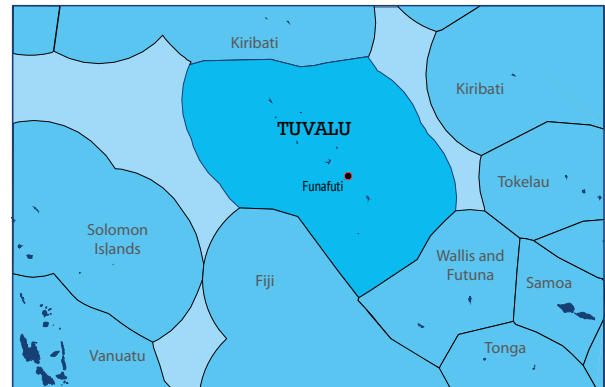


Tuvalu Fisheries: Moving into the 21st century

Garry Preston,¹ Matelina Stuart² and Sam Finikaso³

Fisheries in Tuvalu

The importance of fisheries to Tuvalu cannot be overstated: indeed, Tuvalu is often characterised as one of a handful of ‘fishery-dependent small island states’ whose economy, livelihoods, food security and dietary health depend largely on marine resources. Since 2013 fishery access and licence fees paid by industrial fishing vessels catching tuna in Tuvalu’s exclusive economic zone (EEZ) have been the primary source of non-aid revenue to the Government. Seafood is a major source of protein to Tuvaluans, especially in the outer islands, where fish consumption may exceed 80 kg per person per year (five times the global average).



Tuvalu’s exclusive economic zone.



Tuvalu’s nine islands.

Commercial fishing in Tuvalu primarily comprises the industrial purse-seine and longline tuna fisheries. Fishing is generally undertaken by foreign vessels operating under access agreements, and skipjack tuna make up the bulk of the catch, which in 2015 was around 90,000 tonnes (50% more than usual due to El Niño). Fishery access is a major source of government revenue: in 2015, licence and access fees were AUD 31.4 million, 58% of non-aid revenues and 43% of the national budget. As well as generating revenues, the fishing industry provides employment to Tuvaluan observers and fishing vessel crew.

Domestic fishing is dominated by subsistence activities. A wide variety of techniques are used throughout the group to collect fish, crabs and shellfish, which are consumed, shared, bartered or sold. Fisheries centres have been established on all outer islands in order to provide fishers with income earning opportunities, although not all are functioning. On the main island, Funafuti, artisanal fishing is carried out by a fleet of 4–5 meter outboard powered skiffs, which mostly fish by trolling (tuna) and handline (reef fish).

About 75% of the fish landed in Tuvalu are ocean species, predominantly skipjack and yellowfin tuna. The rest are reef and lagoon species, with smaller amounts of bottom fish from deep slope areas. Census data indicated that 74% of households participate in reef fishing and 63% in ocean fishing. Studies in fish consumption over the past decade have estimated annual per capita fish consumption of between 85 and 146 kilograms. Current annual domestic fishery

¹ Advisor, Tuvalu Fisheries Department.

² Information Officer, Tuvalu Fisheries Department.

³ Director, Tuvalu Fisheries Department.

production of approximately 1100 tonnes suggests that per capita fresh fish consumption is around 100 kg per person, per year.

Transforming the Tuvalu Fisheries Department

The Tuvalu Fisheries Department (TFD) is one of three departments in the Ministry of Natural Resources (along with Agriculture and Lands). In 2012, the Department was reviewed by two consultants (Tom McClurg and Grant Carnie) as part of the Institutional Strengthening Programme Inception Phase, generously funded by the Government of New Zealand via its Ministry of Foreign Affairs and Trade. The review concluded that:

- In regard to coastal fisheries, TFD had for too long been focusing on small research and development projects, especially in aquaculture, that had delivered no visible economic or social benefits to Tuvalu.
- In regard to oceanic fisheries, Tuvalu had been a passive player in regional fishery management and access negotiations, 'standing on the sidelines' and following the consensus instead of promoting its own national interests for greater economic benefit.
- Organisationally, the Department was 'about the right size, but the wrong shape', with too many staff focusing on issues that were not very important, and insufficient attention being paid to 'big-ticket' items.

The reviewers recommended that the Department be reorganised into three separate divisions (Oceanic, Coastal and Operations & Development), overseen by an Administration group comprising the Director, Deputy Director, and several staff with cross-cutting duties (Legal Officer, Information Officer and Economist).

