



Annual Work Plan

2018



Fisheries Department
Ministry of Natural Resources
Government of Tuvalu

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Acronyms & Terms

AA	Access agreement	OI	Outer Island
BDM	Beche-de-mer	PFO	Principal Fisheries Officer
CFC	Community Fishing Centre	PNA	Parties to the Nauru Agreement
EEZ	Exclusive economic zone	PROP	Pacific Regional Oceanscape Programme
EU	European Union	PS	Purse seine
FAD	Fish-aggregation device	QUAD	Quadrilateral MCS partners, Australia, France, New Zealand and America
FCA	Funafuti Conservation Area	R2R	Ridge to Reef Project
FFA	Forum Fisheries Agency	SFO	Senior Fisheries Officer
FFV	Foreign fishing vessel	SMC	Senior Management Committee
FO	Fisheries Officer	SOP	Standard operating procedures
FOFA	Fishermen of Funafuti Association	SPC	Secretariat of the Pacific Community
GEF	Global Environment Facility	STCW	Standards of Training, Certification and Watchkeeping (STCW Convention, IMO)
GOT	Government of Tuvalu	TFD	Tuvalu Fisheries Department
HRD	Human resource development	TFSP	Tuvalu Fisheries Support Programme (MFAT)
IMO	International Maritime Organisation	TKIII	Te Kakeega III: National Strategy for Sustainable Development 2015-2020
IT	Information technology	TMTI	Tuvalu Maritime Training Institute
IUU	Illegal, unregulated and unreported fishing	TVNOP	Tuvalu National Observer Programme
KOICA	Korean International Cooperation Agency	UNDP	United Nations Development Project
LL	Longline	VDS	Vessel Day Scheme
MCS	Monitoring, control & surveillance	WB	World Bank
MCS WG20	MCS working group, FFA	WCPFC	Western and Central Pacific Fisheries Commission
MFAT	New Zealand Ministry of Foreign Affairs and Trade		
MFED	Ministry of Finance and Economic Development		
MNR	Ministry of Natural Resources		
MRA	Marine Resources Act		
MSC	Marine Stewardship Council		
MTU	Mobile transmission units		
NAFICOT	National Fisheries Corporation of Tuvalu		
NAPA	National Adaptation Programme of Action		
NFD	Non-fishing days		
OFCE	Overseas Fishery Cooperation Foundation, Japan		

1. Background

1.1 Introduction

In 2012 and 2013, a detailed review was carried out of the structure and functions of the Tuvalu Fisheries Department (TFD) within the Ministry of Natural Resources (MNR). The review recommended changes to the Department's staffing and activities to better reflect the responsibilities and obligations of a modern-day government fisheries agency. The review also defined objectives and key performance indicators to guide the work of the Department in the medium term.

In September 2013 the Tuvalu Cabinet approved the Department's reorganization, effective as of January 1st 2014. The reorganization was implemented in 2014, which was therefore a transitional year of the Department. By the end of 2014 a new staff structure had been put in place, key corporate and operational documents were under development, and a revised set of priority activities had been agreed.

As a result, the Senior Management Committee (SMC) was established and the monitoring and reporting system of the Department was formulated. Annual Reports and Annual Work Plans were published and it is our aim to keep this momentum going. This is the fourth comprehensive Annual Work Plan produced by the Department, and describes the immediate priorities and activities for 2018. Where possible, longer-range work targets have also been indicated. Work plans for individual TFD sections have been produced in the past but achieving them has been difficult due to a number of issues, including shortage of staff, insufficient funds, inadequate office facilities and other factors. Under the new structure and funding arrangements the financial and office constraints should no longer apply, although staff movements remain an issue. At least seven TFGD professional staff will leave the Department to take up other jobs, or depart for long-term overseas training, in early 2018.

In 2018, each section will continue to implement outstanding activities from last year and new ones for this year using this plan as a guide. It is quite ambitious and there may be some outputs that will not be achieved during the year. New issues and priorities are likely to emerge and the Department needs to be flexible to meet these challenges as they arise.

1.2 Vision

The guiding vision of the Department can be stated as:

- *Bountiful inshore fisheries supporting livelihoods and providing healthy local food;*
- *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. Inshore fisheries can be managed by Tuvalu, but the health of oceanic fisheries requires regional and sub-regional co-operation.

1.3 Mission

The Department's mission is:

- *To maximize social and economic returns to the people of Tuvalu through 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 sustainable national revenues and sustainable employment opportunities. The Department will also support the Kaupules and Falekaupules which have the responsibility of managing inshore fisheries to support livelihoods and provide local food security.

1.4 Objectives

The primary objectives of the Department, as expressed in the current (2nd) Corporate Plan (2017-2019) are:

1. Tuvalu's national rights and interests are secured and protected within the regional purse seine and longline Vessel Day Schemes, whose integrity and development have been promoted by Tuvalu through cooperation with other participating coastal States.
2. Fisheries revenues to Tuvalu are maintained and further improved through the optimum allocation and pricing of Tuvalu's Vessel Days and associated purse seine and longline licenses.
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 WCPFC and other international fishery treaties to which it is a party.
5. Tuvalu meets the requirements of overseas market states in regard to 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 penalized through the Tuvalu legal system.
7. New fishery joint ventures have been negotiated between the Government of Tuvalu and selected commercial fishing interests which provide increased employment for Tuvaluans and additional revenue streams to the Government of Tuvalu (GOT) while minimizing investment cost and risk.
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. 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 (BDM), 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 TFDs organizational 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 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, the Government's National Strategy for Sustainable Development 2015-2020. However there have been significant, rapid changes in the fisheries sector even since the formulation of TKIII, and the objectives it contains are already in need of updating.

