



Tuvalu Fisheries Department:
Coastal, NAPA II and Operations & Development Sections:
Trip Report

Nui and Nukufetau 21st August – 10 September 2016



Nui channel: Main fishers' landing

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14th September 2016



1 Summary

An outer islands trip to Nui and Nukufetau was undertaken by the Coastal, NAPA II and Operations & Development sections of the Tuvalu Fisheries Department from 21st August to 10th September 2016, using the new fisheries vessel Tala Moana supplied through NAPA II.

The expedition was designed to collect data on the importance of fishing in the community (consultations), fishing capacity (all assets) and state of the resources (ciguatera and creel surveys). Workshops and materials focused on sea safety, distribution of grab bags, supply of an aluminium welder and welding techniques for maintaining boats were also carried out. The main datasets collected and activities completed were:

1. Key informant and Group consultations;
2. Socio-economic surveys at household level;
3. Ciguatera poisoning cases;
4. Creel surveys of fishers' catches;
5. Locally managed marine area / marine protected area (LMMA/MPA) location, size and rules
6. Independent counts and measurements of boat assets on the island
7. Fisheries assets including condition of the CFC and its assets;
8. Assessment of the Community Fisheries Centre (CFC) as part of planning for a new training fale to be built by NAPA II;
9. Workshops / training on sea safety and distribution of grab bags; and
10. Inspection and assessment of FADs and Memorandum of Understanding with Fishers on their use and maintenance.

All parts of the work requiring data collections were facilitated by the use of formal datasheets (some from SPC, some developed internally for this work) and data stored in the Coastal Fisheries Database (CFD) for later analysis.

A total of 15 key informant, 78 household and 2 community consultations was completed across both islands. Records of fish poisoning were not well kept by the medical staff, but 6 follow-up surveys were carried out by the team with people who had been poisoned in the past. On Nui, poisoning was not ciguatera, but the 5 cases on Nukufetau generally concerned groupers near the main channel during spawning. Overall 42 creel surveys were completed, 10 on Nui and 32 on Nukufetau. On both islands boundaries of the LMMA/MPA were recorded by GPS and a draft by-law of the Nukufetau LMMA, which has been recently decreased in size, was collected. The LMMA in Nui is controlled by traditional means. The independent boat survey found a total of 104 boats and canoes on the islands (24 in Nui, 80 on Nukufetau). The CFCs are not in good condition and many of the assets are also in poor condition and require maintenance. In Nui, the CFC is under-utilised, and in Nukufetau is located in the wrong place for regular use and has no power. An aluminium welder and training to 4 users was supplied on each island to assist with boat maintenance. Also sea-safety training centred on the use of a Global Positioning System (GPS) and provision of 16 grab bags was made on each island. Both islands had only 1 of 2 FADs remaining and there were issues with maintenance. MOUs for their use and maintenance are now under review and expected to be signed during the next visit to each island. Some additional work was carried



out on weights of fishery products commonly sold, on a coral bleaching and die-back event in the LMMA on Nukufetau and in locating sites for moorings in Nukufetau lagoon.

The main issues encountered during the expedition included:

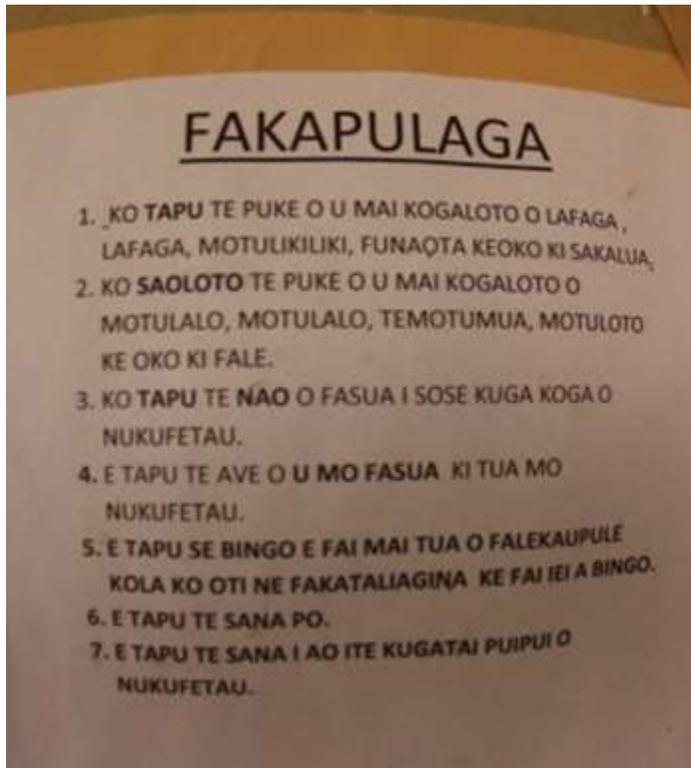
- Key informants were often hard to interview because they were busy elsewhere and/or because they were reluctant to release their knowledge;
- Poor records of everything on the islands, including by-laws, meeting records, ciguatera records, assets, etc make collecting information difficult and in some cases impossible;
- Kaupules have not been successful at maintaining and running CFCs for the benefit of the community;
- Women have limited involvement in post-harvest processing, on Nui in particular;
- There were a lot of empty houses on outer islands due to migration to Funafuti, making it difficult to carry out socio-economic surveys;
- The community has little information on the VDS funding available to them and are confused about its use and who controls the funding;
- The LMMA/MPA boundaries are not marked and rules are not clear resulting in confusion by fishers; and
- FADs were not being maintained well and no coconut fronds had been attached. This led to poor catches around the FADs. Fishermen did not want to tie leaves on the FADs.

As a result the following recommendations were made for future work:

1. A detailed request well in advance of the trip needs to be given before arriving on island, with the request that the Kaupule warns the community of the work to be done. Acknowledgement from the Kaupules is needed before the trip begins. This should outline the work to be done so there is a realistic expectation from the community on what is required of them;
2. It may be worth trying Bob Johannes' technique of swapping fishing knowledge so that people are more likely to share their information;
3. Managers should enter into inter-departmental discussions with the responsible ministries to improve record-keeping the islands;
4. Fisheries should work with Kaupules to improve business arrangements for the CFCs. This may include increasing fish prices, location of the CFC (e.g. on Nukufetau CFC needs to be relocated to main island). This should be considered in 2017 work plan;
5. Fisheries should focus on involving women more in fish processing, as planned in NAPA II;
6. Fisheries should carry out awareness on the VDS on outer islands;
7. R2R and NAPA II need to carry out the marking project for which they have been funded as soon as possible to demarcate the LMMAs. This should include redefining objectives of each LMMA;
8. Fisheries should investigate the use of non-biodegradable materials for use on the FADs. Use of VDS for setting up and maintaining FADs by the Kaupule should be investigated;
9. MOUs for FADs need to be reviewed and signed on next outer islands trip; and R2R officers should work closer with Fisheries staff as many of their tasks overlap.



Figure 1: Public notice on fisheries posted at Nukufetau



2 Introduction

Regular outer island trips have been incorporated as part of the Fisheries Department's work plan to gather regular information on coastal fisheries and fishery assets. The Departmental sections most involved in these tasks are the Coastal Fisheries and Operations & Development Sections. The 2016 Workplan also calls for surveys to be undertaken as part of the GEF-funded and UNDP-implemented National Adaptation Programme of Action (NAPA) II activities which focus on Locally Managed Marine Areas, improvements to the Community Fisheries Centres and several modules on canoe-building, traditional fishing techniques, preservation and Fish Attracting Devices (FADs).

Most of these trips, at least one per island per year, rely on the regular metronome trips coordinated by the Fisheries Department under NAPA II. The remainder of the trips will be funded by TFD through its New Zealand TFSP and World Bank PROP. Three trips have been organised for 2016 to cover all of the outer islands:

- A NAPA II Metronome trip to the northern islands Nanumea, Nanumaga & Niutao in June;
- A second non-metronome trip (this report) to central islands Nui and Nukufetau in August-September; and
- A NAPA II Metronome trip scheduled for November to visit the two southern islands.

