



Tuvalu Fisheries Department  
Coastal Section  
Trip Report

Niulakita and Nukulaelae

22<sup>nd</sup> May – 10<sup>th</sup> June 2018



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## 1 Summary

Between the 22nd May to the 10th of June 2018, 7 staffs from the coastal division, undertook an adventurous trip to the beautiful islands to the South of Tuvalu. The purpose of the trip was to implement fisheries related work on Niulakita and Nukulaelae. The trip consists of 6 nights on Niulakita and 10 nights on Nukulaelae in execution of fisheries support activities. However, it was made possible through financial assistance of the Pacific Regional Oceans cape Programme (PROP), NAPA II Project, Ridge to Reef Project and Coastal Recurrent Budget.

Activities carried out during this second metronome visit for 2018 was targeted mainly to undertake data collection and find out status of the resources through creel surveys, ciguatera fish poisoning interview, LMMA work and Island profiles, raise awareness of everyone in the community, fishermen and primary schools and investigate fishing capacity. We have also conducted workshops focused on FADs, sea safety and reviewed grab bags. One of the major activities we have introduced this year was the developing of management and monitoring plans for outer islands. The main datasets collected and activities completed were:

- (1) Ciguatera fish poisoning cases;
- (2) Creel surveys of fishers' catches;
- (3) Locally managed marine area / marine protected area (LMMA/MPA) location;
- (4) Independent counts and measurements of all boat & canoe assets on the island;
- (5) Fisheries assets including condition of the CFC and its assets;
- (6) Awareness Workshops with Fishermen, Community and Primary schools
- (7) Inspection and assessment of FADs
- (8) Collect fisheries related information
- (9) Refreshing training with OIIC;
- (10) Undertake consultations with Kaupule upon arrival and before leaving each island; and
- (11) Developing Management and Monitoring Plans

No single case for ciguatera fish poisoning was found out in both the islands. There were 3 targeted groups for awareness program such as fishermen, community and primary schools on each island. Overall 2 creel surveys were completed on Niulakita and more than 20 samples were collected on Nukulaelae. Niulakita had established an MPA whereby all location points have been plotted by R2R officers located in one of their inland lagoon. LMMAs for both islands do not require changes in their shapes thus would consider the last waypoints been taken by R2R officers. The independent boat and canoe survey found a total of 72 boats and 16 canoes in Nukulaelae with 2 boats on Niulakita. The condition of CFC in Nukulaelae was still good but few assets require proper maintenance. Also sea-safety training mainly targeted on the use of a Global Positioning System (GPS) and reviewing of grab bags in which 17 grab bags were checked for Nukulaelae and 1 on Niulakita. There were no FADs in both islands at current given a request for FADs instalment to be done in Nukulaelae at the earliest. Fisheries related information was gathered from consultations with communities, fishermen and Kaupule. A major task been carried out was the accomplishment of developing management and monitoring plans for both islands in order to control current issues that impacted them at current and near future. The two communities highly contributed to each and every activity in developing their plans with the mentality that they were the ones that benefit the most especially a prosperous and healthy future for their children and grandchildren.

## 2 Introduction

Metronome trips are regularly undertaken by Coastal Staff to execute the mandated activities under their work plan in the Outer Islands. It is one of our core doings within our section that will strengthen the collaboration bond between Kaupule, Fishermen associations, Communities and Fisheries Department. This sixteen nights expedition to Niulakita and Nukulaelae is the second metronome trip for the year 2018. However, there will be two more coming trips to the Northern and Central islands in August and October respectively.

This particular outing was specifically focused on gathering fisheries data and carrying out activities that were mentioned in our Terms of Reference such as;

1. Developing Management and Monitoring Plans for Niulakita and Nukulaelae;
2. Creel Sampling Survey;
3. Follow up on Ciguatera Fish Poisoning Cases;
4. Check with condition of CFCs;
5. Boat and Canoe Survey;
6. LMMA Work;
7. FAD Visit;
8. Island Profile Work; and
9. Awareness Workshop with Fishermen Association, Communities and Primary Schools

All the above activities will be made possible through the funding assistance from Pacific Regional Oceanscape Program Project, Ridge to Reef Project, NAPA II Project and Coastal Recurrent Budget. Moreover, developing of management and monitoring plans is a new activity to be implemented during this metronome trip compared to previous trips. Although staffs are having little experience in working with communities to formulate island plans, some of the staffs have been trained by FLAMMA under R2R Project that would enable the team to complete our task. In addition, the team also underwent some pre-preparation consultations with our experienced staff and staff from R2R Project.

## 3 Methods

A team of seven staff from Coastal Section were dropped off to Niulakita by MV Manufolau being on the island for six nights from the 24th – 30th May. MV Manauai picked up the team from Niulakita on Wednesday afternoon and finally arrived Nukulaelae on the same night around nine o'clock. One staff returned on the Manauai to Funafuti leaving six crew to complete all the activities on Nukulaelae. The team had a bit lengthy stay on Nukulaelae for ten nights and all tasks completely came to a favourable end.

All staff together with a hand from the island data collector went out to the field every time a fisherman landed his catch on shore. One staff has to weigh the fish; another person will measure the length of the fish and the other records fishing information from a fisherman/fisherwoman.

Island communities all gathered at the meeting hall to assist Fisheries team by generating and brainstorming ideas for the developing of their Management and Monitoring Plans. The team have allocated four days to formulate Management and Monitoring Plans. Informative presentations were presented by Fisheries team to guide communities followed by group work activities according to different tools being used.

Cases for Ciguatera Fish Poisoning were also followed up by our staff during this trip by conducting a short interview with the island nurse. If there are cases found on the island, fisheries team will do individual interview of the victims.

Visit to Community Fishing Centre of Nukulaelae was executed by the team. We checked the entire building and also asked series of questions to the Kaupule responsible to look after the CFC. Answers and relevant notes to our brief conversation were all recorded for reporting.

Boat and Canoe Survey was done by the whole team whereby all different types of boats and canoes were surveyed and measurements for length, type of boat/canoe, GPS position and comments were taken and recorded in a form.

The team will also have to visit the Locally Managed Marine Areas if needed to make changes to its current co-ordinates. If there was no alteration from communities, there will be no new demarcation work to be done.

Fishing Aggregating Devices would be visited by the team to check its condition. Staffs need to dive down to properly check the submerged portion of the FAD and to install green coconut fronds onto the FADs if required by fishermen.

Fisheries related information was gathered by all the team during spare time to compile fisheries island profiles. This was done through a short interview with key people or resourceful personnel. Information were then recorded and stored in laptops or note books.

Awareness programs were also fulfilled with three main targeted stakeholders including Fishermen, Schools and Communities. The team presented few power points on various topics that have been prepared for each stakeholder. Communities will be divided into groups of three or four to discuss issues that have great impacts on their land and find ways to resolve these issues to be presented in a form of a management and monitoring plan. A GPS and Sea Safety training will be conducted by fisheries to refresh each fisherman on the important tips that they should acquire. Reviewing of grab bags will also be done to ensure that all equipment in the bag are in good condition and operational. Awareness with Class Five and above is to be delivered by fisheries team to enrich and add up knowledge of school kids on the assigned fisheries related information.

## 4 Results & Data storage

### 4.1 Ciguatera

A core activity under Coastal Work Plan that monitoring was not only concentrated on Funafuti island but also expanded it to the Outer Islands. Interestingly, there are no Ciguatera cases in Niulakita and Nukulaelae. From the past, Niulakita hardly have any ciguatera cases as it is so geographically isolated on the map of Tuvalu with a very tiny population. Old people from Nukulaelae also shared the same views that it is also rare to have CFP cases ever since in the olden days till nowadays.

### 4.2 Creel Survey

Since Niulakita's population is very small and so as fishing activities on their island. A total of 2 creel samples were able to collect at Niulakita. However, more than 20 creel samples were gathered in Nukulaelae. The team always went out to the field in the morning, afternoon and evening time to sample fishermen landings with great assistance from the island data collector and R2R officer. The survey is not an easy job to carry out however; proper equipment like tray scales, measuring ruler,

hook scale, creel data sheets and a pen or pencil is mostly needed by staff to smoothly doing the survey.

### 4.3 LMMA/MPA Assessment

Niulakita just recently establish a Marine Protected Area in one of their in-land lagoon. The team underwent an underwater assessment of the area and found out a diverse number of species (fua gutuloa, kanase, Manini, moimoi, tuna and tilapia). Their Locally Managed Marine Area is located to the Southwest side of the island. All kind of fishing methods was not allowed to practice in their locally managed marine area. Demarcations of their LMMA and MPA have been plotted and mapped by the Ridge to Reef Project. Therefore there will be no need to re-mark both areas. Likewise in Nukulaelae, there were no changes to their LMMA where the last demarcation of the area was marked by Ridge to Reef Project.

### 4.4 Independent Boat Survey

Two boats were found on Niulakita and a total of 72 boats and 16 canoes on Nukulaelae.

Table 1: Boats and canoes counted on each island

Island name	Aluminium dingy	Aluminium Canoe	Wooden dingy	Wooden Canoe	Fibreglass dingy	Total
Niulakita	2	0	0	0	0	2
Nukulaelae	50	3	14	13	8	88

### 4.5 Fisheries assets & CFC

There was no Community Fishing Centre on Niulakita hence no such work was to be done on the island. The team paid a visit to Nukulaelae CFC where we were able to interview the Kaupule who was responsible to oversee fisheries activities on the island. All assets in the centre were in good condition however it needs little maintenance to the entire building. The location seemed to be isolated from the community settlement. Therefore fish were all stored at the Te Akau Fakalava Kitchen next to the Community Hall which was more centralised and easy accessible for people. Reports from the Kaupule in charge insisted that the location for their new training centre would be next to the old CFC building.

### 4.6 FAD maintenance

None of the FAD maintenance work was carried out in both islands as Niulakita do not have FADs and Nukulaelae lost both nearshore and offshore FADs. Out of all consultation dialogues, it was obvious that fishermen and the whole community requested our support on installing FADs for Nukulaelae Island.



## 4.7 Management and Monitoring Plans – Southern Islands

Developing of both Niulakita and Nukulaelae resources community based management and monitoring plans is a collaboration task between the Tuvalu Fisheries Department (TFD), Ridge to Reef (R2R) and National Adaptation Programme of Action (NAPA) II. Unfortunately, due to some unforeseen circumstances, the R2R team from Funafuti were unable to participate in the metronome trip 9 to the Southern Island of Tuvalu. Nevertheless, the R2R island based officer in Nukulaelae was able to participate in the process. The objective of the trip was to develop a resource based management for each community in the South Islands that would ensure sustain in both the land and marine coastal resources.

### 4.7.1 Niulakita Management and Monitoring Plans

In developing the plan for Niulakita, 4 days were allocated for the community which deemed sufficient with full participations from community members that empower to accomplish the necessary tasks. Given the small community of less than 10 families, the conduction of activities on the island were convenient, easy and fun. Despite the richness in land resources on the island, governance is the main focal point of issues for the community raised by the community. This is because Niulakita is fully governed by the island of Niutao, hence, governance on the finalizing of decisions for development purposes were raised as a barrier for the community. The main concern of the people is the fact that majority of their proposals that are beneficial for the people and the development of the island are always not approved by the Niutao island council.

#### Niulakita Community Visioning

##### VISION

TE LUMANAI O NIULAKITA, KE MAFAI O ATAGINA I TAUPULEGA LEI, TE ILOA MO TE MALAMALAMA MOTE FAKATUMAUGA O MAUMEA MO ATIAKEGA I LUGA ITE FENUA E MAUA EI TE OLA LEI KAE FIAFIA O ANA TINO.

##### MISSION

KE GALUE FAKATASI A NIULAKITA MO TE KAUPULE/FALEKAUPULE O NIUTAO KI TE FAKATAUNUGA O FAKAMOEMOEGA I MEA TAU ATIAKEGA, O FAKALAUUSA TE ILOA MO TE MALAMALAMA O TUPULAGA GASOLO, ITE TAUSIGA MO TE FAKASOAGA O MAUMEA O TE FENUA KAE TUMAU TE OLA LEI O TINO.

##### GOAL

KO LAVA TE ILOA MO TE MALAMALAMA MO TAUPULEGA LEI, KAE KO FAIGOFIE IEI TE FAKATINOGA MO TE FAKATAUNUGA O MANAKOGA FAKAFENUA KI ATIAKEGA TUTUMAU MO TE OLA LEI O TINO.

## Niulakita Management Plans

Fakalavelave mo pokotiaga Threat/Issues (TOI)	Aofaga (Management strategy solution to TOI)	Tapula & Galuega fai <b>SMART Objectives:</b> Stepwise actions and expected outcomes	Fakamailoga/ Fakamaoniaga o te taunu o galuega (Performance Indicators)	Tino fakagalue – Takitaki, Taugasoa fesoasoani, Matagaluega etc Who are responsible? Who take the lead? Other partners		Taimi e fakataunu iei te galuega (By when)	Fakatupega, fakagaluega o te aofaga Resources (People, Budget and materials)
				Tino I loto (within the community)	Tino mai tua (Outside the community)		
1. Fakamataku te ava	Faite fakalei ate ava	Ite tausaga 2028, ko lei a te ava o Niulakita.  <u>Activity 1:</u> Fakatagi kite Kaupule o Niutao ke talia o fakalei ate ava.	-Pasia mai ite Falekaupule o Niutao  -Faka-mataupu kite fale o sui/kapineta	-Pule fenua mote kalaki o Niulakita	-Failautusi Kaupule o NTO -Malo Tuvalu (DRD)	15/06/2018	-Proposal
		<u>Activity 2:</u> Follow up	-Quarterly report of NTO	-Kalaki o Niulakita	-Failautusi Kaupule o NTO	August 2018	



2. Se lava tane vai/vaisameni + se lei a septic tank	Faita fakalei a vaisameni & septic tanks kae faopopo ne tane vai mo fale	Ite tausaga 2020 ko taki 2 tane vai faopopo ki fale, ko oti faitega o vaisameni mo septic tanks					
		<u>Activity 1:</u> Fakatagi kite Kaupule o NTO	-Talia kae pasia ite Falekaupule NTO  -fakamataupu kite fale o sui/kapineta	-Pule fenua mo te kalaki o Niulakita	-Failautusi Kaupule o NTO -Sui o NTO ki te palamene	15/6/2018	Proposal
		<u>Activity 2</u> Follow up	-Quarterly Report	Kalaki o NTO	-Failautusi Kaupule o NTO	August 2018	
3. Uke o lō (crazy ants) mo namu (mosquito)	Fakatagi kite mata-galuega toki lakau, waste mo te ola lei (health) ke fakalei te tulaga o invasive species	Ite tausaga 2018 seai/mutana a lō mo namu.					
		<u>Activity 1:</u> Sokotaki kite mata galuega toki lakau, waste department mote health.	Ko oti ne pasia mai ite Falekaupule o NTO	Pule fenua mo kalaki ote o Niulakita	Failautusi Kaupule o NTO	15/06/2018	Proposal
		<u>Activity 2:</u> Fai se iloiloga ki te tulaga o te lō mo te namu.	-Lipoti o te savea/iloiloga		-mata galuega toki lakau mo te mata galuega o te ola lei.	August – September 2018.	

