests that provide increased employment for Tuvaluans and additional revenue streams to the GoT while minimising investment costs and risks.
8. The National Fisheries Corporation of Tuvalu (NAFICOT) has been reformed to comply with the provisions of the Public Enterprises (Performance and Accountability) Act 2009 and acts as a vehicle for the GoT's commercial fishery interests.
9. The relationship between the TFD and Kaupule / Falekaupule has been transformed such that Kaupule regulate local food fisheries supplying local needs, and the Department provides support in the form of data collection and analysis, and fisheries management advice.
10. Fish Aggregation Devices (FADs) are available to fishers throughout Tuvalu and provide increased food security, higher financial returns, improved sea safety, and reduced fishing pressure on inshore resources.
11. Small-scale fisheries increasingly target a more diverse range of ocean resources in order to reduce fishing pressure on coastal species.
12. The safety of small-scale fishers has been improved through the installation of VHF radio equipment and the development of systems to respond to emergencies.
13. The TFD has reliable information on coastal fishery resources in each island on which to base the management advice it provides to Kaupule.
14. Conservation areas, by-laws and other fishery management arrangements have been established in those coastal fisheries where this is a high priority.
15. Management plans for beche-de-mer, shark and other sensitive species are in place, if necessary through designation of these fisheries for management by the TFD under the MRA.
16. Improved office space, IT and internet facilities and other support arrangements have been established to allow improved delivery of TFD functions.
17. Appropriate TFD training and human resource management arrangements, including succession planning, have been implemented to support the optimum performance of the Department.

18. Continued fine tuning of the TFD's organisational structure, recurrent budget and donor support has taken place to ensure that the available human and other resources correspond to the Department's evolving needs.
19. Stakeholders and the general public are aware of TFD activities that affect them, and participate in them in a supportive way
20. Fisheries Department staff members and co-workers are able to access the information and knowledge needed for them to carry out their functions effectively.

These objectives are consistent with but updated from the objectives stated in Te Kakeega III (TKIII), the Government's National Strategy for Sustainable Development 2015–2020. There have been significant, rapid changes in the fisheries sector since the formulation of TKIII, and the objectives it contains are in need of revision.

Some of these objectives were achieved, or partly achieved during the year. However, objective 3 continued to be blocked by regional fishery politics within the Parties to the Nauru Agreement (PNA), while objective 5 remained subject to the judgements of the European Commission. These and several other objectives will be carried forward to the next plan period.

The fisheries sector is dynamic and subject to rapidly changing circumstances that may affect Tuvalu's fishery revenue. In many cases these issues require departmental action, sometimes substantial, which may not have been anticipated and thus not fully planned for. This emphasises the need for the TFD to remain responsive and flexible irrespective of the planning framework that is adopted.

1.6 Organisation

The TFD organisational structure, shown in Figure 1, was substantively revised as part of the Cabinet decision of September 2013, and has been modified from time to time since then to reflect the establishment of a small number of new positions. The Department now comprises:

- An Administration Section, comprising the Director and Deputy Director, several professionals with cross-cutting responsibilities (Legal Officer, Economist and Librarian / Public Relations Officer, Fisheries IT Officer) and the Executive staff members. The Administration Section is responsible, among other things, for recommending fishery policy initiatives, negotiating fishery access arrangements, and the establishment of joint ventures in which the Tuvalu Government has an interest.
- An Oceanic Fisheries Section, responsible for industrial fishery vessel licensing, managing the sale of fishery access rights, compliance with Tuvalu's obligations under international fishery treaties and conventions, and monitoring, control and surveillance of fishing activities within the exclusive economic zone.
- A Coastal Fisheries Section, responsible for inshore fishery resource assessment, monitoring, and providing support to Kaupule, fishers associations and other stakeholders in the management of coastal fishery resources and the marine environment, both in Funafuti and the outer islands.
- An Operations and Development Section, responsible for the running of the TFD vessels RV Manui and RV Tala Moana, construction and deployment of FADs, vocational training of fishers and fishing vessel crew, and other development-oriented activities.

Several new activity streams are expected to be developed in the coming years; for example, the establishment of arrangements for sanitary control of Tuvalu's fishery product exports in order to meet the food safety requirements of market states. These will be located in the appropriate sections of the TFD as they are implemented.

2 Fisheries Department Resources

2.1 Staffing

The TFD reorganisation in 2014 resulted in some former positions being re-designated, several frozen positions being unfrozen, and the creation of a small number of new posts. At that time the Department comprised 42 staff members: 11 (including executive staff members) in the Administration Section, 9 in the Oceanic Fisheries Section, 10 in the Coastal Fisheries Section, and 12 in the Operations and Development Section. In late 2016, two new positions (IT Manager and Maintenance Technician) were approved by Cabinet. Both of these positions were established in anticipation of the specific requirements of the new TFD building (see Section 2.2). The organisational structure of the TFD Public Service establishment at 21 December 2016 was therefore as shown in Figure 1.

In addition to the public service establishment, several externally funded projects continued to operate in 2017 and employed staff members who are housed in the fisheries buildings, and work as part of the organisation. These included:

- A full time Fisheries Department Advisor (since 2012), and a part-time Inshore Fisheries Advisor (since 2015) engaged by the NZ Ministry of Foreign Affairs under the Tuvalu Fishery Support Programme (TFSP), and responsible to the Director of Fisheries. These advisors are expected to finish their contract with Tuvalu Fisheries by July 2018.
- Two fisheries officers were recruited in 2014 under the Global Environment Facility (GEF)-funded National Adaptation Programme of Action (against Climate Change) Phase 2 (NAPA II) project for the four-year duration of the project. These officers work under the supervision of the Principal Fisheries Officer (PFO) of the Coastal Fisheries Section and the PFO of the Operations and Development Section. In mid-2017, one of these officers took up a permanent position in the Fisheries Department, leaving just one fisheries officer still working under the programme.
- Eight contract-employed officers and crew of the RV Tala Moana were also recruited using NAPA II funding in early 2016 after delivery of the new vessel to Funafuti in January 2016.
- A Project Coordinator, Project Accountant and Project Officer were recruited in 2016 for the World Bank-funded Pacific Regional Oceanscape Programme (PROP) in Tuvalu.

The Department also manages a pool of 79 trained and qualified fishery observers who are contracted to work on board fishing vessels when required (which was an increase in early 2017 from 67 observers). The number of qualified Debriefers also increased to 14 including four Debriefers Assessors, relieving the shortage that hampered the programme in 2016. However, there is a need to properly plan the placement of them on fishing vessels so there are enough Debriefers on the island to carry out debriefing and other higher level functions. In addition to the 44 officers in the official establishment, there are, therefore, a further 89 non-established staff members working for the TFD on either a full-time or part-time basis, bringing the total staff complement to 133.

There was an increase in staff movements in 2017, which interfered with delivery of the work programme. The former PFO for Coastal Fisheries resigned to take up the Tuvalu Coastal Adaptation Project Coordinator position; the Principal Fisheries Officer (PFO) Coastal post is now vacant and expected to be filled in early 2018. The Fisheries Officer (FO) Coastal Fisheries position also became vacant when the former FO Coastal Fisheries Management for Outer Islands was promoted to another position within the Department. The FO for Training and Development under the Operation and Development Section departed on long-term (three years) study in 2015, and the position was back-filled in 2016. The original officer is expecting to finish her study by the end of 2018. The Fisheries Legal Officer also left the Department at the end of the year to take up a job elsewhere in the region, and the Support Assistant for the Oceanic Fisheries Section also resigned leaving these three posts still vacant at the end of 2017. Staff turnover at the end of 2017 was recognised as a significant problem that is likely to affect the work of the Department in 2018.

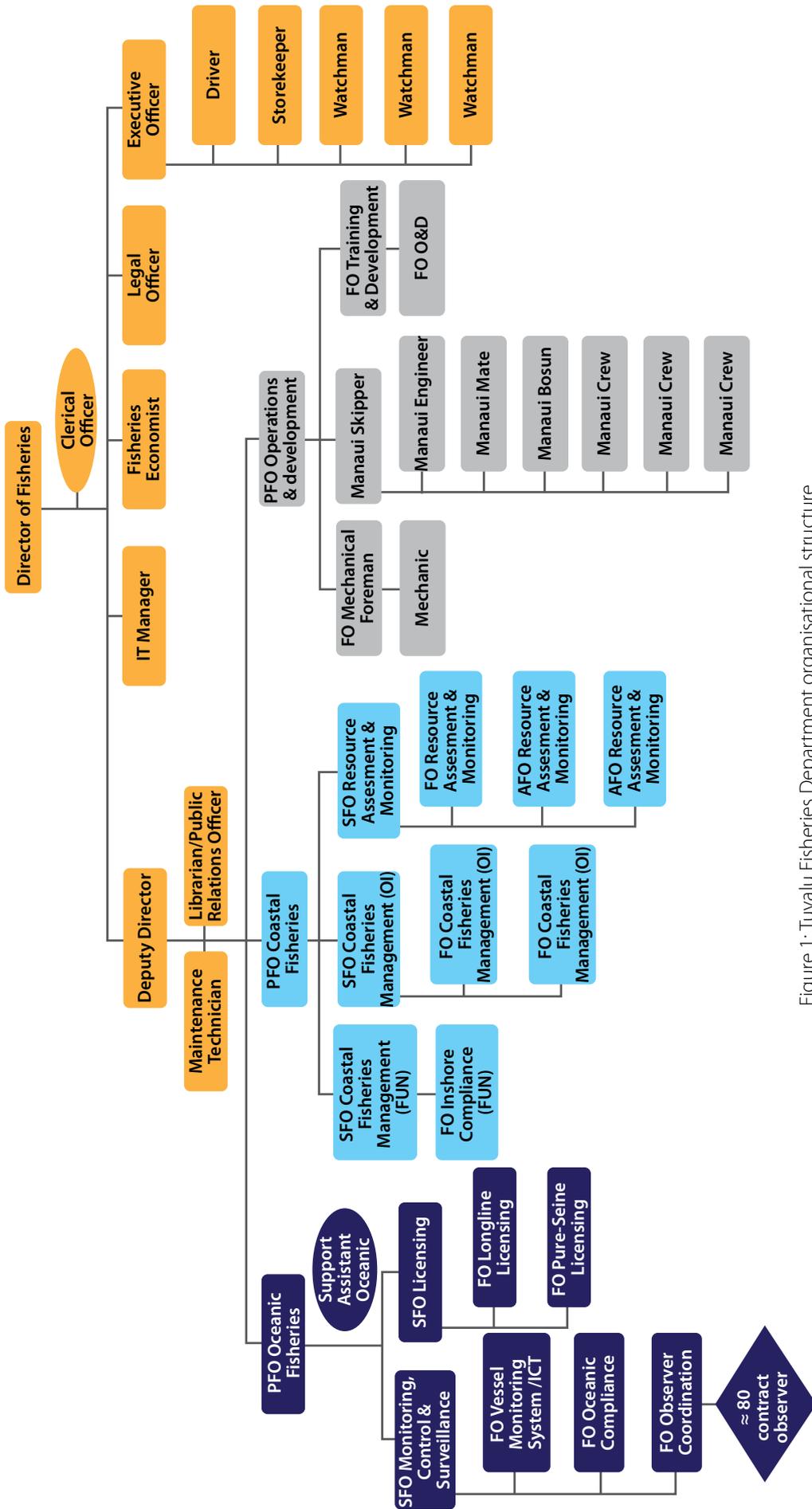


Figure 1: Tuvalu Fisheries Department organisational structure

2.2 Assets and Facilities

Until the end of 2017 the TFD staff members were scattered among five separate office buildings, some of which were in a serious state of disrepair. The unsatisfactory office environment impeded the proper functioning of the Department during 2017, preventing effective communications and personnel management, and had a negative effect on staff morale.

In recognition of these issues, the New Zealand Government agreed to support the construction of a new office building for the Department (Figure 2). The new building was constructed during 2017 at Teone on the site of one of the Department's old, decrepit buildings.

It was originally expected that the new building would be completed by October 2015, but several delays occurred, including an overall budget cut by the New Zealand Government, which then led to a need for a re-design and re-tendering of the works. The construction of the new building commenced in early 2017 and was substantively completed by the end of 2017, although some finishing work (electrical and network connections, some internal drains, etc.) were not yet finished. Nevertheless the TFD staff commenced moving into the new building at the end of 2017 and it is expected that the relocation will be complete in early 2018. The Department will then benefit greatly from the improved facilities available to it.

The Department runs the RV Manau, an 18-metre fibreglass vessel provided in 1982 by the Japanese Overseas Fishery Cooperation Foundation (OFCF). The RV Manau was originally designed as a fish collection vessel to service outer island community fisheries centres, but is now used for deployment of FADs, transportation of fisheries staff members to the outer islands, and charters. The RV Manau is increasingly suffering mechanical problems and breakdowns and will soon reach the end of its service life. Discussions are currently under way with OFCF about a possible replacement of the R Manau, which it is hoped will become available in 2019.

The NAPA II and R2R projects on the other hand jointly procured an additional project vessel in mid-2015, named the RV Tala Moana, which is more suited to passenger transport and outer island field work, and was received in January 2016. The vessel is operated by the TFD on behalf of the Government of Tuvalu, and is made available for charter to other organisations when not in use for fisheries or NAPA II / R2R work.

There is also a collection of vehicles, including crane trucks, motorbikes and scooters, freezers and refrigerators, and an ice machine for supplying ice to fishers. Several new boats with outboard motors and trailers, laboratory and IT equipment and other items were procured using PROP and TFSP funding.

Materials needed for the construction of FADs were donated and funded by SPC through an EU Devfish2 project, and by NAPA II. FADs are rigged and deployed by Fisheries Department staff and local fishers as required, while the rest of the equipment is stored in containers until needed.

The Department also has various items of laboratory and other apparatus used for fishery research purposes, which was previously donated by the Japanese International Cooperation Agency (JICA). Tables and chairs, book shelves and cabinets have been donated by the Korean Overseas Fisheries Association (KOFA), while others have been locally made and purchased by the Department. A complete set of furniture for the new office building was procured using funds from the TFSP and the Tuvalu Development Fund financed by the Government of Taiwan.



Figure 2:
New TFD office building
(view from the roadside)

2.3 Budget

Fisheries licensing, access fees and investments now generate a significant proportion of Tuvalu Government revenue: estimated income was AUD 14.8 million in 2014, AUD 26 million in 2015, and AUD 36 million in 2016, AUD 26 million in 2017. 2018 projections are at similar levels to those seen in 2017. The Fisheries Department plays an active and critical role in maximising these returns through its ongoing participation in regional and bilateral fisheries negotiation, and the development of strategies intended to promote Tuvalu's economic interests.

Despite its importance in generating Government revenue, the TFD's recurrent budget allocations are far less than the true cost of running the organisation. Overall 81% of the 2017 allocated budget of AUD 639,926 was for staff salaries, and just 19% (AUD 151,316) was for operations. If this is to continue in the future, the Department will be unable to meet its goals under the government roadmap or its own planning documents (CP2 and AWP) and may not be able to maintain or improve the benefits that the country derives from its fisheries.

Fortunately, the Department has successfully negotiated substantial amounts of additional funding support to the fisheries sector from several major development partners for use in the medium term.

These are as follows:

- The New Zealand-Tuvalu Fishery Support Programme (TFSP) is providing operational support funding of NZD 1,336,800 over the five-year period that commenced on 31 May 2014. The TFSP has also provided new office facilities for the Department, and continues to support ongoing technical assistance services;
- The World Bank Pacific Regional Oceanscape Programme (PROP), approved in December 2014, will provide a total of USD7,910,000 over a six-year period that commenced in June 2015;
- The GEF-funded NAPA II is providing approximately USD 2.1 million to support fisheries development and food security activities in Tuvalu's outer islands over the four-year period that started in early 2015.

Together these programmes support a wide range of activities by the Fisheries Department, while working in close collaboration with other partner agencies, including the Maritime Wing of the Tuvalu Police Department, the Tuvalu Maritime Training Institute (TMTI), and the Kaupule on each of Tuvalu's islands. Activities to be supported by all three programmes are fully integrated into the Department's Work Programme, under which most activities are funded by a combination of donor and recurrent budget allocations.