This expedition to Nui and Nukufetau focused on gathering data and carrying out activities in 10 major areas:



1. Key informant and Group consultations – including Kaupule, Falekaupule, Women, Fishers and the community in general;
2. Socio-economic surveys at household level, covering 30% of the population;
3. Ciguatera poisoning cases, if any, on the island;
4. Creel surveys of fishers' catches;
5. Locally managed marine area / marine protected area (LMMA/MPA) location, size and rules
6. Independent counts and measurements of boat assets on the island¹ – including public and private boats;
7. Fisheries assets – including condition of the CFC and its assets and any other fisheries infrastructure to add to our understanding of fishing capacity;
8. Assessment of the Community Fisheries Centre (CFC) owned by the Kaupule as part of planning for a new training fale to be built by NAPA II;
9. Workshops / training on sea safety and distribution of grab bags; and
10. Inspection and assessment of FADs and Memorandum of understanding with Fishers on their use and maintenance.

These activities were designed to provide a basis for the island profiles to be produced for each island. Data on socio-economics, infrastructure and fishing were gathered to also provide baseline information on the importance of fishing in the community (consultations), fishing capacity (all assets) and state of the resources (ciguatera and creel surveys). The Sea safety/grab bags and FAD work, carried out by the Operations and Development staff focused on providing services to the island's fishers to improve their safety at sea and access to close-by oceanic tuna resources.

3 Methods

The expedition was run between the dates of 21st August to 10th September 2016, using the new Fisheries / NAPA II research vessel, the RV Tala Moana. Ten days were planned for each island, allowing sufficient time for 12 people to carry out all parts of the survey, assessment, training and maintenance work. Although the Tala Moana is well fitted-out for expeditions, including cabins for researchers, a mess, storage for dive equipment, and a separate area for paperwork and computers for data entry, the vessel was used only in Nukufetau where access to an enclosed lagoon for anchoring is present. On Nui, the research team based themselves on the island.

All parts of the work requiring data collections were facilitated by the use of formal datasheets (see Appendix 2). The datasheets provided a structure that ensured all questions could be answered for all surveys on both islands. Some of the datasheets followed SPC datasheets previously used on socio-economic surveys, creel surveys and seafood poisoning reports by health professionals or our surveyors. Additional datasheets were developed for key informant and group surveys, attendance at group meetings, LMMA/MPA work and the independent boat survey. A data control sheet (see Section 8.1 on page 15) was used to ensure all replicates were completed as planned.

¹ These were to be independent of the information collected from households, with data collected by the team walking around the island and recording data on all boats



Data collected during the surveys were entered into the Coastal Fisheries Database, with modules added as needed during the trip to accommodate all of the data being collected². The database temporarily replaced those provided by SPC (SEMCOS and the Creel database) because the SPC server became unserviceable and could no longer be accessed for data entry. The Coastal Fisheries Database (CFD), built as a split database in Access 2010, was installed in the Coastal Fisheries temporary server which was taken into the field. A local area wifi network was established (without access to internet) to allow staff laptops to connect to the server for data entry and printing.

On each island 30% of all households were surveyed (41 on Nui and 37 on Nukufetau) for socio-economic data. Several key informants among the Kaupule, Falekaupule, Women and Fishers were consulted to capture fisheries-related concerns among each group. A single community meeting was also run on each island. This comprised a fisheries-related video, followed by a discussion in one of the community halls at night. Initial and debriefing meetings were also conducted with the Kaupule on each island.

The Health staff were consulted to determine the number of cases of ciguatera or other types of seafood poisoning over the past few years. If the staff, previously given poisoning report forms (see Section 8.5 on page 32), had not completed the form, the affected persons were contacted and interviewed by the team.

Creel surveys were carried out around the island wherever fishers were landing their catch. Many of these tended to be boat landings at the main channel for the island, but there were fishers who cast nets across the reef crest by walking there and other forms of fishing. For each catch landed, data were collected on the vessel (or not) used, costs of fishing (fuel, time, other costs), fishers perceptions and length and weight of all seafoods landed. This included any oceanic fishes, reef fishes, invertebrates or other types of seafood that might be targeted. A total of 20-50 creel surveys was the target for each island.

The Locally Managed Marine Area (LMMA/MPA) on each island was visited with a Kaupule official and its boundaries recorded using a GPS. Key information on the LMMA was collected and copies of any written rules or by-laws collected.

The independent boat survey was carried out during a period when those on the island were unlikely to be fishing (during Sunday or a community event). At that time all of the Coastal Fisheries Team split up and combed the island to locate every boat they could. At that time, they measured the length of the boat and recorded its materials (but not power) along with a GPS reading.

² It is envisaged that in subsequent field trips, no new modules will be required.



Figure 2: Canoes observed during the canoe survey



A full condition and assets survey of the CFCs was not carried out at Nui during this trip and the assessment for the new training fale was completed for Nui during late 2015. At Nukufetau, a full CFC assessment was undertaken by a combination of consulting Kaupule records and site inspections.

The workshops on sea safety, distribution of grab bags, inspection of and MOUs for FADs were carried out by the Operations and Development Section, with assistance from the Coastal Team.

4 Results & Data storage

4.1 Key Informant and Group Consultations

On Nui, an initial briefing with the Kaupule was carried out on arrival on 22nd August and a debriefing on 29th August. On Nukufetau, briefing was carried out on 30th August and debriefing on 9th September 2016. On each island one Falekaupule Chief (Alik) was contacted, 2 Kaupule members and 2-3 women, one fisher and a CFC staff member as key informants. A total of 15 key informant surveys was completed during the expedition. Results of these consultations were recorded on data sheets and entered into the CFD.

4.2 Socio-economic Surveys

A total of 78 socio-economic surveys was completed during the trip, 41 in Nui and 37 in Nukufetau, meeting the 30% target on each island. The data were entered into the CFD for storage and later analysis. The households included in the survey were randomly-selected from those available on the main islet on each atoll. A GPS reading was taken for each household.

Figure 3: The survey team at work





4.3 Ciguatera

Although records of poisonings were kept, the medical staff did not fill out SPC seafood poisoning report forms on either island. The team interviewed one person identified on Nui and 5 cases on Nukufetau. The case in Nui was identified as not being attributed to ciguatera, while all cases on Nukufetau were likely to be ciguatera. The cases in Nukufetau occurred in mid-June to late July 2016 mainly around the main passage during grouper spawning. The main fish involved were *Epinephelus fuscoguttatus*. Data were stored in the CFD. It appears that ciguatera is not an issue in Nui.

4.4 Creel Survey

A total of 10 creel surveys were completed on Nui and 32 on Nukufetau during the expedition. In Nui most creel samples were either of fishers using nets on the reef crest during in-coming tides, or fishers using boats in the ocean. On Nukufetau, most creel samples were of fishers using boats in the ocean or the lagoon, usually at high tide. The creel data collected were entered into the CFD for storage and later analysis.

Figure 4: Creel catches



4.5 LMMA/MPA Assessment

LMMA/MPA boundaries were recorded by GPS on both islands with the assistance of the Kaupule. Nui's boundary was demarcated by 2 points, while the LMMA at Nukufetau was marked using 32 points. The data are currently still in the GPS with which they were collected, and will be entered into the CFD as soon as possible. The LMMA in Nukufetau had been recently decreased because of a clash with development projects which had been begun within the LMMA.

Nui's LMMA is based on traditional law, the main parts of which were collected in an interview during this survey trip. The data are recorded within the key informant survey results in the CFD. On Nukufetau there is a draft by-law which is currently with the Attorney General's Office. A copy of the by-law was collected by the team and appears in Appendix 3. One of the key issues identified by key informants and during the household surveys was poaching within the LMMA. It is unclear whether poachers have been penalised. The boundaries and rules are still considered unclear on that island.

Figure 5: Location of Locally-managed marine Area (LMMA) at Nui



4.6 Independent Boat Survey

On Nui a total of 24 boats and canoes were recorded during the independent survey, some made of wood and others of aluminium. On Nukufetau a total of 80 boats and canoes was recorded including aluminium, wood and fibreglass construction and ranging from 3m to 8m length. All data, including GPS position for each boat has been recorded in the CFD for future analysis.



4.7 Fisheries assets

4.7.1 Assets

A full report on fisheries assets has been provided under a separate report of the O&D Section submitted 13/9/16. In summary, the condition of the CFC in Nui is poor and requires maintenance. There has been no selling of fish since January 2016. In terms of assets, there are freezers (500 litres each), 2 of which are not functioning. Other assets on Nui include a header tank, an aluminium 5m boat, a fish dryer, 5 coolers and a generator which is not in use. There is a broken ice machine. The CFC in Nui is managed by 3 staff.