The review recommendations were formally accepted by the Tuvalu Cabinet in late 2013, for implementation in 2014. The Cabinet also approved the Department's first-ever Corporate Plan, covering the period 2014–2016. The Plan provided a clear statement of the TFDs vision, mission and objectives. Importantly, the Plan specified a number of key performance indicators by which the Department's performance would be monitored over the three-year period.

TFD's revised organisational structure

2014 thus became a transitional year for the Department. Several 'frozen' positions were unfrozen and re-designated, a couple of new positions were created, some staff members were moved around, job descriptions rewritten, and the new structure was implemented by the end of the year. However as some positions were filled by internal promotion or transfer, there were still several vacancies at the end of 2014 that were not filled until the following year.

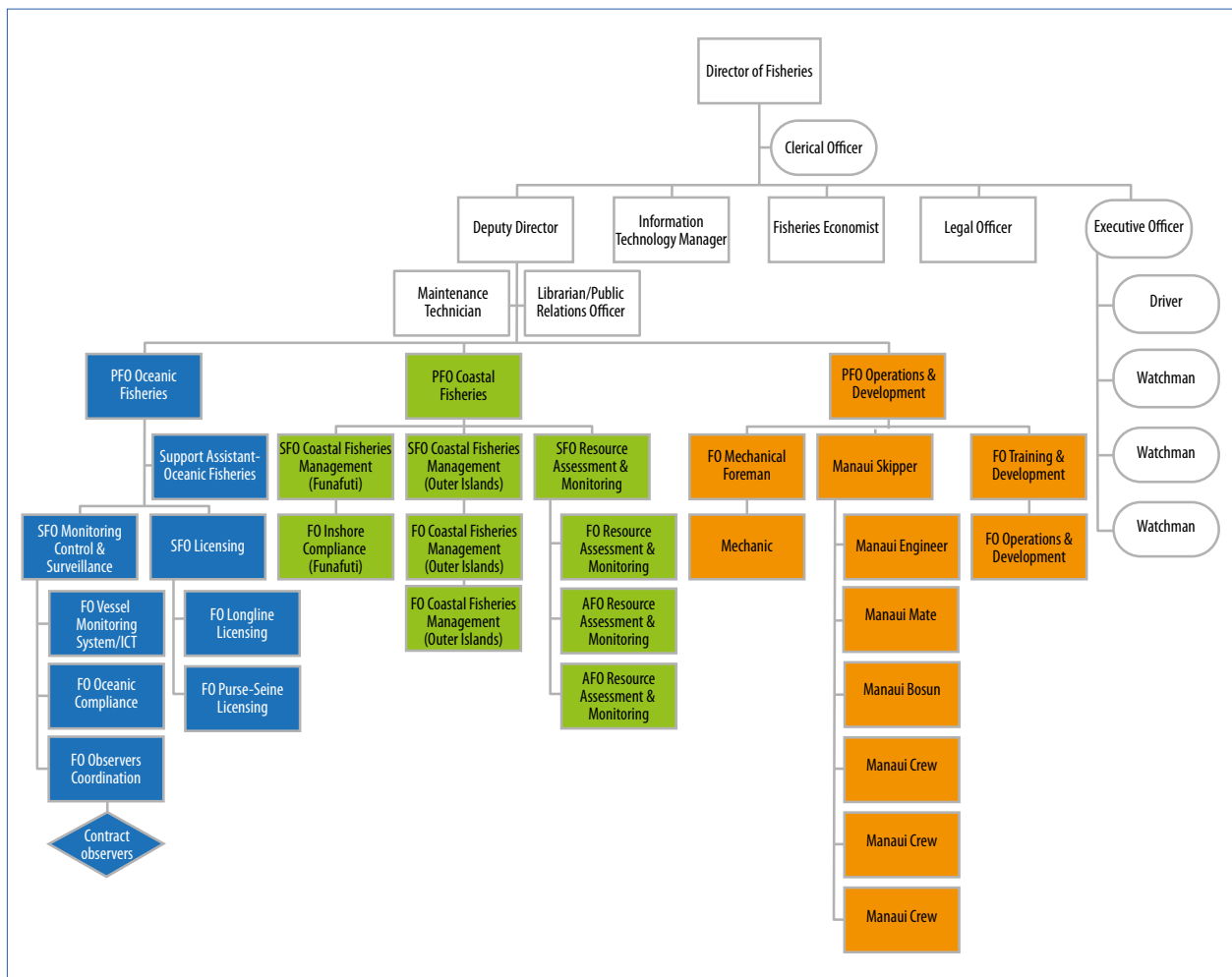
At the same time work began on reforming the Department's work programme to align with the Corporate Plan approved by Cabinet. TFD's work is now aligned along two major axes:

- The promotion of food security, livelihoods and economic development based on sustainable management and utilisation of coastal and inshore resources, primarily through working with the Kaupule (island councils), communities and fishers associations on each island.
- The generation of revenue and economic growth from the industrial tuna fishery, through collection of licence and access revenues, joint ventures, and the employment of Tuvaluan seafarers on fishing vessels.