The Department also has long term objectives already in place and which consist of:

- Conversion of the Fisheries Department to non-commercial statutory authority, so that it can function more effectively as a revenue-generation agency without the inefficiencies and constraints imposed by public service rules and regulations;
- Establishment of a fishery product food safety competent authority, so that fishery products caught in Tuvalu waters, or by Tuvalu vessels fishing elsewhere, can be sold into higher-value markets that are currently not available to us;
- Establishment of shore-based facilities supporting the operations of a small fleet of domestically-based tuna longliners, probably operating under joint-venture or charter arrangements, producing tuna loins and steaks that are being exported either in freezer containers or by dedicated cargo aircraft;
- The growth of a local fleet of mini-longliners, owned and operated by Tuvaluans, fishing outside the reef for tunas and deep-water snappers, whose product is being fed into the export supply chain;
- Lagoon fishery management and stewardship plans that have reversed the decline in reef fishery production in Funafuti and at least a couple of outer islands where we know that overfishing is becoming a problem.

The fisheries sector is dynamic and fast-evolving: even since Cabinet's approval of the TFD Corporate Plan there have been some developments that require a response by the Department. These include increasing international fishery compliance obligations resulting from Tuvalu's membership of the Western Central Pacific Fisheries Commission, rapidly-changing circumstances in the regional arrangements that affect Tuvalu's fishery revenues, and the EU's identification of Tuvalu, in December 2014, as a possible non-cooperating country in regard to illegal, unregulated and unreported fishing. All these issues require Departmental action, sometimes substantial, which may not have been anticipated and thus not fully planned for. This emphasizes the need for the Department to remain responsive and flexible irrespective of the planning framework adopted.

1.5 Organisation

The TFD organizational structure, shown in Figure 1, was revised as part of the Cabinet decision of September 2013, and came into effect on 1st January 2014. Two new positions were established as a result of the 2016 workforce plan that was approved by cabinet in late 2016, and additional positions in 2017, as detailed below.

The Department now comprises:

- An Administration Group, comprising the Director, Deputy Director and several professionals with cross-cutting responsibilities (Legal Officer, Economist, Public Relations Officer and IT Manager) and the Executive staff. The group is responsible, among other things, for recommending fishery policy initiatives, negotiating fishery access arrangements, and establishing joint ventures in which the Tuvalu Government has an interest;
- An Oceanic Fisheries Section, responsible for industrial fishery vessel licensing, 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 EEZ;
- A Coastal Fisheries Section, responsible for inshore fishery resource assessment, monitoring and providing support to Kaupules, 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 & Development Section, responsible for the running of the TFD vessels *Manau* and *Tala Moana*, construction and deployment of fads, training of fishers and fishing vessel crew, and other development-oriented activities.

Several new activity streams are expected to develop 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 section of the TFD as they are implemented.