1. Se lei a fale akoga o Lotoalofa Primary School	Fakafou a fale akoga o Niulakita	<p>Ite tausaga 2019-2020, ko tuu fale-akoga fou o Lotoalofa Primary School</p> <p><u>Activity 1:</u> Tusi fakatagi ki te Kaupule NTO</p>	<p>-Taliaga ko pasia ite Falekaupule NTO -Faka-mataupu kite fale o sui</p>	<p>-Pule fenua mote kalaki o Niulakita</p>	<p>-Failautusi Kaupule of NTO -Sui NTO kite palamene</p>	15/06/2018	Proposal
		<p><u>Activity 2:</u> Follow up</p>	Quarterly Report	Kalaki o Niulakita	-Failautusi Kaupule o NTO	August 2018	
2. Taupulega mai NTO	<p><u>Option 1:</u> Olo se malaga ki Niutao</p> <p><u>Option 2:</u> Fakatagi kit e Home Affairs ke fai se akoakoga/iloiloga ki luga i te taupulega</p> <p><u>Option 3:</u> Fakakau a tino Niulakita ki faitega a palani,</p>	<p>Ko maua se taupulega lei mai Niutao ite tausaga 2018</p> <p><u>Option 1 &amp; 3</u> <u>Activity 1</u> Fakailoa kite Kaupule NTO</p>	Taliaga ko pasia ite Falekaupule o Niutao	Pule fenua mo te kalaki o Niulakita	Failautusi Kaupule o Niutao	Novema 2018	Proposal

	ISP, mo atiakega etc, & fakapatino a maumea (sene mo atiakega)	<u>Activity 2:</u> Olo te malaga ki Niutao	Malaga taunu ki Niutao	-Kalaki o Niulakita		December 2019	
		<u>Option 2:</u> <u>Activity 1</u> Contact kite Home Affairs (DRD)	Fakailoaga mai te Home Affairs (DRD)	Kalaki o Niulakita	Home Affairs (DRD)	TBC	
		<u>Activity 2</u> Conduct awareness and survey	Report		Home Affairs officers (DRD)		
<b>3. Se lei tulaga o mea tau sokotakiga</b>	Fakaleiga tulaga mo kope o mea tau sokotakiga	<b>I te tausaga 2018 ko lei a mea tau sokotakiga</b>  <u>Activity 1:</u> Tusi fakatagi ki te Kaupule o Niutao ke talia te faitega fakalei o mea tau sokotakiga i Niulakita	- Ko oti ne talia kae pasia mai ite Falekaupule o Niutao  -Fakamataupu ki te fono palamene	Pule fenua mo te Kalaki o Niulakita	Failautusi Kaupule o Niutao  Govt Tuvalu (DRD)	15/06/2018	Proposal

		<u>Activity 2:</u> Follow up	Quarterly Report	Kalaki o Niulakita	Failautusi Kaupule Niutao	August 2018	
4. Waste Recycling	Fakaleiga tulaga o kaiga I luga I Niulakita	I te fakaotiga o te tausaga 2018, ko lei tulaga ki te atafaiga o kaiga					
		<u>Activity 1</u> Fakatagi ki te Kaupule Niutao	-Ko oti ne talia kae pasia i te falekaupule o Niutao	Pulefenua mo te kalaki ote Niulakita	Failautusi Kaupule o Niutao	15/06/2018	Proposal
		<u>Activity 2:</u> Follow up	Quarterly Report	Kalaki o Niulakita	Failautusi Kaupule o Niutao	Aukuso 2018	
5. Se lei auala	Fakaleiga o auala	Ite tausaga 2025, ko oti ne fakalei a auala o Niulakita					
		<u>Activity 1:</u> Fakatagi ki te Kaupule o Niutao ke talia te faitega o te auala	-Ko oti ne talia kae pasia ite Falekaupule o Niutao  -Fakamataupu ki te fono palamene	Pule fenua mo te kalaki o Niulakita	Failautusi Kaupule o Niutao  Sui palamene o Niutao	15/06/2018	Proposal
		<u>Activity 2:</u> Follow Up	Quarterly Report	Kalaki o Niulakita	Failautusi Kaupule o Niutao	August 2018	
6. Se uke a ika ite papa	Fakalei/Avaka te fuainumela o ika	Ite fakaotiga ote tausaga 2025, ko fanaka e 20% te					

	mo maumea o te papa	<b>fuainumela o ika ote papa i Niulakita</b>  <u>Activity 1</u> Avaka faka fenua te mataupu	-Ko oti ne talia kae pasia ite Falekaupule o Niutao	Pule fenua mo te kalaki o Niulakita	Failautusi Kaupule o Niutao	June – August 2018	Proposal
		<u>Activity 2</u> Fakagalua ne te fenua (pei ota mo meakai ki te tai, tapu tatili te tili matikao 1 & 2, tapu te pei kaiga ite tai)	Ko fakagalua ikuga mai te falekaupule	Kalaki o Niulakita	Failautusi Kaupule o Niutao	August – September 2018	
7. Coastal Erosion/ Kaina ote laukele	Tokitokiga ne lakau lasi i te tafatai	<b>Ite fakaotiga o te tausaga 2020, ko foliki te kaina o te tafatai o Niulakita</b>					
		<u>Activity 1</u> Fakatagi ki te Kaupule o Niutao ke mafai o faka polotieki te tokiga o lakau lasi	Ko oti ne talia kae pasia i te falekaupule o Niutao	Pule fenua mo te Kalaki o Niulakita	Failautusi Kaupule o Niutao	December 2018	Proposal
		<u>Activity 2</u> Follow-up	Quarterly Report	Kalaki o Niulakita	Failautusi Kaupule o Niutao	December 2018	

## Niulakita Monitoring Plan

<i>Solutions (Aofaga)</i>	<i>Best indicator identified (Fakasinoga/Fakamaoniga ko taunu te galuega)</i>	<i>Monitoring Method &amp; Communicated Results (Auala e maua o iloilo taunuga o te galuega)</i>	<i>When to carryout Monitoring (Taimi fea e kamata ei a te iloiloga)</i>	<i>Who to implements Monitoring Tasks (Kooi e fakagalue)</i>	<i>Area to be Surveyed (Kogakoga ka savea)</i>	<i>Reporting (Tino e fakatoka ne ia te lipoti)</i>
1. <i>Faitega fakalei o te ava</i>	Lipoti mai ite Kaupule Niutao a te taliaga	Received quarterly report from Kaupule Niutao	Received quarterly report from Kaupule Niutao	Kalaki o Niulakita	None	Kalaki o Niulakita
	Maua a quarterly report mai Kaupule Niutao	Received quarterly report from Kaupule Niutao	Received quarterly report from Kaupule Niutao	Kalaki o Niulakita	None	Kalaki o Niulakita
2. <i>Faitega fakalei o vaisameni mo septic tanks, mo faopopoga o tena vai ki fale</i>	Lipoti mai i te Kaupule o Niutao a te taliaga	Fakatumau te fesokotakiga / Follow up	Kamataga o August 2018	Kalaki o Niulakita	None	Kalaki o Niulakita
	Maua quarterly report mai te Kaupule Niutao	Fakatumau te fesokotakiga / Follow up	Fakaotiga o August 2018	Kalaki o Niulakita	None	Kalaki o Niulakita
	Ko lavea taki lua tane vai i fale takitasi, ko lei faitega o septic tanks fakatasi mo vaisameni	Savea/Iloilo	Fakaotiga o August 2018	Kalaki o Niulakita	Fale o kaiga takitasi i luga I Niulakita	Kalaki o Niulakita
3. <i>Sokotaki kite Agriculture Department,</i>	Sokotaki mai te Agricultural Dept., Health & Waste. Maua taliaga mai te Agr Dept., Waste & Health	Follow up	Kamataga o August 2018	Kalaki o Niulakita	None	Kalaki o Niulakita

<i>Waste mote Health ke fakalei tulaga o te lō (invasive crazy ant species) mo te namu</i>	Te fenua ko maua te mainaga mo te malamalama	Questionnaires, Survey	-	Mata galuega o te toki lakau, waste, mo te Health	Niulakita island community	Agriculture Officers
<i>4. Fakafou faleakoga o Lotoalofa Primary School</i>	Tusi fakatagi ko talia mai i te falekapule o Niutao	Follow up	November 2018	Kalaki o Niulakita	None	Kalaki o Niulakita
	Kamata te galuega ki te faitaga o te fale akoga	Monitaga/iiloiloga o te galuega (Monitoring of the school construction work)	?	Kapenita o Niulakita	Lotoalofa Primary School malae tafao	Kapenita o Niulakita
<i>5. Fakaleiga tulaga o sokotakiga</i>	Lipoti mai ite Kaupule o Niutao a te taliaga	Fakatumau te fesokotaki/follow up	November 2018	Kalaki o Niulakita	None	Kalaki o Niulakita
	Mauaga o te quarterly report mai te Kaupule Niutao	Fakatumau te fesokotaki/follow up	December 2018	Kalaki o Niulakita	None	Kalaki o Niulakita
	Maua kope mo fai te galuega	Iloilo/follow up	?	-	-	-
	Kamataga o te galuega	Follow up/Savea	?	-	-	-
<i>6. Fakaleiga taupuelga mai Niutao</i> <i>Option 1: Olo te malaga ki Nitao</i>	Lipoti mai i te Kaupule o Niutao a te taliga					
	Ko taunu a te malaga ki Niutao	Fakatumau a te fesokotakiga/Follow up	November 2018	Kalaki o Niulakita	None	Kalaki a Niulakita



*Option 2: Sokotaki ki te Home Affairs ke fai akoakoga/ioloiologa ki taupulega lei*

Maua taliaga mai ite home affairs	Follow up	?	Kalaki o Niulakita	None	Kalaki o Niulakita
Tino ko maina kae malamalama	Savea mo lipoti		Home Affairs Officer		Home Affairs Officer

*Option 3: Amanaia ke kau ki loto i faitega o palani mo atiakega i Niutao -fakapatino a maumea (sene mo atiakega)*

Lipoti mai i te Kaupule o Niutao	Fakatumau te fesokotakiga/Follow up	?	Kalaki o Niulakita	None	Kalaki o Niulakita
Maua quarterly report mai te Kaupule Niutao	Fakatumau te fesokotakiga/Follow up	?	Kalaki o Niulakita	None	

*7. Fakaleiga tulaga o kaiga i luga I Niulakita*

Lipoti mai te Kaupule Niutao	Fakatumau te fesokotakiga/Follow up	July – August, 2018	Kalaki o Niulakita	None	Kalaki o Niulakita
Maua te quarterly report from Kaupule Niutao	Fakatumau te fesokotakiga/Follow up	August 2018	Kalaki o Niulakita	None	Kalaki o Niulakita

*8. Fakaleiga aua*

Maua te lipoti mai te Kaupule Niutao	Fakatumau te fesokotakiga/Follow up	March-April 2019	Kalaki o Niulakita	None	Kalaki o Niulakita
Maua te quarterly lipoti mai te Kaupule Niutao	Fakatumau te fesokotakiga/Follow up	May 2019	Kalaki o Niulakita	None	Kalaki o Niulakita

*9. Fakaleiga tulaga o ika o Niulakita*

Ko oti ne pasia te falekaupule a te mataupu	Tulafono fakafenua	June – August 2018		None	Kalaki o Niulakita
Fakagaluega o faifaiga kola ne iku i loto i te falekaupule	Savea/ Iloiloga	?	Fili mai te fonotaga a te falekaupule	Koga tai papa o Niulakita-	Kalaki o Niulakita

					Status o ika (aofaki)	
10. <i>Kaina o te tafatai</i>	Lipoti mai te Kaupule o Niutao	Fakatumau te fesokotakiga/Follow up	July 2018	Kalaki o Niulakita	None	Kalaki o Niulakita
	Maua te lipoti mai te Kaupule Niutao	Fakatumau te fesokotakiga/Follow up	August 2018	Kalaki o Niulakita	None	Niulakita

### Discussion

The Niulakita Community Integrated Management and Monitoring Plan was designed by the community island members residing on Niulakita at the time of the development of the plan. From the incorporated plan, it can be observed that the community is willing to effectively and efficiently manage their resources (natural and man-made) from the land right out to the sea. The communal island members were able to think of the present times in comparison with the impending situations their future generations will face if there a continual depletion of resources for sustaining livelihood. From this plan, the people were reminded the importance of taking ownership of the plan otherwise the plan is unsuccessful and ineffective in helping the sole owners to sustainably manage their resources for sustenance and subsistence. Hence, it is an important obligation which requires unity in order to carry out the necessary tasks to achieve the objectives set in place for attaining the desired *Vision, Mission and Goal* for a prosperous, healthy and sustainable livelihood of the island community of Niulakita at present and the future.

#### 4.72 Nukulaelae Management and Monitoring Plans

The second island of the Southern island was the community of Nukulaelae. A much larger community compares to Niulakita with 4 days allocated for the consultation with the community in developing their integrated management and monitoring plan. Few barriers while developing the plan were due to the ceremonial day of Niuoku (New York Day) which marks the reclaiming one of the biggest islet which were leased by America. In addition, were the ongoing projects of building houses for every family that majority of men are worked at. Nevertheless, activities have slotted through with the authority by the island chief and the Kaupule members and the agenda of developing an integrated management and monitoring plan was made possible during the consultations with the community island members of the 4 groups of *Kaupule and Falekaupule, Women, Fishermen and Youth members*.



Fakalavelave mo pokotiaga (Threats/ Issues - TOI)	Aofaaga (Management strategy solution to TOI)	Tapula & Galuega fai mo auala fakataunu ( <i>SMART Objectives</i> & Stepwise action and expected outcomes)	Fakamaonia o te taunuuga o te galuega (Performance Indicators)	Tino fakagalue – Takitaki, Taugasoa fesoasoani, Matagaluega etc Who are responsible? Who to take the lead? Other Partners		Taimi e fakataunu iei (By when)	Fakatupega, fakagaluega o te aofaga Resources (people, Budget and materials)
				Iloto	Itua		
1. Laku valevale o kaiga	a) Fakauke akoakoga	Ite tausaga 2020, ko foliki te pokotiaga ki te laku valevale o kaiga mo te atafaiga o kaiga pala mo kaiga se pala. <u>Activity a1:</u> Fakamalosi te fenua I maopoopoga fai ite tausiga o kaiga	Ko tasi te iloa mote malamalama I tino ote fenua	Kaupule, Falekaupule, Neesi, Komiti taumata kite atafaiga o kaiga, Tamaliki akoga, Faiakoga	Matagaluega ote Waste Technical advisors Matagaluega o Malo o Fenua	Fakalua taimi ite 3 masina(Mati, Luni mo Setema) 2019	\$1,500.00 AUD
		<u>Activity a2:</u> Fakatuu ne notice board/fakapulaga kite laku valevale o kaiga	Ko oti ne fakatuu a notice boards/posters ke lavea ne tino	Tamaliki mo tino katoa ote fenua	Ofisa ote tulafono	Aso katoa ote olaga	Tamaliki mo tino katoa ote fenua
		<u>Activity a3:</u> Fakaaofia I akoga Kindergarten mo	Ko toka te vaega kite atafaiga o			Mati, 2019	\$500