Tuvalu's isolation, lack of water and labour, high cost of fuel and electricity, unavailability of materials, supplies and equipment, poor telecommunications and infrequent air and sea transportation make it difficult to envisage onshore development such as canneries or loining plants. There may, nevertheless, be smaller-scale development opportunities that can be leveraged through concessionary resource access arrangements, and these are also being investigated and pursued by the Department.

Simultaneously with these transitional changes, the Department began to address one of its major constraints: insufficient funding. During the period 2013–2015 the fisheries sector became by far the largest contributor to the Tuvalu economy, but as the organisation responsible for generating and managing this revenue stream, TFD remained seriously under-funded by the Government of Tuvalu. As a result of the limited recurrent budget allocation, many TFD core functions essentially could not be carried out. In recognition of this situation, in 2013 the Department began to seek support from several major development partners, which has resulted in substantial amounts of additional funding now being available:

- The New Zealand-Tuvalu Fishery Support Programme (TFSP) is providing NZD 1,036,800 in operational funding over the five-year period which commenced on 31 May 2014. TFSP is also providing two technical advisors to TFD, and will also support the construction of new office facilities for the Department, now expected to be completed in 2017.
- The World Bank Pacific Regional Oceanscape Programme (PROP), approved in December 2014, is providing a total of USD 7,910,000 over a six-year period that commenced on 9 June 2015. These funds will support internal capacity development and training, the procurement of equipment and supplies, consultancy services in technical areas, increased surface patrols within the Tuvalu EEZ, and other activities.
- The Global Environment Facility-funded NAPA2 (National Adaptation Plan of Action for Climate



TFD's revised organisational structure

Change, Phase 2) project is providing approximately USD 2.1 million to support fisheries development and food security activities in Tuvalu's outer islands over a four-year period from early 2015. In early 2016 the NAPA2 project also procured a project vessel, the *Tala Moana*, which is being operated by the Department, and which is used to support a range of TFD activities.

- The GEF-funded Ridge-to-Reef project was approved in mid-2015 and supports aquatic biodiversity conservation and establishment of marine protected areas in selected outer islands.

Together these programmes support a wide range of activities by the Fisheries Department by 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 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.

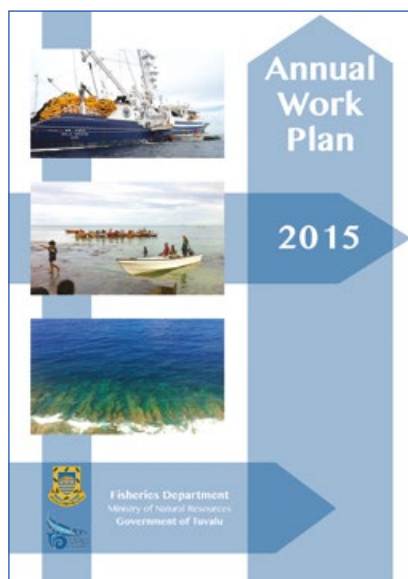


RV *Tala Moana* (image: George Vann Temanau).

Work planning and monitoring

The TFD Corporate Plan provides an overall framework that guides the Department's activities over a three-year period (the first Corporate Plan will expire at the end of 2016, and a new Plan is currently being prepared).

The planning framework has been further refined through the production of annual work plans (AWP), the first of which covered the calendar year 2015 and which was formally published with SPC's assistance. Producing an AWP is a useful process because it provides a permanent reminder to all TFD staff of the tasks to be achieved during the year, as well as a basis for assessing performance and rectifying problems. The document also serves as a valuable handout for the numerous visiting consultants, donor representatives, regional organisations staff and others who want information on the Department's work programme. Instead of having to go through long question-and-answer sessions over and over again, TFD staff can simply provide a copy of the AWP and invite visitors to read it and then come back with any further questions. The AWP also makes the Department's priorities clear in the event that donor representatives are trying to promote projects and activities that are not pressing concerns for the Department – which happens a lot more than we would like. Finally, the AWP provides a basis for monitoring and reporting. The Department's 2015 Annual Report will be finalised shortly, and will for the first time be reporting against the objectives and tasks set in the AWP.



