

METRONOME 23 – NANUMEA



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1.0 Summary

The lagged Nanumea Metronome – 23 focuses on the development of the Coastal Fisheries Management plan for the Nanumea community. A total of 10 days were allocated especially to fulfil mandated activities for the trip. On the 9th of August, 2022 the team left Funafuti on the LC.Moeiteava barge for Nanumaga and arrived Nanumea on the 11th at 4:00pm. The trip was a compensation of Metronome 23 where Nanumea closed their borders at the brink of the Team’s plan of arrival. When all the activities were done in Nanumea, Metronome 23 took the MV. Nivaga III on July 26th on its normal run upon return to Funafuti.

As in Nanumaga and Niutao, similar activities have been on-going as part of the trip; A total of 65 boats and canoe put together were surveyed. One Ciguatera Fish Poisoning was admitted to the Nanumea clinic. Awareness programs was done in Kaumaile Primary School. A refresher training for Data Collectors and with feedbacks on the progression of the job. Post-harvest Training of Community Fisheries Centre (CFC). Grab bag inspection from each island and the evaluation of the Grab bag condition. There was no FAD maintenance on Nanumea since for currently there were no FADs on their shores. LMMA Household Survey, interviewing the community’s point of view on Locally Managed Marine Area from their own island. In the community consultation, the goals in all islands were similar in wanting the improvement of their coastal fisheries resources. Each island have different approach on achieving the goal. There have been some feedbacks made from the community and Kaupule on how Fisheries could assist the island in various activities from the closing consultation (Day 3 of Developing Community Fisheries Management and Monitoring Plan) last day consultation with the Kaupule).

2.0 Introduction

The trip was funded by the Pacific Regional Oceanscape Project (PROP) and the Tuvalu Fisheries Support Program (TFSP-2). The funds were to support proposed activities and travel requirements. The Department sections most involved in these tasks are the Coastal Fisheries and Operations & Development Sections.

The mission was to develop Nanumea Coastal Fisheries Management plan through proper consultations. Other activities during the stay includes: Awareness Program (Community and School Awareness), Ciguatera Fish Poisoning Case update, Boat & Canoe Survey, LMMA Activities (Household Survey), Post-harvest Activities.

The LMMA household survey was conducted by TFD metro team on the 16th July, 2022. The purpose of this survey is find out how much the island community understand about LMMA related information. Depending on the result of these survey, TFD will provide services to the Nanumea Island to improve LMMA related matters. In this survey, there are 30 people that are randomly selected by TFD team to participate in. The participants include children of 13 years old and above, youths, fishers, people in middle age and the old people.

Presentation in Sea Safety briefly provided an overview of the Section activities to give a clear ideas to the participant on the importance of the Operation and Development section to the island Fishermen association and each island CFC in their collaborated work to improve safety at sea. And followed by a presentation on fish handling; the following is a short summary of the presentation content;

- What is fish spoilage
- What is the cause of fish spoilage
- Why is it important to handle fish properly
- Ways to preserve fish to maintain good quality of fish

A refresher training was proposed for the smoke box construction with the Nanumea CFC employees to improve post harvesting, ways to preserve fish – smoked and salted fish for trading purposes. There was no FAD maintenance as there was no FAD in Nanumea.

3.0 Methodology

There were arrangement made prior to arrival. It was done by contacting the secretary and the CFO of Nanumea in arranging the accommodation and needs for each island. The team left Funafuti for Nanumea on the *LC Moeiteava* on the 9th of July and disembark on the 11th of July. The team took the *MV Nivaga* upon return where the boat diverted to Nanumaga for a day before reaching Funafuti on the 28th July, 2022.

Consultation with the Kaupule; informing the Kaupule members on the tentative program and amending the changes in the time and day. Consultation with the Community, the presentation was made first to understand the concept the establishing of a coastal fisheries management plan. In activities section, the community was divided into 5 groups: Kaupule (and men), Elders, Fishermen Association, Women Association and Youth Association.

Three presenters were allocated to present in the school awareness on topics that relates to the coastal fisheries resources. The Refresher training were arranged to be done by a member from the Coastal and an O&D officer with the Community fisheries Officer (Data collector was on leave).

The team members would visit to the medical centre and discuss with the nurse on the positive cases of Ciguatera Fish Poisoning. The team including the Community fisheries officer (CFO) were divided into groups of two and the number within the group; it varies depending on the team members' time availability. The group would stroll around the island to find the boat or canoe then gets its measurements (measuring the length of the boat or canoe and it coordinates) using a measuring tape and a GPS.

This survey conducted as an interview between TFD officers and participants. The metro team divided into 2 groups in which each group have to visit each of the two sides of Nanumea which is Lolua and Haumaefa. The team reach out to interview the selected participants in their respective homes. There are 30 selected participants including children year 13 and above, youths, fishers, matured people and the elders. There are 10 females and 20 females participated in this survey. The average household members on Nanumea is 5 people.

Post-harvest training was done with Nanumea CFC employees with 3 of the O&D officers, the idea is to refresh and train CFC employees on fisheries management subjects. The training formally opened with a short summary and the benefits of the training. Then lastly, followed by a summary of the training expectations which include;

- I. CFC to produce healthy fish products;
- II. Improved knowledge on Fish Handling storage and preservation;
- III. Improving opportunities for fish product marketing;
- IV. Improving trading of fish products nationally and internally.

Sea safety training and grab bags inspection was carried out with the Nanumea Fishermen (Magaomea) at the passenger's shed near the wharf. This is to effectively inspect each Grab Bags and to refresh each local fishers on the usage of each safety gears in the Grab Bag. This is one of the section priorities to ensure all fishers access to well-maintained safety equipment (Grab Bag) and at least inspected once in every year.

Prior to the team's departure, a final consultation was made to the Kaupule in summarizing the activities done on the island.

4.0 Results & Storage

4.1 Community Consultation



For this year’s metronome trip, the community consultation was based on developing the Coastal Fisheries Management Plan. The island community was divided into groups with fisheries officers as facilitators for each group.