On Nukufetau the CFC is in fair condition, but also requires maintenance. There is currently no phone or electricity. One fibreglass boat, 6 chest freezers (all functional, 2 in use), 4 coolers, 5 driers, 2 stainless steel processing tables, scales and other facilities are available. An ice-making machine is present but



unserviceable. The CFC is, however in use, with women using the facility for salting and smoking fish, and a small market in the village which is running well. There are 3 staff managing the facilities.

4.7.2 Welding and Boat Maintenance Training

An aluminium welder was supplied to each island under TC Pam funding. At the same time a consultant ran 4 days of training on use of the welding machine for maintaining aluminium boats. Four people from each island were trained: 2 from the Kaupule and 2 for the Fishermen’s Association. Details are supplied in the O&D report of 13/9/16.

Figure 6: Maintenance training



4.8 Assessment of CFC for NAPA II

Assessment of the CFCs for purposes of building a training facility was not conducted in either Nui or Nukufetau during this trip. PWD did not attend the expedition for Nui, and the work was not required at Nukufetau because it had been completed in another trip in 27-29 February this year. The boundaries of the CFC in Nui were recorded using a GPS, with the data to be recorded in the CFD.

Figure 7: CFC assets at Nui



4.9 Sea Safety & Grab Bags

Sea safety workshops were run on both islands, for a total of 3 days per island. This included work on how to use a GPS. In Nui there were 20 participants and in Nukufetau 36 participants. Details of the outcomes are provided in a separate report produced by the O&D Section submitted on 13/9/16. A total of 16 grab bags was distributed on each island through the Kaupule.



Figure 8: Community meeting



4.10 FADs & MOU

On both islands, one of the FADs had been lost, and the one remaining was the shallower. The shallow FAD was generally in good condition at Nui except that it was devoid of leaves as the fishers had not been adding new leaves to it. In Nukufetau 2 days of work were required to maintain the FAD because it appears it had been dragged to deeper water. It was necessary to detach the FAD and add rope to its length to avoid loss.

An MOU was reviewed by fishers on both islands, but both are yet to be signed. In Nui, fishers agreed to the conditions of the MOU but in Nukufetau there were concerns with the text of the agreement. In one case the concern was that the MOU should be with the Fishermen's Association not with individuals. Another concern was that the roles of the Fishermen's Association and Kaupule should be made clearer. More details are available in the report by O&D 13/9/16.

4.11 Other work

Some additional research was carried out by the team to determine the equivalence of the weight fishery products to counts. For example an average of 1,018 shells constitutes a bucket and 28.1 kg of product.

A preliminary assessment of coral condition was carried out at Nukufetau at the request of the Kaupule. Approximately 60% of the coral in the LMMA area were found to be bleached or dead. GPS points were collected for the areas affected.

Sites for mooring buoys for vessels in the Lagoon in Nukufetau were also investigated.



Figure 9: Mooring buoys are planned as part of preventing habitat destruction for fisheries



5 Issues

Several issues were encountered on the islands as follows:

- Key informants were often hard to interview because they were busy elsewhere and/or because they were reluctant to release their knowledge;
- Poor records of everything, including by-laws, meeting records, ciguatera records, assets, etc. make collecting information difficult and in some cases impossible;
- Kaupules have not been successful at maintaining and running CFCs for the benefit of the community;
- Women have limited involvement in post-harvest processing on Nui in particular;
- There were a lot of empty houses on outer islands due to migration to Funafuti, making it difficult to carry out socio-economic surveys;
- The community has little information on the VDS funding available to them and are confused about its use and who controls the funding;
- The LMMA/MPA boundaries are not marked and rules are not clear resulting in confusion by fishers;
- FADs were not being maintained well and no coconut fronds had been attached. This led to poor catches around the FADs. Fishermen did not want to tie leaves on the FADs;

6 Recommendations

A number of recommendations are made on improvements for future outer islands trips as follows:

1. A detailed request well in advance of the trip needs to be given before arriving on island, with the request that the Kaupule warns the community of the work to be done. Acknowledgement from the Kaupules is needed before the trip begins. This should outline the work to be done so there is a realistic expectation from the community on what is required of them;
2. It may be worth trying Bob Johannes' technique of swapping fishing knowledge so that people are more likely to share their information;
3. Managers should enter into inter-departmental discussions with the responsible ministries to improve record-keeping the islands;
4. Fisheries should work with Kaupules to improve business arrangements for the CFCs. This may include increasing fish prices, location of the CFC (e.g. on Nukufetau CFC needs to be relocated to main island). This should be considered in 2017 work plan;
5. Fisheries should focus on involving women more in fish processing, as planned in NAPA II;



6. Fisheries should carry out awareness on the VDS on outer islands;
7. R2R and NAPA II need to carry out the marking project for which they have been funded as soon as possible to demarcate the LMMAs. This should include redefining objectives of each LMMA;
8. Fisheries should investigate the use of non-biodegradable materials for use on the FADs. Use of VDS for setting up and maintaining FADs by the Kaupule should be investigated;
9. MOUs for FADs need to be reviewed and signed on next outer islands trip; and
10. R2R officers should be work closer with fisheries as many of their tasks overlap.

7 Appendix1: Workplan example from Nui

Task	Sem	Vili	Uschi	Lale	Sim	Maani	Manu	Paeniu	Filipo	Min Target	Achieved Nui
1. Key Informants & Groups											
Kaupule	✓	✓	✓	✓						1	2
Falekaupule	✓		✓	✓						1	1
Women	✓		✓	✓						1	3
Fishers	✓		✓	✓						1	1
Community	✓	✓	✓	✓	✓	✓	✓	✓	✓	1	1
2. SE Surveys										41	41
3. Ciguatera	✓									?	1
4. Creel surveys	✓							✓	✓	20	10
5. LMMA/MPA				✓						1	1
6. Boat assets											
Public boats										1	1
Private boats/canoes						✓	✓	✓		?	24
7. Fisheries Assets		✓			✓					1	1
8. CFC Assessment		✓			✓					1	0
9. Workshops		✓								1	1
Grab bags										16	16
10. FADs / MOU	✓	✓			✓			✓	✓	1	1

8 Appendix 2: Data Sheets

8.1 Data Control Sheet



Tuvalu Fisheries

Data Control Sheet for Coastal Fisheries Outer Islands Missions

Our tasks are: 1. Key Informant meetings – Women, Fishers; Community Dialogue Meeting; 2. SE surveys at HH level (including new boat component); 3. Ciguatera Report forms; 4. Creel/artisanal; 5. LMMA/MPA/CBM; 6. Independent Boat/canoe survey (independent of HH); 7. Fisheries assets; 8. CFC Assessment for NAPA II; 9. Grab bags; 10. FADs

Island:		Team Leader:	
Date Start:		Date Finished:	

List of documents and maps collected

Document name	Type (e.g. report, plan, map)	Format (e.g. PDF, paper copy)	Copy obtained? (Y/N)

1 Key Informant / Community Surveys/Meetings

	#Surveys	Comments
Kaupule fisheries plans / issues (2)		
Fisher's Representatives (1-2)		
Women's Group (1-2)		
Community Meeting (1)		

2 Socio-economic Surveys HH

	#HH/Pers	Comments
Household demography & Consumption Survey		
Fin Fisher Survey Questionnaire		
Invert Fisher Survey Questionnaire		
Key Informant Questionnaire		
Middlemen/Agents/Shops	NA	NA
Additional Information		
Extra HH survey of boats		

3 Ciguatera

	#Records	Comments



Hospital/Clinic records		
SPC poisoning survey forms		
GTX samples taken		

4 Creel & Artisanal Tuna Surveys

	# Surveys	Comments
Creel surveys		
Artisanal surveys		

5 LMMA/MPA Information

	Yes No	Comments
Map of LMMA/MPA obtained?		
GPS Waypoints around Area?		
Copy LMMA/MPA rules/By-laws?		
Assessment of markers needed?		

6 Independent Vessel Survey

	Yes No	Comments
Count & description of Public vessels		
Count of private boats & canoes		

7 Fisheries Assets

	Yes No	Comments
Assessment of CFC building		
Listing of all assets in building		

8 CFC Assessment for NAPA II

	Yes No	Comments
Assessment for NAPA II addition		

9 Grab bags

	#Bags	Comments
Grab bags distributed		

10 FADs

	Yes No	Comments
FAD assessment		
FAD repairs		
Other _____		

Any other data collected?