Additional support continues to be available through the main fisheries sector regional organisations (Forum Fisheries Agency (FFA), Secretariat of the Pacific Community (SPC), Parties to the Nauru Agreement Office (PNAO) and Western Central Pacific Fisheries Commission (WCPFC)). Technical assistance, training and small project funding is also accessible from time to time through a number of bilateral and multilateral partner agencies and non-government organisations (NGOs). However, the TFSP and the PROP have greatly reduced the Department's dependence on this type of small-project funding, which can be unpredictable and, sometimes, more closely aligned with regional rather than national priorities.

2.4 Internal Management, Monitoring and Reporting

The TFD work programme in 2017 was strengthened through continued improvements to internal management and coordination arrangements. This was done primarily through the Senior Management Committee (SMC), which was first established in 2015. The SMC comprises the TFD Director and Deputy Director, the three Principal Fisheries Officers, the Fisheries Legal Officer, Fisheries Economist, Fisheries Information Officer, PROP Coordinator, and the two NZ-funded Technical Advisors (TAs). The SMC met four times throughout the year to discuss and review implemented activities against the 2017 AWP and other internal matters.

The effectiveness of the SMC was further improved through quarterly meetings of all TFD staff members, which were held to discuss the implemented activities, as well as professional and social issues within the Department.

A Project Advisory Committee (PAC) for the TFSP project was formed in 2014, which comprised the SMC members, representatives from NZAID, UNDP, NAPA II, and the Finance Department. Unfortunately it has proven difficult to convene meetings of this group, and arrangements have now been made for the SMC to act as the steering committee for the TFSP, as well as the PROP and other externally funded projects.

Quarterly progress reports were produced by the TFD, both for GoT internal purposes and to respond to the requirements of NZAP, World Bank and UNDP / GEF, the Department's major external development partners.

The Department completed two out of three quarterly reports for internal purposes only.

3 Administration Section Activities

3.1 General

Many of the activities of the Administration Section during 2017 were ongoing from previous years. These included recruitment of personnel, staff appraisals, and reporting on the activities of the staff. Many of the Administration Section staff members were involved in regional meetings throughout the year. In addition, with the new departmental structure to promote effectiveness, one of the Fisheries Department's obligations is for the fisheries information to be shared with the public; unfortunately the fisheries library remained in poor condition during 2017 while waiting on completion of the new building.

3.2 Marine Resources Act Review

The principal piece of fisheries legislation in Tuvalu is the Marine Resources Act 2006. The Marine Resources (Amendment) Act 2012 (MRA) implements a number of changes to the principal Act to accommodate Tuvalu's international, regional and national rights and responsibilities in fisheries conservation, management and development. The Amendment significantly increased the level of penalties for various types of offences under the Act.

The MRA underwent further revision in 2016, partly to respond to issues raised by the European Commission in regard to Tuvalu's control of foreign fishing vessels operating in its waters. Several stakeholder workshops were held to discuss the Act's provisions, and technical assistance was sourced from FFA. The revised Act was approved by the Tuvalu Parliament in late 2017.

3.3 Fishery Access Negotiations

Several of the staff members of the Administration and Oceanic Fisheries Sections are involved in fishery access negotiations, which take place between the TFD and distant water fishing companies / nations interested in fishing within Tuvalu's EEZ. Negotiations usually take place in the second half of the year before the licence period; often quite late in the year. For 2016, most of the negotiations were carried out in mid- to late-2015 to discuss and agree with the terms of agreement between parties, the licence period and fee, number of fishing days and fee for each fishing day and other types of necessary fees such as transshipment fees, observer fees, etc. Fishery negotiations for the 2018 fishing year mostly took place in the fourth quarter of 2017.

3.4 Joint Ventures

The Government of Tuvalu has been a partner in the Tuvalu Tuna Fong Haur (TTFH) purse seine joint venture with the Fong Seong fishing Company of Taiwan since 2009. Although the joint venture (JV) has performed well over the years and paid substantial dividends to the GoT, it was affected during 2017 by serious financial difficulties of the Taiwanese partner. Cash flow problems led to the JV vessel Taumoana being tied up in Majuro, Marshall Islands, as of May 2017, where it was subsequently arrested in response to claims by Fong Seong's creditors. However, the vessel belongs to TTFH, not Fong Seong, and the GoT is currently engaged in a legal battle to regain control of the vessel so that it can be back in operation under different management arrangements.

During the course of 2017, TFD staff members worked with other GoT officials to conclude arrangements for a second JV called the Tuvalu Sajo Joint Venture TUSA with the Korean fishing company Sajo. A second-hand Sajo purse seiner was moved into the JV, renamed the FV Taina, and has been fishing since the fourth quarter of 2017. No information is yet available on the vessel's performance.

3.5 Review of the National Fishing Corporation of Tuvalu

One of the requirements under the Public Trading Enterprise (PTE) Act 2009 is that the National Fishing Corporation of Tuvalu (NAFICOT) has to be registered as a company under the Companies Act. To date this has not occurred and NAFICOT has therefore not fully completed its transition to its new PTE status, and it has not met its reporting obligations under the PTE Act. The Government of Tuvalu's central agencies (the Ministry of Finance and Economic Development [MFED], the Office of the Attorney General [AG], and the Public Enterprise Reform Management Unit [PERMU]) have raised a number of concerns about NAFICOT and have proposed that an investigation be undertaken into its operation. In parallel, MNR requested that FFA review NAFICOT and its future direction as a PTE.

In 2017 Prime Consulting was commissioned by FFA to carry out a series of actions that are necessary to complete the restructuring. Consultations with various key stakeholders were conducted during the three visits made by the Prime Consulting team, which started in June and completed in November.

Later in the year, the Cabinet's endorsement was obtained on the proposed NAFICOT submissions: Governance structure, NAFICOT's accounts of 2016, Articles of Association and Memorandum of Association, Corporate Plan, Budget for 2018, and the inclusion of the Permanent Secretary as NAFICOT's Board Director. Registration of NAFICOT was undertaken towards the year's end. It is envisaged that the recruitment of Board directors and management will be implemented in 2018.

3.6 Participation in Regional Meetings and Workshops

Most of the regional meetings in which TFD participates are focused on the management of tuna fishery, or on technical issues concerning that fishery. Annually, there are more than 10 regional meetings in which Tuvalu has to attend and participate in. These consist of: PNA official and ministerial meetings; FFC officials and ministerial meetings; WCPFC Annual Sessions, Technical Compliance Committee (TTC) and Scientific Committee (SC) meetings; the annual FFA Management Options Consultation (MOC); and a range of technical meetings on MCS, observer programme management, fishery trade and economics, and others.

Most of the staff members that are involved in these meetings are from the Administration and Oceanic Fisheries Sections. There are relatively few regional or international meetings that concern the staff of the Coastal Fisheries Section, and in some ways this is unfortunate as regional meetings provide a good opportunity for participants to gain knowledge and develop their personal capacity. However, the first Regional Technical Meeting on Coastal Fisheries, which was organised by SPC at the request of Tuvalu, took place in December 2017. The meeting was well-attended by TFD Coastal staff members and served as a valuable opportunity for information and knowledge exchange. It is hoped that SPC will stick to its commitment to repeat this meeting on an annual basis.

The list of attendees to regional and international meetings is shown Annexe 9.2 on page 43.

3.7 Staff Training and Workshops

In addition to the meetings noted above, TFD staff members attended various training workshops, in Tuvalu and overseas, in order to build up their capacity in areas relevant to their work. On the Oceanic Fisheries side, most of the training workshops were to do with the technical side of the Vessel Day Scheme (VDS), data collection and analysis, MCS, and other related tuna workshops. In the Coastal Fisheries area, a study tour to New Zealand was arranged for the staff so that they could gain experience in the roles and functions of a fisheries agency in a country where fisheries management is better established. Other training activities relevant to Coastal Fisheries included a FAD workshop, an oil spill management workshop, and in-house lectures delivered on a weekly basis for most of the year.

3.8 Public Information and Awareness Programmes

Public awareness programmes and maintaining the fisheries department library was part of the TFD major and ongoing activities for the year 2017. The Department conducted 10 radio programmes to discuss the activities each section has implemented. Several meetings and workshops were conducted with local communities and fishers to discuss the status of resources, fishing skills, fish processing and sea-safety initiatives. Through the media, the Department covered all these areas for awareness purposes. A complete listing of the radio shows is given in Annexe 9.3 on page 45.

Posters on different fish species, and other fisheries related posters, were distributed to stakeholders in Funafuti and in the outer islands.

Other fisheries promotion activities in 2017 included the ongoing maintenance of the fisheries website with fisheries vacancies advertised, fisheries progress reports, and the fisheries newsletter published biannually. TFD's recent related reports were uploaded to the Department's website (www.tuvalufisheries.tv/library) under the library category. Hard copies were distributed to all stakeholders and to the public. A few fisheries related documents were collected from the southern islands and the northern islands during regular outer island 'metronome' trips. These fisheries related documents were scanned and converted into e-copies, and are stored and maintained within the fisheries library for easy access. The fisheries library was re-opened in 2014; prior to that, the library had been inaccessible since 2007. The library holdings were generally scattered, with the resources damaged by the sea breeze and moisture from a leaking roof and storms in January 2016. Only a few of the holdings were still in good condition and these have now been moved to an alternative office space in the Coastal building until the new fisheries building was completed in late in 2017. All damaged library materials / resources were discarded.

Operating and managing the library is challenging; especially for a library that has been moved to many different locations over the years. In 2017 the Librarian / Information Officer worked on improving the fisheries library and some of the tasks achieved were as follows:

- Collection, maintenance and dissemination of fisheries publications;
- Better organisation of the physical books and documents collection; and
- Fisheries library marketing activities, including the Fisheries website, public awareness programmes and newsletter (biannual Tuvalu version only).

The current fisheries library repository includes 138 fisheries closed files that have now been indexed (with still more to index). The Tuvalu fisheries library holds fisheries publications with 478 print copies that are concerned with fisheries development (more are to be collected), annual reports, research reports and some of the staff members' trip reports that are written by local staff members, and a few of the general collection. There were also a great number of electronic documents (soft copies) in pdf or MS Word formats. These publications include annual reports, research reports, trip reports and also publications of other organisations, which based their reports and research on Tuvalu fisheries.

Although the Tuvalu fisheries library is gradually developing, there is a need to improve some other part of the fisheries library such as the following:

- Develop a database to search and access the fisheries library for easy and quick access to the collection; and
- Training to improve library development and management, and public relations skills.

Library activities are very far behind due to the movement to different locations over the past years, limited internet connection and lack of relevant IT expertise on library systems. Once the new office building is completed, it is expected that all these issues will be resolved.

4 Oceanic Fisheries Section Activities

4.1 General

Most of the activities included in the Annual Work Plan for 2017 for the Oceanic Fisheries Section were successfully implemented as planned. The exception was the development of Standard Operating Procedures (SOPs) and Memoranda of Understanding (MOU) under the National Plan of Action for Illegal, Unregulated and Unreported fishing (NPOA IUU). This was due to the unavailability of Forum Fisheries Agency (FFA) staff to assist the Oceanic staff in implementing these activities.

The staff attended various major regional meetings, including the Scientific Committee (SC), Technical and Compliance Committee (TCC) and the Western and Central Pacific Fisheries Commission (WCPFC), which were important for capacity building. Monitoring, Control and Surveillance (MCS) staff continued to collaborate with Maritime police in regulating and apprehending vessels suspected of IUU fishing activities.

In 2017 the Oceanic Fisheries Section came across a number of challenges, including a lack of staff members and observers to do data entry and monitoring of transshipments in port (transshipment in Funafuti has increased greatly in the past two years). Oil spills in port emerged as one of the major issues, and improved cooperation among the relevant departments will be necessary to address this issue.

In terms of staffing, the new Senior Fisheries Officer (SFO) for Monitoring, Control and Surveillance (MCS) and the Compliance Officer were recruited in early May 2017. All the positions within the section were filled at that time, resulting in nine staff members altogether. However, the Support Assistant for Oceanic Fisheries resigned in August 2017, reducing the number of staff members to eight. In late December, the PFO Oceanic resigned, taking up a post in Tokelau Fisheries; at the same time the FO Licensing and the Observer Coordinator left for long-term training at the end of 2017. The loss of these officers will require temporary posts to be recruited early in 2018.

The Tuvalu Fisheries Department issued fishing permits / licences to its bilateral partners and multilateral fishing partners from China, Korea, Taiwan, Japan, Fiji, USA, Tuvalu flagged vessels and also vessels operating under the FSM Arrangement and US Treaty. The normal routine for all foreign fishing companies that were interested in fishing in Tuvalu waters involved their signing of an access agreement with the GoT through the Fisheries Department (this is a legal requirement under the Marine Resources Act). During 2017 a total of 357 fishing vessels were licenced for fishing in Tuvalu waters (Table 1). These vessels including purse seine (PS), longline (LL), and other supported vessels (e.g. fish carriers).

Table 1: The number of licences issued by gear and vessels (fish carriers and bunkers) for the last five years

Year	Longline	Purse Seine	Pole and Line	Fish Carrier	Bunker	TOTAL
2013	32	96	13	5	3	149
2014	43	146	12	15	3	219
2015	26	188	1	34	7	256
2016	66	165	3	41	1	276
2017	115	202	0	40	0	357

In most cases licences are issued on an annual basis, except for 54 longline vessels that applied for six-month licences and only 11 vessels that applied for a one month licence in December 2017. There were no bunker or pole and line vessels operating in 2017. Figure 3 below shows the breakdown of vessels licensed in Tuvalu waters by flag and gear type for both bilateral and multilateral agreements for 2017. The PS vessels including 86 FSMA vessels, 34 UST and 82 vessels licensed from bilateral partners.

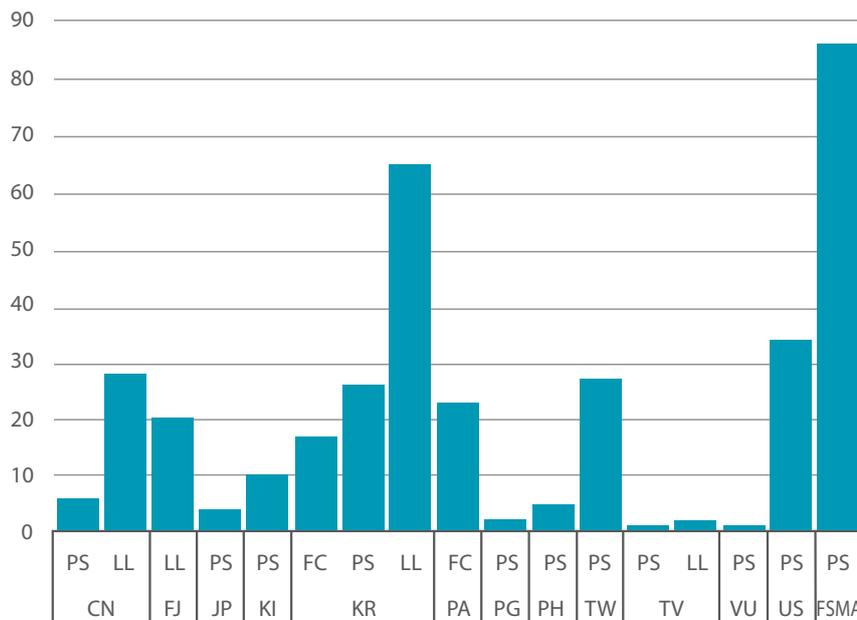


Figure 3: Annual number of fishing vessel licences by flag for 2017

PS=purse seiners; LL=longliners; FC=fish carrier; CN=China; FJ=Fiji; JP=Japan; KI=Kiribati; KR=Korea; PA=Panama; PG=Papua New Guinea; PH=Philippines; TW=Taiwan; TV=Tuvalu; VU=Vanuatu; US=United States of America; FSMA=FSM Arrangement.

4.2 Catch by Tuvalu National Fleets

4.2.1 Domestic fleets

Tuvalu had five flagged vessels that actively fished in the Western and Central Pacific Ocean (WCPO) in 2017. There were two longliner vessels, two purse seiners (FV Taina is a new JV) and one bunker vessel on the WCPFC Register of Fishing Vessels (RFV) (Table 2).