The consultation was held at *Nameana-II* Falekaupule; commenced on the 12th to the 14th of August at dusk, the most available time for participants to attend where their daylight chores were done. The attendees were divided into 5 groups: **Kaupule (community Council leaders)**, **Toeaina (Elders)**, **Fishermen Association**, **Fafine (Women Association)**, and **Malosiga (Youth Group)**. The goal from all groups were similar as they want to ensure that there is extra area to fish, an improvement of coastal fisheries resources, supporting the livelihood and cultural practices for the Nanumea women. The community seems eager to continue and have shown great interest in the developing of the plan.

The results from the consultation will be in the drafting process by the Fisheries officers when they return to office, they ensure the community that they will return to islands with the reviewed CFMP for the last time to finalise the issues raised. The Minister should approve the plan, only then the plan will be on implementing and monitoring phase. The consultation ended successfully.

4.2 Ciguatera Fish Poisoning Case Update

Some officers from the Metronome team visited the island nurse and found out that there was one case admitted from eating a ‘LOI’ (*Cephalopholis argus*), location was unknown. On the last day meeting with the Kaupule, the team advised the council that it is important to note the location of where fishers fish – at the CFC office to ensure proper warning of such Sea Food Poisoning breakout. The issue was noted by the Kaupule Secretary.

4.3 Boat & canoe Survey

The team made a survey on locating boat and canoe and observe their conditions and location. Here are the tables from the central below:



Table 4.3a showing the types of boat/canoe and the number of vessel measured in Nanumea.

Type of Boat/Canoe	Number of Boat/Canoe Measured
Wooden Boat	5
Aluminium Boat	12
Wooden Canoe	37
Aluminium Canoe	6
Fiberglass Boat	4
Plastic Boat	1
GRAND TOTAL (BOAT+CANOE)	65

The table shows that the majority of Nanumea fishing vessels were wooden canoe although their island vessel channel is extremely rough on bad weather condition, fishers prefer. Even though the situation is threatening, Nanumea fishers are able to access their channel qualmlless.

4.4 LMMA Activities

Household Survey on Nanumea

The LMMA Officer conducted a survey with the help of the metronome team and the islands Community Fisheries Officer (CFO). The survey was focused on:

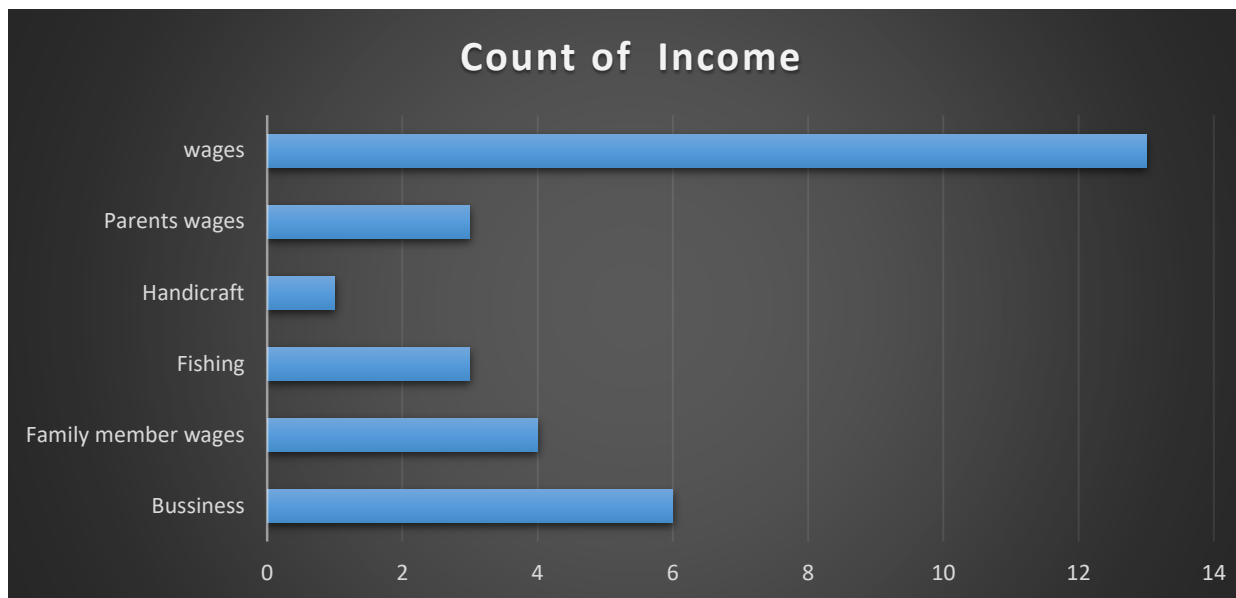
- Participants who were fishers
- Heard of LMMA
- Knowledge of LMMA
- Knowledge of rules based on LMMA
- Penalties in placed
- Knowledge of LMMA Boundary
- Opening of LMMA

4.1.1 Nanumea LMMA household survey.

The table below shows the percentage of how the participants react to the questions listed in the above table. It shows that almost all the

Questions	Yes	No
Fisher	93%	7%
Have you ever heard of LMMA?	17%	83%
Have you ever heard of MPA?	23%	77%
Have you ever heard of SPA?	20%	80%
Do you know the difference between LMMA, MPA and SPA?	13%	87%
Has your island SPA open in the past 2 years?	90%	10%

participants are fishers. Most of them have not heard of LMMA, MPA and SPA. Many of the participants does not know the differences between LMMA, MPA and SPA. 90% of the participants were strongly agree that the Nanumea Falekaupule has opened the Nanumea SPA for fishing activities in the past 2 years.