Please list all other types of information collected

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8.2 Key informant and Community Meetings



Tuvalu Fisheries Survey Data Sheets

Key Informant / Community Meeting		
Target Groups:	Key Persons likely to have deep knowledge Island Community Women's Fishers, Youth Groups	
Island:	Date:	
Latitude (DD):	Longitude (DD):	
Surveyor 1:	Surveyor 2:	
Key Informant Name:		
Key Informant Position / Occupation:		
KI Contacts:	Village:	
Phone:	Email:	
or:		
Group or Community:	# Males:	# Females:
Main topic(s) of discussions:		
Main outcomes of meeting		

Use reverse for more space →

Please ensure you have filled in the attendance sheet for this meeting if there is more than 1 person.

8.4 Socio-economic Survey (SPC)

This sheet was adapted from the SPC SEMCOS datasheets for easier use in the field – some fields have been reduced in size for this report.



Tuvalu Fisheries Socio-economic Survey Data Sheets

Household Demography and Consumption Survey				
Target Group: (either)	<input type="checkbox"/> Head of HH	<input type="checkbox"/> Women preparing food for HH		
Objective: To gather detailed information on (i) average HH size / composition; (ii) consumption patterns; (iii) fishers by gender; (iv) boat and canoe information.				
Island:	Village:			
Latitude (DD):	Longitude (DD):			
Surveyor 1:	Surveyor 2:			
Date:	Household Number:			
Person interviewed (confidential, names will not be published)				
First name:		Last name:		
Date of birth:		Gender:	<input type="checkbox"/> Male	<input type="checkbox"/> Female
Household information				
HH1. How many people usually live and eat in your household?	Number:			
HH2. What are the ages of the male and female members in this household? (Include children and older people; please only quote persons living permanently in this household).	Males		Females	
	Person	Year of birth	Person	Year of Birth
	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
6		6		
HH3. How many people in your household fish or collect on reefs and in the lagoon regularly? (Do not include people who only fish once or twice a year)	Fisher type	Male	Female	
	Invertebrates			
	Finfish			
	Both			
HH4. Does this household own any boats/canoes?			<input type="checkbox"/> Yes	<input type="checkbox"/> No
HH4a. How many of each type	Type	Number		
	Canoes			
	Sailboats			
	Motorised			



Other (specify): _____ Number: _____

HH4b. For each vessel please specify details:

Vessel	Type	Length (m)	Materials	Power	Hp	Safety gear?
0	Boat	6m	Wooden	Inboard	75	Yes
1						
2						
3						
4						
5						
6						

HH4c. If any safety gear, list all you use:

HH4d. Who built your boat / canoe?

Vessel #	Type	Built by:
0	Boat	<input type="checkbox"/> Me <input checked="" type="checkbox"/> Relatives <input type="checkbox"/> Local builder <input type="checkbox"/> Overseas <input type="checkbox"/> Other: _____
1		<input type="checkbox"/> Me <input type="checkbox"/> Relatives <input type="checkbox"/> Local builder <input type="checkbox"/> Overseas <input type="checkbox"/> Other: _____
2		<input type="checkbox"/> Me <input type="checkbox"/> Relatives <input type="checkbox"/> Local builder <input type="checkbox"/> Overseas <input type="checkbox"/> Other: _____
3		<input type="checkbox"/> Me <input type="checkbox"/> Relatives <input type="checkbox"/> Local builder <input type="checkbox"/> Overseas <input type="checkbox"/> Other: _____
4		<input type="checkbox"/> Me <input type="checkbox"/> Relatives <input type="checkbox"/> Local builder <input type="checkbox"/> Overseas <input type="checkbox"/> Other: _____
5		<input type="checkbox"/> Me <input type="checkbox"/> Relatives <input type="checkbox"/> Local builder <input type="checkbox"/> Overseas <input type="checkbox"/> Other: _____
6		<input type="checkbox"/> Me <input type="checkbox"/> Relatives <input type="checkbox"/> Local builder <input type="checkbox"/> Overseas <input type="checkbox"/> Other: _____

HH4e. Where do you normally store each vessel? Please mark on attached map.

Vessel #	Type	Lat:	Lon:
1			
2			
3			
4			
5			
6			

HH4f. What do you do to protect your boats / canoes, if anything, during a cyclone?

HH4g. Should boats in Tuvalu be licenced?

☺ Strongly agree	Agree	Neutral	Disagree	☹ Strongly disagree
<input type="checkbox"/>				

HH4h. What are the most important uses of your boats / canoes?



(please tick all that apply)

<input type="checkbox"/> Fishing	<input type="checkbox"/> Transport	<input type="checkbox"/> Feeding pigs	<input type="checkbox"/> Picnics
<input type="checkbox"/> Recreation	<input type="checkbox"/> Racing	<input type="checkbox"/> Other: _____	<input type="checkbox"/> Other: _____

HH5. Where does the cash money in this household come from?

(only list the sources of money contributed by people who live here usually)

Rank options,
 1 = most money;
 2 = second most important income source;
 3 = third most important income source;
 4 = least important income source)

Tick ✓	Source	Rank (1-4)
	Fishing / Seafood collection	
	Agriculture	
	Salary	
	Other: _____	
	Other: _____	

HH6. During an average/normal week, how many days do you prepare fish, other seafood and canned fish for your family? (Tick ✓ box)

Type	Number of days per week							Or Specify
	7	6	5	4	3	2	1	
Fresh fish								
Other seafood								
Canned fish								
Other: _____								

HH7. On average, how much do you cook per day for your household?
 (enter number per size class, using size chart - tool while interviewing)

Size class	FINFISH						E+ cm:
	A	B	C	D	E		
# fish:							
Or kg:							

7b. Other seafood
 (enter data using size charts – tools used while interviewing)

OTHER SEAFOOD			
Seafood name	No.	Size	kg

HH8. On a day when you prepare canned fish, how many cans do you use on average / normally for the household?
 (Enter no. of cans per day)

Size of can	# Cans / day
Small	
Medium	
Large	

HH9. Where do you normally get your fresh fish from, and which source is the most common?
 (Tick ✓ box and rank from 1 to 3)
 (1 = most common;
 2 = second most common;
 3 = least common source)

	Tick ✓	Rank (1-3)
Caught by me or someone else from this household:		
Got it from someone else (no money paid):		
Buy it (name place): _____		



HH10. Where do you normally get your invertebrates (creatures from the sea other than fish) from, and which source is the most common? (Tick ✓ box and rank from 1 to 3) (1 = most common; 2 = second most common; 3 = least common source)		Tick ✓	Rank (1-3)
	Caught by me or someone else from this household:		
	Got it from someone else (no money paid):		
Buy it (name place): _____			
THANK YOU			

Finfisher Survey Questionnaire					
Target group: Fishers (men and women 15 years and older) from households surveyed					
Objective to gather detailed information on: (i) average catch size and composition; (ii) fishing techniques; (iii) proportions of catch for subsistence, gift and sale; (iv) methods of conserving and preserving seafood.					
Island:		Village:			
Latitude (DD):		Longitude (DD):			
Surveyor 1:		Surveyor 2:			
Date:		Household Number:			
Person interviewed (confidential, names will not be published)					
First name:		Last name:			
Date of birth:		Gender:	<input type="checkbox"/> Male	<input type="checkbox"/> Female	
Household information					
F1. Which areas do you fish? (Tick ✓ boxes and use chart)	<input type="checkbox"/> Coastal reef	<input type="checkbox"/> Lagoon	<input type="checkbox"/> Mangrove		
	<input type="checkbox"/> Outer reef (incl passages)	<input type="checkbox"/> Open ocean	<input type="checkbox"/> Other: _____		
F2. Do you fish only one of the habitats that you target at a time—or do you usually visit several during one fishing trip? If so, which ones do you usually combine during one fishing trip? (please fill in)	Habitat	Only targeted (tick ✓)	Targeted together with habitat (fill in)		
	Coastal reef				
	Lagoon				
	Mangrove				
	Outer reef (incl passages)				
	Pelagic / open ocean				
Other: _____					
F3. How often do you visit each habitat in a week, or a combination of habitats?			Times / week	Hours / trip	Months / year
	Coastal Reef	<input type="checkbox"/>			
	Lagoon	<input type="checkbox"/>			