Table 2: Tuvalu (TV) flagged vessels

Vessel Name	Flag	Registration No.	Vessel Type	IRCS
Fong Seong 888	TV	29489613	Bunker	T2MZ4
Pakasoa	TV	23011010	Longliner	T2RB3
Tuipuga	TV	23951010	Longliner	T2TT3
Taumoana	TV	19930909	Purse seiner	T2FA3
Taina	TV	34128217	Purse seiner	T2BX5

4.2.2 Purse seine

In 2017, Tuvalu purse seine vessels caught an estimated total of 1605 MT in the Convention area (Table 3 and Figure 4). Large data gaps on the catch were due to less data entry than normal into the database system because there were no specific staff members allocated for the task. Skipjack tuna had the highest catches within the WCPFC Convention of 96.3% (1,545 MT) compared with 3.7% (60 MT) for yellowfin tuna and none for bigeye tuna. It should be noted that the catch report from the fishing operators might not record the exact catch for bigeye tuna.

Table 3: Provisional catch estimates (MT) for Tuvalu PS fleet, in the WCPO (2013–2017) (Source: TUFMAN 2)

Year	Bigeye (MT)	Skipjack (MT)	Yellowfin (MT)	TOTAL (MT)
2013	67	10,282	539	10,888
2014	11	5,593	216	5,820
2015	0	5,362	108	5,470
2016	0	5,970	140	6,110
2017	0	1,545	60	1,605

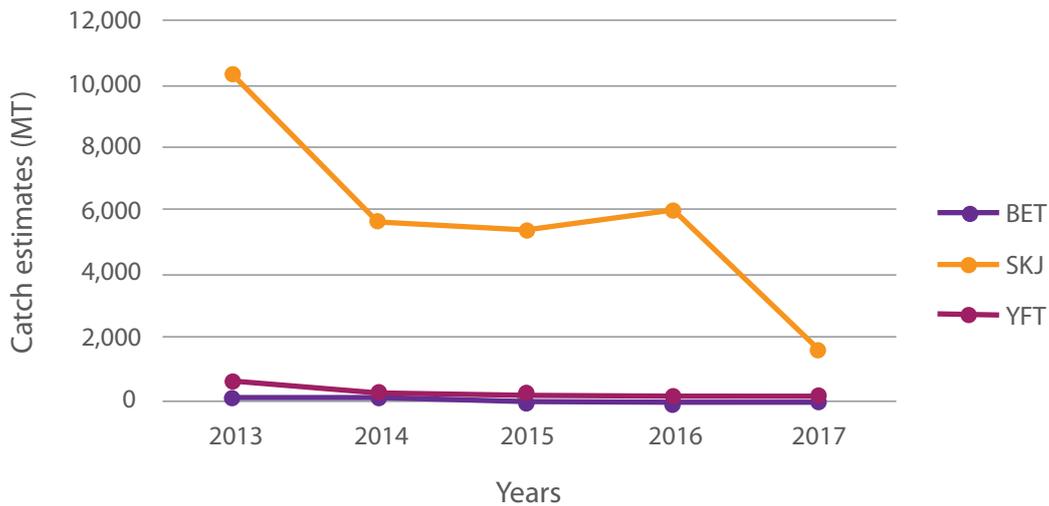


Figure 4: Provisional catch estimates (MT) for Tuvalu PS fleet, in the WCPO (2013–2017)

4.2.2 Longline

In 2017, Tuvalu longline flagged vessels estimated a total catch of 505 MT in the Convention area (Table 4 and Figure 5). Albacore tuna had the highest catches in 2017, accounting for 48.1% of the catch (243 MT). The catch of yellowfin tuna was 29.7% of the catch (149.8 MT), bigeye tuna 16.7% (84.6 MT), with other species including billfish species at 4.6% (23.1 MT).

Table 4: Provisional catch estimates (MT) for Tuvalu LL fleet, in the WCPO (2013–2017) (Source: TUFMAN 2)

YEAR	ALB	BET	SKJ	YFT	BILLFISH	TOTAL
2013	168.5	120.0	5.0	113.9	29.5	436.5
2014	85.2	219.2	5.3	215.7	31.8	557.2
2015	98.2	204.6	7.3	174.8	22.9	507.8
2016	52.2	104.3	3.4	125.3	15.0	300.2
2017	243.1	84.6	4.6	149.8	23.1	505.2

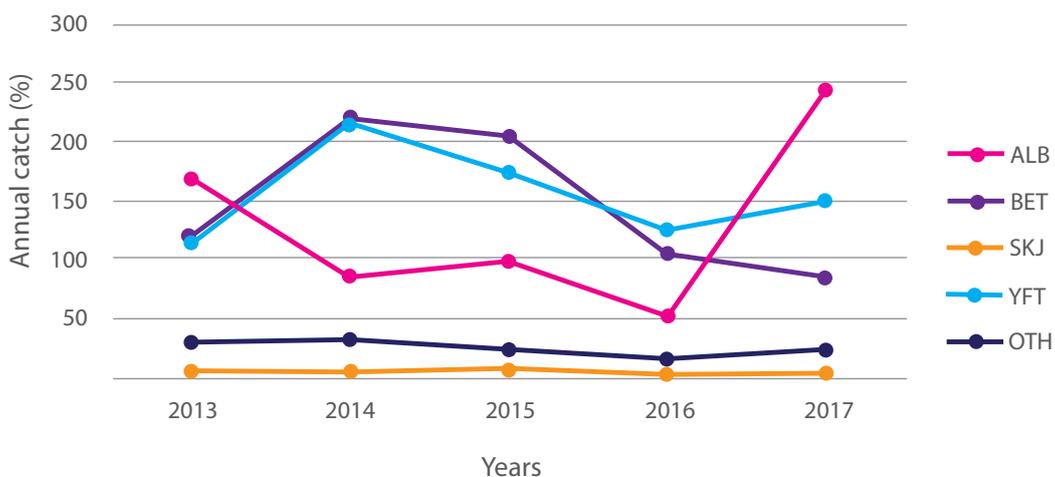


Figure 5: Provisional catch estimates (MT) for Tuvalu LL fleet, in the WCPO (2013–2017)

4.3 Catch from Foreign Fishing Fleets in National Waters

4.3.1 Annual catches from purse seine fleets in Tuvalu's EEZ

In Figure 6, skipjack tuna had the highest catches from Tuvalu's EEZ of 52,959.71 MT (90.2%), 4,966.28 MT (8.5%) for yellowfin tuna and 770.36 MT (1.3%) for bigeye tuna. The total annual catches of tuna from purse seine fleets in Tuvalu's EEZ in 2017 were 58,696.35 MT.

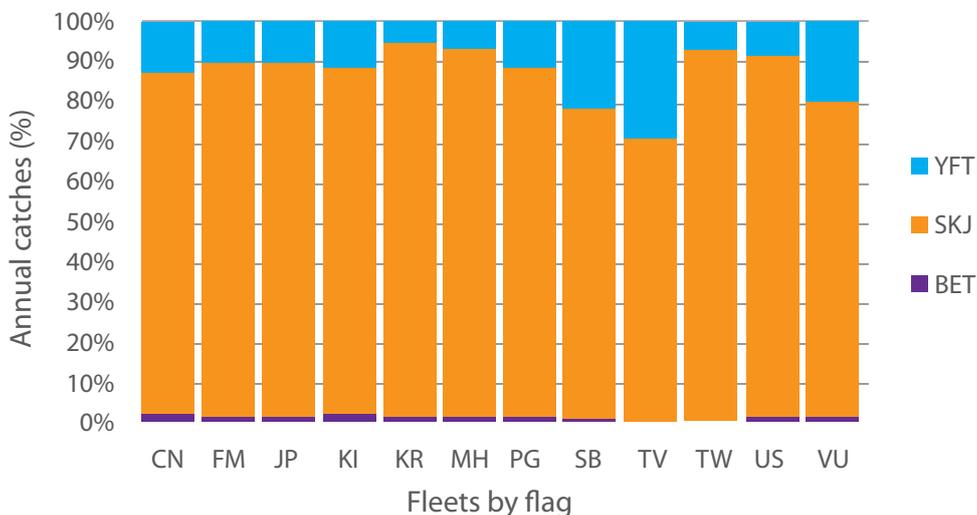


Figure 6: Annual catches (MT) from PS fleets in Tuvalu's EEZ in 2017

4.3.1 Annual catches from longline fleets in Tuvalu's EEZ

In comparison to longline fleets, Figure 7 shows that the most dominant catch species yellowfin tuna of 1,755.37 MT (44.9%), 1,712.94 MT (43.8%) of albacore tuna and 441.15 MT (11.3%) of bigeye tuna. With total annual catches from longline fleets in Tuvalu's EEZ of 3,909.46 MT.

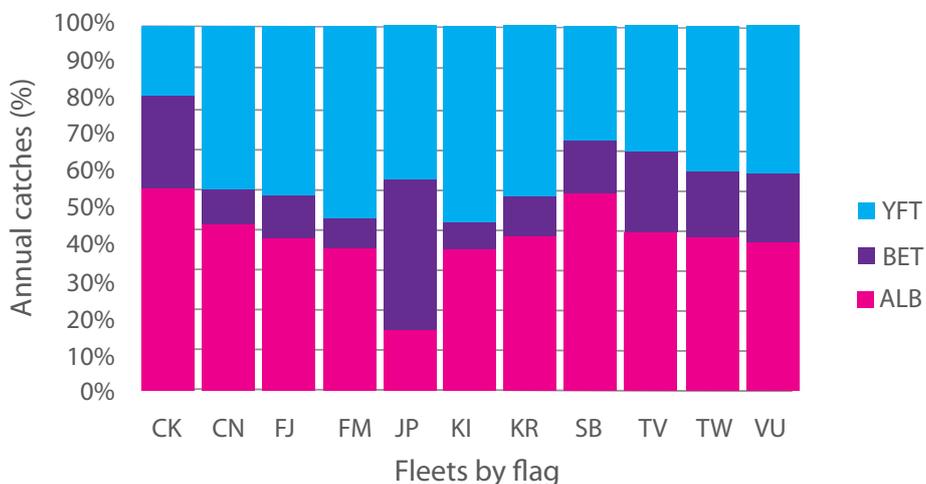


Figure 7: Annual catches (MT) from LL fleets in Tuvalu's EEZ in 2017

4.4 Fishing Catch and Effort Distribution for Tuvalu Flagged Vessels (PS and LL)

The fishing catch and effort distribution in 2017 from PS vessels for tuna species with high catches of skipjack were mostly found in the area of high seas between the EEZs of the Gilbert and the Phoenix Islands of Kiribati. However, for the longliners, most of the fishing catch and fishing efforts were found between Tuvalu's EEZ, eastern high seas and Phoenix Islands, some with low catch and effort were found in the Eastern High Seas Pocket 2 (HSP2) and Fiji Islands EEZ.

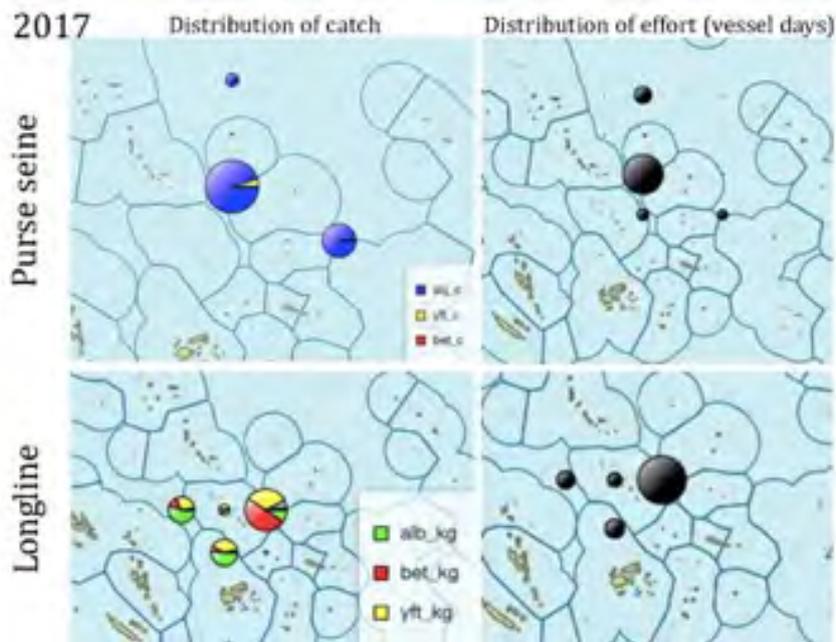


Figure 8: Tuvalu national PS and LL fleets operations within WCPO area in 2017 (Source – Dorado, TUFMAN 2)

4.5 Fishery Revenue

4.5.1 Fishing licences

The total fishery revenue from fishing licence, access, VDS and other fees is generated to an amount of more than AUD 26 million in 2017. There is a reduction in revenue compared with 2016; this may be due to unsold days from Tuvalu Party Allowable Efforts (PAEs) for 2017 of 18% of total PAEs. In Figure 9, the highest revenue came from bilateral partners including access fees and vessel days of AUD 13.6 million (51%), UST of AUD 7.9 million (29%), transshipment fees of AUD 1.6 million (6%) for 2017. There were also some outstanding revenues for 2016, including licence fees for longline vessels and support vessels (such as fish carriers), as well as fines and administration fees of AUD 1.4 million (5%) and AUD 1.2 million (5%), respectively.

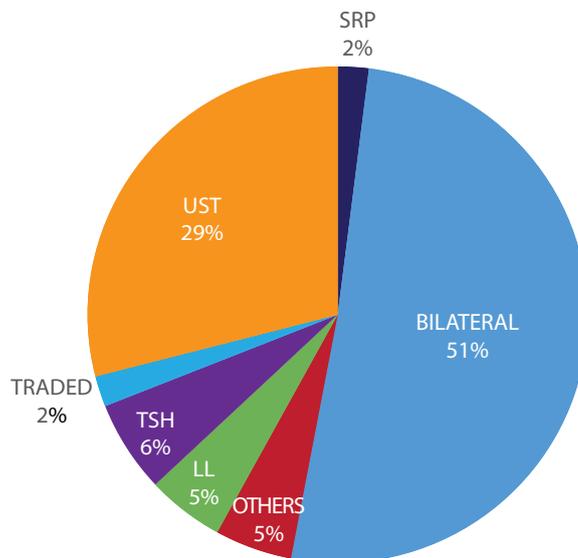


Figure 9: Revenue by licensing category for 2017 (AUD)

Sub-regional pooling (SRP) vessel day arrangements accounted for revenue of AUD 421,000 (2%) and vessel day trading an additional AUD 678,000 (2%). In a breakdown of the trading days, there were 47.5% for trade out and 52.5% trade in of vessel days to PNA member countries such as FSM, Nauru and PNG.

4.5.2 Observer levy

The total amount of observer levy for 2017 was AUD 908,752.99. This portion from observer fees into the Tuvalu Development Fund then warrants monthly into the observer fund. The observer fees are very high in January of AUD 346,684.08 (Figure 10) because most of the fishing licence and observer fees are received by the Department in the beginning of the year. This fund was used for the observer advances and final payments.

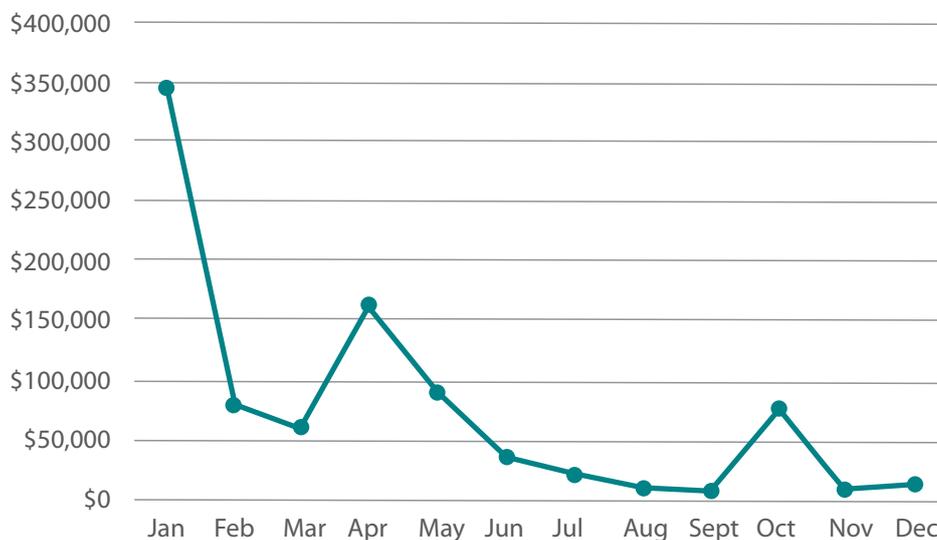


Figure 10: Observer levy for 2017 (AUD)

4.6 Transhipment

The Funafuti Port has become a popular port for transhipment in the last year or two. This has led to an increased number of fishing vessels from distant water fishing nations coming into Tuvalu waters – in particular the Funafuti Port – to offload and tranship their catches to fish carriers. The increase in transhipment activities within the Funafuti Port has generated high returns and revenue for the GoT by means of transhipment fees, port charges, and employment for the local people.