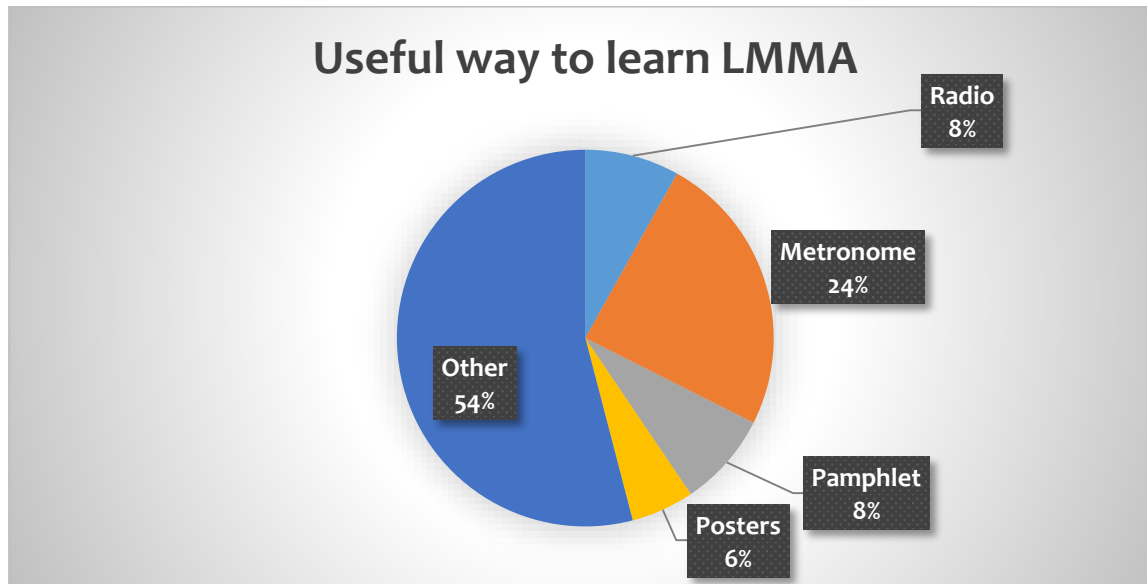


The above graph confer that most of the participants are depending on their wages for living. One of the reason for this is that there are many employment opportunities on the island at the moment due to the numerous amount of projects that are currently implementing on the island.

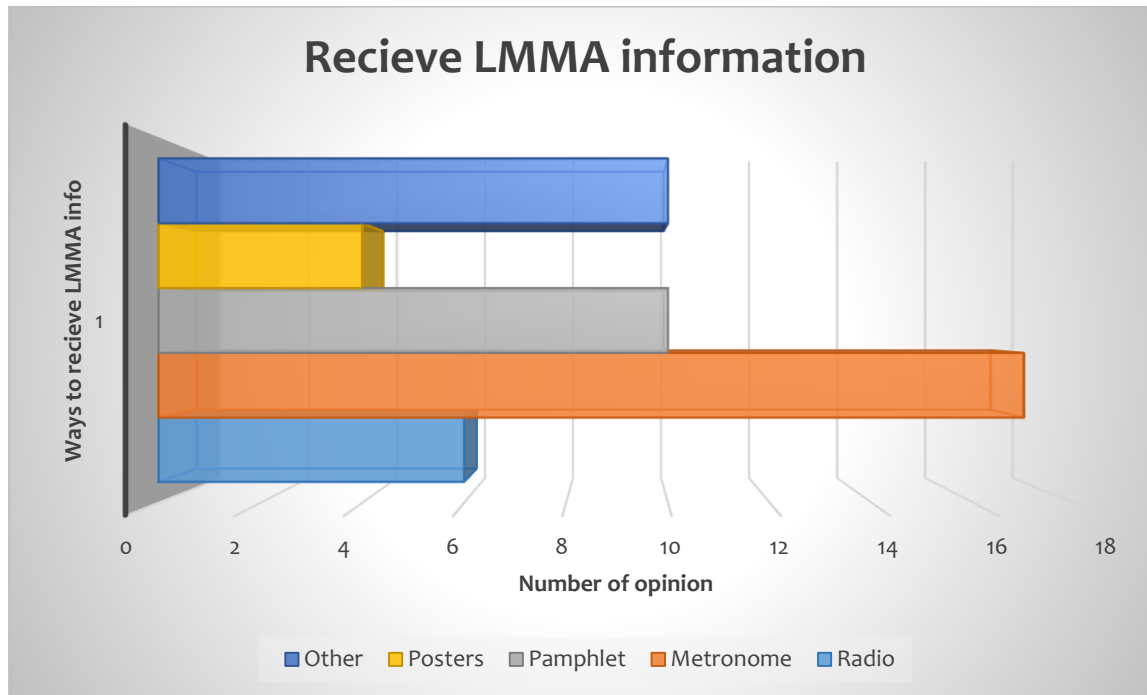
How well do you understand of LMMA				
	Objectives	Rules	Penalties	Boundary
Don't know anything	3%	7%	17%	17%
Know a little	10%	10%	7%	10%
Fair knowledge	3%	10%	7%	17%
Good knowledge	84%	73%	69%	56%

The table above display the understanding of participants on the reason why management measures and approaches are being put in place by the Falekaupule with the help of TFD. The table shows that the majority

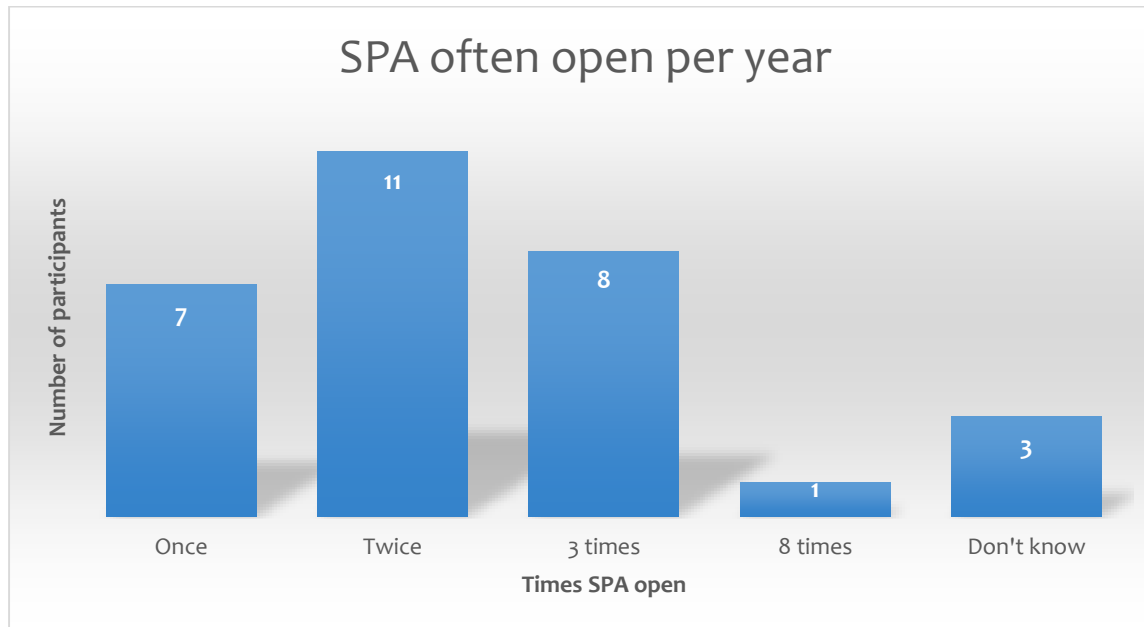
of the participants have good knowledge and understanding of LMMA objectives, rules, penalties, the LMMA and SPA boundaries. However, there are concerns raised by younger generation that they know very little of these LMMA information. Some of the Kaumaile Primary School students and teachers requested TFD officers if fisheries related information could be shared more often in school and also for them to visit their SPA.