		<p>Primary School te mataupu ki te atafaiga o kaiga pela he polokalame e tauga tonu ki mea tau kaiga</p> <p><u>Activity a4:</u> Fakatagi ki matagaluega te malo e taumata kite atafaiga o kaiga ke aumai o fakatele awareness programs</p> <p><u>Activity b1:</u> Tino ke maopoopo katoa I taimi e fai iei akoakoga ki mea tau atafaiga o kaiga</p> <p><u>Activity b2:</u> Fakatu se stewardship committee mai tino te fenua ke onoono ki te atafaiga fakalei o kaiga i te fenua</p> <p><u>Activity b3:</u></p>	<p>kaiga ke mafai o fakatele I loto I akoga(English &amp; Tuvalu version)</p> <p>Uke awareness programs e fakatele ite fenua</p> <p>Tino ko fakalogo kae kaufakatasi</p> <p>Ko isi se stewardship committee a te fenua ki te atafaiga o kaiga</p>	<p>Kaupule, Falekaupule</p> <p>Labours mo faite te fence, Kaupule</p> <p>Falekaupule, Kaupule</p> <p>Falekaupule</p>	<p>Matagaluega ote Waste</p> <p>Malo o Tuvalu Donors mai tua atu o Tuvalu</p>	<p>Aokuso, 2018</p> <p>Oketopa, 2019</p> <p>Tesema, 2018.</p>	<p>Ministry of Education</p> <p>\$500</p>
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		<p>Matai o te kaiga ke fakamalosi ki tena kaiga ite tausiga o kaiga ke maa te fakai</p> <p><u>Activity c1:</u> Ave te mataupu nete Falekaupule kite Kaupule ke fakatuu te by-law</p> <p><u>Activity c2:</u> Kaupule ke ave se tusi kite Ofisa o Loia ke Iloilo fakalei ne latou te by law</p> <p>Activity c3: Fakatalia nete ofisa o loia te by-law ko saina iei ke mafai o fakagalue</p> <p>Activity c4: Fenua ko fakagalue tena by-law</p>	<p>Ko ma te fenua kae ko se uke masaki ite fenua maise a lago</p> <p>Pasia te by-law kae ko toka o fakagalue</p> <p>Tusi ko maua ne te ofisa o te loia</p> <p>Sainaga o te by-law ne te ofisa o te lawyer</p> <p>Ko galue te tulafono kite aumai o kaiga se pala kae ko seai ne tino e laku valevale a kaiga</p>	<p>Stewardship committee</p> <p>Falekaupule, Kaupule</p> <p>Failautusi o te Kaupule</p> <p>Pule Kaupule</p> <p>Fenua</p>	<p>Loia</p> <p>Loia</p>	<p>Ianuali, 2019.</p> <p>Fepuali, 2019.</p> <p>Apelila, 2019</p> <p>End of June, 2019</p> <p>Aokuso, 2019</p>	
	<p>c) Faite se by law kite aumai o kaiga se pala mote laku valevale o kaiga</p>						

	d)Faita se fence ote koga pei kaiga (dumpsite)	<p>Activity d1: Fakamaua mai te mea faigaluega(loader) mo keli te koga pei kaiga (dumpsite)</p> <p>Activity d2: Fakatoka fakalei te dumpsite - Faita te fence, ko loka iei fakalei mo pei kaiga</p> <p>Activity d3: Te fenua ka fakatapu neia se tino ke fano o pei ana kaiga ia ia eiloa kae ka tae loa a kaiga ne tino galue i fale o latou</p>	<p>Ko toka te loader/kope mo fai te galuega</p> <p>Ko galue ki te fakaleiga o te koga pei kaiga, ko toka te fence ote dumpsite</p> <p>Kaiga ko pei fakalei ne kau galue i te tae kaiga</p>	<p>Matagaluega o te Waste</p> <p>Fenua mo te Lima malosi</p> <p>Kau galuega i te tae/pei kaiga o te Kaupule</p>		<p>Aukuso – Tesema 2018</p> <p>Kamataga tausaga 2019 Fepuali – Mati?</p> <p>Kamata mai ia Apelila 2019 fano ki mua</p>	<p>\$3000</p> <p>\$20,000</p>
	e)Fakamaua recycling machines	<p>Activity e1: Kaupule ka galue tasi mote malo kite fakamauaga mote fakatupega ke maua mai vaegaa mesini</p>	<p>Ko isi ne vaega mesini fakafoliki iei te kaiga</p>	<p>Tino galue o te Kaupule onono ki te</p>		<p>Iuni 2019</p>	



		Activity e2: Train ne tamaliki ote fenua ke iloa o fakaoga vaegaa mesini vili kaiga konei	Ko isi ne tamaliki atamai I te fakagaluega o mesini konei mote toe faitega	atafaiga o kaiga  Tamaliki galue i te Matagaluega o Kaiga	Matagaluega o te Waste	Aukuso - Setema 2019	\$1,000
<b>2. Kaina ote laukele</b>	A) Tokitoki lakau lasi eg.fetau, kanava etc	<b>Ite tausaga ote 2023, ko foliki te fakamaseiga ote tai mote matagi kite kauone/tafatai.</b>  <u>Activity A1:</u> Malosiga te fenua ke fai se polokalame o tokitoki ne lakau lasi  <u>Activity A2:</u> Tino tokotasi ke toki ana lakau mai luga I fautuaga ate fenua  <u>Activity A3:</u> Kaupule ke fakatoka ne asiasiga ki luga I lakau ne toki	Ko uke lakau lasi ne toki  Fakalogo a tino o toki a lakau lasi  Kaupule ka galue malosi o asiasi lakau ne toki	Malosiga ote fenua  Tino katoa ote fenua  Kaupule, Fenua	Waste department/ Environment Department	Oketopa, 2018/Fepuali, 2019/July,2019  Novema, 2018.  Novema, 2018/Mati, 2019/Aokuso 2019.	<b>\$200.00</b>  <b>Kaupule</b>  <b>Falekaupule ote fenua</b>

		<p><u>Activity A4:</u> Awareness ki tino ote fenua ke moaa e fakamasei a lakau ne toki</p>	Ko lasi te iloa o tino ote fenua ite tokiga o lakau	Kaupule, Fenua		Novema 2018 / Mati 2019 / Aokuso 2019.	Falekaupule, Kaupule
		<p><u>Activity A5:</u> Kaupule ka fakailoa ne ia ki tino io ia te manafa mafai e isi se lakau ko mate ke mafai o toe toki</p>	Ko matea ko oti ne sui a lakau kola ne mate	Kaupule, fenua		Iulai, 2018	
	B)Sea wall	<p><u>Activity B1:</u> Fakamanatua kite malo ki taimi tonu e faite iei te seawall</p>	Ko oti ne ave se tusi fakamasaua kite malo	Kaupule	<b>Malo</b>	2019	<b>Proposal</b>
		<p><u>Activity B2:</u> Iloilo muamua me sea te vaegaa seawall e taugaatonu mo Nukulaelae mo akogakoga</p>	Ko oti ne fai a savea kite vaegaa seawall e manakogina mo Nukulaelae, pena foki akoakoga mo te fenua	Kaupule	Department of Environment, GOT	2020	<b>\$5000</b>
		<p><u>Activity B3:</u></p>			Malo, Donors	2023	<b>\$3 million</b>

	C)Fakagata te puke kilikili,fatu&one mai tafatai(fenua ke oko ki motu katoa) (By law)	<p>Faitega o te sea wall</p> <p><u>Activity C1:</u> More awareness (fakapulaga mo lukuga fai ate fenua) ki tino e uiga mote puke fatu,one mo kilikili mai tafatai pena foki mo motu</p> <p><u>Activity C2:</u> Fakamalosi te fakagaluega ote by-law e uiga mote puke mai o fatu, one mo kilikili</p>	<p>Ko isi se seawall o Nukulaelae</p> <p>Ka fakalogo a tino ote fenua</p> <p>Ko galue tasi a tino ote fenua ite fakagaluegaga ote by-law</p>	<p>Kaupule, Tino te fenua</p> <p>Falekaupule, Kaupule</p> <p>Kaupule, Falekaupule</p>	<p>Department of Environment, R2R Project</p>	<p>Monthly (start July 2018 – December 2025)</p>	<p>\$1,000</p>
3. Fanaifo ote maumea ote tai	a)Fakatulafono a faiva I taimi tau (seasonalities)	<p>I te tausaga 2023, ko matea te fanaka o maumea o te tai.</p> <p><u>Activity a1:</u> Akoakoga mo tino ote fenua ki tulaga o faiva</p>	<p>Faopoopo te iloa ki tino te fenua</p>	<p>Tino te fenua</p>	<p>Matagaluega te Kaufaika</p> <p>Loia (Lawyer)</p>	<p>Iuni - Oketopa, yearly.</p> <p>Iuni, 2019.</p>	

		<p><u>Activity a2:</u> Faite te by-law ke fakapasiasia nete Falekaupule</p> <p><u>Activity a3:</u> Iloilo ne te ofisa o loia te fakataliaga o te by-law</p> <p><u>Activity a4:</u> Fakagalue te by-law</p> <p><u>Activity b1:</u> Kaupule galue mote komiti onoono ki kaiga kite faitega o te polokalame tae kaiga ite tafatai</p> <p><u>Activity b2:</u> Fenua ko galue kite fakamaaga o te tafatai</p> <p><u>Activity c1:</u> Kaupule galue mote falekaupule kite</p>	<p>Toka te by-law o fakagalue</p> <p>Ko talia te by-law</p> <p>Fakalogo kae tautali a tino kite by-law</p> <p>Galue tasi a tino e aofia kae tautali kite polokalame tae kaiga</p> <p>Feoloolo te kaiga ite tafatai</p> <p>Ko oti ne faite te by-law</p>	<p>Kaupule mote falekaupule</p> <p>Kaupule mote falekaupule</p> <p>Falekaupule, Lima malosia</p> <p>Fenua</p> <p>Falekaupule mo Kaupule</p> <p>Kaupule mote falekaupule</p>	<p>Loia</p> <p>Loia</p>	<p>Oketopa, 2019.</p> <p>Apelila, Aokuso, Tesema (yearly)</p> <p>Iuni, 2019.</p> <p>Iuni, 2019 (twice annually)</p> <p>Ianuali, 2019</p>	<p><b>\$1500</b></p>
	<p>b)Cleaning campaigns I tafatai ke fakamalosi</p> <p>c)Fakatulafono fishing gears e.g tapu tili maikao tasi</p>						

		<p>faitega te by-law mo tulaga o kope faika</p> <p><u>Activity c2:</u> Ofisa o loia lloilo ne latou fakalei te by-law koi tuai o tuku atu kite fenua ke fakagalue</p> <p><u>Activity c3:</u> Fakagalue te bylaw nete fenua</p> <p><u>Activity d1:</u> Faite se by-law mote faika o ika foliki</p> <p><u>Activity d2:</u> Fakatalia nete Ofisa o loia te by law koi tuai o fakagalue nete fenua</p> <p><u>Activity d3:</u> Fakagalue te bylaw</p> <p><u>Activity e1:</u> Fakatagi kite matagaluega</p>	<p>Ko oti ne saina kae fakatalia te by law</p> <p>Toka te by law</p> <p>Ko toka te by law mote faika o ika foliki</p> <p>Ko oti ne saina kae fakatalia te by-law</p> <p>Tino o te fenua mo tagata faika ko tautali ki te tulafono Talia te fakatagi mo se sukesukega</p>	<p>Fenua</p> <p>Kaupule mote falekaupule</p> <p>Falekaupule</p> <p>Kaupule</p> <p>Kaupule mote falekaupule</p> <p>Falekaupule mo te Kaupule</p>	<p>Loia</p> <p>Loia</p> <p>Loia</p> <p>Matagaluega Kaufaika</p>	<p><b>Fepuali, 2019</b></p> <p><b>Mati, 2019</b></p> <p><b>Ianuali, 2019</b></p> <p><b>Fepuali, 2019</b></p> <p><b>Iuni, 2019</b></p> <p><b>Fepuali 2019</b></p>	
	<p>d)Puke te ika lasi (oti ne fanafanau)</p> <p>e)Fai se savea iloiloga kite mate o kamu</p>						

f)Tai fakalasi te koga puipui o ika	kaufaika ke mafai o fai se sukesukega	Lasi te iloa I tino	Falekaupule mo Kaupule	Matagaluega Kaufaika	<b>Mati 2019</b>	<b>\$500</b>
	<u>Activity e2:</u> Fai se awareness ki tino ote fenua e uiga mo kamu	Maua lipoti mo vitio o te savea	Kaupule	Matagaluega te Kaufaika	<b>Mati 2019</b>	<b>\$100</b>
	<u>Activity e3:</u> Fai savea e uiga mo kamu	Ko oti ne iku ke fakalasi kae fakagalua te koga puipui	Falekaupule mo te Kaupule		<b>Fepuali 2019</b>	
	<u>Activity f1:</u> Fono te Fenua mote Kaupule kite fakalasi ote lotou koga puipui	Ko oti ne pine te koga puipui	Kaupule, Kaufaika	Matagaluega te Kaufaika	<b>Mati 2019</b>	<b>\$100</b>
	<u>Activity f2:</u> Fakatagi kite Kaufaika ke fesoasoani kite pinega mote makaaga ote koga puipui	Fanaka te iloa I tulaga o koga puipui		Matagaluega a te Kaufaika	<b>Mati 2019</b>	<b>\$500</b>
<u>Activity f3:</u> Fai Awareness kite fenua e fakamalosi iei tino ote fenua ke tausi te lotou koga puipui						

4. Faigata te ūu o maua		I te tausaga 2023, ko faigofie te maua o ūu.					
	A)Fakatulafono taimi fai ūu (seasonal closure)	<u>Activity A1:</u> Awareness kae talai ke iloa ne tino a taimi e fakatapu iei te ūu	Ko iloa kae tautali a tino ki taimi e tapu te fai ūu	Kaupule		Monthly (2018 – 2025)	
	B)Fakatapu/by law te ave o Uu ki Funafuti	<u>Activity B1:</u> Faite te bylaw	Ko talia te by law ke fakagalue	Kaupule	Loia	Iulai 2018.	
		<u>Activity B2:</u> Fakamalosi io me fakatapu te ave o uu ki tua o Nukulaelae	Ko fakalogo tino te fenua	Fenua		Aukuso,2018	
	C)Fuafua fakalei tuu mo aganu	<u>Activity C1:</u> Falekaupule toe review fakalei faifaiga e lasi iei te fakaoga o uu	Se uke mea fai ate fenua e fai ki uu	Fenua		Setema, 2018	
	D)Fesokotaki ki matagaluega ola lei /Agriculture ke mafai o ta a lo kula	<u>Activity D1:</u> Tusi fakatagi kite matagaluega te Ola lei/Agriculture ke	Talia te tusi fakatagi	Kaupule		Oketopa - Tesema, 2018	



		<p>fesoasoani mai kite taaga o loo kula</p> <p><u>Activity D2:</u> Matagaluega Agriculture mote Health ke onoono ki te fakataunuuga o te manakoga ke taa lo kula</p>	Ko oti ne fakataunu te manakoga	Kaupule	Matagaluega te Agriculture mo te Health		
5. Se uke/kalo a manu lele	<p>A)Fakatulafono te fakaogaaga o fana manu</p> <p>b)Fakalamalosi/f akaakoako te seu manu(faifaiga fakatatou)</p>	<p>I te tausga e 2023, ko matea atu te fanaka fuainumela o manu kaina i luga ite fenua.</p> <p><u>Activity A1:</u> Faite se by law ite fakaogaaga o fana</p> <p><u>Activity A2:</u> Fai ne taimi ke saoloto iei mo taimi ke pono iei te fana manu</p> <p><u>Activity B1:</u> Fakaakoako tupulaga ne tino poto ite seu manu</p>	<p>Ko isi se by law ke mafai o fakagalue</p> <p>Fakalogo a tino</p> <p>Ko apo a tupulaga gasolo ite fai te faiva kote</p>	<p>Kaupule</p> <p>Fenua</p> <p>Fenua, Tino poto ite seu manu</p>	Loia	<p>luni, 2019</p> <p>6 months zonal closure (2018 – 2025) Taimi o faigaamea lasi ate fenua</p>	

			seu/seuseu/popo manu				
6. Se uke a fonu	Fakatulafono te puke ote fonu solo/fonu foliki.	I te tausaga 2020, ko mate ate fanaka o te fuainumela o fonu.					
		<u>Activity 1:</u> Faite se by law mote puke fonu solo/foliki <u>Activity 2:</u> Fakagalue te bylaw	Ko isi se by law	Kaupule	Loia	luni, 2019	
			Fakalogo a tino	Fenua		Aukuso 2019 – Tesema 2020	
7. Seai se VHF base	Ke faka tuu se base ote VHF I luga i Fagaua mo monitor kae fesoasoani ki tagata faikai taimi e olo ei ki moana io me olo ki motu.	I te masina o Tesema i te tausaga 2019, ko oti ne fakatu ate VHF base i luga I Fagaua.					
		<u>Activity 1:</u> Akoakoga ki tagata faika (2 weeks)	Miniti ote akoakoga mote lipoti	Operator or wireless officer (Folitaui)	Fisheries development and fisheries officer	October 2018	\$1,000
		<u>Activity 2:</u> Avakaga te mataupu kite kaupule mote fakaoaga ote VDS	Fakailoa nete pelesitene o tagata faika kite Kaupule	Pelesitene io me ko te taipola o tagata faika	-	October 2018	-
		<u>Activity 3:</u>	Te Failautusi ote kaupule ko			November 2018	-