For fisheries, in particular MCS officers, the increase in transhipment activities allows for MCS officers to undertake their duties and responsibilities in port rather than at sea. This is a safe and easy alternative as MCS officers are able to seek the assistance of other colleagues and able to promptly trigger an investigation if an infringement is identified.

4.6.1 Transshipment total revenue

The table below illustrates the total revenue generated from transshipment fees and the activities conducted in Funafuti Port for 2017. The amount of transshipment fees received for each month has been settled until August, with October to December not yet being paid due to delays in remittance from the companies concerned. In September there were few transshipment activities done in port, due to a three-month FADs closure from July to September. The Compliance Officer who is in charge of transshipments must keep on reminding the companies of their outstanding fees. Otherwise all the transshipments in port will cease, as mentioned in the Article 5 (5.5) of the AA of PS for 2018.

Table 5: Revenue from transshipment fees for 2017

Month	Paid	Unpaid	Total Payable AUD
January	\$117,085	Clear	\$117,085
February	\$90,300	Clear	\$90,300
March	\$90,660	Clear	\$90,660
April	\$74,590	Clear	\$74,590
May	\$141,150	Clear	\$141,150
June	\$63,565	Clear	\$63,565
July	\$69,630	Clear	\$69,630
August	\$22,650	Clear	\$22,650
September	-	-	-
October	\$347,908	\$21,110	\$369,018
November	\$240,375	\$52,765	\$293,140
December	\$125,050	\$65,380	\$190,430
TOTAL	\$1,382,963	\$139,255	\$1,522,218

4.6.2 Number of transshipments and total catch offload in Funafuti Port

Figure 11 below shows the trend for transshipment that was done in port for 2017. The peak number of purse seiners that came into port for transshipment was during October, which is due to a three-month FADs closure where all purse seine vessels came into port to offload their catch to fish carriers.



Figure 11: Number of purse seiners that came for transshipment in Funafuti in 2017

However, for Table 6, for the amount of tuna offloaded in its graded type, brine is the highest catch offload and skipjack is the highest by species, followed by the yellowfin, and bigeye tuna is the lowest.

Table 6: Total catch offload in Funafuti Port

Species	Brine (MT)	MSC (MT)	PS (MT)	Weight (MT)
SKJ	129,885	2,279	-	132,164
YFT	12,562	746	2,113	15,421
BET	2,911	15	2	2,928
TOTAL	145,358	3,040	2,115	150,512

4.7 Monitoring, Control and Surveillance (MCS)

The Monitoring Compliance and Surveillance (MCS) unit is a key component of this section and also for the broader fisheries management process. It is under the Oceanic Fisheries Section and it covers a wide range of responsibilities, which include the Vessel Monitoring System (VMS), Observer Programme, regional and national surveillance operations and monitoring implementation of the Vessel Day Scheme (VDS). The main focus is to deter and eliminate all illegal, unregulated and unreported (IUU) activity in Tuvalu’s EEZ.

4.8 Vessel Monitoring System (VMS)

All vessels are monitored daily after working hours through an animation loop in the Regional Surveillance Picture (RSP) with reference to Trackwell and other MCS web-based tools. Attention is focused on vessels entering the TV zone with a less than zero (-1 to -4) compliance index.

All vessels on the FFA good standing register are monitored and those reporting normally on FFA VMS result in no manual reporting being submitted through RIMF and Trackwell reporting. Unknown vessels in FFA VMS are further analysed by enabling automated information system (AIS) functionality in the RSP and WCPFC VMS.

The following snapshot illustrates vessel activities in TV EEZ, adjacent EEZ and high seas for the reporting period. Generally, most of the fishing activities for the reporting year were concentrated to the north and northeast sector of the EEZ. The much anticipated shift of fishing effort to the western Pacific due to a second year of the La Niña effect was not evident as most fishing activities slowly shifted to the east towards the end of the year, confining it within 5°N and 5°S latitude.

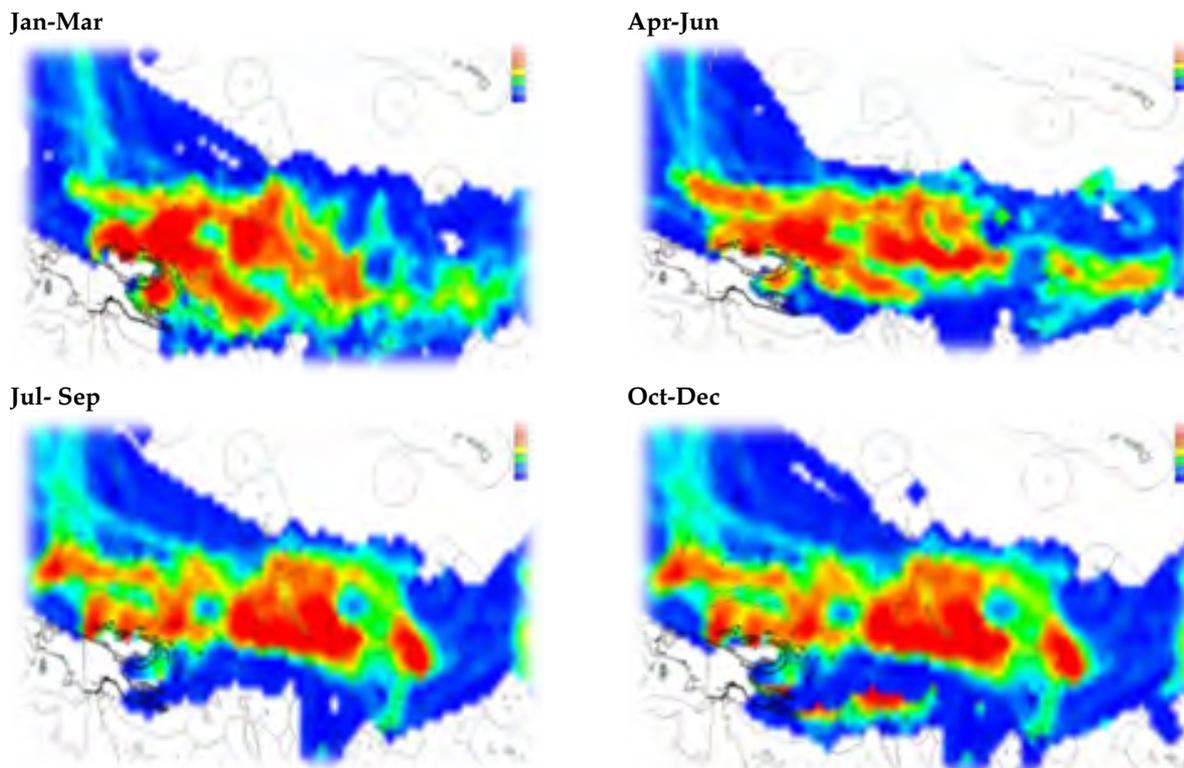


Figure 12: Vessel activities in Tuvalu’s EEZ and high seas

4.8.1 Vessel Day Scheme (VDS)

Management of VDS is an ongoing activity that utilises VMS as the primary platform for monitoring purpose through PNA FIMS. This includes the monitoring of each company’s day allocations and verifications of NFD to project actual VDS usage for reporting purposes.

This year we witnessed another increase in the TAE, where member countries are receiving maximum benefits of the VDS. A total of 2,004 days were allocated to Tuvalu’s PAE for the reporting year and a total of 1,340 days were allocated to bilateral partners after trading with multilateral and sub-regional pooling. Further transfer and trading was facilitated between bilateral partners and member countries, resulting in the utilisation of more than 90% of the allocated days.

Table 7: Breakdown of vessel days allocated to each company from PAE after trading with multilateral agreements and pooling

Foreign company	Days allocated	Days EEZ	Days used	% Used	Days remaining	% remaining
China Overseas Fisheries Assoc. ¹	60	50.2	50.2	83.73	9.8	16.3
Japan Far Seas Purse Seine Fishing Association	10	0	0	0	10	100
Kiribati & Sajo Fisheries Co.	30	30	0	6.4	21.4	23.6
Kirikore	15	15.7	15	100.2	-0.03	-0.2
Korean Overseas Fishing Association	570	653	623.6	109.4	-53.63	-9.41
Majestic Seafood Corp. Ltd.	10	11.7	9.3	92.7	0.7	7.3
Taiwan Deep-Sea Tuna Purse Seine	327	185.3	184.1	56.3	143.0	43.7
Win Harvest Fishery Co. Ltd.	15	16.6	15	99.8	0.03	0.2
Total	1,037	1,002.7	967.5		133.4	

4.8.2 VDS usage

According to the current usage chart (Figure 13), the usage rate is similar to the past three years for the same period. The complexity of rules associated with managing the VDS poses various challenges in terms monitoring and usage of days allocated under the PAE and sub-regional pooling.

This was experienced after KOFA exceeded its allocated days, where individual companies within the association claimed that “overshoot days” could easily be offset from the vessels that are allocated to sub-regional pooling days. Since the pooling allocations account for all participating members, it is impossible to offset bilateral days from pooling as we do not have access to data on other members’ usage in order to count whether this particular vessel has used up all allocated days in other member’s EEZ or not. Tuvalu does not tender sale agreement for pooling with the association, thus causing further misunderstandings by the company on VDS utilisation rules.

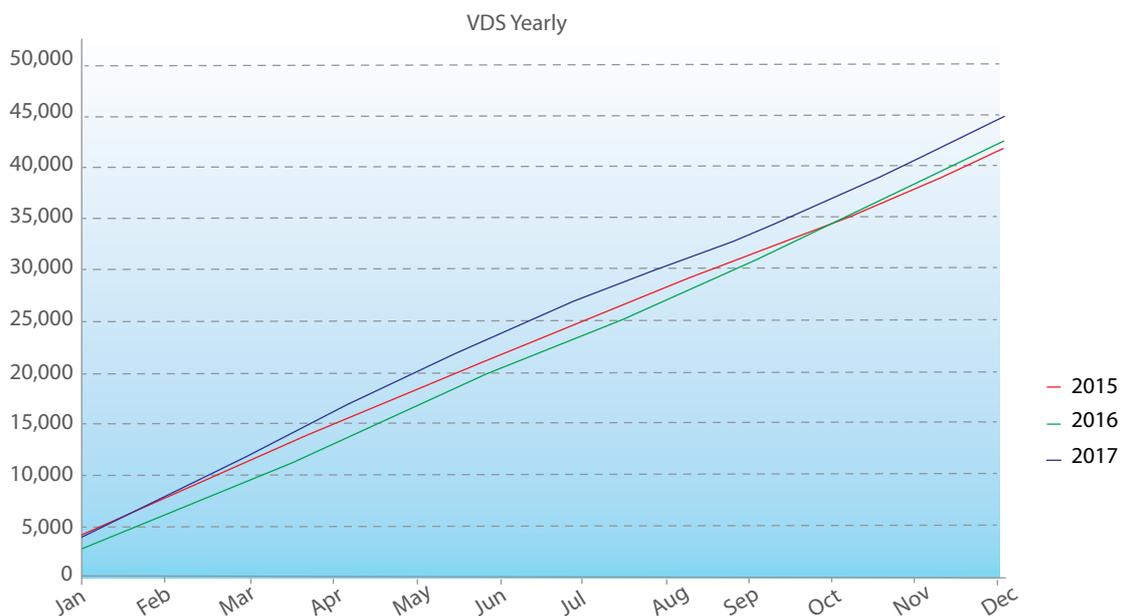


Figure 13: VDS usage 2014–2017

4.8.3 VSAT dish and maintenance

VSAT was out of service for most of the year and a new LNB has finally been installed and awaiting technical assistance from FFA to configure network settings. A maintenance schedule has now been developed to guide Fisheries Oceanic staff members since there was no service manual provided upon installation. TFD is working closely with FFA on the procurement of extended cables to enable access to the VMS room in the new building.

4.8.4 Other issues

There are currently no vessels being registered as 'vessels of interest' (VOIs) for the reporting period. A couple of vessels were initially identified as VOIs for alleged transshipment / bunkering violations and were cleared after a thorough investigation was conducted during port and at sea inspections, which provided insufficient evidence to substantiate the transshipment claims.

Ongoing support is rendered to member countries who wish to obtain VMS tracking to confirm an alleged violation in Tuvalu's EEZ pertaining to their flag vessels and / or CCM coastal state.

Support is provided to any domestic or regional surface patrol asset that covers Tuvalu's EEZ through the provision of VMS data and a possible area of operations based on VMS historical data on a particular set of dates.

Tuvalu shares VMS data with all members; therefore, a reciprocal sharing arrangement will be facilitated in accordance with the VMS data sharing agreement with the FFA. The Regional Fisheries Surveillance Centre (RFSC) has been nominated to be Tuvalu's MCS entity and has the ability to view WCPFC VMS in-zone data and a 100 NM buffer zone. However, TV should also have a separate WCPFC access in order to independently monitor WCPFC vessels – particularly those only authorised to fish in the high seas given Tuvalu's EEZ is adjacent to high seas, which could be a safe haven for IUU activities.

4.9 Regional Operations / Surveillance Patrol

The conducting of surface patrol operation in Tuvalu's EEZ is one of the effective methods to battle and eliminate IUU activities in the region and Tuvalu's EEZ. The main intention of patrol operation is to board and inspect every fishing vessel that is spotted in our waters, check if they comply with the regulation, and to enforce the Marine Resources Act 2006. In the TFD Corporate Plan a 100 sea-days patrol is required, but due to some concerns that this has caused, this goal has not been able to be achieved. In the year 2017, there were four operations that were able to be deployed. The details of these operations are shown in Table 8 below.



Figure 14: Tuvalu's patrol boat, HMTSS Te Mataili

Table 8: Regional operation / surveillance patrol in Tuvalu's EEZ

Operation	ETA	ETD	Platform	Boardings	Operation Type
Nukuotoa	28/05/17	02/06/17	HMTSS Te Mataili	0	National
Island Chief 2017	26/07/17	04/08/17	HMTSS Te Mataili	5	Regional
Kurukuru 17	07/10/17	13/10/17	HMTSS Te Mataili	11	Regional
Fish Hook 17	08/11/17	15/11/17	RV Tala Moana	2	National

There are two types of operations that the MCS team and patrol boat team used to participate. The national operations refer to operations that are coordinated by Tuvalu, and the regional operations are the operations that all of the other FFA members (including Tuvalu) participated in. Regional operations are mostly coordinated by the FFA, where they assist members in providing updates and information to all deployment teams.

4.10 Tuvalu National Observer Programme

In 2017, the Tuvalu National Observer Programme (TNOP) managed to successfully run seven observer training courses in-country. These courses included a basic observer course whereby a total of 20 new observers were recruited and underwent a five-week course. This included 16 new observers who undertook the training in-country and four on sub-regional training course, which were held in Vanuatu and Federal State of Micronesia. All 20 observers were certified, which increased the number of active observers to 79.

Other training sessions were held later, including Part A, B and C Debriefing courses and the MSC course. After completion of the courses, 14 observers were certified as Debriefers and 12 were recruited as Trainee Debriefers who can now assist in the debriefing process. Lastly but not least, 15 of the experienced observers were certified as MSC eligible observers after successfully attending to a two-day intensive MSC course.

In late September, four senior Debriefers attended the assessor training course, which was held in Fiji. They successfully completed the course and were all certified as Debriefing Assessors. In late December, the PNA conducted e-reporting and safety gear training in-country for Tuvaluan observers. Overall the training sessions were successful and contributed constructively to the successful management of the observer programme in order to meet the Pacific Island Regional Fishery Observer (PIRFO) standards.