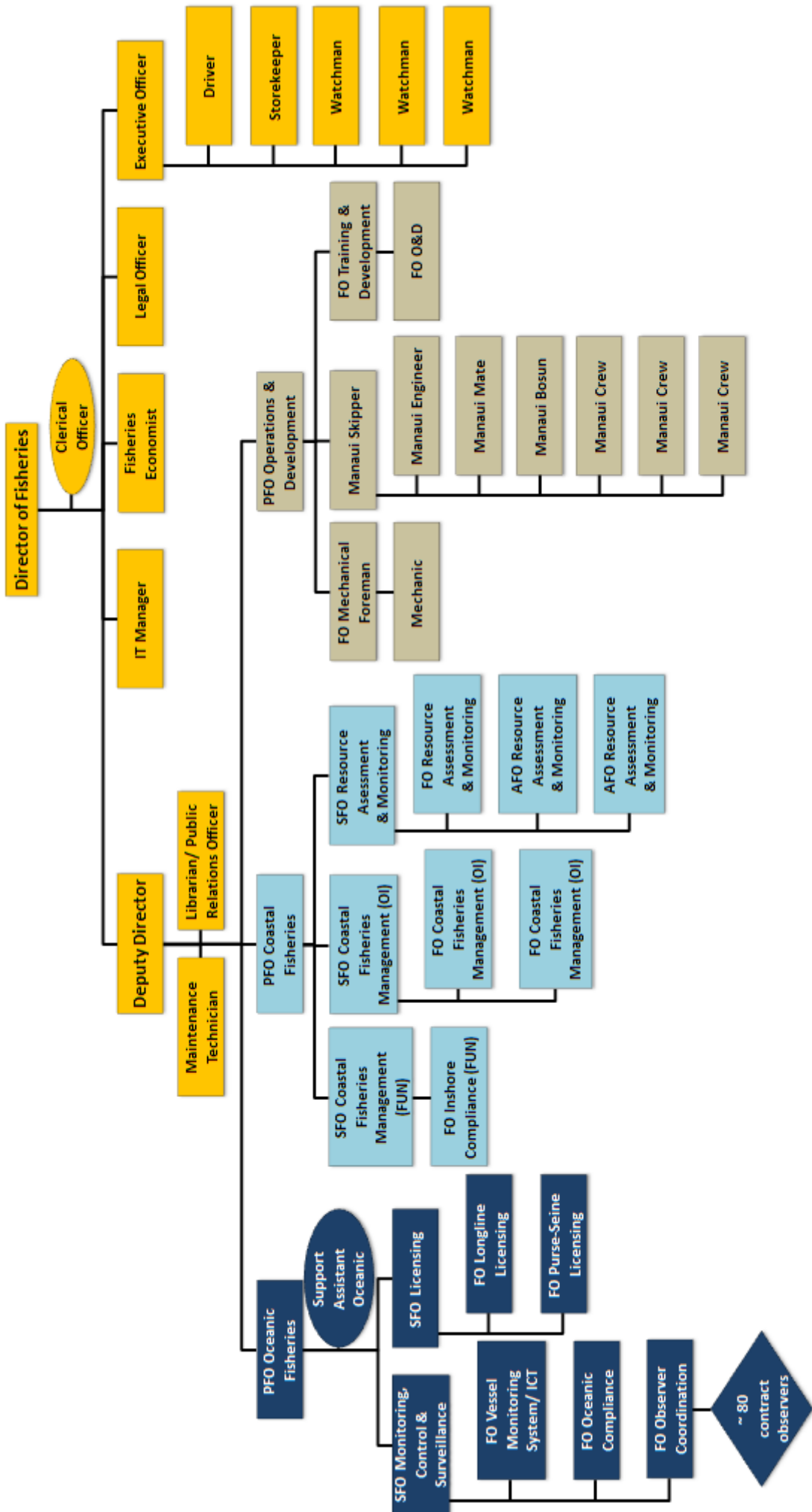


Figure 1. Organisation of the Fisheries Department

2. Fisheries Department Resources

2.1 Staffing

The Department initially comprised 42 staff, but after the two workforce planning proposals for 2017 and 2018, it increased to 46 staff (Figure 1). This includes 14 (including Executive staff) in the Administration Group, 10 in the Oceanic Section, 10 in the Coastal Section, and 12 in the Operations and Development Section.

In 2017, the Department established two new positions under the Administration Group, namely the IT Officer who will be responsible for the smooth running of the Department's IT systems, and the Maintenance Technician to perform basic repair and maintenance of the Department office buildings. For 2018, only one new position was established which is the Fisheries Officer for Data Entry under the Oceanic section.

In addition, the Department has a pool of 79 trained and qualified fishery observers who are contracted to work on board fishing vessels when required. In light of its rapid recent growth, the observer programme needs to be restructured before any further expansion. It is therefore not planned to increase the pool further in 2018, but training will be undertaken to increase the number of those qualified to carry out debriefing and other higher-level functions. The Department also manages the *Tala Moana* vessel with eight non-established crew, and runs a data collection program for all islands, using eight Data Collectors engaged on contract basis, one on each island and two temporary staff in Funafuti.

Since October 2012 the Department has been supported by a full-time advisor, provided under New Zealand donor funding, and who has concentrated primarily on oceanic fisheries management and industrial development. An additional part-time advisor, focusing on coastal fisheries management, was recruited in late 2015. The two advisors will complete their contracts with Tuvalu and leave the country in early January 2018.

In 2015 two more fisheries officers were recruited under the GEF-funded National Plan of Action for Adaptation to Climate Change (NAPA2) project for the 4-year duration of the project. So far only one fisheries officer is still working under the GEF-funded NAPA2 project.

2.2 Assets and facilities

The Fisheries Department office building construction began in early 2017 and was completed in late November 2017. The office building was not, however ready for staff to move in as there were some logistic issues that had to be sorted out prior to the moving in. When the move is completed TFD staff will no longer be scattered around Funafuti: only the Mechanics and the crew of the Department's two vessels will be housed in the workshop and its office spaces adjacent to the new building.

The Department still also has the workshop and NAFICOT buildings. Part of the NAFICOT building is still used by the Department for the ice making machine, while the top floor will be used for Observers. The Department also plans to construct a training centre in 2018.

TFD has two research vessels, the RV *Manau* and RV *Tala Moana* used for deploying FADs, transporting people and equipment to the outer islands and which are available for charter to third parties. The *Tala Moana* is now being used to conduct regular outer islands fisheries expeditions to monitor resources and provide services on outer islands as well as surface patrols to monitor illegal fishing activity.

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. There are four new boats; 1 fiberglass boat gifted by Korean International Cooperation Agency (KOICA) and four inflatable boats and other equipment procured using WB PROP funding.

The department has a dive compressor, dive gear and tanks and various items of office and laboratory equipment used for fishery research purposes. In 2016 and 2017, some items of office and technical equipment were procured through the Fisheries Support Programme (TFSP) funded by the New Zealand Ministry of Foreign Affairs and Trade (MFAT) and through WB PROP, to support the activities outlined in this work plan. Additional equipment was procured in 2017, including the IT fitout for the new building (using PROP funds) and office equipment (funded by the Tuvalu Special Development Expenditure (SDE) fund of the Government of Tuvalu).

2.3 Budget

Fisheries licensing, access fees and investments now generate a significant proportion of Tuvalu Government revenues: estimated income in 2014 was \$14.8 million, a significant increase of \$26 million in 2015, \$33 million in 2016, \$27 million in 2017 and the forecast for 2018 is conservatively estimated at AUD \$26.3 million or 51% of total revenues. Revenues will fluctuate over time but overall, income should now remain above AUD \$25 million. The Fisheries Department plays an active role in maximizing these returns through its ongoing participation in regional and bilateral fisheries negotiation, and the development of strategies intended to promote Tuvalu's interests.

The TFD recurrent allocation for 2018 was approved as part of the national budget process that took place in December 2017. The 2018 approved budget shows a slight increase in the Department's allocation, of \$925,277, which is a 10% increase from the 2017 approved budget. A total of \$670,106 (72%) is to cover staff costs. The balance of \$255,171 will contribute to the Department's increasing operating costs.