		<p>Kaupule ko fakailoa kite falekaupule</p> <p><u>Activity 4:</u> Falekaupule ke ave taliaga kite kaupule</p> <p><u>Activity 5:</u> <i>Option 1:</i> Ko fai a order nete kaupule ki materials ote base</p> <p><i>Option 2:</i> Ke fesoasoani a tagata faika o fai a order</p> <p><u>Activity 6:</u> Ko fai ate galuega o faite te base</p>	<p>fakailoa ne ia kite Falekaupule</p> <p>Ko pasia ate mataupu ite falekaupule</p> <p>Ko fakatoka nete failautusi a order o materials</p> <p>Ko fakatoka orders nete komiti a tagata faika</p> <p>Kamataga ote galuega: faite ate fale kae fakapiki ate VHF</p>	<p>Failautusi Kaupule o Nukulaelale</p> <p>Failautusi Kaupule o Nukulaelale</p> <p>Failautusi Kaupule o Nukulaelale</p> <p>Komiti o tagata faika</p> <p>Fakapotopotog a o tagata faika</p>	<p>Supplier</p>	<p>March 2019</p> <p>March 2019</p> <p>May 2019</p> <p>luni 2019</p>	<p>-</p> <p>-</p> <p>-\$200</p> <p>\$5,000</p>
<b>8. Pua e suatai ki te mauga</b>	Ke ati fakasameni se pui puiga moa e oma ki tua te tai	<p>I te masina Apelila 2019, ko oti ne fakasameni ate Pua.</p> <p><u>Activity 1:</u></p>		Falekaupule		Jan 2019	-

		<p>Fai se fonotaga ate fenua</p> <p><u>Activity 2:</u> Ave te fakailoaga kite kaupule</p> <p><u>Activity 3:</u> Kaupule fakatoka order o materials</p> <p><u>Activity 4:</u> Ko fakagalua ate faitaga ote pua.</p>	<p>Ko pasia ate mataupu ite fenua</p> <p>Kote ikuga ote mataupu ko fakailoa kite kaupule</p> <p>Fakatoka nete kaupule ate order</p> <p>Ko kamata ate faiga ote galuega</p>	<p>Failautusi (Collin N)</p> <p>Failautusi (Collin N)</p> <p>Te malosiga ote fenua</p>		<p>Jan, 2019.</p> <p>Jan 2019</p> <p>April 2019</p>	<p>-</p> <p>-</p> <p>\$1,500</p>
<p>9. Se lava te iloa i taimi fanafanau o ika keseke</p>	<p>Ke fai ne awareness program</p>	<p>Ite tausaga ote 2019 ia March, ko fai ne awareness program i luga i te fenua mo tulaga o taimi fanau ei a ika</p> <p><u>Activity 1:</u> Avaka te mataupu ki te fakapotopotoga a tagata faika</p> <p><u>Activity 2:</u> Ave te fakailoaga ki te kaupule</p>	<p>Ko iku te mataupu/ lipoti mo miniti ote fonotaga</p>	<p>Fakapotopotoga a tagata fiaka</p>		<p>July, 2018</p> <p>August, 2018</p>	

		<p><u>Activity 3:</u> Kaupule ke tusi fakatagi kite TFD</p> <p><u>Activity 4:</u> Ko fai ate awareness program</p>	<p>Ko oti ne pasia ate mataupu mai ite kaufaika</p> <p>Ko ikuga ote fonotaga ke fakailoa kite TFD</p> <p>Ko faulu i loto i metronome trips programs 2019 ate Coastal fisheries section</p>	<p>Failautusi Kaupule o Nukulaelale</p> <p>Failautusi Kaupule o Nukulaelale</p>	<p>Coastal Fisheries Section</p>	<p>August, 2018</p> <p>Fakalua ite tausaga 2019</p>	
<p><b>10. Masei o moto faika kae se lave te atamai</b></p>	<p>Ke tino poto/atamai ite faitega o moto ke nofo ite fenua</p>	<p><b>Ia luni 2019, ko isi se tino tonu o faite a masini masei a tagata fiaka</b></p> <p><u>Activity 1:</u> Fai se fonotaga a tagata faika</p> <p><u>Activity 2:</u> Ave te fakailoaga kite kaupule</p> <p><u>Activity 3:</u> Ave te fakatagi nete</p>		<p>Fakapotopotog a tagata faika</p> <p>Failautusi Kaupule o Nukulaelale</p>		<p>July, 2018</p> <p>July, 2018</p> <p>August 2018</p>	

		kaupule kite maloo kae maise te kaufaika  <u>Activity 4:</u> Ko nofo te tagata atamai i te faitega o masini ite fenua		Failautusi Kaupule o Nukulaelale  ?	Matagaluega Kaufaika (Operation & Development Section)	June, 2019	\$1,500
<b>11. Masei ate ava</b>	Ke fakalei a ava o Nukulaelae	<b>la tesema tausaga 2018, ko oti ne fakalei a ava.</b>  <u>Activity 1:</u> Avaka te mataupu fakafenua kite fakalei o ava  <u>Activity 2:</u> Fakailoa kite kaupule te ikuga ote mataupu  <u>Activity 3:</u> Ave te fakatagi ate kaupule ki te Boat harbour company/project  <u>Activity 4:</u>	Ko pasia ate mataupu ite falekaupule  Miniti mo lipoti ote fonotaga  Fakailoaga mai ite failautusi	Fakapotopotog a a tagata faika  Failautusi o te Kaupule  Failautusi o te Kaupule		July, 2018  July, 2018  August, 2018  December, 2019	-  -  -  -

		Ko fai ate galuega kit e fakleiga o ava	Ko oti ne fakailoa mai ate taliaga mai ite boat harbour company		Boat harbour Company		
12. Se amanaia ne te fafine tena tulaga i loto i te fenua	1.Tuu mote aganuu/fafine e kilo fataua kae fakamalalo e iloa neia tena tulaga I loto ite fenua	I te tausaga e 2020, ko isi ne se mafuliga kite kiloga o fafine mote tulaga o latou i loto i fenua.  <u>Activity 1</u> Fai ne fakamalosiga io meni akoakoga (Awareness Workshops mo fakamalosiga konei)	-Ko isi ne miniti/lipooti mai luga I akoakoga konei -Fafine ko lasi te iloa mote mainaga I te taua o latou I loto ite fenua.  -Ko tokouke fafine ko mafai o faipati I loto ie fono mo mea fai I loto I te falekaupule	-Taipola ote Mauifa  -Kaupule te fenua  -Community Worker	-NGO-Tenita	<u>Activity 1</u> Aukuso-2018-2019 (Aso fafine)	-\$20,000 (All costs o workshops: Togi ote expert, sitting allowances, materials)
13. Seai ne alagasene e maua mai meataulima	1.Faite se fale meataulima	Ite 2020, ko tau o uke alagasene e maua mai meataulima.					



		<p><u>Activity 1</u> Tusi se tusi fakatagi kite Kaupule ke mafai o maua mai ne sene mo fakatuu te fale mo se laukele</p> <p><u>Activity 2</u> Sala nete Kaupule ne tino mo faite te fale</p> <p><u>Activity 3</u> Ko faite te fale</p>	<p>Ko talia nete Kaupule te manakonga</p> <p>Maua a tino mo faite a fale</p> <p><u>Activity 3</u> Ko tuu te fale meataulima</p>	<p>-Failautusi o te fapopotoga fafine</p> <p>-Fapotopotga fafine</p>	<p>-PWD (ata ote fale, etc)</p> <p>-Government</p> <p>-Tino fai manafa(Ekale sia)</p>	<p><u>Activity 1</u> - Aukuso 2018</p> <p><u>Activity 2</u> - Mati 2018</p> <p><u>Activity 3</u> - Mid 2020</p>	<p>\$30000 = (Costs katoa ote falemeataulima faopoopo kiei te falekai)</p>
2.Fai ne akoakoaga mai fafine kola e isi ne olotou atamai mote iloa l meataulima	<p><u>Activity 1</u> Fai ne akoakoga ki fafine ki luga i vaega meataulima mo kuuka fakatuvalu.</p>	<p><u>Activity 1</u> -Ko isi ne lipooti maua mai luga l akoakoga kona</p> <p>-Ko lava te iloa l fafine ite faiga o vaega meataulima pena foki mo kuuka.</p>	<p>-Taipola ate Mauifa</p> <p>-Fafine</p> <p>-Fafine kola e lasi te iloa mote malamalama l mea taulima</p>		<p><u>Activity 1</u> - Apelila 2019</p>	<p>\$5000 = (Catering, sitting allowances, faiakonga)</p>	
3.Fafine ke fakaavanao ne	<p><u>Activity 1</u> Faite se polokalame ke mafai o</p>	<p><u>Activity 1</u> -Ko tele te polokalame</p>	<p>-Taipola ate Mauifa</p>		<p><u>Activity 1</u> – Apelila 2019</p>	<p>Ulu ite \$5000 tela mai luga</p>	

	taimi mo faite meataulima	fakaavanoa se vaiaso e tasi mo akonga ki meataulima	-Ko lava te iloa I fafine I meataulima	-Fafine -fafine ko lasi te iloa mote malamalama I akonga meataulima			
<b>14. Fale ika/se lei fakanofonofoga ote maketiga o ika i luga ite fenua</b>	-Toe review fakalei a fakanofonofoga ote maketi ika I luga ite fenua	<b>I te masina ko Aukuso 2018, ko mafai o toka te fakafouga o fakanofonofoga ote maketi ika.</b> <u>Activity 1</u> Avaka te mataupu I loto ite Kaupule mote manakoga.  <u>Activity 2</u> Avaka I loto ite Falekaupule te mataupu  <u>Activity 3</u> Review te fakanofonofoga ote maketi ika.	<u>Activity1</u> Ko oti ne pasia I loto ite Kaupule  <u>Activity 2</u> Ko talia nete Falekaupule te mataupu  <u>Activity 3</u> Ko isi se mafuliga lei atu ki fakanofonofoga ote maketiga o ika i luga ite fenua.	Falekaupule-Tagata faika  -Falekaupule  -Kaupule; Ofisa onoono ki te Kaufaika		Aukuso 2018.  Setema 2018  Novema – Tesema 2018	

<p><b>15. Se lava koga tausí o vai</b></p>	<p>-Ke fakamaua mai ne tane vai</p>	<p>Ite tausaga e 2020, ko mafai o maua a tane ote fenua.</p> <p><u>Activity 1:</u> Tusi se tusi akai (proposal) kite Malo Tuvalu ke mafai o fakamaua mai ne tane vai.</p> <p><u>Activity 2:</u> Ko aumai a tane vai</p>	<p>Talia nete Malo te fakatagi.</p> <p>Ko tofu kaiga i luga I Nukulaelae I tane vai.</p>	<p>-Nukulaelae Planner</p> <p>-Kaupule te fenua</p>	<p>-Tuvalu Government</p> <p>-Donors</p>	<p><u>Activity 1</u> - Iulai 2018</p> <p><u>Activity 2U</u> - Aukuso 2019.</p>	<p>-\$150,000 Budget fakatautau mo Costs valevale ote fakamauaga maiga o tane vai.</p>
<p><b>16. Togi mafa mea i store</b></p>	<p>A. Fakamalosi tulafono</p>	<p>I te tausaga e 2019, ko isi se mafuliga ki te togi o mea i store i luga i te fenua ko Nukulaelae.</p> <p><u>Activity A1:</u> Avaka i te Fale Kaupule</p> <p><u>Activity A2:</u> Ave te tusi fakatagi ne te Kaupule, include fesoasoani mai loa.</p>	<p>Pasia i loto ite Fale Kaupule</p> <p>Sainaga o te tusi ne te Kaupule mo te fenua</p>	<p>Takitaki o te Malosiga</p> <p>Failautusi o te Kaupule</p>		<p>Iulai 2018</p> <p>Aukuso 2018</p>	<p>Falekaupule</p> <p>-</p>

<p>B. Fakauke tupe feasoasoa ni mai te malo</p> <p>C. Avaka peofuga</p> <p>*Involve lawyers – legal advisor for legal justification.</p>	<p><u>Activity A3:</u> Fakamalosi tulafono (Price control)</p>	<p>Review tulafono, fakamalosi</p>	<p>Kaupule</p>		<p>Tesema 2018</p>	<p>-</p>
	<p><u>Activity B1 &amp; C1:</u> Avaka i te Fale Kaupule mataupu:</p> <p>i) Fakauke tupe fesoasoa ni mai te malo</p> <p>ii) Avaka peofuga</p>	<p>Pasia i loto i te Fale Kaupule</p>	<p>Fale Kaupule (pou loto), toeaina fakamatuatua</p>		<p>Iulai 2018</p> <p>Aukuso 2018</p>	<p>-</p>
	<p><u>Activity B2 &amp; C2:</u> Ave te fakatagi ne te Kaupule ki te malo</p>	<p>Taliaga mai te malo</p>	<p>Failautusi o te Kaupule</p>	<p>Malo (DRD)</p>	<p>Setema 2018</p>	
	<p><u>Activity B3 &amp; C3:</u> Maua se feasoasoni ki mea tau tupe mai te malo</p>	<p>- Maua fesoasoa ni fakatupe mai te malo</p> <p>- Isi ne mafuliga ki peofuga (avaka o peofuga)</p>	<p>Kaupule, Fale Kaupule</p>	<p>Malo</p>		

			Tela ko mafai iei o fakagalue manakoga				
17. Se lava te iloa/ malamalama	- Fakauke akoakoga - Fakamalosi tulafono	<b>I te tausaga 2019, ko lausa te iloa mo te malamalama o tino mo kautupu gasolo o Nukulaelae.</b>  <u>Activity 1:</u> Avaka i loto i te Fale Kaupule te mataupu ki te fakauke o vaega akoakoga  <u>Activity 2:</u> Ave te fakatagi ne te Kaupule ki minisituli mo matagaluega kesekese kola e manakogina ke fai ne latou a akoakoaga  <u>Activity 3:</u> Faiga o akoakoga	Pasia/fakatalia i loto i te Fale Kaupule  Sainaga o te tusi ne te Pule Kaupule, Ulu fenua mo te Failautusi o te Kaupule  Miniti mo te lipoti o te akoakoga. - Survey/ Questionnaires	Pelesitene/ Tokolua Takitaki o te Malosiga mo te Tokolua  Failautusi o te Kaupule	Malo  Matagaluega/ Minisituli kesekese o te malo	Mati 2019  Apelila 2019  Mee 2019	Falekaupule       Matagaluega o te Waste, Ola lei, Kau Faika etc