Figure 15: Observer training

In terms of placement opportunities, most of the observers were placed on board Korean Flag vessels (39 placements) that are normally transhipped in Funafuti Port. The total number of placements in 2017 under all three programmes – Tuvalu National Observer Programme (TNOP=39 placements), PNA Observer Agency (POA=39 placements) and UST (5 placements) – was 112.

Table 9: Summary of Tuvalu National Observer Programme 2017

Total Number of Active Observers	79
Number of Certified Debriefers	14
Number of Trainee Debriefers	12
Number of Debriefers Assessor	4
Number of Observers deployed on FFA trips	5
Number of Observers deployed on PNA trips	39
Number of Observers deployed on TNOP trips	68

4.11 European Union (EU) Yellow Card

Tuvalu Fisheries has not yet had its EU yellow card given in December 2014 lifted. The TFD continues to work closely with FFA and PNA on addressing some of the issues and shortfalls identified by EU in their 2014 assessment, including a review of the National Plan of Action (NPOA) on IUU for Tuvalu Fisheries and improving the prosecution of illegal fishing in Tuvalu’s EEZ. This work commenced in 2015 and a number of FFA visits and consultations were carried out in-country in 2017 in order to complete this work. The FFA’s MCS team assistance is committed to rectifying this EU yellow card situation. The Oceanic Fisheries Section will continue to work together with the FFA and other agencies during 2018 to resolve the shortfalls that were identified by the EU.

4.12 Challenges Encountered

Some of the challenges faced by the Oceanic Fisheries Section in 2017 included the following:

- Experience of frequent internet failure due to the unreliable local internet service provider. This became more complicated since the breakdown of the VSAT connection in 2016.
- Lack of MSC observers resulted in Tuvaluans losing out in many placement opportunities on most of the national and PNAO placements.
- PROP project seemed to operate with very complicated processes for procuring equipment that is included in the PROP budget.
- Shortage of staff towards the end of the year. Two senior officers received a government scholarship for further studies abroad, which include the Observer Coordinator and the FO Licensing Officer. Also the head of section PFO Oceanic had submitted his resignation letter to the Human Resources Department (HRD) for other new positions at end of 2017.
- The slow process by HRD of the recruitment of the new position of Oceanic Data Entry Officer to help out in scanning and compiling observers’ data, which need to be sent to SPC before the end of April in each year.

- Lack of surface patrols due to HMTSS Te Mataili being heavily involved in inter-island charters and other police department activities.

Efforts will be made to address and rectify these issues in 2018.

5 Coastal Fisheries Section Activities

5.1 General

The year 2017 was remarkably successful in terms of accomplishments, and very challenging mainly because of ongoing changes in staffing positions and a heavy activity schedule. This was accompanied by problems associated with the delay (again) of the new office building, unavailability of resources and insufficient staff to implement activities. Despite these challenges, an estimated total of 90% of activities under the Annual Workplan 2017 were successfully achieved. A lot of staff time and effort was put into implementing four national stakeholder consultations throughout the year on the development of the Funafuti Reef Stewardship Plan (FRFSP), which was finalised and launched at the end of the year. Staff members also showcased their success stories and experience at the Pacific Community (SPC) First Regional Technical Meeting on Coastal Fisheries (RTMCF) in Noumea at the end of the November, which was praised by many countries and SPC.

A considerable change in staff positions occurred throughout the year. The Principal Fisheries Officer (PFO) for the Coastal Fisheries Section resigned leaving the Senior Fisheries Officer (SFO) for Resource Assessment and Monitoring to act in that post and manage the section for the rest of the year. The SFO for Funafuti was filled by the NAPA II Fisheries Officer, leaving that position also vacant. The position of FO for the outer islands became vacant after the officer moved to join the Oceanic Fisheries Section as an MCS Officer. Finding rapid replacements for these vacant positions was so challenging, mainly due to the lengthy process of the recruitment system and the limited number of qualified applicants. The staff turnover necessitated reorganisation of workloads and plans in order to achieve targeted activities under the Annual Work Plan for 2017.

5.2 Data Collections

5.2.1 Creel survey programme

In June 2017 the creel survey programme began on Funafuti and was expanded to the outer islands. This outer islands data collection programme was activated on all outer islands to improve the reach, quality and quantity of the data in the creel programme. Eight new island officers were recruited on a 12-month contract. Each officer was responsible for collecting fish catch data twice weekly and sending them to Funafuti for analysis.

The ongoing creel surveys were implemented in collaboration with Kaupule and Ridge to Reef officers on each island. A target of 20 samples per fortnight was set for each officer to ensure sufficient samples for a meaningful analysis. The majority of these newly recruited officers were people who previously had been involved with the artisanal tuna data collection programme in the past four years. An initial introductory training workshop was held in Funafuti to train them, while additional training was also delivered during metronome trips to the outer islands. This new programme was targeted to improve our understanding on the condition of fish resources, fishing effort, fishing activities and other related issues. This programme was supported through funds from the GoT, PROP and NAPA II.

In 2017, a total of 1,217 creel samples were collected; 79% of them from outer islands, which covered all outer islands except Niulakita. The spread of samples among the islands was the strongest in Nanumaga, Vaitupu, Nanumea and Nukufetau. Additional effort will be placed on the remaining islands in 2018 (Figure 16 and Figure 17).

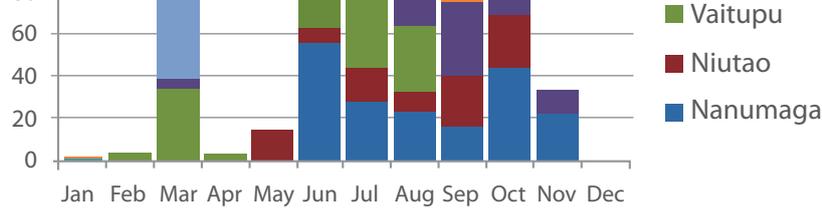


Figure 16: Number of creel surveys collected on outer islands during each month of 2017

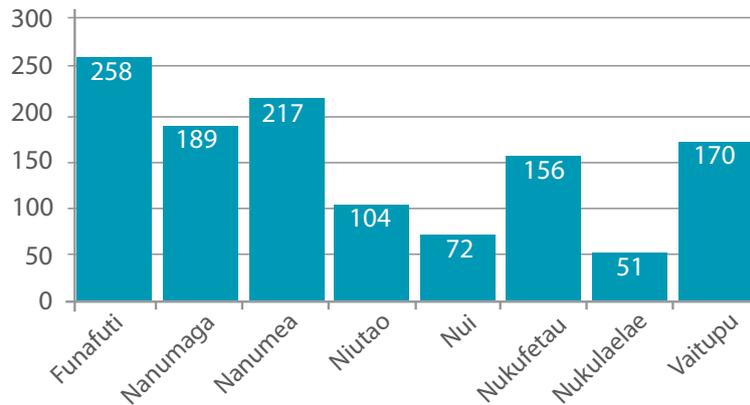


Figure 17: Total number of samples collected on each island in 2017

5.2.2 Reef fish exports

Since the beginning of formal, ongoing data collections in 2015, a substantial improvement has been made on gathering data on the amount of fish that has been exported out of Tuvalu. These data are collected at the end of each month through the Quarantine Section of MNR. This mainly involves reef fishes that were exported through outbound flights or shipping, by counting the number of coolers (using an average weight of 10 kg of fish per cooler).

For 2017 the highest record was noted in the month of October (286 coolers exported) and November (169), and the lowest exports were recorded in February (32). In summary, a total of 1,420 coolers were recorded in 2017, compared with 779 coolers in 2016 and 1,292 in 2015 (Figure 18). These results show an increase in numbers of fish exported this year. All data have now been stored in the coastal database at the fisheries office in Teone.

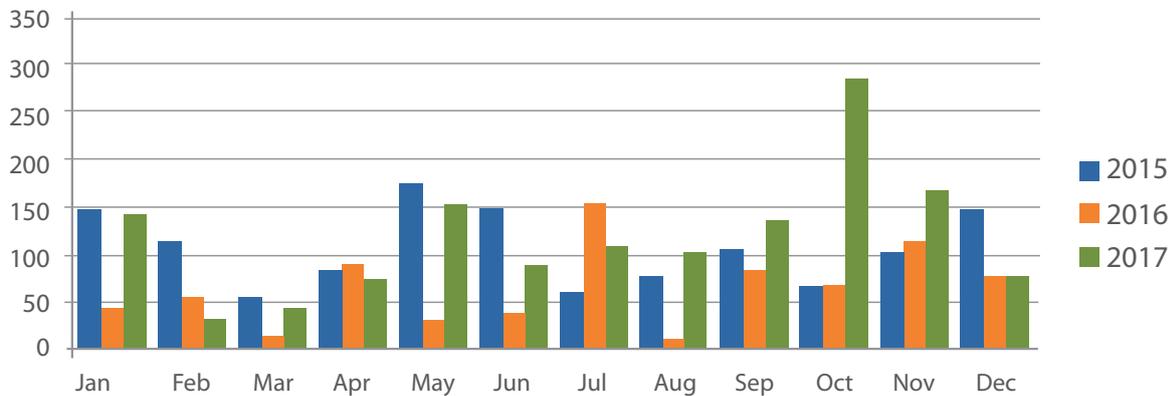


Figure 18: Number of exports of reef fishes from Funafuti 2015–2017

5.2.3 Monitoring of dinoflagellates responsible for ciguatera (GTX monitoring)

Ciguatera is caused by blooms of toxin-producing single-celled microalgae called dinoflagellates that live naturally in Tuvalu’s shallow waters on the surface of large macroalgae (the seaweeds or *limu* that we can see). Dinoflagellates are normally found in low numbers, but can suddenly undergo a population explosion, jumping from very few cells to millions per handful of algae. The main species that produce the toxins are *Gambierdiscus toxicus* (GTX), *Prorocentrum lima* and *Ostreopsis* sp. Much like weather warnings, the GTX monitoring programme was established on Funafuti to identify when outbreaks might be coming (due to an increase in the number of causative dinoflagellates) and when they decline back to ‘normal’ background levels. It is thought that the toxin may take several months to accumulate or be removed by fish’s livers, so there is scope for adequate warning. The GTX monitoring on Funafuti will, after sufficient sampling, also be

able to determine 'hotspots' (areas of the reef that are actively having outbreak numbers of dinoflagellates) in order to warn the public.

By the end of 2017 a total of 106 samples was collected and analysed for the presence and abundance of toxic dinoflagellates. A total of 17 different sites were selected for testing to determine the level of GTX inside the lagoon. The results from these tests showed that the GTX levels at almost all of the sites along the main settlement were fairly high (more than 5,000 dinoflagellates cells per sample) compared with other more distant sites inside the lagoon such as Akau Tulaga (Figure 19). These results suggest that high levels of nutrients in runoff into the lagoon along the main settlement may be feeding ciguatera outbreaks. This is likely due to runoff from household liquid waste, pig waste and other human related coastal developments. However, in areas with low levels of GTX, it was noted that the health status of corals was still good with a good diversity of fish species.

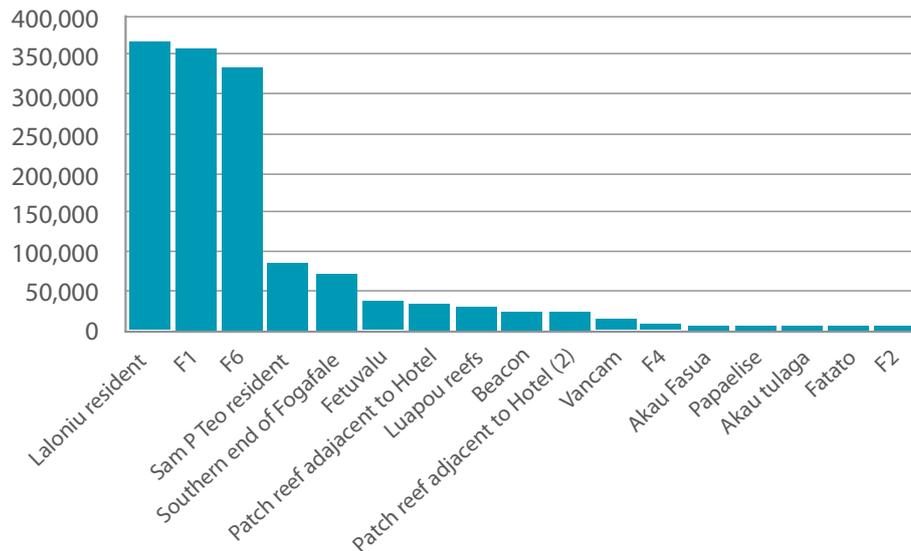


Figure 19: Average cell counts of *Gambierdiscus toxicus* per 100g of host algae at sites in Funafuti lagoon 2016–2017

This work is still in early stages and requires a good laboratory and microscopes; thereby further effort is needed in 2018. The work may also be extended in the future to the outer islands during metronome trips as may be requested by the *Kaupules*.



Figure 20: The pathway of ciguatoxins from algae to fish

5.2.4 Cases of Ciguatera Fish Poisoning

Ciguatera Fish Poisoning (CFP) continues to be a concern in some islands but is no longer as serious as it was in the past few years. Regular CFP assessments were conducted on all islands throughout the year during each metronome trip, where information was gathered on cases of poisoning in humans. The numbers of CFP cases were normally obtained from hospitals on each island by using a data sheet, which were then all brought back to Funafuti and transferred into a database in the office.

Funafuti recorded the highest number of cases for 2017, with 13 cases of CFP (seven males and six females),

while Nanumea and Nukufetau recorded two patients on each island. In total there were 17 cases in 2017, compared with 27 cases that were recorded in 2016 (Figure 21 and Figure 22). *Lutjanus bohar* (Fagamea) was identified as the primary species responsible for the majority of cases. Other species that were also identified included *Ctenochaetus striatus* (poneuli), *Lutjanus monostigma* (taaiva) and *Scarus ghobban* (ulafi).

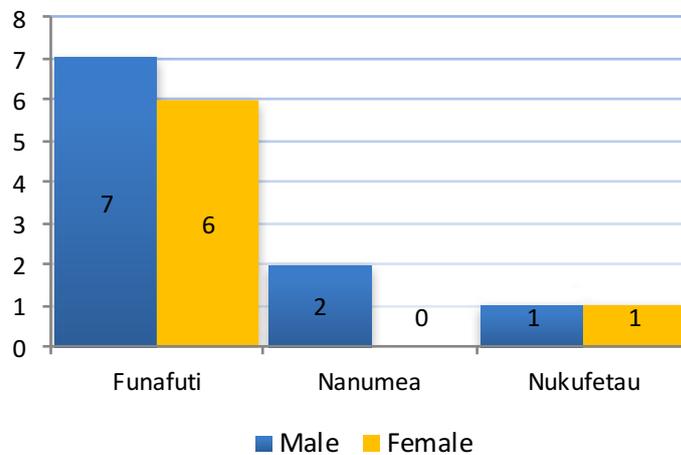


Figure 21: Ciguatera cases reported on three islands during 2017

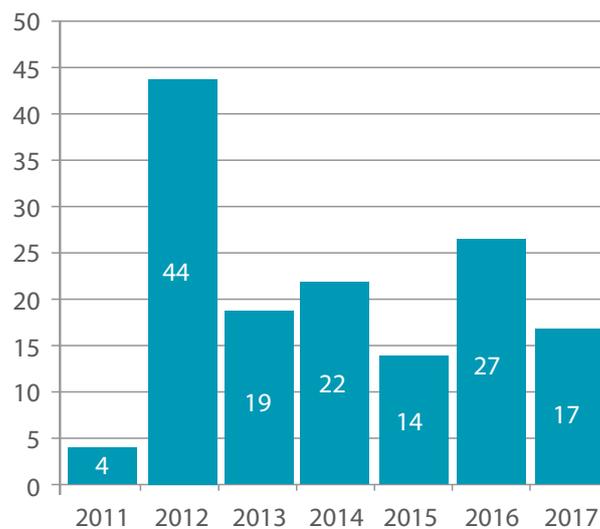


Figure 22: Number of ciguatera patients 2011–2017

The general overview of the CFP situation throughout the islands has improved and not as serious when compared with previous years. That is good news for everyone, especially given the impact of this problem on local food security and human health. Assessment on the number of CFP cases per island will continue in future through each metronome trip.