The Department has successfully negotiated substantial amounts of additional funding support to the fisheries sector from several major development partners:

- The New Zealand-Tuvalu Fishery Support Programme (TFSP), which will provide NZ\$ 1,036,800 over the 5-year period which commenced on 31st May 2014. The TFSP also provided new office facilities for the Department in 2017;
- The World Bank Pacific Regional Oceanscape Programme (PROP), approved in December 2014, which will provide a total of US \$7,910,000 over a 6-year period, was commenced in the first quarter of 2016;
- The GEF-funded NAPA2 project provided approximately US\$2.1 million to support fisheries development and food security activities in Tuvalu's outer islands over the 4-year period from early 2015. The NAPA2 project also procured a project vessel, the *Tala Moana*, which is now operated by the Department, and also used in support of other TFD activities; and
- The GEF-funded R2R project was approved in mid-2015 and was commenced in the first quarter of 2017 and supports aquatic biodiversity conservation and establishment of marine protected areas in some outer islands.

Together these programmes continue to support a wide range of activities by the Fisheries Department 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 supported by all four programmes are fully integrated into the Department's Work Programme, and in many cases will be funded by a combination of both 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 also continues to be available from time to time through a number of bilateral and multilateral partner agencies. However the TFSP and the PROP will greatly reduce the Department's dependence on this type of funding, which can be unpredictable and, sometimes, more closely aligned with regional rather than national priorities.

3. 2018 Work Plan

3.1 Internal management

The TFD work programme in 2018 will continue to focus on strengthening of the Department's internal management and coordination arrangements and just like in 2017, it will be done primarily through monthly meetings of the internal Senior Management Committee (SMC). The SMC was formalized in 2015 comprising the Director, Deputy Director, Legal Officer, Fisheries Economist, Information Officer, PFO Oceanic, PFO Coastal, PFO Operations & Development, and Technical Advisors. The SMC will continue to meet approximately monthly and will review the implementation of the Work Programme based on reports to be provided by each member prior to each meeting. Quarterly meetings of all TFD staff will also be held to discuss the implemented activities, as well as professional and social issues within the department.

The SMC committee also oversees the use of funding from the two donor-funded programmes mentioned above (TFSP and PRO). The committee is expected to meet quarterly to review programme plans, activities, expenditure and reports. The NAPA2 and R2R projects have their own governing Boards but would benefit from the technical advice and coordination function of a SMC focusing on their fisheries components, which are significant (more than half the project budget in each case). In 2016, it was observed that none other than SMC members attended the Project Advisory Committee (PAC) meetings, therefore SMC members decided that the same committee will also look after these projects. In order to ensure full coordination, and also minimise the number of meetings to be held, SMC will include these project items in their monthly meetings to review the implementation of the work program relating to Fisheries. Updates from these projects will have to come through their Fisheries counterparts; which are the Coastal Fisheries and Operation and Development Sections.

Over the longer term it is expected that the SMC will evolve into a broader Fisheries Advisory Committee, comprising representatives of all fishery sector stakeholder, as recommended by a number of previous advisory missions to Tuvalu, and also stipulated in Tuvalu's Tuna Fishery Management and Development Plan.

2018 will see the improvement of travel reporting, under which TFD staff will be required to submit mission reports and, where appropriate, make presentations on the results of their travel at TFD seminars. The first of these seminars took place as a pilot exercise in 2014 and will strengthen in 2018 once everyone moves in to the new office building.

The Fisheries Department promoted an active social life, both for the enjoyment of staff and to help maintain a cohesive social environment. The Department's Social Committee organizes regular sporting, activities, musical events and social functions, and participated in inter-departmental and other competitions. In future it is planned to introduce additional activities, such as canoe racing, and fishing competitions. Some of these will be open to public participation, in order to better promote the Department's activities among the broader community.

3.2 Administration Group

The Administration section of the Department is responsible for a range of activities, including:

- Advising the Minister, Cabinet and Parliament on fishery policy issues and high-level developments within the sector;
- Negotiating fishery access agreements with distant water fishing nations, associations, fleets and companies;
- Economic analysis of fishery development and management options;
- Ensuring consistency between fishery revenue information held by the TFD and the Treasury Department of MFED;
- Promoting and managing fishery joint ventures and other commercial activities in which the Government of Tuvalu has an interest, including the restructure of NAFICOT;
- Ongoing review of Tuvalu's fishery legislation to ensure it remains compliant with international treaties to which Tuvalu is a party;
- Assisting the Attorney-General's Office and other relevant government departments in regard to incidents of non-compliance with Tuvalu's fishery laws;

- Providing access to information on Tuvalu fisheries, including through the development and maintenance of a Fisheries Department library and website;
- Production of public information materials on the work of the Department, and the Tuvalu fisheries sector in general;
- Representing Tuvalu at high-level fishery discussions and negotiations; and
- Managing and keeping records of departmental expenditure, travel, training and personnel issues.

One of the milestones for 2018 is to ensure that all Fisheries staff and stakeholders understand and comply with the changes made in the Marine Resource Act Amendment 2017. Therefore awareness programs will be carried out this year to upgrade the capacity of staff.

It was initially expected that Tuvalu would commence implementation of the longline vessel-day scheme (LL-VDS) in 2018. However in late 2017 a decision was made to postpone LL-VDS implementation until 2019 to allow time for additional research on historical patterns of longline fishing activity in Tuvalu waters. This additional research is deemed necessary in order to allow proper price-setting and packaging of longline vessel-days.

Other major objectives which will be commenced this year are:

- Investigating options for the possible conversion of the Fisheries Department to non-commercial statutory authority, so that it can function more effectively as a revenue-generation agency without the inefficiencies and constraints imposed by public service rules and regulations; and
- Establishment of a fishery product food safety competent authority, so that fishery products caught in Tuvalu waters, or by Tuvalu vessels fishing elsewhere, can be sold into higher-value markets that are currently not available to us.