			(Follow-up)				
18. Pisi tai (Salt spray)	<ul style="list-style-type: none"> <li>Seawall/ Wave breaker</li> <li>Fakaleiga o mea tau puipuiga o fale/kope totino o kaiga</li> </ul>	<p>I te tausaga 2024, ko foliki (se matea tena fakapokotiaga) te fakamaseiga o te pisi tai ki luga i te fenua.</p> <p><u>Activity 1:</u> Akoakoga ki te fenua (Awareness)</p> <p><u>Activity 2:</u> Avakaga te mataupu ki te Fale kaupule</p> <p><u>Activity 3:</u> Kaupule fakatoka te tusi ki te malo (DRD)</p> <p><u>Activity 4:</u> Malo sokotaki ki donors/projects e.g. TCAP</p> <p><u>Activity 5:</u></p>	<p>Miniti o te akoakoga mo te lipoti</p> <p>Fakatalia iloto ite Fale Kaupule</p> <p>Sainaga o te tusi ne te Pule Kaupule mo te fenua (Ulu fenua)</p> <p>Taliaga mo sokotakiga mai polotieki (TCAP)</p>	<p>R2R Island Officer Lanu</p> <p>Kaupule – Pelesitene/Tokolua Takitaki o te Malosiga</p> <p>Failautusi o te Kaupule</p> <p>Failautusi o te Kaupule</p>	<p>Malo</p>	<p>Aukuso 2018</p> <p>Setema 2018</p> <p>Oketopa 2018</p> <p>Tesema 2018 – Fepuali 2019</p>	2,000.00 AUD

		<p>Malo mo donors/polotieki sokotaki ki te Kaupule</p> <p><u>Activity 6:</u> Kaupule ko fakailoa ki te fenua</p> <p><u>Activity 7:</u> Fakagaluega ne te Kaupule/Falekaupule mo sokotakiga/fakataugatupe.</p> <ul style="list-style-type: none"> <li>Fai ne savea</li> </ul>	<p>Sainaga o te tusi – proposal approved</p> <p>Fono falekaupule</p> <p>Ko kamata te galuega – faitega o seawall/wave breaker</p>			<p>Fakaotiga Fepuali 2019</p> <p>Mati 2019</p> <p>Mee – Luni 2019?</p>	<p>1,000,000.00 AUD</p>
<p>19. Se lava resources mo fai atiakega/ pukega o kilikili mo one</p>	<p>- Sose atiakega vau ki luga i Nukulaelae, ke togi mai/aumai kope faigaluega (all required resources for the work)</p>	<p>I te tausaga 2019, ko galue te tulafono ki te fakaaoga o kilikili mo one ki te fakatelega o atiakega i luga i te fenua.</p> <p><u>Activity 1:</u> Avaka te mataupu i te Fale Kaupule, faite tulafono</p> <p><u>Activity 2:</u> Kaupule fakatoka te tusi ki te malo (DRD)</p>	<p>Fakatalia/pasia i loto ite Fale Kaupule</p>	<p>Falekaupule</p> <p>Failautusi o te Kaupule</p>		<p>Mati 2019</p> <p>Apelila 2019</p>	

		<p>i fakanofonofoga ko oti ne pasia</p> <p><u>Activity 3:</u> Fale Kaupule fakamalosi tulaga o fakanofonofoga ko oti ne fakatalia/pasia i loto i te falekaupule.</p>	<p>Sainaga ne te Pule Kaupule mo te fenua</p> <p>Savea/Iloiloga o sose atiakega vau ki luga i te fenua ke tautali ki te tulafono.</p>	Kaupule		Mee 2019 (masina takitasi)	
20. Poor communication	<ul style="list-style-type: none"> <li>- Improve Telecom services</li> <li>- Improve facility, tools etc</li> <li>- Awareness programs</li> <li>- Fakalauuega /fakalauuega te iloa o Kaupule/ Fale kaupule (fenua) ki gasuesuega fou/tulafono a te malo.</li> </ul>	<p>I te tausaga 2019, ko lei tulaga ki mea tau sokotakiga i luga i te fenua o Nukulaelae.</p> <p><u>Activity 1:</u> Avaka te mataupu faka-falekaupule</p> <p><u>Activity 2:</u> Kaupule fakatoka te tusi ki te Telecom</p> <p><u>Activity 3:</u> Telecom ko galue o fakalei tulaga o mea</p>	<p>Miniti mo te lipoti o te fenua</p> <p>Sainaga o te tusi ne te Pule Kaupule mo te fenua</p> <p>Oko mai mea faigaluega ke</p>	<p>Pelesitene/Tokolua Takitaki o te Malosiga – Kaupule</p> <p>Failautusi o te Kaupule</p>		<p>Ianuali 2019</p> <p>Fepuali 2019</p>	<p>Falekaupule</p> <p>Kaupule, Malo</p> <p>Telecom officers,</p>



		tau sokotakiga i luga i Nukulaelae	fakalei tulaga o mea tau sokotakiga i luga i Nukulaelae		Tino galue mai te Telecom		pc fou, telefoni faopoopo, air conditioner
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### Nukulaelae Monitoring Plan

<i>Aofaaga</i>	<i>Fakasinoga/ Fakamaonia taunuga ote galuega)</i>	<i>Auala e maua o iloilo taunuga o galuega</i>	<i>Taimi e fakataimi iei te iloiloga</i>	<i>Tino fakagalue ne ia te iloiloga</i>	<i>Kogakoga ke savea</i>	<i>Tino fakatoka te lipoti</i>
<i>i) Fakauke akoakoga</i>	Ko tasi te iloa mote malamalama I tino ote fenua	Fai polokalame asiasi I loto ite fakai	Fakalua taimi i te 3 masina(Mati, luni mo Setema) 2018	Kaupule mote Komiti taumata kite atafaiga o Kaiga	Fakai katoa	-Kaupule mote Komiti o atafaiga o kaiga
	Ko oti ne fakatuu a notice boards/posters ke lavea ne tino	Asiasi ki kogaakoga kola e tau o fakapaa iei fakapulaga	Aso katoa ote olaga	Kaupule mote Komiti taumata ki atafaiga o kaiga	Public places	-Kaupule in charge
	Ko toka te vaega kite atafaiga o kaiga ke	Savea Iloilo I akoga	Mati, 2019	Faiakoga, Kaupule,tamaliki		Kaupule in charge

	mafai o fakatele I loto I akoga (English & Tuvalu version)			akoga, Ministry of Education	Schools (Kindergarten and Primary school) Fenua katoa	
	Uke awareness programs e fakatele ite fenua	Te aofaki o awareness programs ne fai	Aokuso, 2018	Waste Department, Fenua	Fenua katoa	-Kaupule, Waste Department
<i>ii) Fakalogo kae alofa ki tou fenua</i>	Tino ko fakalogo kae kaufakatasi	Asiga te komiti o kaiga	Oketopa, 2019	Fenua	Fakai katoa	Kaupule
	Ko isi se stewardship committee ate fenua kite atafaiga o kaiga Ko ma te fenua kae ko se uke masaki ite fenua maise a lago	Lipoti/Tala o asiga  Savea/asiga foliki ite fenua	luni, 2018  Tesema, 2018.	Fenua/komiti  Sanitation officer, Nurse, Komiti tumaa	Fakai mo saipuaka  Fenua katoa	Taipola ote fenua,kaiga o kaupule  Health Department, Kaupule
<i>iii) Faite se by-law ki te aumai o kaiga pala mo te laku valevale o kaiga</i>	Pasia te by-law kae ko toka o fakagalua	Lipoti	Ianuali, 2019.	Kaupule, Loia, Falekaupule	Dump site	Waste Department, Kaupule
<i>iv) Faite se fence o te koga pei kaiga</i>	Ko toka te loader/kope mo fai te galuega	Tusi/Call/Meli iti	Fepuali, 2019.	Kaupule, driver	Dump site	Waste department, Kaupule
	Ko toka te fence ote dumpsite	Asiasi kite galuega	Apelila 2019	Pule o te Lima malosi, Kaupule	Dump site	Waste department, Kaupule

(dumpsite) & Fakamaua recycling machines	Ko isi ne vaegaa mesini fakafoliki iei te kaiga	Tusi/Call/Meli iti	Apelila, 2019	Failautusi o te Kaupule	-	Failautusi o te Kaupule
	Ko isi ne tamaliki atamai i te fakagaluega o mesini konei mote toe faitega	Training Report	Fakaotiga o Luni 2019	Pule Kaupule	-	Pule Kaupule
v) Tokiga o lakau lasi eg. fetau, kanava etc	Ko uke lakau lasi ne toki	Asiasi	Aokuso, 2018	Sui Kaupule onoono kit e Olalei mo Tumā	Koga pili ki tafatai ote fenua	Sui Kaupule onoono kit e Olalei mo Tumā
	Fakalogo a tino o toki a lakau lasi	Lipoti	2019	Sui Kaupule onoono kit e Olalei mo Tumā	Koga pili ki tafatai	Sui Kaupule onoono kit e Olalei mo Tumā
	Kaupule ka galue malosi o asiasi lakau ne toki	Lipoti/Asiasi	2018 -2025	Failautusi o te Kaupule	Koga pili ki tafatai	Failautusi o te Kaupule R2R officer
	Ko lasi te iloa I tino ote fenua ite tokiga o lakau	Lipoti	Fakaotiga 2018	R2R officer	-	R2R officer
	Ko matea ko oti ne sui a lakau kola ne mate	Asiasi	Aukuso 2018	R2R Officer	Fenua katoa mo tafatai	

vi)	<i>Faitega o te seawall</i>	Ko oti ne ave se tusi fakamasaua kite malo	Tusi/Meli iti/Call	Tesema, 2018	Pule Kaupule	-	Pule Kaupule & Failautusi o te Kaupule
		Ko oti ne fai a savea kite vaegaa seawall e manakogina mo Nukulaelae	EIA Report	2018 – 2025	Department of Environment, Kaupule, PWD, Engineers	Site mo fakatuu te sea wall	Officers from Dept. Environment, PWD, Engineers.
		Ko isi se seawall o Nukulaelae	Full Report / Ata ote galuega ko oti	2019	Pule Kaupule mo sui Kaupule	Seawall site	Sui Kaupule mo te Pule Kaupule
vii)	<i>Fakagata te puke o kilikili, fatu mo one mai tafatai mo motu (Fakagalue te by-law</i>	Ka fakalogo a tino ote fenua	Savea	Early 2019	Sui Kaupule ki Atiakega	-	Sui Kaupule ki Atiakega
		Ko galue tasi a tino ote fenua ite fakagaluegaga ote by-law	Savea	2019	Sui Kaupule ki Atiakega	Fenua	Sui Kaupule ki Atiakega
viii)	Fakatulafono o faiva i taimi tau (seasonal fishing)	Faopoopo te iloa ki tino te fenua	Savea, Fakafesilisiliga	2019?	Matagaluega Kaufaika	-	Matagaluega Kaufaika
		Ko fakagalue a te by-law ne te fenua	Savea/Iloilo	2019?	R2R Officer mo te Kaupule	Kogatai o te fenua	R2R Officer
		Fakalogo kae tautali a tino kite by-law	Tusi fakamaonia/ Lipoti	2019?	Pule Kaupule	-	Pule Kaupule

ix)	Cleaning campaigns i te tafatai ke fakamalosi	Galue tasi a tino e aofia kae tautali kite polokalame tae kaiga	Savea lloilo	luni 2019	Komiti onoono ki kaiga	Fenua	Komiti onoono ki kaiga
		Feoloolo te kaiga ite tafatai	Asiga/ Lipoti	luni 2019	Komiti onoono ki kaiga	Tafatai mo kogatai	Komiti onoono ki kaiga
x)	<i>Fakatula-fono fishing gears e.g. Tapu tili maikao tasi</i>	Ko oti ne faite te by-law	Follow-up	Fepuali 2019	Pule/ Tokolua o te Fakapotopotoga Tagata Faika	-	Pule/Tokolua o te Fakapotopotoga Tagata Faika
		Ko oti ne saina kae fakatalia te by law	Follow-up	Mati 2019	Pule/Tokolua o te Fakapotopotoga Tagata Faika	-	Pule/Tokolua o te Fakapotopotoga Tagata Faika
		Toka te by law	Tusi fakamaonia (follow-up)	Apeila – Mee 2019	Pule/ Tokolua o te Fakapotopotoga Tagata Faika	-	Pule/ Tokolua o te Fakapotopotoga Tagata Faika
xi)	<i>Fakamalosi te faika o ika lasi (kola ko oti ne fanafanau)</i>	Ko toka te by law mote faika o ika foliki	Full draft of by-law, follow-up	2019	Sui Kaupule o te Matagaluega Kaufaika	-	Sui Kaupule o te Matagaluega Kaufaika
		Ko oti ne saina kae fakatalia te by-law	Full document	2019.	Sui Kaupule o te Matagaluega Kaufaika	-	Sui Kaupule o te Matagaluega Kaufaika
		Tino o te fenua mo tagata faika ko tautali ki te tulafono	Lipoti	2019 – 2025	Sui Kaupule o te Matagaluega Kaufaika	Tagata faika	Sui Kaupule o te Matagaluega Kaufaika mo te TFD Data Colleltor

xii) <i>Fai se savea ki kamu mate</i>	Fai te savea	Lipoti (EIA)	Tesema 2018	Failautusi o Tagata Faika	Kogatai kola e mate ei a kamu	Failautusi o Tagata Faika
	Lasi te iloa I tino	Savea/Iloilo	2019 - 2025	Failautusi o Tagata Faika	-	Failautusi o Tagata Faika
xiii) <i>Fakalasila o te kogatai puipui ika</i>	Ko oti ne fakalasi kae fakagalua te koga puipui	Savea/Iloilo mo te lipoti	2020 – 2025	Sui mai Tagata Faika, Sui Kaupule onoono ki Maumea	-	Sui mai Tagata Faika, Sui Kaupule onoono ki Maumea
	Ko oti ne pine te koga puipui	Asiasi ki kogatai puipui	2019	Sui mai Tagata Faika, Sui Kaupule onoono ki Maumea	-	Sui mai Tagata Faika, Sui Kaupule onoono ki Maumea
	Fanaka te iloa I tulaga o koga puipui	Savea i te fenua (Questionnaires, interview)	2019 - 2025	Matagaluega Kaufaika, R2R, NAPA II	-	Matagaluega Kaufaika, R2R, NAPA II
xiv) <i>Fakatula fono taimi fai ūu (seasonal closure)</i>	Ko lasi te iloa i tino	Questionnaires, interviews	Aukuso 2018	R2R Island Officer	-	R2R Island Officer
	Ko talia te by law ke fakagalua	Tusi fakamaonia, miniti mai fonotaga	Setema 2018	R2R Island Officer	-	R2R Island officer
	Ko fakalogo tino te fenua	Savea/Iloilo	2018 – 2023	Pule fenua/Tokolua, Sui Kaupule	-	Failautusi o te fenua
	Se uke mea fai ate fenua e fai ki uu	Pule Fenua/ Tokolua pulefenua	2018 – 2023	Pule fenua/Tokolua, Sui Kaupule	-	Failautusi o te fenua
		Follow-up	2018 – 2019	R2R Island Officer	-	R2R Island Officer

		Talia te tusi fakatagi ki te Matagaluega o te Olalei mo te Toki lakau	Savea/Iloilo	Fakaotiga 2018 - 2019	R2R Island Officer	-	R2R Island Officer
		Ko oti ne fakataunu te manakoga					
xv)	<i>Fakatulafono fakaaoga o fana manu, kae fakamalosi te seu manu</i>	Ko isi se by law ke mafai o fakagalue	Full document	Iulai 2019	R2R Island officer	-	R2R Island officer
		Fakalogo a tino	Savea/Iloilo	Aukuso – Setema 2019	Pule Fenua/Tokolua mo te R2R Officer	-	R2R Island officer
		Ko apo a tupulaga gasolo ite fai te faiva kote seu/seuseu/popo manu	Savea/Iloilo	2019 - 2023	Pule fenua/Tokolua	-	Failautusi
xvi)	<i>Fakatulafono te puke o fonu</i>	Ko isi se by-law	Follow-up	Iulai 2019	R2R Island officer	-	R2R Island officer
		Fakalogo a tino	Savea/Iloilo (Questionnaires/ Interviews)	Setema 2019 – Tesema 2020	R2R Island officer	-	R2R Island officer
xvii)	<i>Ke fakatuu se base ote VHF i luga i</i>	Miniti/Lipoti ote fonotaga	Follow up	Oketopa, 2018/Fepuali, 2019/July,2019	Pelesitene mo taipola o tagata faika	None	Pelesitene/member s o tagata faika