5.2.5 Boat and canoe survey

A total of 702 canoes and boats were surveyed in 2017 (Figure 23 and Figure 24). This survey was conducted on all islands primarily to investigate the number of sea transportation vessel that are available on each island and where they have been stored. Overall, Funafuti and Nukufetau topped the list with the highest number and Niulakita and Nui with the least. More than 80% of these vessels were found to be well stored within a few metres near landing sites on each island. The results of this survey found that quite a large number of fishers on the outer islands still heavily rely on canoe fishing. This is particularly true for all three

northern islands (Nanumea, Nanumaga and Niutao) where canoe fishing is still considered as a very important aspect of fishing traditions. Details of the results of work and activities during these metronome trips can be downloaded from <http://www.tuvalfisheries.tv/library>.

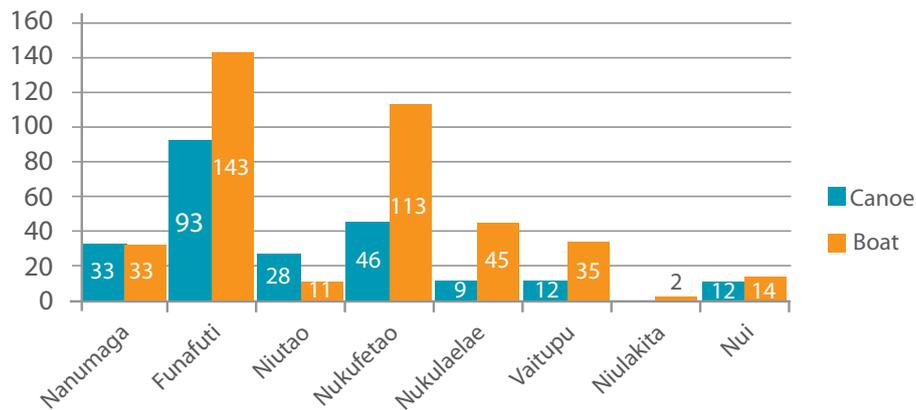


Figure 23: Summary of results of boat and canoe surveys on all islands showing numbers of vessels of each type



Figure 24: Typical fishing boats on outer islands

5.3 Support Programme for Outer Islands

5.3.1 Metronome trips

Fisheries support activities to the outer islands continued in 2017 through metronome trips. There were four metronome trips that were made to the outer islands throughout the year. These are normally fairly lengthy trips (10 days per island) and sometimes challenging due to the long list of activities and tasks required to be executed during each visit. During 2017, the northern islands were visited twice and one trip each was run to the southern and central islands groups. Regular support activities included consultations with each Kaupule, fishers and other stakeholders in the community, canoe and boat surveys, fisher training, FAD maintenance, Locally Managed Marine Areas (LMMA) work and sea safety. These trips were jointly implemented mainly by the Coastal Fisheries Section and the Operations and Development Section by using the two fisheries vessels RV Tala Moana and RV Manau. These metronome trips continue to be critical not only so that staff can achieve the Department's ongoing mandatory obligations, but also to enable them to visit each island with the intention of building links between the Department, fishers and Kaupules, as well as strengthening confidence that local management is possible. A Memorandum of

Understanding for cooperation between the TFD and all island Kaupules has now been signed (in June 2017), which included a three-year plan that institutionalises metronome trips to each island. Table 10 shows the planned trips up to 2019.

Table 10: Listing of all planned outer island survey trips to 2019

Year	Metronome trip	Islands	Start date	Finish date
2017	Metro 4 North (RV Manau)	Nanumea, Nanumaga, Niutao	04/03/17	02/04/17
	Metro 5 Central (RV Manau)	Niu, Nukufetau, Vaitupu	15/05/17	14/06/17
	Metro 6 South (RV Tala Moana)	Nukulaelae, Niulakita	01/08/17	15/08/17
	Metro 7 North (RV Tala Moana)	Nanumea, Nanumaga, Niutao	22/09/17	21/10/17
2018	Metro 8 Central (RV Tala Moana)	Niu, Nukufetau, Vaitupu	01/03/18	30/03/18
	Metro 9 South (RV Tala Moana)	Nukulaelae, Niulakita	15/05/18	31/05/18
	Metro 10 North (RV Tala Moana)	Nanumea, Nanumaga, Niutao	01/08/18	30/08/18
	Metro 11 Central (RV Tala Moana)	Niu, Nukufetau, Vaitupu	22/09/18	21/10/18
2019	Metro 12 South (RV Tala Moana)	Nukulaelae, Niulakita	01/03/19	30/03/19
	Metro 13 North (RV Tala Moana)	Nanumea, Nanumaga, Niutao	15/05/19	14/06/19
	Metro 14 Central (RV Tala Moana)	Niu, Nukufetau, Vaitupu	01/08/19	30/08/19
	Metro 15 South (RV Tala Moana)	Nukulaelae, Niulakita	22/09/19	07/10/19

5.3.2 Outer islands quarterly visits

Outer islands quarterly visits were introduced into the Coastal Fisheries Section’s activities in 2017. The purpose of this new activity was to establish constant, good communications with the outer islands data collectors (OIDCs) and to maintain good quality data. This came up as new response to issues that were discovered on datasheets that were received from the outer islands. These trips were also designed to empower better collaboration between data collectors and the R2R community officer on gathering data for creel surveys.

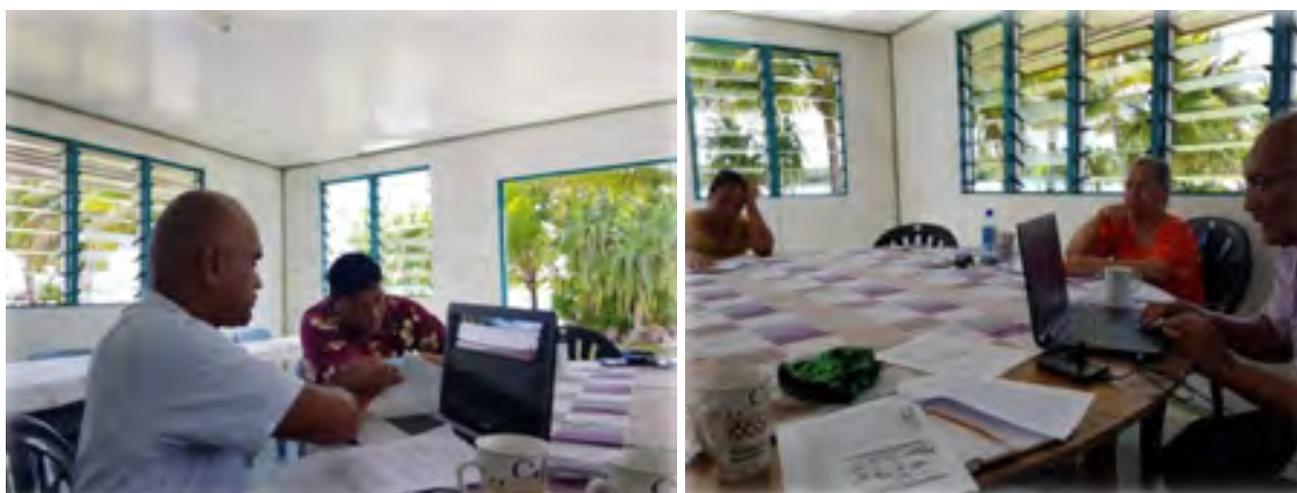


Figure 25: Quarterly visits to outer islands

Between 20 and 23 September, two staff members made a round trip on board the Manufofou to the central islands and visited Nui and Vaitupu. During the visit to these two islands, a meeting was held between the Kaupule, R2R officers and data collectors to discuss issues, progress and new arrangements with the

Creel Data Collection Programme. As a result of these meeting, better relations and cooperation with island *Kaupule* will continue to support the creel data collection programme on these three islands. Regular quarterly visits have now been scheduled for 2018 for all islands.

5.4 Resource Management

5.4.1 Fisheries Monitoring and Management Consultations (FMMC)

Based on the results of the first creel survey in 2016², a series of consultations was carried out in Funafuti with the communities, fishers, *Kaupule* and *Falekaupule* to develop a management plan for the damaged fisheries that the creel monitoring revealed. This management plan was to be capable of reversing the decline and restoring the fisheries to a more productive state. The consultations held in 2017 were as follows:

- Initial Fisher's meeting on 9 February 2017: A pre-meeting held between Funafuti Fishermen's Association and TFD (Coastal Fisheries Section and Operations and Development Section) to inform fishers on creel survey results, artisanal tuna fishing, Ciguatera Fish Poisoning, sea safety and post-harvest training.
- FMMC1 23–24 February 2017: This meeting included four main activities: (1) Report by Coastal Fisheries Section on results of the creel survey; (2) Presentation of a range of management options that could be used in Funafuti; (3) Working Groups to discuss the options and suggest approaches that might work; and (4) Consensus mandate derived by the participants to guide TFD's work on the FRFSP. The meeting was attended by members of the Funafuti Fishermen's Association, the *Kaupule* and *Falekaupule*, representatives of the outer island communities living in Funafuti, and other members of the public. At the end of the meeting, participants requested that TFD develop a proposed plan to present at the next consultation for them to consider. The full report and all others in this series can be downloaded from the Tuvalu Fisheries website www.tuvalufisheries.tv/library/.
- FMMC2 27 April 2017: Presentation of the proposed FRFMP to identify any issues and steer further development.
- FMMC3 July 2017: First draft of the FRFMP presented for discussion and adjustments.
- FMMC4 December 2017: Adoption of the finalised FRFMP and development of the work plan and implementation.

5.4.2 Funafuti Reef Fisheries Stewardship Plan (FRFSP)

Funafuti atoll holds more than 60% of Tuvalu's population and the demand for fishery resources is considerably high. As noted above, the results of creel surveys from September 2016 found that 50% of coastal fisheries in Funafuti are overfished, under significant stress and / or in decline. The need to manage the fisheries was therefore considered urgent, not just to impede the damage, but to encourage recovery to more productive levels. This need led to the development of the Funafuti Reef Fisheries Stewardship Plan (FRFSP). The Coastal Fisheries Section in collaboration with the Funafuti *Kaupule* and fishers on Funafuti worked to develop this new fisheries management plan for Funafuti that embodies a "whole of atoll" approach that recognises the role of people and healthy ecosystems in fisheries, and allows for adaptive responses to changes.

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2 Alefaio, S., M. Finauga, S. Italeli, L. Kaitu, U. Kaly, P. Lopati, F. Makolo, M. Petaia, M. Taufilo, H. Taula and F. Tetoa (2016). Tuvalu Fisheries Creel Survey Report No. 1. Funafuti: 21.



Figure 26: FRFSP poster and booklet cover

The Funafuti Reef Fisheries Stewardship Plan developed in 2017 has four key strategies that would support reviving the multi-species fisheries of Funafuti and sustainably manage its marine resources. The first strategy will focus on improving the effectiveness of the management of the Funafuti Conservation Area. The second strategy will look at options for setting size limits for reef fish based on their size for reproduction, while the third strategy will focus on promoting more use of pelagic fishes. The fourth strategy will ensure that everyone is informed and participating in the supporting of activities of the FRFSP. The launch of the FRFSP in late November marked one of the key achievements for 2017. This came after hosting four community consultations with the Funafuti community, *Kaupules*, relevant departments, fishers and others throughout the year.

The development of the FRFSP was heavily supported by Funafuti community, *Kaupule*, *Falekaupule* and fishers. The FRFSP has now been endorsed by the community and recognised by the Department as a working document for implementing activities under the four strategies within the FRFSP.

5.4.3 Massive wash-up of dead beche-de-mer (lollyfish) in Funafuti lagoon

In March, there were signs of a massive wash up of dead lollyfish, which was witnessed by many people along the shoreline of Fogafale (Figure 27). This unusual event was reported by residents to the Department, which responded with a quick assessment in order to find the possible cause of the problem.



Figure 27: A kill of beche-de-mer in Funafuti in 2017

The problem with the lollyfish beached on the shoreline of Fogafale occurred on 8 March 2017. The findings by TFD were that it was likely to have been caused by anoxia (low oxygen levels in the water, often caused by a rapid influx of organic matter, which when microbially utilised uses up the oxygen, thereby suffocating marine organisms). There was visible evidence of dark black sediment that was found around the affected areas and signs of hydrogen sulphide in the sediment. The oxygen-depletion is likely to have caused the lollyfish to die. Turbidity of water was high at the time (see Figure 27) and less bioturbation activity (trails caused by animals during normal activities) during the neap tide. Any lollyfish found still alive were rescued and relocated to another, cleaner area. It was not clear what caused the anoxia event and further investigations are needed.

5.5 Awareness and Outreach programme

5.5.1 Radio shows

Public educational awareness was identified to be a very important and effective way to educate and inform the people of fisheries activities and issues. In 2017, there were 10 radio awareness programmes that were aired and 21 public awareness shows were conducted on the outer islands during metronomes trips. These public awareness shows were mainly design to build the awareness capacity of fishers and community members, and were normally delivered during evening hours.

5.5.2 Environment Week

Coastal staff took part in promoting fisheries awareness during the Environment Week programme in June 2017. The theme for this Environment Week was “Connecting People to Nature”, which guided awareness activities throughout the week-long programme. Approximately 80 students from both Nauti Primary School and SDA Primary School – accompanied by teachers – and the Environment Day organising Committee members visited Fualopa, a small beautiful islet inside the Funafuti Conservation Area (FCA). During the visit, fisheries officers delivered a series of related educational activities, such as marine conservation awareness including related issues to the FCA, such as waste management and marine biology, just to name a few. Students and teachers were also given the opportunity to ask questions and all participants were very thankful to the Tuvalu Fisheries Department for providing the opportunity and for generously providing refreshment for the students.



Figure 28: Environment Week activities

5.5.3 Publications and posters

During 2017, a range of publications were produced by TFD on coastal fisheries monitoring, as trip reports and to record the results of the FMMC and other consultations. Several posters were also produced to support the launch of the FRFSP. These are available on the website at www.tuvalufisheries.tv/library and include four FMMC reports, several posters and four metronome trip reports.

5.6 Training and Regional Meetings

5.6.1 New Zealand Ministry of Primary Industries staff training attachment

In July 2017, five staff members participated in a short-term training attachment in Auckland, New Zealand. This training was provided by the New Zealand Ministry of Primary Industries (MPI) under its Pacific Fisheries Capacity Development Initiative. The main objectives of the trip were to:

- Observe daily operations of a modern fisheries administration;
- Exchange information between Tuvalu Fisheries Department and MPI on relevant fisheries activities;
- develop skills and knowledge on inshore fisheries management, MCS, conservation areas, and report writing; and
- Share experiences and skills for interaction with the public, and use of awareness materials for MCS.



Figure 29: Signage at a marine reserve near Auckland

Part of the training focused on a collaborative discussion and examination of New Zealand's coastal fisheries management procedures and associated Monitoring, Control and Surveillance (MCS) practices. The overall outcome of this trip was an increased general understanding of the capacity of each organisation, and areas in which MPI can assist with Tuvalu were identified. A second trip has now been scheduled for early 2018 to target staff members who did not have the opportunity to attend this training programme.

5.6.2 Participation in the first Regional Technical Meeting on Coastal Fisheries (RTMCF), Noumea

In late November, a team of six staff members participated in the first ever Regional Technical Meeting on Coastal Fisheries (RTMCF) hosted by SPC. This was a result of Tuvalu's request at the Heads of Fisheries (HOF) Meeting earlier in March of 2017 in which a request was made for SPC to host a regional meeting that targets issues related to coastal fisheries.

At RTMCF, Tuvalu showcased its achievements and shared some of the experience gained on data collections (creel surveys) and the development of the FRFSP for Funafuti. The work was praised by countries at the meeting, including the SPC staff. This event provided a learning opportunity for staff members to expand their capacity to effectively participate in regional meetings in the future. Participation of the staff at this meeting was enabled through funds from SPC, NZ TFSP and PROP.