TFD's 2015 Annual Work Plan

The reality is that the 2015 AWP turned out to be too ambitious. The goals and objectives that the Department set itself were quite high, and we failed to achieve some of them for a variety of reasons, including lack of technical capacity, insufficient recurrent budget allocations, delays in several donor-funded projects, lengthy bureaucratic processes within the Government, the impacts of severe weather events on TFD facilities and infrastructure, and unexpected developments in the fisheries sector (including Tuvalu's being issued with

a 'yellow card' by the European Commission). The 2016 AWP, which is being followed but has not yet been formally

published, is essentially a continuation of the 2015 AWP, in which tasks that should have been completed in 2015 will now, hopefully, be done in 2016. The difference is that some of the equipment, facilities and arrangements that we expected to have in 2015 are now in place, and the delivery of AWP activities is accelerating. By 2017 TFD expects to be able to set a realistic AWP that is fully equipped for and capable of carrying out.

TFD work areas

In line with the important social and economic role of fisheries in Tuvalu, and the provisions of the MRA and other legislation, the Department's work falls into a broad range of areas:

- Sustainable management of the tuna fishery in Tuvalu waters, through:
 - ensuring compliance with the provisions of international fishery treaties to which Tuvalu is a party, including UNCLOS, FSA, PA and WCPFC;⁴
 - actively promoting Tuvalu's national interests through regional tuna fishery management arrangements, including WCPFC, FFA, PNA, TKA and other mechanisms;⁵
 - maintaining fishery licensing and data collection systems for vessels fishing in Tuvalu waters, and monitoring their activities through data collection programmes;
 - monitoring, control and surveillance (MCS) of fishing activities in the Tuvalu waters to ensure compliance with licence conditions, and to deter, detect and penalise illegal, unregulated and unreported (IUU) fishing; and
 - responding to the requirements of major market states in regard to IUU fishing and fishery product food safety.
- Increasing sustainable economic benefits from the tuna fishery, through:
 - effective negotiation of favourable fishery access conditions with foreign interests;
 - development of joint-venture arrangements between the Government of Tuvalu and selected foreign fishing companies with emphasis on shore-based development;
 - promotion of the employment of Tuvaluans as crew on board fishing vessel operating in Tuvalu waters, through training and licence conditions; and

⁴ United Nations Convention on the Law of the Sea, United Nations Fish Stocks Agreement, Palau Arrangement for the Management of Fisheries of Common Interest, and Western Central Pacific Fisheries Management Convention.

⁵ Western and Central Pacific Fisheries Management Commission, South Pacific Forum Fisheries Agency, Parties to the Nauru Agreement, and Tokelau Arrangement for the Management of South Pacific Albacore.

- o reform of the National Fishing Corporation of Tuvalu (NAFICOT) as a vehicle for the Government's commercial fishery interests.
- Improved management of coastal fisheries in order to maintain livelihoods, food security and dietary health. This involves:
 - o working closely with Kaupule, who are responsible for by-laws and other regulations controlling local fishery management;
 - o strengthening relationships between TFD, fishers and other stakeholders;
 - o fishery resource assessment and monitoring, to provide the information needed for management;
 - o supporting the establishment and enforcement of local conservation areas and other management mechanisms;
 - o formulation of management plans for beche-de-mer, sharks and other resources that are prone to extreme overfishing; and
 - o environmental monitoring to assess and mitigate adverse environmental impacts, including waste management, coastal development and ciguatera fish poisoning.
- Supporting the sustainable economic development of Tuvalu's small-scale fisheries, through:
 - o provision of technical assistance, training and material support to small-scale fishers and fish processors, including for sea safety; and
 - o deployment and maintenance of fish aggregation devices in all of Tuvalu's islands.
- Public awareness and education in all the above areas.

This list is not exhaustive, but provides an indication of the diversity of tasks TFD is (or may be) required to perform.