<i>Nukulaelae mo monitor/fesoas oani ki tagata faika i taimi e olo ei ki moana io me olo ki motu.</i>	Ko maua ne tagata faika te fakamaonia mai ite kaupule	Sisiga lima mo tagata faika	luni, 2019.	Pelesitene mo taipola o tagata faika	None	Pelesitene/members o tagata faika
	Received ne te Fale-kaupule ate fakamaonia mai ite kaupule	Follow up	Oketopa - Tesema, 2018	Pelesitene mo taipola o tagata faika	None	Pelesitene/members o tagata faika
	Received ne te Failautusi te taliaga (tusi) mai ie fenua	Follow up	luni, 2019	Failautusi mo members o tagata faika	None	Pelesitene/members o tagata faika
	Option 1: ko oti ne receive nete supplier ate order mai ite failautusi o Nukulaelae	Follow up	luni, 2019	Failautusi ote kaupule mo members o tagata faika	None	Pelesitene/members o tagata faika
	Option 2: ko oti ne receive nete supplier ate order mai l members o tagata faika	Fakatumau ate fesokotakiga/follow up			None	Pelesitene/members o tagata faika
	Ko katoa ate order o materials ko kamata ate faitega ote VHF base	Fakatumau ate sokotakiga/follow up	March 2019	Failautusi ote kaupule mo members o tagata faika	savea te koga mo fakatu te VHF base	Pelesitene/members o tagata faika
<i>xviii) Ke ati fakasameni se puipuiga moa e oma ki tua te tai</i>	Ko maua a miniti mo lipoti ote fonotoga	Fakatumau te fesokotakiga/follow-up	Jan 2019	Pelesitene/members o tagata faika	None	Pelesitene/members o tagata faika
	Ko received ate lipoti ote fonotoga ne te kaupule	Fakatumau te fesokotakiga/follow-up	Jan 2019	Failautusi o Nukulaelae kaupule	None	Pelesitene/members o tagata faika mo te failautusi ote kaupule



<i>xix) Ke fai ne awareness program mo mea tau faika</i>	Ko oti ne fakatoka ate order kite supplier	Faka tumau ate sokotakiga ki suppliers/ follow up	Jan 2019	Failautusi Nukulaelae kaupule	None	Failautusi Nukulaelae kaupule
	Ko oti ne kamata ate fakasameniga ote pua	Land survey i Motu-ote-tala	April 2019	Tagata/malosiga o Nukulaelae	Motu-ote-tala	Failautusi Nukulaelae kaupule
	Ko oti ne pasia kae talia ate mataupu ne te fakapotopotoga a tagata faika	Sisi lima ite fonotaga	July, 2018	Pelestene/members o tagata faika	None	Pelesitene o tagata faika
	Ko maua ne te kaupule failautusi ate lipoti	Follow up	August, 2018	komiti o tagata faika	None	Pelesitene o tagata faika
	ko received ne te Coastal PFO/SFO ate fakatagi (Black & white)	Follow up	August, 2018	Komiti o tagata faika	None	Pelesitene o tagata faika
<i>xx) Ko tino poto/atamai ite faitega o moto ke nofo ite fenua</i>	Community o tagata faika ko maua ate mainaga mote malamalama	Follow up	2019	Coastal Fisheries Department mo tagata faika o nukulaelae	None	Pelesitene o tagata faika
	Ko talia ate mataupu ite fonotaga a tagata faika	Sisi lima	July, 2018	Fakapotopotoga a tagata faika	None	Pelesitene tagata faika
	Ko oti ne maua nete failautusi ate lipoti mai l tagata faika	Sokotaki ate pelesitene/komiti o tagata faika kite failautusi	July, 2018	Failautusi	None	Pelesitene tagata faika
	Ko talia mai ne te fisheries department te manakoga o tagata faika	Follow up ne te failautusi fakatasi mote komiti tagata faika	August, 2018	Failautusi	None	TFD

<i>xxi) Ke fakalei a ava o Nukulaelae</i>	Ko nofo ate mechanical expert i luga i nukulaelae	Ko faite a masini masei I uta I nukulaelae	June, 2019	Tuvalu Fisheries Department	None	Pelesitene tagata faika mote failautusi o te kaupule
	Ko oti ne iku a te mataupu ate fonotaga ate fenua (miniti & reports)	Sisi lima/ majority vote	July, 2018	Pelesitene tagata faika	None	Pelesitene tagata faika
	Ko received ne te failautusi ate ikuga ote mataupu	Follow up	July, 2018	Pelesitene tagata faika	None	Failautusi o Nukulaelae
	Ko talia mai ne te boat harbor company fakatagi ke faite a ava	Follow up	August, 2018	Boat harbor company	Survey a ava	Boat harbor company
	Ko failei a ava o nukulaelae	Fakagalue ne te boat harbor survey ate ava ki ana kope	December, 2019	Boat Harbor Company	Te ava	Boat harbor company
<i>xxii) Se amanaia nete fafine tena tulaga I loto ite fenua.</i>	<ul style="list-style-type: none"> <li>Fafine ko lasi te iloa mote malamalama</li> </ul>	<ul style="list-style-type: none"> <li>-Fakatoka Questionnaires</li> <li>-Maopoopo kote tasi (iloilo me pefea te tulaga ote kaufakatasi o fafine I loto I mea fai ote fenua</li> <li>-Attendance</li> </ul>	-Setema 2018-2019	-Taipola te Mauifa (Fafine Nukulaelae)	None	Failautusi o Fafine

<p>xxiii) Seai ne alagasene e maua mai l meataulima</p> <p>Option 1:</p> <p>(Faite se fale meataulima)</p>	<ul style="list-style-type: none"> <li>Ko talia nete Kaupule te manakoga</li> </ul>	<p>-Follow up/fakatumau fesokotakiga</p>	<p>-Mai tua o Aukuso (Asi fakatasi ite vaiaso mo vaiaso mai tua o Aukuso</p>	<p>Takitaki fafine o Nukulaelae (Mauifa)</p>	<p>None</p>	<p>Failautusi o fafine (Mauifa)</p>
<p>Option 2:</p> <p>(Fai ne akoakoga mai fafine atamai)</p>	<ul style="list-style-type: none"> <li>Ko isi ne lipooti mai luga l akoakoga kona</li> <li>Ko lava te iloa l fafine l faiga o meataulima.</li> </ul>	<p>-Iloilo te ola o te fale Meatulima</p> <p>-Savea me pefea te uke o meataulima l te fale meataulima</p>	<p>-Aukuso 2019 (Aso fafine)</p>	<p>-Taipola Fafine</p> <p>-Fafine kola e fai ne latou akoakoga konei (Fafine atamai)</p>	<p>-Falemeataulima</p>	<p>Failautusi o fafine (Mauifa)</p>
<p>Option 3:</p> <p>(Fafine ke fakavanoa ne taimi mo faiga o meataulima)</p>	<ul style="list-style-type: none"> <li>Ko lava te iloa o fafine l meataulima</li> </ul>	<p>-Puke te attendance o fafine</p> <p>(Polokalame o te vaiaso mo akonga o meataulima)</p>	<p>-Apelila 2019</p>	<p>-Taipola fafine</p> <p>-Tino e fakatele neia te polokalame akoako.</p>	<p>None</p>	<p>Failautusi o fafine (Mauifa)</p>
<p>xxiv) Se lei fakanofonofoga o te maketi ika.</p>	<ul style="list-style-type: none"> <li>Ko oti ne pasia te mataupu ite Kaupule</li> </ul>	<p>-Follow up/fakatumau fesokotakiga.</p> <p>-Questionnaires ki tagata faika</p>	<p>-Masina mai tua o July</p>	<p>-Tukumuna o te Falekaupule</p>	<p>None</p>	<p>Kaupule (Failautusi)</p>

		mote community.				
<i>xxv) Se lava koga mo tausi ei a vai.</i>	<ul style="list-style-type: none"> <li>Talia nete Malo te fakatagi</li> <li>Toe faopoopo takitasi tane vai ki kaiga i luga i Nukulaelae.</li> </ul>	-Follow up/fakatumau fesokotakiga mote tulaga ote tusi	-Aukuso 2018	-Kaupule (Failautusi)	None	Kaupule (Failautusi)
<i>xxvi) Togi mafa mea i store - Fakamalosi o tulafono</i>	Taliaga mai te Falekaupule	Miniti o te fono falekaupule	Iulai 2018	Pelesitene/Tokolua Takitaki o te Malosiga	-	Pelesitene/Tokolua Takitaki o te Malosiga
	Sainaga o te tusi ne te Kaupule mo te fenua	Sokotaki ki te Kaupule (Follow-up)	Aukuso 2018	Pelestitene o te Malosiga	-	Pelesitene/Tokolua Takitaki o te Malosiga
	Kesega/Fakamafuliga ki luga i togi o mea i store, peofuga	Savea/Iloilo	2019	Failautusi o te Kaupule	Store i luga i Nukulaelae	Failautusi o te Kaupule
<i>xxvii) Se lava te iloa/malamalama</i>	Taliaga mai te Falekaupule	Miniti o te fono falekaupule	Mati 2019	Pelesitene/Tokolua Takitaki o te Malosiga	-	Pelesitene/Tokolua Takitaki o te Malosiga/Tokolua
	Sainaga o te tusi ne te Kaupule mo te fenua	Sokotaki ki te Kaupule (Follow-up)	Apelila 2019	Pelesitene/Tokolua Takitaki o te Malosiga	-	Pelesitene/Tokolua o te Malosiga
	Lausa te iloa mo te malamalama o tino o te fenua	Savea/Iloilo	2019 - 2020	Sui o te Kaupule onoono ki luga i atiakega fakatasi mo te Failautusi o te Kaupule	-	Sui o te Kaupule (Mea tau atiakega) mo te Failautusi o te Kaupule

<i>xxviii) Pisi tai – fakalei tulaga o koga nofo mo puipuiga</i>	Taliaga mai loto ite Falekaupule	Miniti o te fono falekaupule	Aukuso 2018	Pelesitene/Tokolua Takitaki o te Malosiga	-	Pelesitene/Tokolua Takitaki o te Malosiga
	Sainaga o te tusi ne te Kaupule mo te fenua	Sokotaki ki te Kaupule (Follow-up)	Setema 2018	Sui Kaupule (Atiakega)	-	Sui Kaupule o Atiakega mo te Failautusi o te Kaupule
	Savea/Iloilo o te fenua (best solution/method)	Lipoti	?	Matagaluega fai savea/ iloiloga	Fagaua	Matagaluega fai savea/iloiloga
	Taliaga mo sokotakiga (TCAP)	Sokotaki ki te Kaupule (Follow-up)	?			
	Feoloolo te pokotiaga o te pisi ki fale/kope totino o tino i luga i te fenua	Savea/Iloiloga	?	Sui Kaupule (Atiakega)	Fagaua – fale nofo o tino mo kope totino	Sui Kaupule mo te Failautusi o te Kaupule
<i>xxix) Fakatulafono te puke o kilikili, one mo sose kope totino o te fenua (natula)</i>	Taliaga mai loto ite Falekaupule	Miniti o te fonotaga	Setema 2018	Pelesitene/Tokolua Takitaki o te Malosiga	-	Pelesitene/Tokolua o te Malosiga
	Sainaga o te tusi fakatagi	Sokotakiga mo te Kaupule (Follow-up)	Oketopa – Novema 2018		-	Sui Kaupule o Atiakega
	Kaupule fakagalue/fakamalosi te tulafono	Savea/Iloilo	Tesema 2018 – Ianuali 2019	Price control enforcement officer (Kaupule)	-	Price control enforcement officer (Kaupule)
<i>xxx) Fakaleiga tulaga mea tau sokotakiga (Telecom)</i>	Taliaga mai loto ite Falekaupule	Miniti o te fonotaga	Sokotakiga mo te Kaupule – Pelesitene/Tokolua Takitaki o te Malosiga	Fepuali 2019	-	Sokotakiga mo te Kaupule – Pelesitene/Tokolua Takitaki o te Malosiga

Sainaga o te tusi fakatagi	Sokotakiga mo te Kaupule (Follow-up)	Sokotakiga mo te Kaupule – Pelesitene/Tokolua Takitaki o te Malosiga	Mati – Apelila 2019	-	Sokotakiga mo te Kaupule – Pelesitene/Tokolua Takitaki o te Malosiga
Ko isi ne pc fakaaoga mo Internet, ko uke telefoni fakaaoga, ko mafai o galue mobile mo te Wifi iluga i te fenua, ko aircon te ofisa Telecom	Savea/Iloilo	Pelesitene/Tokolua takitaki o te Malosiga	Iuni – Tesema (asi i masina)	Ofisa Telecom	Pelesitene/Tokolua takitaki o te Malosiga

### Discussion

The development of the Integrated Management and Monitoring Plan for the community of Nukulaelae was a success with a high number of participation from the community island members. The Nukulaelae Community Integrated Management and Monitoring Plan was designed by the communal participants present on the island that were willing to be part of the workshop for 4 consecutive days. From the integrated plan, all planned activities and tasks existing are ideas mainly from the community members with assistance from the facilitators and the team. From the consultation with the community members, various needs and wants arose for improving the livelihood of the people. However, precise planning is crucial in ensuring that all are on the same page and are willing to take on the ownership and responsibility to make certain that individual actions and outcomes are accomplished, as these have been aligned to steer towards achieving the visioning of the community for the improved livelihood for the current and forthcoming days. Thus, the plan will only be effective and achieve its desired *Vision, Mission and Goal*, if people take responsible for the acquired tasks of them as originally planned by the community island members for the benefit of the island of Nukulaelae.

## 4.8 Other Activities

**4.81 Island Profile Work:** Information being collected for island profiles was made possible through consultations with communities, fishermen associations and interviews with Kaupule members. Information would be safely stored in a laptop for further needs specifically for developing and publishing of Fisheries Island Profiles for all islands in future.

### **4.82 Community Awareness:**

Awareness workshop was delivered to both communities of Niulakita and Nukulaelae. Participants in Niulakita and Nukulaelae were around 95 percent and 70 percent of the total population attending the workshop respectively. Focused areas of presentations covered Ciguatera Fish Poisoning, Creel Survey Report 2 Results and Locally Managed Marine Areas. Both communities were keen to focus on the deliveries and lots of questions and comments were burst out. Questions were directly answered by the team and comments were recorded in minutes by the team secretaries.

### **4.83 Fishermen Awareness:**

Themes been discussed during the awareness were based on Sea Safety Training, FADs, GPS Training and Reviewing of Grab Bags. Since there was only one grab bag on Niulakita, the sea safety training was conducted with this single fisherman. He was retrained with the use of GPS and important reminders on sea safety issues when go out to sea and at the same time did a review assessment of his grab bag in which everything was fine. The same training was executed in Nukulaelae with fishermen association where great interest was shown during and after delivering of fisheries work. A total of 17 bags were able to review while 5 grab bag owners did not turned up to the workshop and we were not able to review their bags.

### **4.84 School Awareness:**

The importance of delivering awareness workshop to schools was high as kids need to be taught on fisheries basics information. Issues that were talked over covered Marine Biodiversity and Food Chain, Coastal Fisheries in relation to Climate Change and Ciguatera Fish Poisoning. We have seen that after all, kids were interested on the topics covered and were also able to answer our questions which show that the information delivered was well absorbed by school kids. Teachers further requested the team of presenters if we could maintain this activity during every metronome trips to outer islands and also preferred to make copies of all presentations to be used by their school.