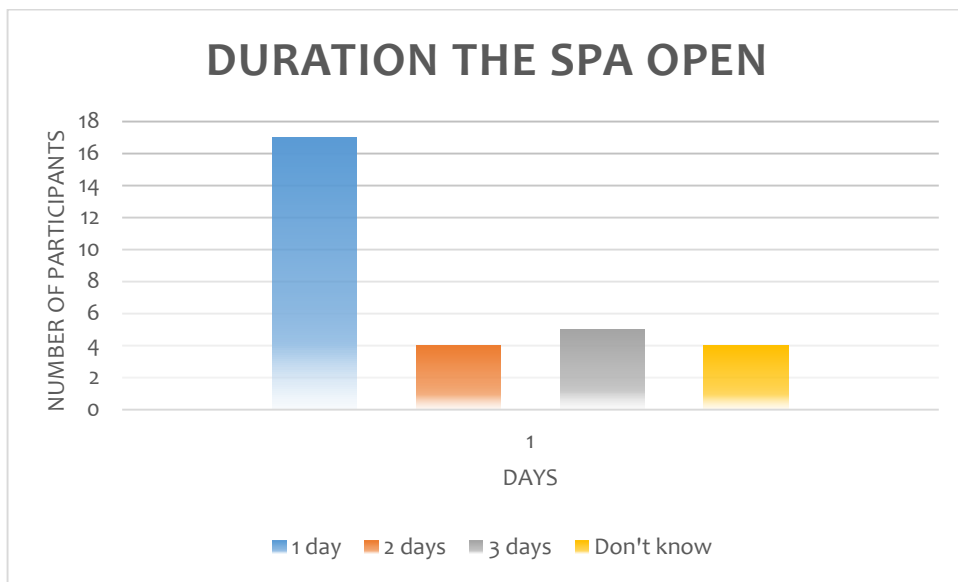
This chart illustrates the useful way people have learned LMMA related information. The chart displays that most people of Nanumea have learned LMMA information from their island leaders and peers on the island presented. It was said that this information is shared through the exchanging communication with their peers and through speeches made by leaders during community gatherings and feasts.



The graph above confer how the Nanumea island community would like to receive LMMA related information. This graph is showing that the Nanumea island community wanted to receive LMMA information from TFD officers during metronome trips.



The above graph display a high number of participants who have witness that the Nanumea SPA have open twice a year in the past two years. However, there are also trepidations from other participants who have also witness the time in which the Nanumea SPA have open. According to these participants, there are several reasons the SPA could be open by the Falekaupule. These reasons include the visiting of government officials, request from the Nanumea community on Funafuti, Pastors food to carry upon his visit to Funafuti and the island commemoration days (Te po Tefolaha). The opening of the Nanumea SPA could depend on the amount of occasions held on the island throughout the year.



The graph above shows that most of the participants have agreed that the SPA is usually open for 1 day only.

Notice changes in the catch			
Increase in size	Increase in quantity	Decrease in size	Decrease in quantity
23	25		

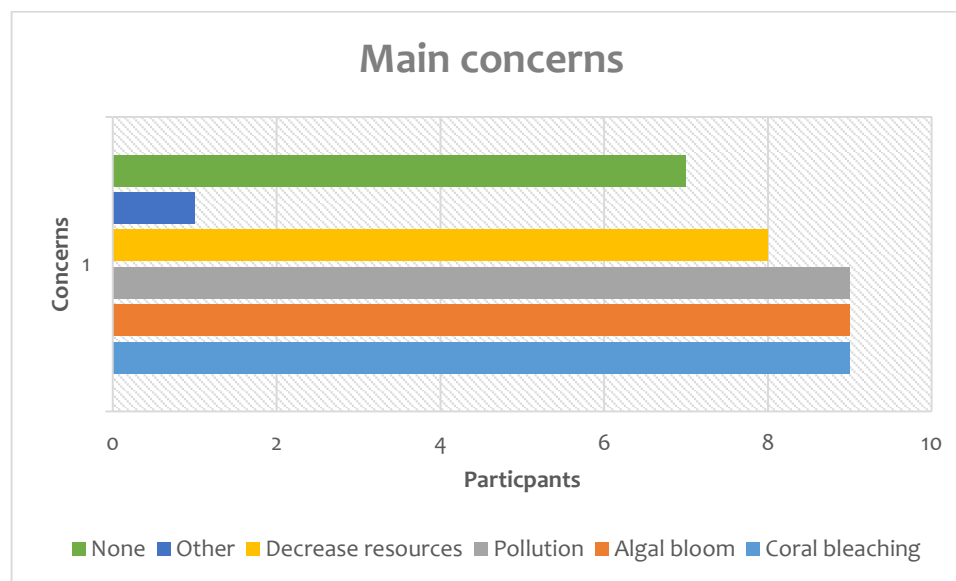
Table above display the experience the participants had during the period when the SPA was open. The participants have comprehended the effectiveness of the Nanumea SPA. Only few participants who have not seen the catch from the SPA because they are primary school students and they were in school during the time of the harvest. The majority of the participants were very pleased with the result of their SPA. There were so many fish and they only have to spend very less time catching fish.