Another major activity for the department is the revamping of NAFICOT with its new trimmed management structure that reflect its renewed focus as a parent / holding Company overseeing its subsidiary companies that mostly handle operations such as joint ventures, marketing of fish products and so forth.

Other ongoing activities for 2018 are the usual provision of economic analysis of fishery development and management options and ensuring consistency between fishery revenue information held by TFD and the Treasury department (MFED). Collection of economic indicators data for FFA is also an ongoing task for 2018.

Many of the Administration group's activities are ongoing or routine, such as organizing periodic staff meetings, personnel recruitment, staff appraisals, reporting, etc. However a number of milestone tasks for 2018 are identified in Table 1.

Table 1. Activity timetable for the Administration Section in 2018

Administration Group	Activity/Task ↓	Month →	2018 milestones											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	2016 Annual Report Production		★	★	★									
	NAFICOT operates under renewed structure		★	★	★	★	★	★	★	★	★	★	★	★
	Fishery revenue reconciliation			★			★			★			★	
	Collection of economic indicators data (FFA)				★						★			
	Participate in Regional Fisheries Management				★	★	★	★	★				★	★
	Sub-regional pooling and Bilateral Negotiations						★							
	Removal of EU Yellow card						★							
	Public Information and Awareness Program		★	★	★	★	★	★	★	★	★	★	★	★
	Legislation Awareness Workshop			★										
	Consultation trip to Ols			★	★	★								
	Assessment of FFA report on competent authority legislation								★					
	TA to develop the TFD Statutory Authority				★									

3.3 Oceanic Fisheries Division

The Oceanic Fisheries Division oversees the effective monitoring, control and management of industrial tuna fisheries in Tuvalu's fishery waters. Mindful of the significance of this fishery in terms of its social and most importantly economic benefits, the Division focuses its work programme on achieving the following objectives:

- Improve managing the PS and LL Vessel Day Scheme (VDS) and other Bilateral Licensing arrangements in place with other gears (LL, PL, BU and other support vessels);
- To complete all outstanding work required to rectify the EU IUU yellow card;
- Improve Monitoring, Control and Surveillance (MCS) of foreign fishing vessels (FFV) activities in Tuvalu's Fishery waters;
- Improve management of the National Observer Programme through implementing activities recommended by the review work carried out in 2017;
- Improve Monitoring of transshipment activities in Tuvalu's designated port of Funafuti;
- Improve collection and dissemination of tuna fishing data to SPC and WCPFC;
- To fully comply and implement Tuvalu's reporting obligation under WCPFC (Part 1 and 2);
- Promoting HRD plan through attending Internal and external capacity building training courses to enhance staff's capacity; and
- Provide technical training and awareness programme to all stakeholders involved in MCS work.

A key priority activity for this year is research on historical patterns of longline fishing to ensure that Tuvalu is in a position to implement the LL VDS in 2019. A further priority is to enhancing the capacity of Oceanic staff to ensure they can contribute constructively to implementing all the activities in the work plan for 2018. The focus is to enhance the capability and knowledge for the staff to be able to keep up with the ever changing and improvement of the fishing industries in their quest to harvest our fisheries resources.

In terms of MCS, the battle with IUU activity is never ending and with the emerging technologies and new ways to harvest our resources, it is very important to keep building the capacity of this section to be able to enforce our laws and improve compliance.

Enforcement and Compliance activities require close collaboration with the Maritime Wing of the Tuvalu Police Department, the Attorney-General's Office and other government agencies involved in maritime law enforcement. With the increase in donor funding at our disposal, there is an opportunity to meet the need to increase coverage of surface patrol operations to the EEZ to deter IUU activities. This will in turn address concerns of the EU on the lack of patrol and prosecution of illegal fishing activities in Tuvalu in recent years.

The Tuvalu National Observer Programme (TVNOP), managed under the oceanic section, has grown in the past few years. A full operational review and performance audit of the program was successfully undertaken in 2017 by a consultant under PROP funding. The review made several recommendations on restructuring of the TVNOP to ensure that the Observer Programme operates with maximum efficiency and effectiveness.

Now there are 79 active observers, among them 14 certified debriefers and 12 trainee debriefers. Also in this pool of observers there are 61 Marine Stewardship Council (MSC) certified observers that can undertake MSC trips on Purse Seine vessels. The review work recommended the department recruit additional staff to assist the observer coordinator in managing the observer program. The TFD will seek approval for implementation of these changes in 2018

Several other activities, including participation in regional Surveillance operations, support to regional aerial surveillance over-flights, engagement in ship-rider programmes operated by QUAD (US, NZ, AUS & FR) Coastguard vessels, and transshipment monitoring in Funafuti lagoon will be carried out opportunistically but cannot be included in the work programme as dates are unknown at this stage.

Removal of the EU yellow card also falls under the priority work of this section and a work in progress. This include the work of reviewing of our national fisheries laws, which was completed in December 2017, and our national plan of action on illegal, unregulated and unreported (IUU) fishing.

Many of the Oceanic Division’s activities are ongoing or routine, such as renewal of licence and access agreements, updating licence lists, observer deployment, data entry, revenue reconciling, etc. However, a number of milestone tasks for 2018 are identified in Table 2 below.