### **4.85 Refreshing Training with Data Collector:**

Niulakita does not have a data collector thus no training was needed. Nukulaelae main data collector was in Funafuti while we were on the island but we managed to accomplish this task with his reliever. We conducted the training at the reliever's house where he was taught on issues that we spotted from filling of creel datasheet, fishermen interview and report submission. The training was expanded into the field for the data collector and R2R officer that would extremely help to bring reality of theory to be seen and done with bare hands. One major issue raised was on the high need to use tray scales instead of hook scales to weigh reef fish. Reports mentioned that hook scales were best for pelagic species while tray scales accelerate the weighing of huge amount of reef fish.



## 5. Issues & Recommendations

The following consist of issues and recommendations that were from the “Nukulaelae Community Integrated Management and Monitoring Plan” during the development of the plan;

### **Kaupule and Falekaupule Group**

Problems affecting the lagoon:

- Soil covering the corals that resulted in many/most of the coral being dead.
- Invasive algae that is killing or not allowing other organisms and living things to survive and thrive
- Access of ships and anchorage into the island, and waste discharge.

Problems affecting the island:

- Coastal erosion
- Littering of waste
- Declining of fish species and marine resources in coastal areas
- Difficulty in getting coconut crab
- Low numbers of edible birds and sea turtles.

Recommendation:

- Demarcate buoys to indicate the restricted area for anchorage.
- Ships are not allowed to discharge their wastes within the 12 nautical miles under the Falekaupule Act.

### **Fishermen Group**

Identified problems:

- Umaga or the island plantation area, not many people are working their land for crop production, thus the umaga is not highly productive like in the past (concern on food security).
- Passageway of access on to the island due to the sedimentation of pebble-like stones and sand rapidly increasing over time.
- Anchorage of ships along the marine coastlines that is endangering the corals.
- Giant clam are not found in the lagoon except in the outer-reef and Motulikiliki?
- Most of the fishing grounds hotspots are selected reef patches which are now showing above water, thus affecting the fishing effort of fishermen.
- One of the islet Kalilaila is now gone leaving a great impact on the island of Nukulaelae.
- Most of the sacred traditional fishing knowledge are not being passed down through generations.
- Fishing knowledge are kept within the fishermen but are not shared so others are not aware on the various fishing grounds.
- Using of sand and pebbles, stones and rocks from the islets leaving the islets vulnerable to sea level rising and other natural disasters.
- Channels that school of fish move through are now closed due to the sedimentation forming reef patches.





- The issue of cutting fish heads before taking these to the CFC, because fishing effort has to be taken into consideration, means of the fishermen; time and cost spent by the fishermen for fuel and other necessities.
- Poor condition of the CFC building, tools and machines.
- Mechanical problem for fishermen mainly on boat welding and horse power.
- Expensive costs for fuel.
- Not enough fishing gears and equipment due to having no supplier supply these for the fishermen on the island.
- Not enough time devoted to fishing due to the developments on the island.
- Lack of knowledge on the spawning seasons for various targeted fish species.
- No VHF base station.
- Saltwater intrusion affecting land crops in the community plantation (umaga).

### **Youth Group**

- Sea level rising resulted in flooding out soil and sand covering the corals, thus killing the corals on the reef.
- Lack of resources for carrying out of any development projects on the island.
- Poor building codes of septic tanks and pig pens.
- Use of resources such as sand, soil, pebbles and rocks from the islets and coastal areas.
- Poor communication.
- Expensive products and goods in stores.
- Lack of water storage such as water tanks and reservoirs.
- Existing dead corals around the coastal areas.
- Saltwater sea sprays affecting housing conditions and properties, as well as crops.

### **Women's Group**

- Lack of waste recycling.
- Spread of diseases.
- Strengthening women's position and involvement in all kinds of activities on the island.
- Bingo is taking up most of the women's time to do handicraft and other activities that can benefit their individual self, family and community.
- Women's Handicraft Centre is not successful as most women are not using it for its rightful purpose it was built, that is to sell handicrafts. Women are not using the centre for selling their handicrafts.
- No source of income for women.
- In short supply of materials (kie) for weaving mats.

The following issues and recommendations were based from the Nukulaelae Community Awareness Program:

- The fishermen have waited for a long time for a new FAD to be installed in our waters since the last one had been lost for quite some time now. Though, the fishermen and the people of the island saw the useful and convenience of a FADs.
- There is still no report or legal document that states all the laws that prohibit all these illegal fishing actions on the island.
- Documented research and findings on spawning periods of various species of fish.
- Fishermen need to be provided with list of fish and matured length so that they can be aware of these in order to avoid fishing fish below the maturity level.

Recommendations:

- The need to have more protected areas so that reef patches can be restricted from overfishing.



- A survey to be done at the Asaga.

(Note: This activity has been carried out and completed by the TFD Coastal team during their Metronome 9 trip shortly after the need arise from the people of the island).

The following issues and recommendations are from the Fishermen Awareness Program on the island of Nukulaelae.

- TFD should provide diving gear that can assist a trained and experienced diver to regularly assess the condition of the FAD.
- No FADs hence there is a need for FADs to be installed on the island
- Further assessments of the grab bags to ensure bags are specified by owners.

The following consist of the following issues and recommendations that were from the “Niulakita Community Integrated Management and Monitoring Plan” during the development of the plan;

- Very few fish species are caught on the reef and marine coastal area
- No development on the island due to the low population that is residing on the island, therefore legislations need to be reviewed.
- Unsafe passageway access on to the island, with the need of construction for a harbor.
- Littering of waste due to not having a designated ground for dumping rubbish.
- Numerous mosquitoes due to the wild bushes and uninhabited lands that have not been cleared.
- Coastal erosion due to sea level rising as an impact of Climate Change.
- Limited water supply due to limited water tanks and cistern for water storage.
- Poor condition of the primary school.
- Poor communication on the island.
- Few edible land crops planted and the need to enhance planting of edible vegetation and supply of tools to assist in plantation on the island.
- Hygiene has to be promoted and encouraged on the island.
- Poor governance from the island of Niutao.
- Big rocks that are blocking the roads.
- Waste recycling.
- Sources of income is low as most income generated goes to Niutao.
- Poorly built septic tanks.
- Decline of turtles due to the excessive turtle diving.
- Delays of shipping schedules affecting the live organisms.

## 6. Appendix

### 6.1 Attendance sheet for Groups



## Tuvalu Fisheries Survey Data Sheets

Attendance at Meetings: NUKULAEAE COMMUNITY AWARENESS					
Target Group:			Any group meeting		
Island: Nukulaelae	Date:04/6/18		Surveyor 1: Fakatokaga.Namoto	Surveyor 2:Tautalo.iese	
Latitude (DD):			Longitude (DD):		
Name	Gender	Age	Occupation/Organisation	Village	Phone/Email
Fiavai	Male		Ulufenua	Nukualofa	
Galu	Male		Tokolua Ulufenua	Nukualofa	
Saosaoa	Male		Kaupule	Pepesala	
Semolina	Female		Pulekaupule	Pepesala	
Kalahati	Male		Faifeau	Pepesala	
Oliula	Female		Faletua	Pepesala	
Tapuaiga	Male		Toeaina	Pepesala	
Pule	Male		Toeaina	Nukualofa	
Tavita	Male		Fisherman	Pepesala	
Lotonu	Male		Toeaina	Nukualofa	
Vaimoana	Female		Faiakoga	Pepesala	
Maiau	Male		Fisherman	Pepesala	
Kalim	Male		Youth	Pepesala	
Tempesi	Male		Kaupule	Pepesala	



Silo	Male		Fisherman	Nukualofa
Selau	Male		Fisherman	Nukualofa
Petaia	Male		Fisherman	Nukualofa
Collin	Male		Failautuhi Kaupule	Nukualofa
Filipo	Male		Toeaina	Nukualofa
Siliva	Male		Toeaina	Pepesala
Teoli	Male		Toeaina	Nukualofa
Auega	Male		Tukumuna	Nukualofa
Tamoa	Male		Fisherman	Nukualofa
Lupeni	Male		Youth	Pepesala
Timo	Male		Youth	Nukualofa
Mau	Male		Fisherman	Nukualofa
Elekana	Male		Toeaina	Nukualofa
Afasene	Female		Women Group	Nukualofa
Lanu	Female		R2R Officer	Nukualofa
Penina	Female		Women Group	Nukualofa
Talauila	Female		Women Group	Nukualofa
Ufiata	Female		Women Group	Nukualofa
Vakai	Male		Youth	Nukualofa
Takapepe	Male		Youth	Nukualofa
Motusia	Female		Women Group	Pepesala
Tausese	Female		Women Group	Nukualofa
Lieli	Female		Women Group	Nukualofa
Palanitina	Female		Women Group	Pepesala
Pouleta	Male		Planner	Pepesala
Tusitapu	Male		Lands Clerk	Pepesala
Letioa	Female		Kaupule clerk	Pepesala
Eleni	Female		Youth	Nukualofa
Sesilina	Female		Youth	Pepesala
Tie	Male		Youth	Pepesala
Lakai	Female		Women Group	Pepesala





### Tuvalu Fisheries Survey Data Sheets

#### Attendance at Meetings

Target Group:		Any group meeting	
Island:	Date:	Surveyor 1:	Surveyor 2:
Nukunuaelae	04/06/2018		
Latitude (DD):		Longitude (DD):	

Name	Gender	Age	Occupation	Village	Phone/Email
Lotonu. Nukulasi	Male	48	Civil Servant	Nukunua	25019.
Tamoa. Uluvaloa	Male	50	Falokampule	Fa'esele.	25020
Elelona. Sisaano	Male	78	Falokampule	Nukunua	—
Galuafe. Moava	Male	59	Toko Ua Ulu Fenua.	✓	NIL.
Kelsiana Joseph.	Male	63	Kampule Member	✓	—
FILIPS	1 1	47	FKL	✓	—
PUNA. M	"	52	—	—	—
Sonodan	Female	44	Kampule President	Pepesa	25005.
Togi. A	Male	65	Talokauviva	Nukunua	NIL
Vosa. L	✓	36	✓	✓	Visipage@gmail.com
garepale	✓	39	garepale	✓	25020
Vaki. J	Male	34	—	garepale	—
Collin. N	"	34	Kampule Sec.	"	—
Togis. F	Male	51	Falokampule	Aluati Pesele	—
TOMIT	✓	49	Falokampule	Pepesa	25031

THANK YOU





Tuvalu Fisheries Survey Data Sheets

Attendance at Meetings

Target Group:	Any group meeting	
Island: Nukunono	Date: 05/06/2018	Surveyor 2:
Latitude (DD):	Longitude (DD):	

Name	Gender	Age	Occupation	Village	Phone/Email
TAMOALIKOLOA	Male	50	F. Kaupule	Pesea	-
Kelivina Toeta.	Male	62	Kaupule	N/Alaka	-
Tooli. Alava	Male	65	Takakaupule	Alakafa	-
Felenevi. Toqa.	male	50	"	"	-
GALLAFI. MOEAVA.	Male.	59.	F. KAUPULE.	Nukunono.	NL.
Eteiona. Sigoro	Male	78	Takakaupule	Nukunono	-
Selina timo	M.	59.	F. Kaupule	N/Alaka	-
Pule. Omita.	M.	68.	F. Kaupule	N.K.L.	-
Mariau N	M	48	F. Kaupule	Pesea	-
Tamaki. T	M	57	Kaupule.	✓	287031
Afinae. L	F	73	Fafua	✓	-
Sauhi. Toka	F	59	✓	Nukunono	-
Sumana. Auega.	F	20	Makoga	✓	-
Peteli. T	F	44	Fafua	Nukunono	287031
Silo. F	M	50	FK	Pesea	25013

THANK YOU





## Tuvalu Fisheries Survey Data Sheets

### Attendance at Meetings: NIULAKITA COMMUNITY & FISHERMEN COMBINED AWARENESS

Target Group:		Any group meeting	
Island: Niulakita	Date:27/5/18	Surveyor 1: Filipino Makolo	Surveyor 2:Paeniu Lopati
Latitude (DD):		Longitude (DD):	

Name	Gender	Age	Occupation/Organisation	Village	Phone/Email
Teoti Tevai	Male		Land Owner		
Palelei Teoti	Female		House wife		
Minister	Male		Carpenter		
Tuaii Minister	Female		Teacher		
Sueina	Female		Nurse		
Liini Teuea	Female		House wife		
Teuea	Male		Pulefenua		
Taleni	Male		Land Owner		
Talita	Female		Pre School Teacher		
Tupou	Male		Pastor		
Ipuseta	Female		Pastor's wife		
Salaina	Female		Head Teacher		
Akesa Tupa	Female		Teacher		
Tupa	Male		Land Owner		
Lopati	Male		Youth		
Igapapa	Male		Youth		





Tuivae	Male		Youth		
Uimai	Female		MET Officer		

## 6.2 Minutes

### Fakatokaga ote Management Plan a Niulakita. (Day 1)

Village: Niulakita

Date- 25/05/2018

Koga- Salamanu Falekaupule

Facilitators: Semese.A, Siale.S, Tautalo, Kufaki, Paeniu,

9:13- Opening words from Semese followed by opening prayer from Rev.Tupou

Introduction of team members

- Emphasis on the reason to why it is needed management plans for each island

Semese: **Resources Management Plan of Niulakita**

- **To create this Management Plan, the Tuvalu Fisheries Department needs the cooperation of community members together with other relevant stakeholders in addressing issues regarding the depletion of our resources in our coastal environments.**
- **The plan is much more focused on reef species (ika ote papa)**
- **It looks into all kinds of fish or variety of fish species that are found or live in our waters and all fishing methods that our fishermen do mostly practised nowadays.**
- **All of those fishing methods should be managed properly like gillnetting because it doesn't catch fish according to sizes or the maturity.**
- **Fisheries activities then have to be created and practise in order to solve problems that our poor corals are facing.**
- **All drained wastes of households that are polluting our seas should also be managed properly.**
- **The R2R is linkage to fisheries in the sense that some of the activities that are taking place on lands can have multiple effects on the marine ecosystem.**  
(Community identifies problems on the photo shown)
- **More emphasis on reef species that are getting scarce or becoming extinct (fasua, maiava, savane, pu mo kalea, fonu, taea)**  
Reason- Due to all kinds of fishing methods.
- **Elaborations on steps towards making of management plan**



- A deeper look into the status of the island ( who are the responsible ones: issues that are visible on the island :Stakeholders)
- Identifies problems and traditional knowledge that could help eliminate those problems.
- Progress of the plan
- Monitoring of the Plan
- 5 mins break

### **Introduction of Tools for the Management Plan Making)**

#### **RESOURCE MAPPING**

#### **9:56- Vae ki Groups e 2 (Resource Mapping Activity)**

**Group 1- Tuivae, Taleni , Kufaki, Paeniu, Epusetu, Tokaga, Sueina,**

**Group 2- Tautalo, Siale, Tupou, Lopati, Minista, Teuea,Semese**

- Refreshment

#### **Presentations of the Mapping Activity**

- **Group 1 first- Presenter Sueina.T**
  - Presenting of the Island Map including highlighted areas like the church, school area, lagoon, sea passage.
  - End of Presentation.
- **Group 2 Presentation – Rev.Tupou**
  - Island Map Presentation as well.

#### **2<sup>ND</sup> TOOL- HISTORICAL PROFILE**

- All major or minor events that happened in the past must all be listed as they are relevant in the plan making (Political and social profiles)
- Semese then further explained the idea behind this is that everyone should know that some of the long-ago events has had impacts on our coastal seas, so it is important to list everything down.