How many hours does the average fishing trip take to this habitat, or combination of habitats? How many months in a year do you fish this habitat / combination of habitats?	Mangrove	<input type="checkbox"/>					
	Outer reef (incl passages)	<input type="checkbox"/>					
	Pelagic / open ocean	<input type="checkbox"/>					
	Other:	<input type="checkbox"/>					
F3b. Please select your most important habitat (or combination of habitats mostly fished during one fishing trip) and answer the following questions:		Most important habitat (fill in): _____					
F4. Do you use a boat for fishing?		<input type="checkbox"/> Always	<input type="checkbox"/> Sometimes	<input type="checkbox"/> Never			
F5. When do you go fishing? (Tick ✓ box)		<input type="checkbox"/> Only during DAY	<input type="checkbox"/> Only during NIGHT	<input type="checkbox"/> Day & Night			
F6. Which fishing techniques do you use? (Tick all ✓ boxes that apply)							
<input type="checkbox"/> Handlining	<input type="checkbox"/> Spearfishing (diving)	<input type="checkbox"/> Castnetting	<input type="checkbox"/> Trolling				
<input type="checkbox"/> Gillnetting Mesh size (cm): _____		<input type="checkbox"/> Spear (walking)	<input type="checkbox"/> Spear (canoe)				
<input type="checkbox"/> Deep bottom handlining	<input type="checkbox"/> Other (specify): _____	<input type="checkbox"/> Other (specify): _____	<input type="checkbox"/> Other (specify): _____				
F7. Do you use only one technique per fishing trip, or do you use several during one trip? (Tick ✓ box) If you use more than one, which techniques do you combine during one trip? (List)		<input type="checkbox"/> One technique per trip	<input type="checkbox"/> More than one technique per trip. Which techniques? _____ _____ _____				
F8. How much do you catch during a normal fishing trip (your catch or share of catch only)? (use size charts)							
Size class:	A	B	C	D	E	E+	cm
# Fish:							
Or kg:							
F9. on an average/normal fishing trip as above, what kinds of fish do you catch? (Fill in the names and <u>numbers</u> per size class)					Figures are: <input type="checkbox"/> Numbers <input type="checkbox"/> kg		
Technique most often used to get this catch? _____							
Size class →	A	B	C	D	E	E+	cm
↓ Name of fish							
e.g. Emperors	20			1			



F10. Do you sell your fish? (Tick ✓ box) Yes No

If Yes, where? Within community Outside community **Which place?** _____

F11. To whom do you sell? (Tick ✓ boxes)

Individuals (houses, roadside) | Shop | Agent | Market | Restaurant

F12. Which preservation method do you use for your catch? (Tick ✓ box) None

Tick ✓	Method	Always	Sometimes	Never
<input type="checkbox"/>	Ice (during fishing trips)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Refrigeration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Freezing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Smoking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Drying	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you !

Invertebrate Fisher Survey Questionnaire

Target group: Fishers (men and women 15 years and older) from households surveyed

Objective to gather detailed information on: (i) average catch size and composition; (ii) fishing techniques; (iii) proportions of catch for subsistence, gift and sale; (iv) methods of conserving and preserving seafood.

Island:		Village:	
Latitude (DD):		Longitude (DD):	
Surveyor 1:		Surveyor 2:	
Date:		Household Number:	

Person interviewed (confidential, names will not be published)

First name:		Last name:	
Date of birth:		Gender:	<input type="checkbox"/> Male <input type="checkbox"/> Female

IF1. In which areas do you collect sea animals other than fish? (Tick ✓ boxes and use chart)

<input type="checkbox"/> Soft bottom (seagrass, sand)	<input type="checkbox"/> Mangroves & mud	<input type="checkbox"/> Reef tops
---	--	------------------------------------

IF2. Which sea animals other than fish do you dive for?

<input type="checkbox"/> Beche-de-mer / sea cucumber
<input type="checkbox"/> Lobsters



(Tick ✓ boxes)		<input type="checkbox"/> Mother of pearl, Trochus, Pearl shell etc				
		<input type="checkbox"/> Other: _____				
		<input type="checkbox"/> Other: _____				
IF3. Do you glean only one of the habitats that you target at a time—or do you usually visit several during one gleaning trip? If so, which ones do you usually combine during one gleaning trip? <i>(please fill in)</i>	Habitat		Only targeted in 1 gleaning trip		Gleaned together during 1 trip	
	Soft bottom (seagrass, sand)		<input type="checkbox"/>		<input type="checkbox"/>	
	Mangroves & mud		<input type="checkbox"/>		<input type="checkbox"/>	
	Reef tops		<input type="checkbox"/>		<input type="checkbox"/>	
IF4. Please answer the following questions for each habitat that you glean or the combined habitats that you glean during one fishing trip						
Habitat	Tick ✓	Times /week	Boat	Hours /trip	Time of glean	# Months /year
Soft bottom (seagrass /sand)	<input type="checkbox"/>		<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never		<input type="checkbox"/> Day <input type="checkbox"/> Night <input type="checkbox"/> Day/Night	
Mangrove / Mud	<input type="checkbox"/>		<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never		<input type="checkbox"/> Day <input type="checkbox"/> Night <input type="checkbox"/> Day/Night	
Reef tops	<input type="checkbox"/>		<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never		<input type="checkbox"/> Day <input type="checkbox"/> Night <input type="checkbox"/> Day/Night	
IF5. Please answer the following questions for each of your dive invertebrate fisheries						
Habitat	Tick ✓	Times /week	Boat	Hours /trip	Time of glean	# Months /year
Beche-de-mer	<input type="checkbox"/>		<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never		<input type="checkbox"/> Day <input type="checkbox"/> Night <input type="checkbox"/> Day/Night	
MoP (trochus, pearl)	<input type="checkbox"/>		<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never		<input type="checkbox"/> Day <input type="checkbox"/> Night <input type="checkbox"/> Day/Night	
Lobster	<input type="checkbox"/>		<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never		<input type="checkbox"/> Day <input type="checkbox"/> Night <input type="checkbox"/> Day/Night	
Other (clams, octopus etc)	<input type="checkbox"/>		<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never		<input type="checkbox"/> Day <input type="checkbox"/> Night <input type="checkbox"/> Day/Night	
Other: _____	<input type="checkbox"/>		<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never		<input type="checkbox"/> Day <input type="checkbox"/> Night <input type="checkbox"/> Day/Night	



IF5b. Please select your most important habitat (or combination of habitats that you **GLEAN** during one fishing trip) and answer the following questions:

Most important habitat or habitat combination (fill in):

IF6. On a normal gleaning trip, what species do you catch?
(Fill in the names and numbers per size class) (use size charts)

Species / name	Total #/trip	Avg Size (cm)	Total kg/trip	Used for			
				Consumption	Gift	Sale	
						In Village	Elsewhere
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IF7. On a normal dive trip, what do you usually catch? (Fill in the names and numbers or kg per size class and per fishery) (use size charts)

Species / name	Tick ✓	Total #/trip	Avg Size (cm)	Total kg/trip	Used for			
					Consumption	Gift	Sale	
							In Village	Elsewhere
Beche-de-mer	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MoP (trochus)	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lobster	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (clams, octopus)	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IF8. Which preservation method do you use for your catch? (Tick ✓ boxes) None

Species	Fresh/meat	Dried	Shell	Smoked	Specify:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Thank you !!



Key Informant Survey

Target group: Key informants (men and women) in the community(ies) (for example, chiefs, village elders, priests, spokespersons, community leaders, leaders of women's and youth groups) who have a good insight into the general perceptions and attitudes of marine resource use and management

Objective to learn about: locations and names of fishing grounds; management rules (known and applied); major recurrent problems related to marine resource management in the community; selected information on marketing and costs; vernacular names; seasonality of species.

Island:		Village:	
Latitude (DD):		Longitude (DD):	
Surveyor 1:		Surveyor 2:	
Date:		Survey ID Number:	
Person interviewed (confidential, names will not be published)			
First name:		Last name:	
Date of birth:		Gender:	<input type="checkbox"/> Male <input type="checkbox"/> Female
K1. Record the areas and names of fishing grounds used by the community	<i>Prepare a map of the area, or use a nautical chart if available. Indicate areas, places and names of fishing, diving and gleaning grounds used.</i>		
K2. Who owns the reefs and fishing grounds?	<input type="checkbox"/> Community		
	<input type="checkbox"/> Open access		
	<input type="checkbox"/> Individual ownership		
	<input type="checkbox"/> Jointly owned with other villages, list names of villages:		
K3. Are the fishing grounds in this village used by other villages?	<input type="checkbox"/> Yes		<input type="checkbox"/> No
If yes, who uses them? (List names of other villages)	1		
	2		
	3		
	4		
K.4 Are the people in your village aware of the regulations issued by the Department/Ministry of Fisheries?	<input type="checkbox"/> Yes ↓		<input type="checkbox"/> No
	<input type="checkbox"/> Mostly		
	<input type="checkbox"/> Sometimes ↓		
And do they comply with the regulations?	<input type="checkbox"/> Yes		<input type="checkbox"/> No
	<input type="checkbox"/> Not really ↓		
If they do not comply with the regulations, why not?			
K.5 Has this community made its own rules and regulations (including customary rules)?	<input type="checkbox"/> Yes ↓		<input type="checkbox"/> No
If yes, what are they?			