Table 2. Activity timetable for the Oceanic Fisheries Section in 2018

Oceanic Section Activity/ Task ↓	Month →	2018 milestones											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Recruitment of Data entry officer and other vacancy in the section		★	★										
Recruitment of Observer program additional staffs		★	★								★	★	★
Observer Program review work				★	★								
Tala Moana surface patrol operation							★		★			★	
Te Mataili surface patrol operation		★	★	★	★	★	★	★					
Regional surveillance operations				★			★			★			
Developing SOP for MCS activities and Licensing			★				★						
Negotiating Bilateral Fishing Agreements		★					★					★	★
Revising of AA templates								★			★	★	
Consultation/Workshop with local agencies						★							
Vessel Sighting awareness workshop			★			★			★			★	
VDS management (Non-fishing Days (NFD) verification, allocation, trading days, etc.)		★	★	★	★	★	★	★	★	★	★	★	★
WCPFC Part 1 (science) report			★	★	★	★	★						
WCPFC Part 2 (Compliance) report			★	★	★	★	★						
VSAT maintenance				★			★			★			★
In-house Information Sharing and presentation			★				★			★			★
Quarterly Progress Reports				★			★			★			★
Data entry (observer & catch logs)		★	★	★	★	★	★	★	★	★	★	★	★
Monitoring transshipment (in port)		★	★	★	★	★	★	★	★	★	★	★	★
Mobile Transmission Units (MTU) inspection/interrogation training						★							
VMS and MCS fellowship attachments			★				★	★					
MCS Foundation course (FFA)			★								★		
Regional Observer Coordinator meeting			★										
FIMS Observer e-Reporting Training					★								
Observer Debriefing, MSC training				★	★	★							
FFA MCS WG20				★	★								
SC14									★				
TCC14 meeting										★			
WCPFC15												★	★

3.4 Coastal Fisheries Division

Inshore fisheries support livelihoods, food security, nutrition and human health on all the islands of Tuvalu and are significant contributors to building the resilience in all our communities. The Coastal Fisheries Section is responsible for ensuring the sustainability of coastal resources of finfishes, shellfishes and other seafoods now and in the future. Because Tuvalu's legislation essentially places control of inshore fisheries in the hands of local government, the Coastal Fisheries Division needs to work closely with the Kaupule to achieve its goals.

In the last few years, the Coastal Section has been undergoing significant changes as a result of strengthening through the TFSP and PROP. In 2015 the focus of the work plan was on training and the establishment of monitoring programmes designed to provide the core data needed for effective management (e.g. creel fisher's surveys). In 2016 monitoring continued, but added to the work plan were consultations with the Kaupule and communities of Funafuti for Tuvalu's first comprehensive multispecies management plan, the Funafuti Reef Fisheries Stewardship Plan (FRFSP). In 2018 the workplan will see the implementation of the FRFSP, while the Coastal Section continues with its on-going monitoring and begins the development of plans for some other fisheries and outer islands.

The changes in the work plan were supported by the results of the first report on creel surveys completed in October 2016 in which strong evidence was found that at least some of the coastal species are overfished in Funafuti, Nui and Nukufetau¹. As a result of these findings, overfishing that was suspected in the past now has supporting evidence and management strategies are now under development.

The Coastal Section will focus its 2018 work programme on the following activities:

- **Funafuti Reef Fisheries Stewardship Plan (FRFSP):** With completion of consultations and the development of a plan in 2017, the section will implement the resulting stewardship plan in partnership with the Kaupule, Fishermen of Funafuti Association (FOFA), community and other stakeholders during 2018. The main activities in FRFSP are:
 - Strengthening of the Funafuti Conservation Area (FCA): The purpose of this activity is to ensure the FCA functions as a true no-take zone able to provide a breeding population for replenishing the lagoon. The work will include demarcation of the conservation area with buoys and lights to ensure fishers are clear on the boundaries. Regular patrols will be undertaken by TFD and the Kaupule to enforce the fishing ban within the conservation area, and these will work in combination with the establishment of an island outpost within the FCA for a caretaker. Pilot work will be undertaken using a drone and fixed cameras to support surveillance. This work will also include a public awareness programme.
 - Size limits: The Coastal Section will, through the Kaupule and with support from FOFA, establish minimum size limits for commonly-fished species to allow each fish to breed at least once. This will include FOFA sanctioning their members for breaches and working with fishers to ensure as much voluntary compliance as possible. It will also include public awareness campaigns, the distribution of posters, stickers, measurement equipment and other items to support compliance. This work may also include protection of spawning aggregations (SPAGs) and controls on some fishing gear and methods.
 - Offshore focus: This part of the FRFSP will seek to encourage greater use of pelagic and offshore fisheries to ensure measures taken to recover the damaged reef fisheries do not lead to shortages of fish. This will work in cooperation with new work on lagoon FADs and offshore vessels to be undertaken by Operations & Development Section. The Coastal Section will carry out lagoon FAD monitoring through the creel data and camera observations around FADs to determine their effectiveness (see also Creel Surveys and Fisheries Research).
 - Adaptive management and support: Under the FRFSP the Coastal Section will assist the Kaupule to strengthen its FCA Office and work with Kaupule officers on a regular basis. A steering Committee will be formed from the stakeholders of the project and meet once a year to assess effectiveness and adjust the measures as needed. Once per year a large community meeting will also be held.
- **Creel Surveys:** Creel surveys, the heart of the data required for management, will continue to be run on all islands in 2018 and permanently thereafter. On Funafuti this will continue to involve a team of 4 officers meeting fishers as they land their catch twice per week to collect data on counts and sizes. On all outer islands TFD has now employed Outer Islands Data Collectors (OIDCs) to collect on-going creel data on their island. This work will be supported in 3 ways in 2018. First,

¹ Alefaio *et al.* 2016 Creel Survey Report 1, Tuvalu Department of Fisheries, 15 pp.

quarterly visits by Coastal Staff will be undertaken to ensure equipment is functional and the work is being carried out in a consistent fashion by all OIDs. During each Coastal Section Metronome trip, additional creel samples will be collected to augment the work of the OIDs and allow for checks that data are consistent. Finally, an annual workshop will be run in Funafuti to which OIDs will travel for on-going training and sharing of experiences.