5.7 Project Funding

5.7.1 NAPA II and R2R projects

NAPA II and R2R continued to cooperate and share their resources on implementing some of their activities on the outer islands with the fisheries department. These two GEF-funded projects have been very active in implementing related fishery activities on the outer islands. Both projects also supported the purchasing of the new vessel *RV Tala Moana*, which enables staff to travel on metronome trips to the outer islands. R2R community officers are now also working closely with the OIIC on gathering creel data in the outer islands.

5.7.2 Tuvalu Fisheries Support Programme (TFSP)

In 2017 the TFSP provided key support to the Coastal Fisheries Section through providing an Inshore Fisheries Adviser, training and funding for data collections, databases, equipment, fieldwork and metronome trips. By June 2017 approximately 32% of the available whole of project funds for the Coastal Fisheries Section had

been expended, at an amount of AUD 128,197.

5.7.3 Pacific Regional Oceanscape Programme (PROP)

PROP funding has been critical to the development of the data collection programmes and in 2017 continued to provide critical support in procurement of laboratory equipment, boats, and provided critical support for metronome trips and consultations in Funafuti and outer islands. In 2017, two rigid inflatable boats were procured for coastal fisheries and water quality surveys and for MCS of the Funafuti Conservation Area. Laboratory equipment that was procured during 2017 included water quality probes, faecal coliform testing equipment, ciguatera monitoring equipment and vehicles to support creel and other surveys.

6 Operations and Development Section Activities

6.1 General

This was another busy but successful year for the Operations and Development (O&D) Section as most of the tasks planned for execution were completed. This included NAPA II activities. The slipping of the RV *Tala Moana* in Suva was the biggest challenge faced since this was a first time experience for the Department. The slip presented many challenges from which many lessons were learnt. However, the one challenge that remained in connection with slipping was the repayment of project money that was used for this purpose to NAPA II. Very little progress was made on CFC training centres this year due to reasons beyond our control. Full details on this activity plus and other activities undertaken are given below.

6.2 RV *Tala Moana*

RV *Tala Moana* concluded the year with a total of 21 charters, which totalled 2,299 hours or 96.8 days of use of the vessel (Figure 30, Figure 31).

RV *Tala Moana's* operation were suspended after just four runs as the vessel had to be sent to Suva for an emergency slip, which took place from April to July 2017. Operations resumed immediately after its return from Suva. The extended slip cost that the Government of Tuvalu owed to the various companies and suppliers in Suva was approximately half a million Australian dollars. All debts have been cleared, part of which (~AUD 180,000) was offset by NAPA II, while the rest was paid by using the vessel's own funds.

Informal discussions held with the UNDP representative in November 2016, and also the NAPA II, revealed that the total debt owed by the RV *Tala Moana* to the NAPA II totalled about AUD 800,000. This debt was mainly due to the salaries for eight crew members that the project has been paying, and AUD 180,000 incurred from the recent slipping. The UNDP representative claimed that crew salary is the responsibility of the government; hence the GoT should be paying it. Since the project is finishing in December 2018, UNDP is requesting a fast track reimbursement by the government.



Figure 30: A new look for RV *Tala Moana* after slipping in Suva

Due to the short span of time between now and the closing of the project, cash reimbursement is certainly not an option. The Department met the UNDP representative again in January 2018 in which the following options for reimbursement were considered and endorsed: (1) in-kind contribution by the government towards implementation of NAPA II activities; (2) government to pick up some of the NAPA II costs / activities; and (3) the remaining NAPA II activities to be scaled down. The UNDP, when noting that RV *Tala Moana* is now taking up crews' salaries, thanked the Department for taking quick action to prevent an accumulation of the debt.

The next slip for RV *Tala Moana* is scheduled for 2019. Despite all the troubles, 2018 is forecast to be a good year for the vessel with 14 charters already confirmed. Several other charters are yet to be confirmed.

Also undertaken last year was the training of crew and officers in order to be compliant with the Manila 2010 Standards of Training, Certification and Watchkeeping for Seafarers (STCW) amendment. The training for the Skipper and the second engineer was undertaken in Suva while the rest of the crew, with the exception of Chief engineer and Chief mate, had their tickets revalidated at Amatuku. This puts the RV *Tala Moana* in a far better position than the rest of the other boats / ships.

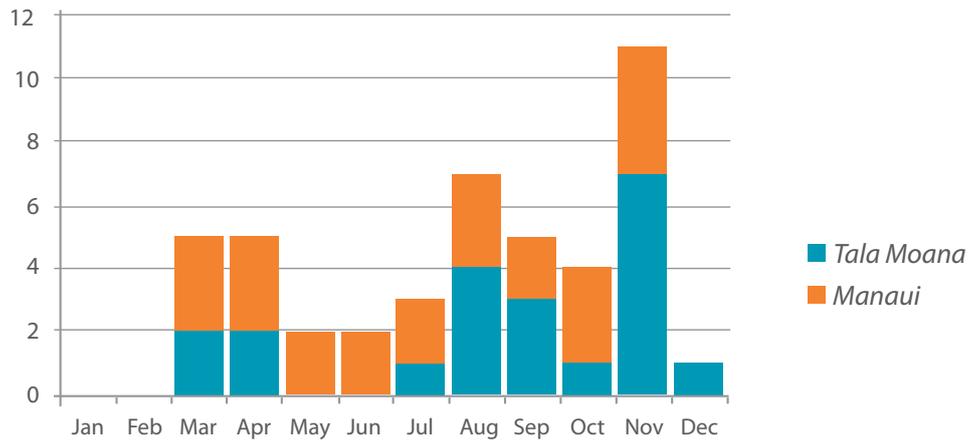


Figure 31: Monthly number of charters by the two fisheries vessels in 2017

6.3 Manauai

The FV *Manauai* did not start its operation until after the new echo sounder and new winch were installed by the OFCF in February 2017. A total of 24 trips, taking up to a total of around 98 days, were successfully executed before the vessel was brought back to dock in November. From those trips, *Manauai* was able to collect about AUD 37,000 in total revenue.



Figure 32: Fisheries mechanics and Furuno expert installing the new echo sounder on RV *Manauai*

There are talks of the new *Manauai* being endorsed by the governments of Tuvalu and Japan, but no further details are known about this important undertaking. The request for the new *Manauai* was in the form of a proposal put forward by the Department to Japan several years ago. Hopefully, 2018 will be the year for some real progress in this regard.

6.4 Fishers Training

6.4.1 Sea safety and grab bags programme

Distribution of grab bags continued in 2017. Two officers from the Operations & Development Section (O&D) travelled to Vaitupu on the *Manauai* to deliver 16 bags; the same number as the rest of the other islands with the exception of Funafuti and Niulakita. The delivery was accompanied by a three-day workshop training on basic sea safety and also to demonstrate to the fisher how to use the items in the bag. The workshop was attended by 17 fishers but only eight received a bag each. The bag is for distribution to active fishers only, and the Vaitupu fishers association identified eight eligible candidates at the time. The other eight bags were

handed over to the Vaitupu *Kaupule* for safe keeping until the Vaitupu Fishermen Association has identified more fishers who are eligible to receive a grab bag.

Some reports from Vaitupu tend to indicate that the *Kaupule* has, through its own power, distributed several bags to certain fishers without the knowledge and approval of the Vaitupu Fishermen Association. The Department was not aware of this action taken by the *Kaupule*. The action, in fact, is a breach of the agreement made with the *Kaupule* during this visit. Also breached, was the understanding that a fisher who is nominated to receive a bag must be trained first prior to receiving the bag. Immediate collaboration with the *Kaupule* is required to avoid more problems in the future. This requires the Department talking to the *Kaupule* to remind them of the understanding and agreement that has already made.



Figure 33: Sea safety training at Vaitupu

The highlight of the grab bag programme was the rescuing of three fishers in February. The three involved a lone fisher at Nukufetau who drifted for more than 24 hours and two at Funafuti. Both were rescued through the activation of the personal locator beacon (PLB), which is one of the items in the bag. The successful use of the PLB has helped raise the profile of the programme not only locally but also regionally.

In November, the O&D Section facilitated the order of 10 additional grab bags for the Nukulaelae *Kaupule*, to be procured through its own source of funding. Moreover, the Pacific Community, being extremely thrilled with the success of the programme, invited the TFD to write an article of the two rescues for inclusion in its Fisheries Newsletter.

6.4.2 Aluminium boat repair

The Fisheries Mechanic accompanied a contracted welding specialist (Teti Panapa) to Vaitupu on Manau'i 21–26 August. The objectives of the mission included: (1) to examine and to repair aluminium fishing boats damaged by cyclone Pam; (2) to train locally selected mechanics on the operation of the welding machine; and (3) to hand over the welding machine to the *Kaupule*.

Four mechanics attended the training. According to the specialist, almost all who attended did not seem to have the confidence or eagerness to use the machine compared with the people of the other islands that were visited. Given this, he strongly recommends a follow up training in Vaitupu be undertaken. It was also noted that the area used for the training was the old Vaitupu Fusi, which is now heavily run down and is too dangerous and not suitable for future training sessions. It is therefore advisable to find a better location for future training sessions.

6.4.3 Smoked fish training

For food security reasons and as part of NAPA II, the smoked fish programme was again revived this year. O&D, in partnership with OFCF and NAPA II, successfully conducted three training sessions in the months of February, November and December that targeted both fishermen and women in Funafuti. The three training sessions attracted a total number of 35 participants. Of these, 15 were women. The final training session was a special one that was conducted as part of the climate change awareness week, 4–8 December. Fish of certain selected species, chicken and pork meat were all trialed. Of all the selected fish species, the oil fish

(*Ruvettus prestiosus*) appeared to be most favoured for tenderness and moistness of its meat.



Figure 34: Fishers looking on during the first fish smoking training session

News of the three training sessions spread quickly and O&D has been receiving several requests / invites from communities outside Funafuti for the programme to be extended to their villages. With the continued partnership between OFCF and NAPA II, expansion of the programme to outer island communities will take effect next year.

Smoked products do not have a very long shelf-life if left exposed to air, moisture, microbes, etc. and can easily go bad within a short time frame (a few days depending on the handling and method of storage). The shelf life can be prolonged through proper packaging. Obtaining the right tools and equipment in sufficient numbers for outer island communities would be a bonus for the programme.

6.4.4 Outboard motor repair and maintenance

Engine failure is very common and is the main cause of sea accidents in Tuvalu. For this reason, the Department has endorsed the idea to have a repair and maintenance of outboard motors included in its work plan since 2015.

No activity was undertaken in 2016 as the spare parts ordered from Japan did not arrive in time. However, this was fulfilled in February 2017 when the parts arrived. Mr Ioapo Tapu, the sole distributor of Yamaha outboard engines in Tuvalu, a qualified mechanic and also Chairman of the Fishermen of Funafuti Association (FOFA), supervised the training that was assisted by fisheries mechanics. As part of its commitment to this undertaking, the Department offered its mechanical workshop as venue for the training free of charge.



Figure 35: Joint outboard motor repair training between FOFA and TFD in 2017

6.4.5 Fishing techniques training

The training on fishing techniques was conducted in November 2017. It focused on three different fishing techniques – namely deep-sea fishing, vertical longline and sub-surface trolling. Two local fishers were selected as trainers to assist the fisheries training officer, especially with the deep-sea fishing technique. Keizo Takahashi, an expert from OFCF who also developed the sub-surface trolling technique spearheaded the last session. Twenty participants in total from FOFA and the Department took part in this training. The training was completed with a fishing trip on the *Manuai* where about 50 black trevallies were caught along with other fish species. No fish was caught with the sub-surface trolling and vertical longline techniques.

More training for outer island fishers is intended for 2018. The cost for the extension of training will come from NAPA II, the Departments recurrent budget and OFCF.



Figure 36: RV *Manuai* crew giving a hand during the deep-sea fishing practical session on the vessel

6.5 Land-based VHF Stations

The dream of having land-based VHF stations established on all islands is getting close to becoming a reality. Last year, 10 sets of VHF radio along with antennae, and solar panels for power, were ordered by the Department. And as of December 2017, some of the parts had already been shipped from abroad. It is hoped that installation would commence in 2018 once all the parts arrive, which is hopefully early in the year. The land-based VHF station is all part of the Department's sea safety programme. The activity is being funded by the PROP project including the costs for installation.

6.6 FAD Programme

The FAD programme did not get much attention during 2017. The Vaitupu FAD was the only FAD visited in 2017. Many FADs have gone missing this year based on reports received by the Department. Niutao, Nukulaelae, Nukufetau, Nanumaga and Nui lost one FAD each this year. At end of 2017, the only outer islands with FADs are Vaitupu (1 FAD) and Nanumaga (1 FAD).

Regular updates on FADs are very poor as the Department is relying on Kaupule and fishers associations for reporting. Prompt and timely reporting therefore is something to be worked on for improvement.

Deployment is a major activity in our 2018 work plan and should start when the eco sounder, which is funded by PROP, arrives in Funafuti in early 2018.

6.7 Ice-cubes

The sale of ice-cubes continued in 2017, contributing a total of AUD 19,854.20 in revenue to the government. Compared with the past three years (years with good records), the sale peaked in 2015 (AUD 31,000) then dropped dramatically to less than AUD 20,000 in 2016. This year, the sale rose by just a couple of dollars. The drop in 2016 was due to the shutting down of the ice machine for over a month (December 2016 through to January 2017) because of the Cyclone Ula. For 2017, ice production was compromised due to poor water supply and because of the condensing unit being faulty since about April of that year.

A new condensing unit, ordered through the OFCF, will be installed next year. Improvement in sales is anticipated when installation of new unit is finished.

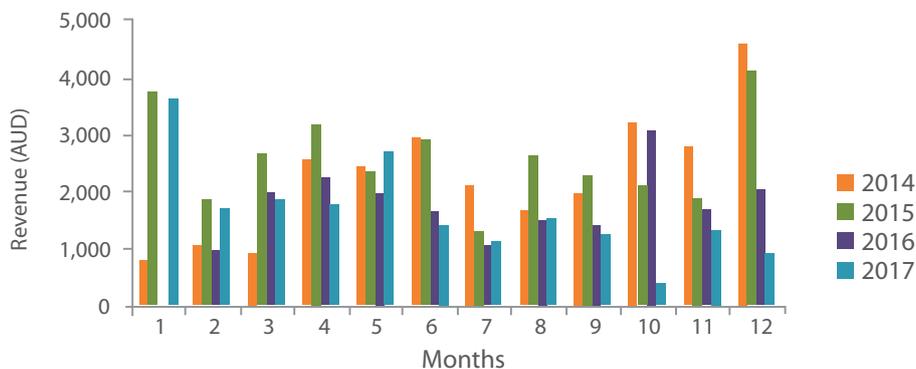


Figure 37: Monthly ice-cube sales 2014–2017

Due to a staff shortage and high demand for ice, the Department hired (one-year contract, ending 31 December 2017) one additional staff member to sell ice. With the contract now ending and given the importance of ice to the government in terms of revenue, long-term appointment of an officer to sell ice is strongly recommended. In addition, improvement in the supply of water for the manufacture of ice is required, a role that can be included in the Terms of Reference of the officer in charge of selling ice.

6.8 CFC Training Centre

This was one of the NAPA II priority activities planned for completion in 2017 but failed to be completed. The failure was due to many challenges being encountered. Two of the most important challenges included: (1) long delays in getting the design ready; and (2) redrafting of the final design by the Public Works Department (PWD) (as it was expensive). The reason for the long delay in (1) is due to PWD architectures being committed to other constructional works that were required by the government.

Contracts for the provision of building materials for all centres had been signed between the NAPA project and two local suppliers, Messamasui and Sulani. According to the former, all materials required are in stock and shipment should occur without delay.

Tender for construction is yet to be completed as most islands have not submitted their tender to the NAPA II or the TFD. Following up with *Kaupule* on tender documents is of paramount important to prevent further delays.

7 Donor Funding and Projects

7.1 General

Over the past years, Tuvalu has benefitted from the generous support of donor agencies and countries, including New Zealand, UNDP, EU, Japan, and Taiwan, among many others. There are now several major projects under way, as described in the following paragraphs. These projects and programmes are fully integrated into the TFD work programme and support many of the activities already described in earlier sections of this report.