K6. Does the community respect these rules and regulations?				<input type="checkbox"/> Yes	<input type="checkbox"/> No ↓
If not, why not?					
K7. If the fishing grounds are used by fishers from other villages, do these other fishers respect the government regulations and/or community rules?				<input type="checkbox"/> Yes	<input type="checkbox"/> No ↓
If not, why not?					
K8. Do people sell their catch in the community?				Yes ↓	No
Reef and lagoon fish				<input type="checkbox"/>	<input type="checkbox"/>
Invertebrates				<input type="checkbox"/>	<input type="checkbox"/>
If Yes, for what price?					
Type	Name	Price/unit	Units (e.g. kg, piece)		
Fish		\$			
Fish		\$			
Invert		\$			
Invert		\$			
		\$			
		\$			
		\$			
K9. Conversion of local units in kg (Information on local units may be provided by key informant(s); however, corresponding weight in kg may require sampling in the field)					
Type	Name	Local Unit	Avg Weight kg		
Fish					
Fish					
Invert					
Invert					
K10. List of seasonal reef and lagoon finfish species usually caught					
Local / common Name	Scientific name	Most abundant months:			
		Start month	End month		



K11. List of seasonal reef and lagoon invertebrate species usually caught				
Local / common Name	Scientific name	Most abundant months:		
		Start month	End month	
K12. Local, common and scientific names for reef and lagoon species (new names)				
Local name	Common name	Scientific name		
Thank you !!				
Additional information required for analysis				
A. Marketing information for finfish and invertebrates				
A1. People sell their catch in the community	Reef / lagoon fish		Invertebrates	
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A2. Prices for reef and lagoon fish	Type/Species	Price	Unit (e.g. kg)	
		\$		
		\$		
		\$		
		\$		
		\$		
A3. Prices for Invertebrates	Type/Species	Price	Unit (e.g. kg)	
		\$		
		\$		
		\$		
		\$		
		\$		
B. Information on canned fish				
A4. Price and weight of canned fish	Can size	Weight per can (g)	Price (local currency)	
	Small			
	Medium			
	Large			



D. Conversion of local finfish units to weight (kg)

Local unit (string, heap, bag etc)	Average weight (kg)

E. Conversion of local invertebrate units to weight (kg)

Species	Processing*	Local unit**	Average weight (kg)

* Processing level refers to: unprocessed (alive, such as crab or lobster), with shell or shelled, gutted (bêche-de-mer), cooked, dried, etc. ** Heap, bag, string, bottle, sack, basket, bucket, etc.

F. Seasonality of finfish species

Local / common Name	Scientific name	Most abundant months:	
		Start month	End month

G. Seasonality of invertebrate species

Local / common Name	Scientific name	Most abundant months:	
		Start month	End month

H. Local, common and scientific names for reef and lagoon species (new names)

Local name	Common name(s)	Scientific name(s)



8.5 SPC Seafood Poisoning Report Form (SPC)



SPC Seafood Poisoning Report Form

This is an electronic form. Please fill the fields or check the boxes using your keyboard and mouse. Text fields will expand to accommodate any amount of text, so do not worry of the space for your answer seems small.

Report Form

Details of person filling in report form	
Name	Job/Position
Contact Address	
Date	Signature

Poisoned person's details		
Name	Sex (M/F)	Age (yrs)
Address		

Details of the seafood that caused the poisoning (tick all that apply)				
Type of food	Where caught	How preserved	What eaten	How eaten
Fish <input type="checkbox"/>	River <input type="checkbox"/>	Fresh, no ice <input type="checkbox"/>	Head <input type="checkbox"/>	Raw <input type="checkbox"/>
Crab <input type="checkbox"/>	Mangrove <input type="checkbox"/>	Fresh, iced <input type="checkbox"/>	Flesh <input type="checkbox"/>	Marinated <input type="checkbox"/>
Lobster <input type="checkbox"/>	Beach <input type="checkbox"/>	Frozen <input type="checkbox"/>	Skin <input type="checkbox"/>	Cooked <input type="checkbox"/>
Other crustacean <input type="checkbox"/>	Patch reef <input type="checkbox"/>	Salted <input type="checkbox"/>	Liver <input type="checkbox"/>	
Gastropod <input type="checkbox"/>	Lagoon <input type="checkbox"/>	Dried <input type="checkbox"/>	Roe <input type="checkbox"/>	How many others:
Bivalve <input type="checkbox"/>	Outer reef <input type="checkbox"/>	Smoked <input type="checkbox"/>	Other <input type="checkbox"/>	Ate this meal?
	Ocean <input type="checkbox"/>	Pickled <input type="checkbox"/>	Specify:	Felt sick?
Other mollusc <input type="checkbox"/>	Other <input type="checkbox"/>	Other <input type="checkbox"/>	Specify:	Were admitted to hospital?
Specify:	Specify:	Specify:	Specify:	
Unknown <input type="checkbox"/>	Unknown <input type="checkbox"/>	Unknown <input type="checkbox"/>	Unknown <input type="checkbox"/>	Unknown <input type="checkbox"/>
What is the local name of the seafood?				
What is the English name of the seafood?				
Name of vendor or restaurant (if bought)				
Name of the place it was caught (if known)				
When was the food eaten?	Date:	Time:		
When did you first feel sick?	Date:	Time:		

Symptoms (tick all that apply)			
Burning or pain when touching cold water <input type="checkbox"/>		Pin pricking sensation on touching water <input type="checkbox"/>	
Tingling or numbness <input type="checkbox"/>		Strange taste in mouth <input type="checkbox"/>	
Difficulty or pain urinating <input type="checkbox"/>		Skin itching or red <input type="checkbox"/>	
Difficulty breathing <input type="checkbox"/>	Excessive salivation <input type="checkbox"/>	Fever / chills <input type="checkbox"/>	
Difficulty walking <input type="checkbox"/>	Excessive sweating <input type="checkbox"/>	Headache <input type="checkbox"/>	
Difficulty talking <input type="checkbox"/>	Diarrhoea <input type="checkbox"/>	Joint aches <input type="checkbox"/>	
Eye irritation <input type="checkbox"/>	Vomiting <input type="checkbox"/>	Muscle cramps <input type="checkbox"/>	
Others:			



History				
Have you had seafood poisoning before?			Yes <input type="checkbox"/> No <input type="checkbox"/>	
How many times?				
Details	When?	Type seafood	Hospital?	How long to recover?
Case 1			Yes <input type="checkbox"/> No <input type="checkbox"/>	
Case 2			Yes <input type="checkbox"/> No <input type="checkbox"/>	
Case 3			Yes <input type="checkbox"/> No <input type="checkbox"/>	
Case 4			Yes <input type="checkbox"/> No <input type="checkbox"/>	
Case 5			Yes <input type="checkbox"/> No <input type="checkbox"/>	
Case 6			Yes <input type="checkbox"/> No <input type="checkbox"/>	
Anything you remember about past poisoning?				

Medical data		
Pulse:	Blood pressure: /	Pupils:

In case of death
Date of death:
Autopsy findings:
Other information:

Local Knowledge and Background Data

Survey Questionnaire No. _____/_____

Details of person filling out this form	
Name:	Job/Position:
Contact Address:	



Date:	Signature:
Details of the person interviewed (optional)	
Name:	Sex (M/F): Male <input type="checkbox"/> Female <input type="checkbox"/>
Age (years):	Ethnic Group:

Questionnaire (tick the boxes where appropriate or fill in the blank spaces)	
1. Are you aware of any previous cases of food poisoning from seafood products among your family and friends?	Yes <input type="checkbox"/> No <input type="checkbox"/>
2. If so, could you give a rough estimate of the number of such cases of food poisoning?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, how many?
3. Have there been periods or years in which the number of cases has been higher?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, when?
How would you explain this?	
4. What are the most frequent symptoms of the people who have such food poisoning?	
5. Which seafood products were supposed to have caused this seafood poisoning?	
Fish <input type="checkbox"/>	What type of fish?
Other <input type="checkbox"/>	What type of seafood?
Don't know <input type="checkbox"/>	
6. Where are the toxic seafood products most often caught?	
Ocean <input type="checkbox"/> Lagoon <input type="checkbox"/> Others <input type="checkbox"/> Specify:	

Please return this form to: The Tuvalu Fisheries Department. Thank you.