Other management measure	
No spearfishing in the lagoon	23
No littering of plastic to the sea	1
Don't know	2
None	4

The above table shows that most of the participants agreed that prohibiting of spearfishing in the Nanumea lagoon is a management measure that is currently implemented on the island apart from the the Nanumea SPA.

Approaches to improve					
SPA	Aquaculture	MPA	Size limit	Gear restriction	Other
21	2	1	7	7	3

This table above showing the opinion of participants on which management approach that mostly needed to be advocated in order to improve the management of coastal fishery on Nanumea. SPA have been an interest approach to most of the participants.



The graph on the above page confer the concerns in the coastal environment on Nanumea Island. It is presenting that there are 3 main concerns encounter by the island. These are pollution, algal bloom and coral bleaching.

Species that are found decreasing are Strawberry conch (Panea), *Spondylus varius* (Hopu nifo), Yellowstripe Goatfish (Kalo), Tugage, Smalltooth Jobfish (Palusega), Lollyfish (Loli), *Kyphosus cinerascens* (Nanue), Onespotsnapper (Taaiva), *Caranx lugubris* (Tafauli)

4.5 Other Activities

4.5.1 Nanumea School Awareness Program

The team covered Fisheries related topics in three presentations prepared, the topics were;

- **Importance of FADS** presented by Pafini Fepuali,
- **Coral Reef Importance to Fishery** presented by Matapua Falani and
- **Size Limit** presented by Paeniu Lopati.

Nanumea Kaumaile Primary schools awareness ranges class 6 – 8 student with pop quizzes given at the end of each presentation, there were also prizes for those who managed to respond on presentation based questions. The Kaumaile teachers besides thanking the team for the good service, they proposed a request to the Fisheries team for the coming years to consider a trip to LMMA compound to do practical awareness instead of watching presentations for a change. One of the team replied that they will note it for next year's awareness program. The Fisheries team presented the school incentive as a gift to the Primary Schools.

4.5.2 OI DC Refresher Training

A refresher training was made with the CFO as he work closely with the OI DC -to refresh the practical of Creel Survey and ways to approach to Fishermen. From that refresher, consultation was made to understand the issues that the data collector faced when doing his/her creel survey, liaising with the Kaupule and/or report submission, to understand the new practiced the TFD is looking at the monitoring of Data Collector work to prove each fortnightly report submission satisfy the amount of data submitted. The DC also raised issues they faced throughout 2021-2022. The TFD deliver some supplies for the DC; batteries, data sheets, pencils, etc... to help the continuation of data collections work.

Nanumea

The CFO report that

- He is doing well in data collection activities
- A need of a calibre ruler for measuring length of fish.
- New supplies of creel data sheets,
- The Kaupule are very helpful with needs for the job.

4.6 Post-Harvest Training

4.6.1 CFC Training Organization:

Training Objective, Outcome, Coordination and Participant

The primarily objectives of this Post Harvest Training is to implement activities that will provided each island CFC improved skills on food security, higher financial returns and also provide them with knowledge on how to preserved fish and products sustainably;

- Fish Handling, Storage and Processing awareness and training to 6 identified communities;
- Maintain and improve the quality of fish product (appearance, texture, flavor and nutritive value)
- To protect food safety (fish products)
- And to reduce losses between harvest and consumption.

After the training, participants form each CFC understand the following;

- ✓ Able to produce healthy fish products;
- ✓ Improved knowledge on Fish Handling;
- ✓ Improving opportunities for fish product marketing;
- ✓ Improving trading of fish product between Tuvalu and the Pacific Islands;
- ✓ Understand different ways of preservation methods.

Training Coordination

The Operation and Development unit was responsible for the organizing, planning and coordinating of the Post-Harvest Training for each island CFC. PROP (Pacific Oceanscape Project) provided immense support in funding training expenses.

Participant

The table below showed the number of men and woman participated in the training activities from each island CFC (Nanumaga and Niutao).

Table 01: Number of Participant from each island CFC

Community	Female	Male	Total
Nanumea	4	2	6

4.6.2 CFC Training Workshop Activities:

Fish Handling and Storage Presentation layout – Day 1;

Presentation briefly provided an overview of the Section activities to give a clear ideas to the participant on the important of the section to fishermen and each island CFC. And lastly followed by a presentation on fish handling and storage; the following is a short summary of the presentation content;

- ✓ What is fish spoilage
- ✓ What is the cause of fish spoilage
- ✓ Why is it important to handle fish properly
- ✓ Ways to preserve fish to maintain good quality of fish.

Fish Preservation

In this session the presenter provided a full idea and concept on fish preservation. It has shown that there were many methods can used to preserve our fish/food and making fish products which improved socio-economic to each island communities. And also discussed on why it is important to preserve our fish as summarized below;

- ✓ To maintain quality of fish (appearance, texture, flavor and nutritive value),
- ✓ To Protect food safety,
- ✓ To reduce losses between harvest and consumption,
- ✓ Preservative methods,
- ✓ Introduced trend of domestic trading.

Practical and Experience – Day 2

Nanumea CFC staff joined the practical session. It basically focused on the processing of fresh tuna species (4 YFT used for the practical), appliance of smoke flavour ingredients for marinating the tuna meats before soaking for the next day. In this practical, the staff were trained using the vacuum sealer.

Smoke Fish Achievement and Outcome.

After the training session, participant acknowledge the following;

- a) Able to produce healthy fish products
- b) Able to understand why it is very important to handle fish properly
- c) Understand different ways to identify fresh fish and spoilage
- d) Able to learn different preservative methods
- e) Opportunities to trade local products (fish products) in and out of Tuvalu.