7.2 NZ Tuvalu Fisheries Support Programme (TFSP)

The TFSP commenced in July 2014 and supports the TFD through three major elements as follows:

- Provision of technical assistance to the TFD through assignment of a Lead Advisor and an Inshore Fisheries Advisor.
- Construction of a new office building, originally expected to be completed in 2015, but construction

began in early 2017;

- A Grant Financing Agreement (GFA), initially for NZD 1.71 million over a five-year period (the amount of the grant increased during 2015, when additional funds were made available for fishery sector rehabilitation activities following tropical cyclone Pam, and then again in 2017 when funding was allocated to cover the cost of furniture for the new office building).

The first two activities are managed directly by MFAT of New Zealand, while the GFA is managed by the TFD.

7.3 World Bank Pacific Regional Oceanscape Programme (PROP)

The Pacific Regional Oceanscape Programme (PROP) is a multi-country programme, which supports economic development through better fisheries management in four countries (initially): Solomon Islands, Federated States of Micronesia, Marshall Islands and Tuvalu. Other Pacific Island countries that are members of the World Bank are expected to join the programme in due course. There is also a regional component of the programme, which is being managed by FFA and involves the PNA office, SPC and PIFS.

The Tuvalu component of the PROP was declared effective on 9 June 2015. Over a six years period, the PROP will provide additional support to the TFD to complement that which is being made available under the TFSP, and will also support Tuvalu agencies, in particular the Maritime Police. The TFSP Advisory Committee will be expanded in future to provide guidance to the PROP.

Most of the programme is funded under an IDA grant. This is complemented by a GEF grant of USD 1 million, which is specifically for conservation of the Funafuti lagoon.

7.4 UN / GEF National Adaptation Programme of Action (NAPA II)

Tuvalu's National Adaptation Programme of Action (NAPA) II project seeks to provide "Effective and responsive island-level governance to secure and diversify climate resilient marine-based coastal livelihoods and enhance climate hazard response capacity." Funded by the United National Development Programme (UNDP) and the Global Environment Facility (GEF), NAPA II focuses on implementing three priorities outlined in Tuvalu's NAPA, on building resilience to climate change: (1) in marine-based livelihoods, by (2) improving access to early disaster warning systems for people on outer islands, and (3) through integrating climate change concerns into outer island strategic plans and capacity building of outer island administrations.

The Coastal Fisheries Section has two NAPA II officers who were specifically recruited to implement the fisheries components of the project. These officers, who were recruited this year, are expected to work with the TFD through to 2018. Their work will focus on surveys, marine managed areas, training workshops, traditional fishing methods, FADs, modernised canoe building and seafood processing, which are all designed to increase food security and resilience of outer island communities.

7.5 UN / GEF Ridge to Reef Project (R2R)

The UN / GEF-funded Ridge to Reef Project (R2R) seeks to maintain and enhance ecosystem goods and services (provisioning, regulating, supporting and cultural) through integrated approaches to land, water, forest, biodiversity and coastal resource management. The purpose of focusing on these areas is to have an effect on poverty reduction, sustainable livelihoods and climate change resilience for the people of the Pacific Islands region. In Tuvalu, the R2R project is focused on water and sanitation. In Funafuti, the estimated demand for freshwater is close to the estimated sustainable freshwater yield and poorly treated wastewater is discharged to groundwater and excess sludge is simply removed to pits.

Although the programme is headed by the Environment Department, the TFD can be expected to become involved in R2R in future years where water and sanitation cut across ecosystem quality and fisheries production.

8 Issues and Challenges

8.1 Inadequate Office Facilities

For many years, TFD staff members have been scattered among a number of separate office building, which has impeded the proper functioning of the Department, prevented effective communications and personnel management, and negatively affected staff morale. The new office building, which was effectively completed at the end of 2017, should help the Department address this situation.

8.2 Low Recurrent Budget Allocations

The 2017 recurrent budget allocation was again too low for an effective Fisheries Department (see Annexe 9.1

on page 41). The Department cannot rely on its recurrent budget to implement its activities, since 81% of the allocated budget of AUD 639,926 was for staff salary, and only 19% for operations. If this is continued in the future, the Department will not be able to meet its assigned goals under Te Kakeega III, other government planning documents and regional and international obligations (e.g. Sustainable Development Goal (SDG) 14 on Oceans).

8.3 Compliance Issues and the European Union (EU) “Yellow Card”

It has been three years now since Tuvalu was issued a yellow card by the EU. Since then, Tuvalu, with the assistance from FFA and PNA, has worked diligently to address some of the issues and shortfalls identified by the EU in their assessment in 2014. An Action Plan was provided with 11 actions that Tuvalu should undertake in order to rectify the shortcomings identified by the Commission. Since 2014, key actions that have taken place are the revision of the National Plan of Action (NPOA) against IUU, revision of the National Tuna Management Plan, and the revision of the MRA, which was finally endorsed in the Parliament session in late 2017.

9 Annexes

9.1 Recurrent Budget for Fisheries in 2017

Code	Title	2017 Budget AUD
711110-I03-01	Salaries	144,601
711120-I03-01	Allowances	8,350
719100-I03-01	Tuvalu National Provident Fund (TNPF)	15,296
721100-I03-01	Overseas Travel and Subsistence	10,000
721110-I03-01	Leave Travel Entitlements	10,957
721300-I03-01	Telecommunication and Internet	2,400
722250-I03-01	Equipment Maintenance	300
722500-I03-01	Vehicle Maintenance	500
723320-I03-01	Petrol and Oil	1,500
723510-I03-01	Office Expenses	1,576
723540-I03-01	Office Stationery	900
723910-I03-01	Electricity	29,040
01 Total		225,420
711110-I03-02	Salaries	152,554
711120-I03-02	Allowances	21,561
712900-I03-02	Relieving Staff	18,325
719100-I03-02	TNPF	17,412
721300-I03-02	Telecommunication and Internet	2,650
722250-I03-02	Equipment Maintenance	24,031
722550-I03-02	Manauai Maintenance	5,378
723210-I03-02	Manauai Provision	5,200
723330-I03-02	Manauai Fuel and Oil Operation	15,000
723460-I03-02	Workshop Expenses	4,000
72346A-I03-02	Workshop Maintenance	1,000
723620-I03-02	Slipway Maintenance	2,170
726030-I03-02	Safety Gear	546
729090-I03-02	CFC Monitoring Cost	4,040
729990-I03-02	Vehicle Maintenance	1,000
782230-I03-02	CFC Operation and Working Capital	2,000
782300-I03-02	Support to FTFT	5,000
02 Total		281,867
711110-I03-03	Salaries	97,193
711120-I03-03	Allowances	5,944
719100-I03-03	TNPF	10,314
721120-I03-03	Communication and Transport	6,267
722250-I03-03	Boat Maintenance	4,544
722251-I03-03	Dive Equipment Maintenance and Services	9,898
723830-I03-03	CFP Monitoring Programme	879
729990-I03-03	Community Based Management Programme(OI)	1,304
782400-I03-03	Support to Funafuti Conservation Area	106
782710-I03-03	Creel Surveys	434
791220-I03-03	Office Equipment	3,000
791350-I03-03	FADs Programmes	674
03 Total		140,557

Code	Title	2017 Budget AUD
711110-103-04	Salaries	110,766
711120-103-04	Allowances	5,069
719100-103-04	TNPF	11,584
721300-103-04	Internet Connection	9,630
722250-103-04	Equipment Maintenance(VSAT Dish)	343
723021-103-04	Vessel Sighting Public Awareness Programme	3,780
723810-103-04	VMS Support Service	520
723820-103-04	Dockside Boarding	884
723830-103-04	Observer Refresher and Debriefing Course	822
04 Total		143,398
Grand Total		791,242

9.2 Participation in Meetings, Training and Workshops

Staff	Meeting / Training / Workshop	Location	Travel Date	Sponsor
ADMINISTRATION SECTION				
Mr Samasoni Finikaso	JV Meeting	Seoul, Korea	02/02–16/02	FFA / Tuvalu
	FFA Ministerial Consultation on Strategic Fisheries Cooperation	Honiara, Solomon Is.	02/03–14/03	Tuvalu PDF
	36 th Annual PNA Official Meeting	Majuro, Republic Marshall Is	30/03–18/04	FFA
	103 Special FFC Official Meeting	Mooloolaba, Australia	11/07–11/07	
	14 th Annual FFC Ministerial Official Meeting	Nadi, Fiji	19/09–07/10	
	Albacore Conservation & Management Measure Meeting			
	13 th Regulars session of the WCPFC TCC Meeting	Pohnpei		Tuvalu (PDF)
Ms Fulitua Tealei	10 th SPC Head of Fisheries Meeting	Noumea, New Caledonia	09/03–21/03	SPC
	Korea International Cooperation Conference on Oceans and Fishers	Busan, South Korea	31/08–12/09	Korea Government
	OFCF Head of Fisheries Meeting	Suva, Fiji	24/10–28/10	Japan Government
Ms Kasipo M Teo	JV Meeting	Seoul, Korea	02/02–16/02	FFA / Tuvalu
	Pacific Ocean Alliance Workshop	Suva, Fiji	09/03–21/03	OPOC
	3 rd Session of the Preparatory Committee	UN HQ NY, USA	23/03–18/04	UN OPOC
	Annual Official Meeting	Majuro, Marshall Is.		Tuvalu PDF
	Pacific Ocean Alliance Workshop	Suva, Fiji	09/03–21/03	OPOC
	4 th UN Preparatory Committee	NY, USA	08/07–25/07	Trust Fund, LoS
	Pacific Blue Economy Conference	Suva, Fiji	22/08–29/08	PROP
	Ocean and Human Health Meeting	Lisbon, Portugal	31/08–12/09	
	FFA Technical Meeting (CMM)	Nadi, Fiji	19/09–07/10	FFA
3 rd Regular Session (TTC 13)	Pohnpei, Federate State	PROP		
Mr Pugameau Taufilo	Regional Training Course in Fisheries Trade Policy and Investment	Honiara, Solomon Is.	16/02–07/03	FFA
	5 th Meeting of NCP Ministers – Fisheries and Aquaculture	Nassau, Bahamas	14/09–26/09	ACP Secretariat
Ms Puasina Tauia	Study Camp for Future Leaders	Taiwan	19/09–03/10	Taiwan, ROC
OCEANIC FISHERIES				
Mr Solomua Ionatana	Fisheries Trade Workshop	Honiara, Solomon Is.	16/02–07/03	FFA
	20 th MCSWG Meeting		23/03–13/04	
	2 nd RIMS Workshop			
	Niue Treaty Information System (NTIS) Training Workshop	Suva, Fiji	20/04–02/05	
	Regional Prosecutors and MCS Advisors Training Workshop	Honiara, Solomon Is.	24/06–01/07	
	Intercessional Meeting to Process the Draft Bridging CMM on Tropical Tuna	Honolulu, Hawaii	17/08–29/08	WCPFC
	WCPFC TCC13 Annual Meeting	Pohnpei, FSM	19/09–07/10	
Management Options Consultation (MOC) and the Tokelau Arrangement (TKA) Meeting	Honiara Solomon Is.	21/10–07/11	FFA	
Mr Manuao Taufilo	Regional Prosecutors and MCS Advisors Training Workshop	Honiara, Solomon Is	24/06–01/07	FFA
	MTU Interrogation Training Course	Suva, Fiji	29/08–05/09	GoT
	TCC 13	Pohnpei, FSM	19/09–07/10	WCPFC
	MCS/VMS Training	Honiara	19/10–04/11	FFA

Staff	Meeting / Training / Workshop	Location	Travel Date	Sponsor
Mr Saifoloi Talesi	PNA Observer Meeting, ROCW & RIMF	Nadi, Fiji	31/01–16/02	PNA & FFA
	Frontline Management Mentor & Leadership Training		02/03–16/03	FFA
	Niue Treaty Information System Training	Suva, Fiji	20/04–02/05	FFA
	ELR Workshop and Mentoring Session	Brisbane, Australia	17/08–29/08	PROP
Ms Siouala Malua	Fisheries Licensing Workshop	Honiara, Solomon Is.	02/03–14/03	FFA
	Tuna Data Workshop	Noumea, NC	20/03–05/05	PROP
	Tuna Stock Assessment Workshop		18/04–01/06	SPC
	WCPFC Scientific Committee Meeting	Rarotonga, Cooks	03/07–22/08	WCPFC
Mr Scott Pelesala	Licensing Workshop	Honiara, Solomon Is.	28/02–14/03	PROP
	10 th Tuna Data Workshop	Noumea, New Caledonia	20/04–02/05	SPC
	Stock Assessment Workshop		18/05–30/05	PROP
	Electronic Licensing Registration Training	Brisbane, Australia	17/08–29/08	PROP
Mr Laitailiu Seono	2 nd Regional E-Monitoring Process Standard Workshop	Noumea, New Caledonia	18/11–25/11	SPC
Mr Onosai Takataka	Observer Critical Analysis Training Workshop	Honiara, Solomon Is.	08/06–17/06	FFA
	Pacific Island Regional Fisheries Observer Debriefing Workshop	Nadi, Fiji	07/08–21/08	ACP Secretariat
Mr Uni Liufau	Observer Critical Incident Analysis Training Workshop	Honiara, Solomon Is.	08/06–17/06	FFA
	MTU Interrogation Training Course	Suva, Fiji	29/08–05/09	GoT
	Debriefing Assessor Workshop	Nadi, Fiji	07/09–21/09	
	MCS / VMS	Honiara, Solomon Is.	19/10–04/11	FFA
COASTAL FISHERIES				
Ms Moeo Finaunga	Coastal Fisheries Management and Compliance Visit	Auckland, New Zealand	11/07–20/07	MFAT NZ
Mr Semese Alefaio	Towards Effectively Manages Coastal Fisheries Areas – Polynesian Region	Papeete, Polynesian	06/04–20/04	SPC
	Regular Process for Global Reporting and Assessment Workshop	Auckland, New Zealand	17/10–21/10	UN HQ, NY
Mr Lale Paeniu	1 st SPC Regional Technical Meeting	Noumea, New Caledonia	25/11–05/12	SPC
Mr Maani Petaia	Coastal Fisheries Management and Compliance Visit	Auckland, New Zealand	11/07–20/07	NZ MPI
Mr Hetoa Kaio	Pacific Island Fisheries Officer Training Course	Nelson, New Zealand	28/02–18/07	NZAID
Mr Simeona Italeli				
OPERATIONS AND DEVELOPMENT				
Mr Tupulaga Poulasi	102 th FFC Regular Session and FFC Pre-meeting	Canberra, Australia	27/04–16/05	PROP
	Aquaculture and Food Security Bases on Philosophy	Thailand	01/07–11/07	Thailand Government
	LTFV Meeting	Nadi, Fiji	31/08–05/09	Pacific Direct Line
Mr Viliamu S Petaia	SPC Fisheries Officer Training	Vanuatu	02/10–27/10	SPC

9.3 Radio Awareness Programming for 2017

Date	Section	Topic	Summary
16 March	Coastal	Fisheries issues regarding coastal marine life in Funafuti	Facilitator: Paeniu, Hetoa Discuss the four main issues that cause danger to the coastal marine life in Funafuti. First of all is the overcrowding and polluting of marine life, the overharvesting or overfishing and lastly is the monitoring of the FCA.
30 March	Admin.		Facilitator: Matelina Update on Fisheries activities, training and purpose of staff overseas trips
20 April	O&D	Conditions of RV Tala Moana	Facilitator: Pafini A brief update on the systems and conditions of the TFD research vessel (RV Tala Moana)
27 April	Admin.	FMMC2	Facilitator: Matelina Discuss and announce the FMMC2
29 June	O&D	Sea Safety	Facilitator: Pafini Remind local fishers of the usefulness of grab bags and how to use them during every fishing trip
20 July	Oceanic	Vessel Sighting	Facilitator: Sai, Uni A brief awareness on vessel sighting, what to do, how to report to TFD staff in monitoring, control and surveillance work
27 July	Admin.	FMMC3	Facilitator: Matelina Discuss and update the general public regarding the FMMC3
10 August	O&D	Smoked fish	Facilitator: Viliamu, Nelly Update on the smoked fish workshop that was conducted by one of the specialists of the OFCF in fishing and postharvest techniques
24 August	O&D	Sea safety/FADs	Facilitator: Tupulaga, Semese, Viliamu Discuss awareness activities on sea safety and FADs



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