8.6 Creel Survey (SPC)



Tuvalu Fisheries Creel Survey Data Sheets

Use ONE sheet for each landing met (replicate). This can be a boat or catch basket brought in by gleaners etc. Note that this is presented by slice, to show all the data so you can choose which parts of the information you want to collect.

Date:		Serial / ID Number:	
Island:		Village/Site:	
Surveyor 1:		Surveyor 2:	
Latitude (DD):		Longitude (DD):	
C1 Basic Information on Fishers			
Lead Fisher's Name:			
Date of birth:		Gender:	<input type="checkbox"/> Male <input type="checkbox"/> Female
Address as Village / Town / City:			
Is the fisher with others?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
→ Data on other fishers in the landing today:			
#	Fisher's Name:	DOB (d/m/y)	Gender
1			<input type="checkbox"/> Male <input type="checkbox"/> Female
2			<input type="checkbox"/> Male <input type="checkbox"/> Female
3			<input type="checkbox"/> Male <input type="checkbox"/> Female
4			<input type="checkbox"/> Male <input type="checkbox"/> Female
5			<input type="checkbox"/> Male <input type="checkbox"/> Female
→ Back to Lead fisher:			
How often do you go fishing per month?			/ month
How many months a year do you fish <i>(i.e. exclude closed months)</i>			months fished
What fishing methods do you usually use <i>(over the last year)?</i>		Method 1:	
Method 2:		Method 3:	
Method 4:		Method 5:	
Where else do you land your fish? What other locations? <i>(List by priority and use map)</i>			
Most often	#	Location	# trips/month



↓	1		
	2		
	3		
	4		
	5	Least often	

Why do you go fishing? Subsistence | Income | Both | Other _____

Please provide details:

About how much of today's catch will be eaten at home / sold? Home: % Sold: %

What would you expect as income from today's catch overall? \$

What is your eye-estimate of the total weight of the day's catch? (Estimated by you, not the fisher) kg

C2 Species composition / counts

What is the total count by species of all fishes / invertebrates / other landed?

Species name / Group	Number	Species name / Group	Number

C3 Species sizes and C4 Species weights

Species Name	All sizes in the catch in cm and all weights in kg (Continue along rows for a species. Each row fits 5 fish. Repeat species in a new line if you need more space)									
	cm	kg	cm	kg	cm	kg	cm	kg	cm	kg



3			
4			
5			
What kind of boat used today?			
Construction: <input type="checkbox"/> Wood <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Steel <input type="checkbox"/> Concrete			
Type of boat: <input type="checkbox"/> Alia <input type="checkbox"/> Canoe <input type="checkbox"/> Dinghy <input type="checkbox"/> Punt <input type="checkbox"/> Skiff <input type="checkbox"/> Other <input type="checkbox"/> None			
If "other", what kind of boat?			
How is the boat powered? <input type="checkbox"/> Paddle <input type="checkbox"/> Sail <input type="checkbox"/> Inboard Outboard: <input type="checkbox"/> 2 stroke <input type="checkbox"/> 4 stroke			
Length:		Engine:	
		m	
		hp	
What safety gear do you have on board today? (<i>tick all that apply</i>)		<input type="checkbox"/> Oars <input type="checkbox"/> Life jackets <input type="checkbox"/> Water <input type="checkbox"/> EPIRB <input type="checkbox"/> GPS <input type="checkbox"/> Flares <input type="checkbox"/> Bailer / Bilge <input type="checkbox"/> Extra fuel <input type="checkbox"/> Others (specify):	
C7 Perceptions of fishers			
How long have you been fishing?		years	
How long have you been doing this type of fishing?		years	
What other types of fishing have you done in the past ?			
Do you do other types of fishing now?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Describe:			
Are you fishing in the same areas as 5 years ago?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Please explain:			
Are you catching the same quantities as 5 years ago?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Please explain:			
Are you catching the same sizes as 5 years ago?		<input type="checkbox"/> Yes	<input type="checkbox"/> No



Please explain:

If catches are **different**, what has changed?

Are you aware of any existing Fisheries Laws?

Yes

No

Please explain:

Do you have any **concerns** about the resources?

Thank you



8.7 LMMA/MPA



Tuvalu Fisheries Survey Data Sheets

Community Feedback on LMMA/MPA		
Target Group:	Island Community	
Island:	Date:	
Latitude (DD):	Longitude (DD):	
Surveyor 1:	Surveyor 2:	
Village/Community:	# Males:	# Females:
General Information		
1. Is there an existing LMMA/MPA on this island?	<input type="checkbox"/> Yes (↓Q2)	<input type="checkbox"/> No (↓Q3)
2. If Yes, what were the reasons for establishing one?		
3. If No, why not?		
4. Who were the people involved in deciding about an LMMA/MPA?		
If no LMMA/MPA stop here		
5. If you have an LMMA/MPA, how was its size and location selected?		



6. Are there any rules, regulations or other for controlling your LMMA/MPA?			<input type="checkbox"/> Yes (↓Q7)	<input type="checkbox"/> No (↓Q8)
7. If Yes, who was involved in formulating the rules?				
8. If Yes, What kind of regulatory system do you have in place?				
9. If No, how do you manage your LMMA/MPA?				
9a. Collect a copy of any by-laws, rules or other system; or write a detailed description of how it is run.				
Document	Copy collected?			
	Yes	No		
	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>		
10. What are the benefits of the LMMA/MPA on this island?				



11. Are there any issues or problems with your LMMA/MPA?	<input type="checkbox"/> Yes (↓Q12)	<input type="checkbox"/> No (↓Q15)
12. If Yes, what are the issues or problems?		
13. How could the issues or problems be addressed?		
14. What, if anything, would you change about your LMMA/MPA?		
15. What role, if any, could Fisheries play to help with your LMMA/MPA?		
16. Any other suggestions or comments?		
THANK YOU		



Comments and observations				



9 Appendix 3: LMMA By-laws for Nukufetau

KAUPULE O NUKUFETAU

TULAFONO MOTE TAUSIGA OTE KOGAATAI PUIPUIGINA O NUKUFETAU 2005.

Ite Fakaogaga ote Maalosi tela e fakatino ite Sekiseni 53 (9) ote Tulafono mo Falekaupule 1997, Ate Kaupule o Nukufetau ne faite ne ia ate tulafono tenei ke tausi kae Puipui ei a Maumea Totino ote Fenua ko Nukufetau kola e mau I tena Kogaa Tai Puipuigina.

1. TE IGOA OTE TULAFONO MOTE KAMATAGA O FAKAGAALUE:

1.1 Ate Tulafono tenei kote Tulafono ate Kaupule o Nukufetau tela a tena Igoa kote,

TE KOGAATAI PUIPUIGINA

1.2 Ka mafai o kamata ate maalosi ote Tulafono tenei, manafai ko oti ne paasia, kae ko oti foki ne taliagina nete malu ote Falekaupule o Nukufetau, e pela foki manafai ko oti ne iloilogina nete ofisa ote Looia ote Maalo.

2. Pogai:

2.1. Te Pogai taaua ote manakoga ote Tulafono tenei, ka isi se maalosi ote Kaupule mote Falekaupule, ite tausiga mote Puipuiga fakalei o Maumea totino o Nukufetau I ona Kogaatai ite Tai, ke mafai o Atafai kae Puipuigina fakalei, kae ke mafai foki o iloilo fakalei kae fuafua fakalei; a taapula kola ka mafai ei o toe tala atu ki tino ote Fenua, kote mea ke mafai ne latou o fakaoga ate Maumea o latou, e pela mo Faasua, ke oko foki Loa ki niisi o Maumea ite Tai, kola e tau o Tausi. Atafai kae Puipuigina fakalei, kae ke se sona fakaoga mo fai a manakoga valevale mai tuatu o Nukufetau.Saukatoa,

3. Te Lasi ote Kogaatai Puipuigina:

3.1. A te Kogaatai puipuigina tenei, ka kamata mai kauluulu ite feitu ote Avapusi kite feitu ki Teafuaone, ko tele tonu ei mai kona, ite feitu o Sakaalua ki Lauafaga ke oko kite mata o Pugaafai, ko tonu ei mai kona o fano kite feitu ote Matanukulaetae ki Funaoa,ko tele mai lei i kona o vau ki tua ote Avapusi.