- **Fisheries Research:** In 2018 we reorganised some of our tasks under the new heading of Fisheries Research. In this part of the workplan all the supporting information needed for effective management of resources will be included from year to year as needed. Some tasks like ciguatera, water quality and fish export work will be ongoing, while others such as beche-de-mer (BDM) quick assessment may be done on a one-off or occasional basis.
 - Ciguatera GTX monitoring: The purpose of monitoring the dinoflagellates (*Gambierdiscus toxicus* (GTX) and other species) that cause ciguatera is to identify hotspots and the progression of outbreaks when they occur. It is expected that a new outbreak could be detected up to 6 months before the fish become toxic if there is a bloom of toxic dinoflagellates.
 - Ciguatera cases: The coastal section will continue to work with the hospital and outer island health centres to collect information on any reported cases of ciguatera. The information will be used in conjunction with monitoring to assess the status of outbreak and identify hotspots.
 - Water quality: Low water quality in the shallows of Funafuti lagoon off Fogafale is leading to losses of fishery habitats and is likely to be feeding outbreaks of ciguatera. This monitoring program will provide core data for improving the poor conditions and supporting recovery of the lagoon.
 - Fish exports: Records of boxes of fish being exported are collected by quarantine and that data shared to TFD for analysis.
 - FAD effectiveness in the lagoon: As part of the FRFSP, some work will be done in assessing whether FADS deployed in Funafuti lagoon are effective in aggregating pelagic species which could be used by local fishermen. This will better allow pressure on reef species to be reduced through the FRFSP measures, by giving fishers other alternatives.
 - Beche-de-mer quick assessment: Recent calls to reopen the BDM fishery require the development of a management plan which in turn depends on information on the resources available. A BDM quick assessment in Funafuti lagoon will be carried out to support the BDM Management Plan.
 - Size at First Reproduction: With support from PROP and possibly SPC, a pilot survey of several species of fishes would be undertaken to determine the local size at which fish first become reproductive. Initially FRFSP will depend on published values for determining minimum fish sizes for catches but because the size varies significantly from place to place, it is necessary to collect data for Tuvalu.
 - Research Mini-metros: To carry out the research required in Funafuti lagoon, the coastal section will in 2018 carry out regular Mini-metro day trips to different sites around the lagoon where all the data needed are collected at once. This will ensure efficient use of boat and fuel resources to meet all research needs.
- **Outer Island Metronome trips:** Since 2015 regular metronome trips have been carried out by TFD on a regular schedule basis on all the outer islands. The metronome trips are the heart of TFD interaction with the outer island communities, fishermen and Kaupule on fisheries matters. The metro trips initially shared with NAPAI will now seek shares with other partners where possible to help reduce costs (e.g. Oceanic Section could run surveillance trips at the same time). Typical work undertaken during the metro trips include: consultations, training and public awareness, support to OIDs, collecting additional data on creel, ciguatera work, boat and canoe assets, LMMA, and other task as may be requested by the Kaupule. This work guided by an MOU which was signed between TFD and Kaupule in 2017. It is intended that metro trips will become a permanent feature of TFD works on OIs, allowing the department to work for at least 10 days on each island per year.
- **Aquaculture support program:** The coastal section will provide support to outer islands wishing to develop aquaculture programs.
- **Formulation of regulations:** The coastal section will continued work on developing fisheries related management plans by laws and other policies as needed for the good management of the country resources. In 2018 this will include the development of the BDM management plan and working with the outer island communities to develop management plan for their resources as may be needed.

- **Awareness:** Regular programmes will be run to ensure the public and government are informed of the status of their fisheries and are informed and consulted about mechanisms needed to ensure the resources. The programmes to be included are radio, website (with newsletter) and, new in 2018, the production of posters and pamphlets to support new rules under FRFSP.
- **Training, Attachments and Meetings:** The Coastal Staff will continuously update their knowledge and skills through regional training and attachments, in-country training programmes when available and through in-service training provided by the Human Resources Division. For example, in 2017 SPC inaugurated the Regional Technical Meeting for Coastal Fisheries which is expected to run in late 2018 and will be attended by TFD staff. In 2018 the New Zealand Ministry of Primary Industries (MPI) will provide attachment training to improve skills in all aspects of fisheries monitoring and management.
- **Administration and Information Technology:** On-going administration of the Coastal Section will include maintenance of facilities and the production of regular reports on the work being done. This includes maintenance of databases, improvements in data collection systems (e.g. tablet data sheets), and servicing of dive gear and compressors. The Coastal Section will also report quarterly on this work plan and produce future work plans, budgets and annual reports.

PROP and TFSP: Funds will be applied from these two projects to support implementation of the FRFSP, development of other plans and regulations, on-going monitoring and research needed to support recovery and management of the resources.

NAPA II and R2R: Under its funding through GEF and UNDP, the Coastal Section will implement tasks that will include managed area demarcation and consultations for the future development of management plans on the outer islands.

Some of the Coastal Fisheries Division's activities will be on-going from past years. However, in 2018 a range of new activities is planned. These are highlighted in Table 3 and include the introduction of the FRFSP. The milestone tasks for 2018 are illustrated below to show when each activity will be most active.