Nanumea Smoke-Box Construction



On the 12th of July, the O&D team meet up with the CFC staffs, most of them seen busy that day, so Mr Nelly (SFO) only discussed with the CFO to gather materials and equipment that needed for the smoke box construction. According to the CFO Mr Panapa, he stated that the materials for the smoke box, were not received such as the galvanised roof and timber (2X2), Therefore, we gathered our materials from the Kaupule carpenter, some from the school construction site, and the rest were found in the CFC site, such as timber and old galvanised roof. Smoke box construction took three days to completed, from the 13th - 15th of July. Mr Lealai (AFO) point out that during the construction of the smoke box, CFC staff (2 males presented), the CFO and the fish

processor were able to help in the construction of the smoke fish, they also learnt how to build a simple wooden smoke box, from any available materials that available, and enable to be more creative in constructing a bigger smoke box if require.

CFC acting Manager Mrs. Meele acknowledge the training involve in the construction of a simple smoke box. With the knowledge they gain from the making of smoke fish, it helps to extend their fish product from salt dried fish to smoke fish. Hoping to increase their process fish production in the near future.

4.6.3 Sea Safety Training;



Sea safety refresher training was design to refresh local fishermen on the usage of each safety gears in the grab bag. The following were the activities and outcomes during this refresher training. Nanumea fishermen association (Magaomea) were able to be presented, though none of them able to bring along their grab bags for inspection.

Achievement.

- 1) Successfully refresh each fishers with grab and the wisely use of each safety gears the grab bag.
- 2) Demonstrating the significant of alternative option beside the safety gears such as empty bucket, fuel tank and yellow floats.
- 3) Fishers understand the 3 different meaning of light activation of the strobe light in terms of communication.
- 4) Reminder of the importance of preparation before going out fishing, checking safety gears, weather forecast and the outboard board motor.

Issues and Challenges.

- 1) Current grab bags user not turn up with bags for inspection during the sea safety refreshment session.
- 2) The association have not figure out a method to sustain each gears in the grab bags.

5 Appendix

5.1 Seafood Poisoning Report Form

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.

5.2 Boat & Canoe Survey Sheet



Tuvalu Fisheries Independent Boat Survey Data Sheets

The objective is to get independent counts and measurements data on all boats and canoes on the island. At the same time we can record some condition information. No not include 'dead' boats that are really rubbish.

Island:		Date:		
Latitude (DD):		Longitude		
Surveyor 1:		Surveyor 2:		
GPS:				
Boat and Canoe Counts				
Type (boat/ canoe/etc)	Lat (DD)	Lon (DD)	Length (m)	Condition / Comments (storage, good, poor, etc)

5.3 Socio-economic Survey



Tuvalu Fisheries Socio-economic Survey Data Sheet

LMMA Household survey				
Target Group	Elders, Women, Fishermen, Youths and children of 13 years old.			
Objective: To gather detailed information on (i) How much the community knows about LMMA; (ii) The effectiveness of LMMA on the island				
Island:		Village:		
Latitude (DD):		Longitude (DD):		
Surveyor 1:		Surveyor 2:		
Date:				
Person interviewed (confidential, names will not be published)				
First name:		Last name:		
Date of birth		Gender:	<input type="checkbox"/> Male	<input type="checkbox"/> Female
Number of household members:		Are you a fisher?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
How often you go fishing in 2 years?				
What is your main source of income?				
LMMA information				
1. Have you ever heard of Locally Managed Marine Area (LMMA)?			<input type="checkbox"/> Yes	<input type="checkbox"/> No

2. Have you heard of Marine Protected Area (MPA)?		<input type="checkbox"/> Yes	<input type="checkbox"/> No		
3. Have you heard of Special Protected Area (SPA)?		<input type="checkbox"/> Yes	<input type="checkbox"/> No		
4. Do you know the different between LMMA and a Marine Protected Area (MPA), and Special Protected Area (SPA)?		<input type="checkbox"/> Yes	<input type="checkbox"/> No		
5. How well do you know and understand of the LMMA?	<p>a) Objectives (what the LMMA is trying to achieve)</p> <ul style="list-style-type: none"> • Don't know anything • Know a little • Fair knowledge • Good knowledge (know it very well) <p>b) Rules</p> <ul style="list-style-type: none"> • Don't know anything • Know a little • Fair knowledge • Good knowledge (know it very well) <p>c) Penalties</p> <ul style="list-style-type: none"> • Don't know anything • Know a little • Fair knowledge • Good knowledge (know it very well) <p>d) Boundary?</p> <ul style="list-style-type: none"> • Don't know anything • Know a little • Fair knowledge • Good knowledge 				
6. What has been the most useful way for you to learn about LMMA?	Radio	Metronome	Pamphlets	Posters	Other
7. Which way would you prefer is the best way to receive information on LMMA?	Radio	Metronome	Pamphlets	Posters	Other

8. In the past 2 years, have the island Chief/elders opened the SPA for fishing?		Yes	No
9. How often did the SPA open?			
10. How long did the SPA opened?			
11. If the elders/chief open the SPA for fishing. Have you noticed the catch?	Increase in size	Increase in quantity	Decrease in size Decrease in quantity
12. Other than the SPA, what management measures are practiced on your island that you are aware of?			
13. What ways and approaches do you think should be done to improve our way of conserving our coastal resources? a) SPA b) Aquaculture c) MPA d) Size limit e) Gear restriction f) Other			
14. What have been your main concerns over the past 2 years? a) Coral bleaching – Good 1, 2, 3, 4, 5 Bad b) Algal bloom – Good 1, 2, 3, 4, 5 Bad c) Pollution – Good 1, 2, 3, 4, 5 Bad d) Decrease in the number of coastal resources – Good 1, 2, 3, 4, 5 Bad e) Others – Please explain If the number of coastal resources are decreasing. What species?			