4. Puipuiga.

4.1. Te Kaupule mote Falekaupule, ka fesoasoani fakatasi kite Tausiga mote Puipuiga ote Kogaatai Puipuigina tenei, ke mo a se tino e taumafai o solisoli ne ia, lo me sona fano o faaika I loto ite kogaa koga tenei I sose taimi. Mote fesoasoani mai ite TANGO mote Minisituli o Maalo o Fenua (HARD).

4.2. Ate Kaupule mote Falekaupule o Nukufetau, ka onono kae fuafua fakalei ine taimi tau kite mafai o fakasaoloto atu ki tino ote Fenua, ke mafai ne latou o fakaoga ate Maumea o latou mai ite Kogaatai puipuigina tenei. Ate kogaa koga ka mafai o puipuigina I loto ise leva e 3 tausaga kite 5 tausaga.

Agasala mo Fakasalaga.

Sose tino e soii ne ia a fakanofoga ote tulafono tenei, ka aive a ia kite fono Tulafono. Kae fakasala a ia kise aofaki Tupe e se silia mai luga ote \$400.

A tupe katoa e mau I fakasalaga konei, ka fai pela me ko tupe maua ate Kaupule o Nukufetau.



10 Appendix 4: Current draft of MOU for FADs

PEIGA, TAUSIGA MOTE FAKATUMAUGA O POE FAKALATA IKA SE FAKATOKAGA IO MESE FEAGAIGA (MOA) ITE VASIA OTE KAUPULE, FAKAPOTOPOTOGA TAGATA FAIKA O MOTE MALO.

E ATAFIAGINA me i poe fakalaika ka fesoasoani malosi ki tagata faika pena foki tino ote fenua i te fakamauaga mote fakafaigofiega te sala o ika pela mo atu, kasi/tavatava, takua mo nisi ika aka foki, fakafolikiga a te fakamaumau o penitini kae fakamama foki a te faika i koga tai pili ote fenua;

E ATAFIAGINA FOKI ite fakamauaga, faitega mote peiga ote POE fakalata ika e se faigofie tusa ko mea ne fakaoga kite faitega, peofuga o tino mote togi ote vaka, pooti ne aofia i te peiga;

E AMANAIAGINA i te MALO fakatasi foki mo taugasoa fesoasoani e se mafai o fakatumau a te fesoasoani ki te fakamauaga o POE, vagana ke isi ne fakamaoniga e iloa i ei a te aoga mote fesoasoani o POE i feitu tau sene, kae ke maua foki se fakamapatonuga me ka se afaina a sose POE pogai mai te fakamasei o te kope io me kote tuku tiakina;

E MALAMALAMA foki ite Tulafono mo Maumea ote Tai e fakatapu ne ia a mea konei - te fakamasei, kaisoa io me sai (o se paopao, pooti, foulua) ki luga i te POE, kae e fakasala foki ne ia sose tino e soli ne ia ate tulafono ki sala e aofia – togi tupe kise aofaki e mafai o oko kise \$5,000, 3 masina ite falepuipui, io me togi tupe (pau mote togi ote POE katoa) kite malo;

E ATAFIAGINA KAE AMANAIAGINA FOKI ate tusaga fesoasoani ote NAPA 2 ki fenua tela ka aofia e 4 POE fakalata ika ka pei i loto i te 4 tausaga ote polotieki (2015-2018);

MAI POGAI KONEI MAI LUGA, a te Fakapotopotoga Tagata Faika mote Kaupule o mote Malo (auala ite matagaluega Faika o Tuvalu) ko talia kae lotofiafia ki fakanofoga konei e fakaasi mai lalo;

FAKAMAUAGA MOTE PEIGA O POE

1. Ate matagaluega faika ote malo ka fesoasoani kite fenua ite fakamauaga pena foki mote peiga o POE aofia i ei a POE kola ka fakamaua mai lalo ote NAPA;
2. Ate matagaluega faika ka fai ne ia se akoga mo tagata faika ote fenua kite fakapikipikiga pena foki mote peiga o POE mote taimi muamua.
3. A te fakapotopotoga faika ote fenua ka panaki mote fakapikiga mote peiga o sose POE faopoopo mai tua o te akoakoga tenei.
4. Ate fakapotopotoga tagata faika ote fenua mote matagaluega ke galue ke maua ne sene mo togi ne POE faopoopo pena foki mote tausiga o POE ko oti ne pei fakatasi mo poe e 4 ote NAPA konei ka fakatautau ke pei;
5. Ate fakapotopotoga tagata faika ote fenua ke fakapatonu a kogakoga kola ka pei ki ei a sose POE fou kae ke sokotaki foki kite matagaluega faika fakatasi mote matagaluega o vaka koi tuai o pei a te POE;

TAUPULEGA, TAUSIGA MOTE ONOONOGA

6. Ate kope tenei ia te fenua (Falekaupule) kae kote te tausiga mote fakaogaaga o te kope e nofo mote fakapotopotoga tagata faika fakatasi mote Kaupule.



7. Ate Falekaupule ke fakatoka ne ia ne aofaga ko tino ote fenua ke ususi tai ki fakanofoga o POE fakalata ika. Kote fakapotopotoga faika MOTE Kaupule ote fenua ka onoono kite fakamalosiga o tulafono mo POE mo nisi fakanofoga faopoopo kola ko oti ne pasia nete falakaupule;
8. Ate fakapotopotoga faika ote fenua ka fai ne ia ne asiasiga fakatumau ki POE fakalata ika kae fai foki a galuega e fakatau ifo e tau ke fai. Konei mea e manakogina ke fai I asiga takitasi,
 - a. Asi a launiu – sai mafai ko galo
 - b. Asi a te mata ote loopu tela i tou – toe sai mafai a poe ko tai too
 - c. Asi ate soko – mafai e mafai, sui ate uka tela ki luga mafai ko kaina ate loopu
 - d. Lipooti tala ote asiga kite matagaluega faika
9. A te Kaupule ke fesoasoani kite fakapotopotoga tagata faika i te fakatupega ote galuega asiasi ki POE fakalata ika pena foki mote fakamauaga o POE fou manafai ko manakogina.

FAKAMAUGA O IKA MAUA MAI POE

10. Ate fakapotopotoga faika ote fenua ke galue tasi mo tino fakamau ika i luga i te fenua kite fakamauaga o mea konei -
 - a. Aofaki o ika (I vaega kesekese) ne maua i POE
 - b. Te ioga ote faiva ne fai, aso mote po masina
 - c. Te aofaki mo igoa o tino ne olo ite faiva
 - d. Te koga ne faika I ei mote leva ote faikaga
 - e. Mo nisi mea aka foki

TALA O ASIASIGA FAKATASI MO TULAGA FAKAMASEIGINA O SOSE POE

11. Fakapotptoga tagata faika ke avaka se lipooti kite Kaupule i sose taimi e fai ei ate asiasiga.
12. Ate Kaupule ke fakaokooko a tala o asiasiga o POE kite matagaluega faika fakatasi ite 3 masina. Te lippoti tenei ke aofia te aofaki o taimi ne asiasi mo galuega ne fai ki POE (mafai e isi).
13. Te Kaupule ke lipooti fakavave kite matagaluega faika mafai ko isi se fakalavelave ko tupu kite POE
14. Matagaluega faika ka fai ne ia se sukesukega mafai ko isi se POE ko lipooti mai me ko galo ko te mea ke maua se tala maea kite pogai ne galo I ei
15. Kafai ate POE ne fakamaseigina, ke fakasala e iloa a tino io mese fakapotopotoga tela/kola ne aofia ite fakamaseiga ote POE.

FAKALAUSAGA TE ILOA O TINO

16. A te matagaluega faika ka fai ne ia ne polokalame ko te mea ke avaka te iloa o tino ote atufenua i POE fakalata ika, te taua/aoga, tausiga, koga e pei i ei mo nisi mea aka.
17. Ate matagaluega faika ke fakailoa kite matagaluega o vaka a kogakoga o POE fakalata ika o fenua katoa