Table 3. Activity timetable for the Coastal Fisheries Section in 2018

Coastal Section		2018 milestones											
Activity/ Task ↓	Month →	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1. Funafuti Reef Fisheries Stewardship Plan FRFSP		★	★	★	★	★	★	★	★	★	★	★	★
2. Creel Surveys Funafuti & OI		★	★	★	★	★	★	★	★	★	★	★	★
2.1 Funafuti		★	★	★	★	★	★	★	★	★	★	★	★
2.2 OIDs		★	★	★	★	★	★	★	★	★	★	★	★
2.3 Quarterly trips			★		★		★	★		★			
3. Fisheries Research		★	★	★	★	★	★	★	★	★	★	★	★
3.1 Ciguatera sampling		★	★		★		★	★		★		★	★
3.2 Ciguatera cases		★	★	★	★	★	★	★	★	★	★	★	★
3.3 Water quality		★			★			★			★		
3.4 Fish Exports		★	★	★	★	★	★	★	★	★	★	★	★
3.5 FAD effectiveness in FUN lagoon							★		★		★		★
3.6 BDM quick assessment		★											
4. Metronome Trips				★		★			★		★		
5. Aquaculture Support Program				★							★		
6. Formulation Regulations / Plans			★		★			★		★			
7. Awareness		★	★	★	★	★	★	★	★	★	★	★	★
8. Training, Attachments, Meetings			★					★	★				★
9. Administration / IT		★	★	★	★	★	★	★	★	★	★	★	★

3.5 Operations & Development Division

Artisanal fishing is very important as a source of income for some and a source of food for most families. The Operations and Development Section (O&D) is therefore devoted to helping artisanal fishers and their families to ensure safe fishing operations, sustainable fishing practices, healthy fish products, food security and good catch returns. As such, O&D continues to offer capacity building and technical support to all outer islands (OIs) whenever the need arises.

O&D has been and will continue to work together with donor partners to identify alternative fisheries and new fishing grounds in light of new findings indicating that overfishing is occurring in some areas, especially on Funafuti. O&D will also ensure that fisheries activities under the NAPA 2 project are implemented this year as this will be the final year for that project.

Also O&D will continue to manage the operation of the two vessels, RV *Manauai* and RV *Tala Moana*. Depending on decisions of Cabinet, O&D hopes to increase its current manpower by at least one additional staff to ensure efficiency and smooth operation of the two vessels.

Below are the milestone activities to be undertaken by the division in 2018:

- Sea safety: In response to several requests received from the fishermen associations of certain islands, follow up training will be undertaken on all islands. The training will focus mainly on the proper operation of global positioning system (GPS) devices (handheld). Also this will be an opportunity to follow up on the “grab bags” distributed to fishers last year and to discuss with them issues or concerns they might have concerning the distribution;
- Fish smoking training will be undertaken on all islands including the Funafuti community on Funafala. Several smoke fish training courses were conducted last year on Funafuti with positive results. The training will be co-funded by the NAPA 2 project, Fisheries Department and other donors yet to be confirmed;
- Bottom and squid fishing trials will be undertaken. Several islands (Niulakita & Nukulaelae) have been selected as initial destinations, and depending on the outcome of the first few trials, extension to other islands are expected to follow;
- VHF land-based radios: To improve safety of fishermen, a VHF land-based radio installation will begin in 2018, covering all islands. Altogether there are 10 land stations, two on Funafuti and one for every other island. The two stations on Funafuti will be set at the new Fisheries office and at the Fishermen of Funafuti Association (FOFA) office;
- Awareness programs (radio, workshop etc.) will be conducted where and when needed to improve understanding of the public and fishermen. Some of the topics to be covered will include sea safety, fish handling, fish spoilage & preservation, small business, fish aggregating devices (FADs) and FAD fishing, and marine pollution;
- Vessel maintenance: Short and rapid maintenance (at least 3 days) will be conducted on an opportunistic basis, particularly for the *Tala Moana*. This maintenance is important for the safe operation of the vessel;
- FAD Deployment was to have occurred last year, but was delayed due to equipment being broken. With new equipment now ordered, deployment is forecast to happen this year and all islands will receive at least one FAD during the year;
- CFC Training Centres were due for completion in 2017 but some technical issues with the building design caused the tender process to be terminated. Construction therefore is set to start next year when everything (design, cargo list, constructors finalized etc.) are ready;
- Canoe building: Several paddle canoes will be constructed and delivered to all islands as part of the NAPA2 Project. Made from imported wooden materials, the new canoes will result in a reduced dependence by locals on local trees for canoe building;
- Purse seine crewing: O&D will follow up on this and will ensure that those who have trained get placement on Purse seiners; and
- The new *Manauai II*: The request by the fisheries department for a replacement vessel to replace the *Manauai*, now 29 years old, was approved by the Japanese Government last year. Therefore several missions by Japanese officials are expected in 2018 to progress work on the new *Manauai*.

Table 4. Activity timetable for the Operations and Development Section in 2018

Operations & Development Section		2018 milestones											
Activity/ Task ↓	Month →	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Fish smoking		★		★				★	★	★			
Fishing Techniques								★	★	★			
Sea safety				★									
VHF land-based established			★	★									
Awareness		★	★	★	★	★	★	★	★	★	★	★	★
<i>Tala Moana</i> maintenance		★	★	★	★	★	★	★	★	★	★	★	★
<i>Manai</i> maintenance		★	★										
FAD deployment				★	★	★							
CFC Training Centres			★	★	★								
<i>Tala Moana</i> mooring										★			
Canoes					★	★	★						
Purse seine crewing			★	★	★	★							

4. Monitoring and Reporting

Monitoring of Work Programme implementation and delivery will primarily be through the monthly meetings of the SMC. In addition, quarterly progress reports will be produced by the TFD, both for internal purposes and to respond to the requirements of the Government of Tuvalu (Planning Department, Ministry of Finance and Economic Development) as well as NZAP, World Bank and UNDP/ GEF, the Department’s major external development partners. The Department will also continue to produce Annual Reports for submission to and approval by Cabinet.



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