The Tuvalu fisheries sector is dynamic and fast-evolving, especially in regard to tuna fishery management and international trade in tuna products. Since Cabinet's approval of the first TFD Corporate Plan in September 2013 there have been new developments that required a response by the Department. These include increasing international fishery compliance obligations resulting from Tuvalu's membership of the WCPFC, changes to aspects of the PNA Vessel Day Scheme that could affect Tuvalu's fishery revenues, the EU's identification of Tuvalu as a possible non-cooperating country in regard to IUU fishing, and the establishment of the Tokelau Arrangement for the Management of South Pacific Albacore. All these issues required Departmental action, sometimes substantial, which was not anticipated and thus not fully planned for. This emphasises the need for the Department to remain responsive and flexible irrespective of the planning framework adopted.

Recent achievements

The last couple of years have seen the Department gain momentum and strength in most its work areas. Notable achievements and outcomes have included:

- establishment of fishery data collection programmes in Funafuti and the outer islands to provide the basis on which to provide management and development advice to Kaupule (which in Tuvalu have the legal mandate to manage fisheries within 12 miles of the shore);
- conduct of field surveys and assessments in selected outer islands, to gather additional information that will complement the data collection programme;



The creel survey team at work (image: Semese Alefaiao).

- successfully promoting several amendments to PNA fishery management arrangements that were in Tuvalu's interests, including changes to the FSM Arrangement, vessel-day pooling trials, and a charging regime for FAD-fishing by industrial purse-seine vessels;
- deployment of fish aggregation devices on all Tuvalu's islands, as a means of improving safety and productivity for small-scale fishermen, as well as diverting fishing pressure away from reef resources;



Deploying a FAD (image: Semese Alefaiao).

- establishment of the Community Vessel-Day Scheme, under which a proportion of Tuvalu's tuna fishery revenues are returned direct to the communities in each island;
- completion of the Tuna Fishery Management and Development Plan, and initial work on Shark and Beche-de-Mer Fishery Management Plans;
- establishment of a safety training programme at the Tuvalu Maritime Training Institute for Tuvaluan seafarers who want to work in the fishing industry. About 100 seafarers have now been trained at the Institute. Following the failure, for three years in a row, of PNA to agree to Tuvalu's proposal for regional mandatory minimum crewing requirements on foreign purse-seiners, Tuvalu will implement this as a national licence condition in 2017;
- expansion of the Tuvalu Fishery Observer Programme, which has increased since 2013 from 12 to 68 PIRFO-certified observers (some of whom are also MSC-certified, or qualified as debriefers), with further expansion planned. Tuvaluan observers have a good reputation in the fishing industry and are in high demand, and the Programme provides jobs that are very well-paid by Tuvaluan standards; and
- revision and updating of the Marine Resources Act (MRA) to respond to concerns raised by the EU and to ensure consistency with the changing provisions of international fishery treaties and agreements. The revised MRA is now in draft form and expected to be submitted for Parliamentary approval in November 2016.



Observer training (image: Onosai Takataka).

This is just a handful of the Department's recent outputs – there are many more. Some of these are documented on TFD's new website, www.tuvalufisheries.tv. The website is a work in progress – some areas are still to be completed and most will require regular updating.

Most of the above outcomes (including the website) were only possible because of the funding support available from



TFD's website homepage: www.tuvalufisheries.tv

New Zealand, the World Bank, and GEF via UNDP, and several relied on technical assistance from FFA, SPC, PNA and WCPFC. The Department is very grateful for this support, which will continue to be essential in the future.

Future plans

Despite the Department's recent achievements, we have only begun to scratch the surface and there remains a huge amount of work to be done, including:

- Complete field survey work in each island and use this information, plus that from the fishery data collection programmes and from other sources, to establish island-by-island fishery management and development plans.
- Strengthen the management of the Funafuti lagoon fishery, especially through working the Funafuti Kaupule and Fishermen's Association to enforce the prohibition on fishing in the Funafuti Conservation Area.
- Further work through PNA and WCPFC to find alternatives to the current three-month FAD closure for the purse-seine fishery, which places a heavy disproportionate burden on Tuvalu.
- Establish IUU and Fishery Product Food Safety Competent Authorities, to satisfy the requirements of the EU and other key market states.
- Reform of NAFICOT (the National Fishing Corporation of Tuvalu) to comply with the requirements of the Public Enterprises (Accountability) act and to act as an effective vehicle for joint ventures or other fishing enterprises in which the Government of Tuvalu has an interest.
- Fulfil Tuvalu's commitment to implement the PNA Longline Vessel-Day Scheme as of 1 January 2017.

Some of these upcoming tasks will be technically demanding and will require significant investments of time and money, but the Tuvalu Fisheries Department will rise to the challenge!