THANK YOU



2022

5.4 MINUTES - Nanumea Coastal Fisheries Management Plan Minutes – Day 1

MINUTES

Nanumea Coastal Fisheries Management Plan

Date & Time	12 th July 2022 Time commenced – 2010hrs to 2234hrs	Location	Nameana III
Organizer	Tuvalu Fisheries Department		
Recorded & Drafted by	Pafini Fepuali	Type of Meeting	Consultation

Attendance Record

<u>Nanumea Community:</u> Refer to attendance	<u>Fisheries Department:</u> <ol style="list-style-type: none"> 1. Mr Maani Petaia 2. Ms Matapua Falani 3. Iakoba I 4. Paeniu Lopati 5. Lealai S 6. Neli Seniola 7. Pafini Fepuali 8. Lavata Nivaga 9. Panapa Tofiga– Nanumea CFO
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Agenda

<ol style="list-style-type: none"> 1. Registration 2. Opening Remarks 3. Opening Prayer
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2022

4. Introduction
5. Coastal Fisheries Management Plan
6. Questions and Answers
7. Activity
8. Group Discussion
9. Presenting of Ideas
10. Closing remarks
11. End of Day 1

Nanumea CFMP Minutes Day 1

No.	Item	Actions
1.	Opening Remarks Mr Patulika, a spoke person of the Falekaupule welcome the team and thanks everyone for making their time for this consultation. Lastly he asked lady in the Falekaupule to open this consultation with word of prayer. After word of prayer he handed over the opportunity to the team to start this consultation.	Mr Patulika officially open first day of the consultation
2.	Opening Prayer: A lady commenced with a word prayer that officially open this consultation	Word of prayer commenced
3.	Introduction Mr Maani thanked Mr Patulika for the opportunity given and thanks everyone who were present for this consultation. In his remarks he highlighted the important of this consultation in the development of the Nanumea Coastal Fisheries Management Plan. He introduced the presenter and also a short introduction of the team members. Lastly, he also highlighted of tonight activities and discussion.	Mr Maani introduced team members
4.	Coastal Fisheries Management Plan – Presentation lay out	

2022

	<ol style="list-style-type: none"> 1. Agenda of consultation 2. What is CFMP – A plan that is developed together in what sort of concerns that we are facing, 3. Why should we developed such plan, 4. What is the importance of this plan to the community, 5. Who is involved in this plan, 6. Duration of the plan 7. Linkage of plan to “Te Kete” 8. Our consultation – responsibilities of each parties in the plan, the plan should be based from community experience 9. Group activities <p>Mr Maani thanks Ms Matapua for the presentation, and kindly asked each participants to sit in their group they represented.</p>	<p>Ms Matapua commenced with her presentation</p>
<p>6.</p>	<p>Group Activity: Women Group – Presented their finding and ideas <u>Question and Comment</u> No comment and question</p>	<p>Women presented their presentation</p>
	<p>Youth Groups – Presented their finding and ideas <u>Question and Comment</u> No comment and question</p>	<p>Youth presented their presentation</p>

2022

	<p>Leader Group – Presented their finding and ideas</p> <p><u>Question and Comment</u> A comment from elders comment on the paper from the leaders groups to install light beacon in coral reef to help attract fish.</p>	<p>Leader presented their presentation</p>
	<p>Men Group – Presented their finding and ideas</p> <p><u>Question and Comments</u> No comment and question</p>	<p>Men presented their presentation</p>
	<p>Fishermen Group – Presented their finding and ideas</p> <p><u>Question and Comment</u> No Comment and question</p> <p>Mr Maani thanks everyone for participating in tonight’s activities and a reminder for the rest of the consultation week. He also raised a concerned that tomorrow will a church services and we will be abide with a decision from the community. He also, remind the community to wait until their sitting allowance received. Lastly, again he thanks the community and handed over the opportunity the community.</p>	<p>Fishermen presented their presentation</p>
7.	<p><u>Closing Remarks</u> Mr Patulika thanks the team for the consultation, and he came up with a decision to continue the consultation as schedule after church services. Lastly, he closed day 1 consultation by asking the deacon of the island with a word of prayer</p>	
8.	<p>End of Day 1 – 2234hrs</p>	



5.5 Nanumea Attendance list

Venue: Nameana II

DAY 1
Tuvalu Fisheries Department

Date: 12/7/22

NAME	AGE	GENDER	OCCUPATION	Sitting Allowance \$10	SIGNATURE
TEKALOGA Patulika Malaka	60	M	Pule fenua	/	[Signature]
SELA LOPATI	58	J	Malapoue	/	[Signature]
Scott-Pati	66	J	Kaupule	/	[Signature]
APULEU TE PULU	42	M	Toko 2	/	[Signature]
Tealala Isalua	64	M	Fanua	/	[Signature]
FOLISAGA	59	M	Fale Kausipule	/	[Signature]
Tua Sejanai	64	M	Takipulu	/	[Signature]
Al. Seno	55	M	Takitaki Haunafa	/	[Signature]
Teaveliki Eliata	61	M	Takipulu	/	[Signature]
Talaga U	38	F	Takitaki Haunafa (E)	/	[Signature]
MARCUS J	52	F	Takitaki Lolua	/	[Signature]
Jasmine S	22	M	Talavou	/	[Signature]
Helena E	26	F	Talavou	/	[Signature]
Foumalia T	26	F	Talavou	/	[Signature]
Aneta J	28	F	Talavou	/	[Signature]
Itilua F	19	F	Talavou	/	[Signature]
FATOSANI Tulu	37	T		/	[Signature]
Talaga Manu	54	M	Fenua	/	[Signature]
Kila T	59	M		/	[Signature]
Lak S	38	M	F/Faika	/	[Signature]
Vaejan N	60	M	Laka F.K.	/	[Signature]
Samuel S	57	M	Laka EK	/	[Signature]
Telo J	61	M	Laka EK	/	[Signature]
Samoa J	37	M	Laka EK	/	[Signature]
	63	M	Takipulu	/	[Signature]

29
14
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ATTENDANCE LIST Nanumea Fisheries Management Plan Consultation

COASTAL SECTION



Metronome 23 Nanumea -



2022

Metronome 23 Nanumea -

DAY 1

Venue: NAMEANA II

Tuvalu Fisheries Department

12/07/22 Date:

	NAME	AGE	GENDER	OCCUPATION	Sitting Allowance \$10	SIGNATURE
1	TAKALAPA A	55	F	Fafine		[Signature]
2	TAKAIKK S	42	F	fafine tanna		[Signature]
3	TAKUANO P	55	/	Fafine		[Signature]
4	GOSE K	53	/	Fafine		[Signature]
5	SAMUE T	58	/	fafine fenua		[Signature]
6	FABOU W	37	/	ISRF Clerk (KPL)		[Signature]
7	RENISUA A	49	/	fafine		[Signature]
8	FESUA L	53	M	Tigata Gaika		[Signature]
9	KLIATA F	29	M	Tigata Gaika		[Signature]
10	TAKALAPA T	68	M	LOKATAKA		[Signature]
11	TAKALAPA F	64	/	/		[Signature]
12	VAELEI V		/	/		[Signature]
13	KULU A		/	/		[Signature]
14	VAILATI P	43	/	/		[Signature]
15	VAILATI V	72	M	/		[Signature]
16	KULU A	62	M	FAIKA		[Signature]
17	TAMAU U	60	M	/		[Signature]
18	TAKALAPA T	28	F	fafine fenua		[Signature]
19						
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ATTENDANCE LIST

COASTAL SECTION

Venue: NANKANA II

Day 2
Tuvalu Fisheries Department

Date: 13/07

	NAME	AGE	GENDER	OCCUPATION	Sitting Allowance \$10	SIGNATURE
1	ase T	60	M	Pule Penua		
2	PATULIKA L	58	M	MATAPULE		
3	KAUAGA V	64	M	TOKOHITA		
4	ALEFAIO O	68	M			
5	AULI T	53	F	KAPUPULE		
6	X Paga	53	F	TAKITIKI Lolua		
7	Teaputaki K	38	F	TAKI Haumafu (F)		
8	Juseta	61	F	FLOASO		
9	Teakota T	59	M	FAPEKAPULE		
10	Komahi	61	M	FK		
11	Lela S	60	M	FK		
12	Vaegan N	57	M	EK		
13	Pemula T	49	F	Fafine		
14	Tapelupe H	55	F	Fafine		
	Manki	42	F	Fafine		
	Tulosa	40	F	Fafine		
	Tekao K	54	F	✓		
	Suila T	59	F	✓		
	Soselina K	53	F	✓		
20	SIMONA F	68	M	✓		
	Takua M	37	F	Kaupule Staff.		
	Kaaka	53	M	F. Pulea		
	Kiata	29	M	✓		
	MALIGA	40	M	✓		
	Valei V	72	M	Valei (CT. Faka)		
	KULLU A	62	M	Val (CT. Faka)		
	Falaumala	28	F	Fafine		
	MARCUS T	27	M	Fafine (Telavou)		
29	Teupene	57	M	Fafine (Telavou)		

Venue: NAMEANIA

Day 3.
Tuvalu Fisheries Department

Date: 14/07

NAME	AGE	GENDER	OCCUPATION	Sitting Allowance \$10	SIGNATURE
1. Iosa T	60				
2. Patalika	58				* Patalika
3. GEMZEE	64				GEMZEE
4. Aiyasio	65				AIYASIO
5. Teafa	59	F	Fetu lolua		Teafa
6. Tematahi E	39	F	P/Peitu Namafa		Tematahi E
7. Euli Jehala	53	F	Sampale		Euli Jehala
8. Takua K	57	F	Fafone		Takua K
9. Tabua Mauata	37	F	Fafone		Tabua Mauata
10. Pesiula Pesimeta	49	F	Fafone		Pesiula Pesimeta
11. Tuosa Tele	40	F	Fafone		Tuosa Tele
12. Silla T	59	F	Fafone		Silla T
13. Selava Fannama	53	F	Fafone		Selava Fannama
14. Teafute H	55	F	Fafone		Teafute H
15. Maika S	42	F	Fafone		Maika S
16. Fannama P	60	F	Fafone		Fannama P
17. SIMON F.	63	M	fali/Carpule		SIMON F.
18. VAEQUAN	57	M	Fali Kanata		VAEQUAN
19. Lita S	68	M	F Kupuata		* Lita S
20. Kamaia	61	F	F K		Kamaia
21. Tealofa T	59	F	F K		Tealofa T
22. Marcus J	29	M	Fafone Talavou		Marcus J
23. Teupene A	57	M	Fafone		Teupene A
24. Aneta I	19	F	Fafone		Aneta I
25. Vaelei	72	M	Tagata		* Vaelei
26. Klinku	29	-	T/Faika		Klinku
27. Kulu	62	-	Tagata		Kulu
28. FASIX	53	M	T. Kaula		FASIX

Venue: NAMEANA

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DAY 4
Tuvalu Fisheries Department

Date: 15/07

	NAME	AGE	GENDER	OCCUPATION	Sitting Allowance \$10.	SIGNATURE
1	SIMONA. F	63	M	Fale kaupule.		[Signature]
2	VAKELI. V.	72	M	Tagata faika		[Signature]
3	KILLY A	62	M	FA		[Signature]
4	Kaumotu T	61	N	FJK		[Signature]
5	Vaigau. N	37	m	FK		[Signature]
6	Lilo S	80	M	FK		[Signature]
7	Taakofa. T	59	M	FK		[Signature]
8	Iese. T	60	M	Pule fenua.		[Signature]
9	Fatulika. L	58	M	Matapu		[Signature]
10	Pasagi. U	53	F	Feitu Lolua		[Signature]
11	Alepaio.	65	M	Toko 7		[Signature]
12	Tagilupe. H	55	F	fafine		[Signature]
13	Inilosa. Iese	40	F	fafine		[Signature]
14	Sivila. J	59	F	✓		[Signature]
15	Marcus. J	29	M	Talavou		[Signature]
16	Aneta. I	19	F	✓		[Signature]
17	Fousaga.	64	M	Toko 7		[Signature]
18	Fasiu. S	53	M	Tagata faika.		[Signature]
19	Manoa. Tuā	25	M	Talavou		[Signature]
20	Eliata. F	29	M	Tagata faika		[Signature]
21	Teaga. E	38	F	P/Feitu Haumaefa.		[Signature]
22	Auli. Tehulu	53	F	Kaupule		[Signature]
23	Soselina. Kawmanna	53	F	fafine		[Signature]
24	Takuao. K. Fatulika	55	F	✓		[Signature]
25	Tumau. U	60	M	Tagata		[Signature]
26	Penisula. Tesimeta	49	F	fafine		[Signature]