#### **11:23- Historical Profile Activity 2**

- Same groups pela mote first activity (Group 1 and Group 2)



- **Group 1 presentation- Rev.Tupou**
  - **Population – 58- 34**
  - **Number of Houses- 12 then 13 then 18**
  - **Garden- Cconut trees were then planted by local community members , pandanus tree etc**
  - **Eden Garden later on**
  - **There were cows before but were all wiped out due to lack of grasses and food in which they feed on.**
  - **Hurricanes – Hurricane Bebe and TC Pam**
  - **Christianity- Molia church was first built in 1955 with local materials until 1956 in which it was then renovate.**
  - **Iosefa Mautinoa was the first pastor to the island.**
  - **Sea passage – misimooa was the name of the passage before, now the new bombing was made effective through funding by the New Zealand Team.**
  - **Plenty Kanapu nowadays compare to olden days whereas for salala where there were plentiful before but now they getting scarce.**
- 
- **Communication problems addressed with the presence of dry batteries.**
  - **LMMA – rod fishing is allowed but not scoop netting.**

#### **Group 2 Presentation- Rev.Liini.**

- **Cyclone Kina (97)- All houses were destroyed except the church and island clinic**
- **Stranded people from PNG survived on the island.**
- **The MPA was created last year only to protect resources in it.**
- **TC PAM in 2015 resulted in the erosion of the coastal areas (majority)**
- **Drought in 2011 caused severe impacts on the community: not enough water for drinking, bathing etc**
- **Radio installation in 2009 and solar in 2017**
- **Landline telephone started in 2015**
- **1983 : first pig sty**

#### **3<sup>rd</sup> TOOL – ROOT CAUSE ANALYSIS: PROBLEM TREE AND SOLUTION TREE**



**Presenter – Siale.S**

- **The activity highlights root causes that all of these problems were formed up from and to list down ways to solve them.**

**1:43 – Activity 3 Root cause analysis and problem tree**

**Same groups as previous activities.**

**Day 2: Management Plan Niulakita**

**1<sup>st</sup> Group Presentation- Liini.**

- **Traditional knowledge that maintains or keep reef species within areas nearshore are often ignored therefore those traditional knowledge should be practise and preserve again.**
- **In some points, developments of the island are often lack in progress due to the low population of the Island.**
- **For security purposes, port harbour is highly recommended.**
- **Mosquitoes problems should be solved**
- **A dumpsite should be built for dumping of unnecessary wastes**
- **Planting of plants(That could survive in sandy conditions) along coastline shores would be environmentally friendly**
- **Not enough water on the island therefore more provision of water tanks and water cisterns**
- **Need to renovate classrooms**

**Presentation 2.**

- **Poor communication on the island**
- **People fail to plant crops- Poor Governance**
  
- **Decreasing in the amount of turtles due to frequent catching.**
- **Invasive species: a major problem.(ants)**
- **Unknown shipping schedules due to poor communication.**

**Comment:**

**A need to rebuilt the causeway in the MPA area so that fish won't be able to escape when its high tide season.**



Siale. S –Priotisation – (Tool)

- **Elaborated on the ranking of issues depending on whether there is available funding support to address the issue and how the island community is capable of addressing the issues and other criteria that should be met.**

**Question: Rev. Tupou-**

**Are there exterior assistance apart from Kaupule Niutao that could fund projects that relate to current issues?**

**Group Activity – Issues Ranking- (Group 1 and Group 2 )**

Group 1- Paeniu, Salaina, Kufaki, Tokaga, Ipuseta, Tuivae, Taleni, Sueina, Uimai, Avaga Taleni, Igapapa, Tupa.

Group 2- Siale, Tautalo, Semese, Teoti, Teuea, Filipino, Minista, Tuiai, Lopati, Rev Tupou.

1<sup>st</sup> Group Presentation - Salaina

- Issues ranking-
- 1. Water scarcity (14)
- 2. Poor classrooms(14)
- 3. Poor communication(14)
- 4. Coastal Erosion(10)
- 5. Unsafe sea passage(10)
- 6. Littering (10)
- 7. Lack of developments(8)
- 8. Hard to catch reef fish (6)
- 9. Lack of vegeies on the island dues to failure efforts of people on planting (4)
- 10. Mosquito problems.(0)

2<sup>nd</sup> Group Presentation –(Siale. Suamalie)

- 1. Sea passage- Ship schedules
- 2. Invasive species
- 3. Water scarcity



- 4. Good Governance
- 5. Communication
- 6. Waste – pollution issues on the island
- 7. Poor conditions of roads.
- 8. Reef species deletion.

5 mins- Exercise (Game: problem solving)

### **Siale. 5 Presentation-Community Visioning**

**Allow the community to decide about what their vision would be stated like given circumstances like to think about the welfare of the island in future and to vision the lives of their children in many years to come or how they will be living in future. A bright future or not?**

### **COMMUNITY VISION ACTIVITY**

#### **Community Vision**

Liini- Te Lumanai O Niulakita

**COMMUNITY VISION- TE LUMANAI O NIULAKITA KOTE MEA KE MAFAI O ATAGIA I TAUPULEGA LEI, TE ILOA MOTE MALAMALAMA MOTE FAKATUMAUGA O MAUMEA, ATIAKEGA I LUGA ITE FENUA E MAUA AI TE OLA LEI KAE FIAFIA O ONA TINO.**

#### **COMMUNITY MISSION-**

- Maua te mainaga
  - Fakaleigaa tulaga taupulega
  - Fakalausea mea tau akoakoga mo atiakega
  - Ola lei o tino
- Galue fakatasi ate fenua mote Kaupule/Falekaupule o Niutao kite fakataunuga o atiakega mo taupulega lei, fakalausea te iloa mote malamalama o tupulaga gasolo, I te tausiga mote atafaiga o maumea ote fenua mote fakatumauga ote ola lei o tino.
- Galue fakatasi o atiake taupulega lei e fakatumaui ei te maumea mote atiakega mote lumanai o Niulakita.

#### **COMMUNITY GOAL-**



- Fakataunu, fakamalosi mea tau taupulega lei kote mea ke ola lei kae fiafia a tino
- Fakalaua te manuia mote maumea ote fenua I tulaga ote iloa mote malamalama o fanau gasolo
- Faite ne atiakega tutumau
- Ko lava te iloa mote malamalama mo taupulega lei , kae ko faigofie te fakatinoga mote fakataunuuga manakoga fakafenua ki atiakegaa tutumau mote ola lei o tino

### **Management plan – Day 3**

#### **8:09- Opening prayer**

- Recap ( Semese)

#### **Presentation- Developing a Management plan (Siale)**

- SMART – Smart Objectives
- Briefly elaborated on the SMART OBJECTIVES

#### **Example of a plan-Funafuti Monitoring plan**

#### **Groups Activity-(Developing of the Management Plan)**

**Group 1 – Semese, Teoti, tautalo, Siale, Teuea, Filipino, Minista.**

**Group 2- Tokaga, Iga, Paeniu, Sueina, Tuivae, Tupa, Taleni.**

#### **12: 00 – Group Presentations**

**Group 1: Presenter (Akesa)**

**Group 2: Presenter (Tautalo)**

**End of Presentations**



#### **Day 4: Management Plan (Niulakita)**

9:50- Opening words from Semese followed by opening prayer from Rev.Tupou

- Presentation- Monitoring plan

End of Presentation

#### **Activity- Monitoring Plan Making**

- Combine activity for the monitoring plan making.
- Community working for the monitoring plan making.

Monitoring Plan done

#### **End of Management Plan and Monitoring Plan**

#### **Ponoga ote workshop- 29/05/2018**

8-00- Opening words from Semese

- Blessing of food

#### **Presentation- Management Plan and Monitoring Plan (Siale)**

- No comments

Attendance- Rev.Tupou, Pulefenua Teuea, Igapapa, Lopati, Lusifelo, Tokaga, Uimai, Salaina, Filipo, Kufaki, Teoti, Akesa, Palelei, Talita, Tuiai, Seiloga, Tupa, Lototasi, Tiale, Semese, Minista, Lynn.

#### **End of Presentation.**





## **Community and Fishermen Awareness**

Koga: Salamanu

Time: 7:00pm

Facilitator: Semese.A

Presentors: Paeniu, Tautalo, Filipino

Presenter- Tautalo (LMMA)

- Elaborations on LMMA
- Brief explanation on what an LMMA is where LMMA is a protected area where endangered species are protected from getting extinct and also an area of near shore waters and coastal resources that is largely or wholly managed at a local level by the coastal communities.
- Went further on to elaborate “No take zones” whereby fishing is totally ignored or fish are strongly prohibited from taking.
- The needs to create LMMA areas were based on the many reasons but one of them is the depleting of coastal marine resources. Therefore LMMA became the solution.
- Species richness is one of the evidences that prove the LMMA is working.
- LMMA is important because it provides lots of opportunities to local communities in terms of earning money from fishing sales and it promotes the community reputation in terms of their marine resources.
  - (shows the photograph of the island LMMA)

(End of presentation)

Comment – to include the MPA area into the island LMMA because it has already been marked by the island.

Presenter- Filipino (Sea safety)

- It is important to go out fishing on bright fine sunny day.
- The 5 minute that could save you is necessary to plan everything that a fisherman should need to do before the fishing trip.
- Proper checking of the engine should be done
- Make sure to check your boat to see if it leaks or not
- Make sure you take your safety grab bag with you in case something bad happens during the trip.
- Make a list of all fishing gears so you could check them when you’re back.
- Don’t forget to take water at least a bottle of water or some food with you
- Kind reminder to all fishermen to not use channel 16 because that is only for emergency cases. Thus it is good to use other channels apart from that channel.

Reminder: Please be reminded to take your grab bag with you but most especially to check that you have everything contains in that bag, before you departs.



Nelly- A need to provide good PLB with 100% percent full battery for all fishermen for security purposes.

Q- How strong is the PLB?

End of presentation.

Presenter- Paeniu.L (CFP)

- Why do fish get poisoned?
- Why do people get poisoned when feeding on these poisonous fish
- Canoe and boat survey
- Cambia is the poisonous thing that fish get when they eat weeds
- The bigger the fish the stronger the accumulation of the poison is.
- When fish has this poisonous thing, it doesn't harm them. However, only people get poisoned when they consume it.
- Funafuti has the highest number of CFP cases so far.
  - In year 2012, a lot of CFP cases were found from people who ate Maiava
- The drought in 2012 resulted in the healthy growth weeds that enable the accumulation of the Gambierdiscus toxicus (Poison) in them.

End of presentation

Questions and Comments

- A poisonous fish should not eaten, especially the head and all parts in the stomach as they have the high concentration of the poisonous thing.
- Will fish get poisoned too?
- For how long will that poisoned fish has the Gambierdiscus toxicus (poison) for?
- How about oceanic species?
- If a poisoned fish spawns, will its offspring get poisoned too? So if they do, then they will have to carry that poison thing as they move?
- What kind of places are those weeds likely to be found at?
- One reason of fish poisoning is due to ship wrecks that are found in seawaters. They caused fish poisoning in areas surrounded.
- Are there any ways to prevent people from eating a poisoned fish?

End of Program



## Minutes (24/05/2018)

### School Awareness (Niulakita)

- 11:00 am – Program starts
- Kufaki started presenting on Marine Biodiversity and food chain
- Asks students questions on food chain and marine biodiversity.
- More elaborations on Food chain.
- Encouragements for a good management of our marine resources
- End of presentation.

#### Questions

- Is there any fish that feeds on seaweeds?
- I think it is important that we should not only put the blame on people for the decreasing amount of reef species like you said but we also need to take into consideration the fact that oceanic species feed on these little fish as well. How about that?
- Manakoga: Can we farm the Mahimahi in the Vaivai?(Lagoon name) - (tali kite fesili a Akesa)

### Presentation of Climate Change and Coastal Fisheries (Tautalo)

- Awareness on why we should manage our coastal fisheries wisely.
- Informing kids about different species live in our coastal waters
- More emphasis on corals
- More emphasis on Climate change and its impacts on corals and livelihoods.

### Presentation of CFP and Fish Poisoning (Paeniu)

- Fish Poisoning Awareness

#### Questions

- Acknowledgement from the Head of the School.
- Will tupa get poisoned?

### End of program



## **Minutes**

### **School\_Awareness\_Nukulaelae**

Koga- Avafoa III

Time: 12:30pm

Attendance:

Presenters: Kufaki, Tautalo, Paeniu

First Presenter: Lotokufaki.Paka(Marine Biodiversity and Food Chain)

- Introduction first
  - Introduction of team members
  - Allow students to show which fish is which on the picture  
In which the picture includes turtles and other reef species as well.

#### Give room for students to think about the importance of corals and sea weeds

- Elaborations on food chain (Herbivores and Carnivores) and primary, secondary and tertiary producers and consumers ,how energy is being flowed along these producers
- Gave a clear status of the marine as of now.
- Question: Name one of the many effects that are visibly seen destroying our seas?  
Answer: littering is one.
- Presenter then gave encouragements to children in protecting our seas

#### End of presentation

**Presenter: Tautalo (Coastal Fisheries and Climate change)**

- **What is Coastal Fisheries?**
- **Photos of colourful corals which mean healthy corals and healthy ecosystems are being showed for children to see.**
- **More emphasis on climate change.**
- **More photos on climate change - (Threats to coral Reefs) Climate change =Ocean Change.**
- **Coral Bleaching and its impacts: Dead corals can grow again if the condition of the sea goes back to normal.**
- **Encourage students on ways to keep our coastal areas clean and healthy.**
- **Give room for students to ask questions**

#### End of Presentation.



**Last presenter: Paeniu (Fish poisoning)**

- Detailed elaborations were made on Fish Poisoning.
- Herbivores species are the first receiver of Cambia poison as they feed on sea weeds
- Photo of variety of fish – showed to children

#### Questions

1. Those are only the conditions where that weed can be grown in?
2. Are there any seasons where that kind of weed could be seen in seawaters?

#### End of awareness

#### **Nukulaelae Community Awareness.**

**Date:** 1/06/2018

**Koga:** Avafoa III

**Time:** 8:00pm

***Presenter: Creel Survey (Siale)***

- A brief elaboration on the Creel Survey, why it is done and its importance.
- Siale then went further to present Creel Survey report of Nukulaelae for Year 2017.

#### **Questions and Comments**

- Why did this creel survey start in June 2017 for us, unlike other islands that were all started at the beginning of year 2017?
- It is so sad to hear that we, fishermen, do not used FADS (according to data presented ) but we have been waiting so long for a FAD to be installed in our sea since the last one that we had had been broken quite long now.
- Could you let us know about how your data collector works, the days exactly because we hardly seen him at landing sites of fishermen when they arrive?
- We really need a FAD to be installed in our sea for convenient fishing.



- Who are the ones responsible to create laws or bylaws to protect our coastal resources?
- Up until now, there hasn't been a report that states all the laws that prohibit all these illegal fishing actions on the island.
- Recommended from the coastal team that fishermen should tie green coconut leaves onto FADS to attract fish.
- Like is there a special fishing method that specifically catches matured fish?
- A need to know the spawning seasons of fish species so we can give fish chances to spawn according to their spawning periods. An Umu usually spawn once a month whereas a kanase breeds twice a month

### **End of Presentation and comments**

#### **2<sup>nd</sup> Presenter: LMMA (Tautalo)**

- Briefly explained why LMMA exists, the importance and why it is relevant to our future generations.

### **Questions and Comments**

- How would you define an LMMA from an MPA?
- Spear fishing is not allowed in our LMMA areas until March next year. (Spear fishing usually opens for four months)
- A need to provide fishermen with the list of fish and their matured length so that they could aware of.
- How would you assess the richness of fish in those protected areas because sometimes fish stock moves?
- Will climate change affect the livelihood and welfare of marine lives in the sea or in conservation areas? (LMMA areas)



- So LMMA areas were assessed and chosen according to conditions like, the richness of that area in terms of marine species and the need to protect endangered species in those area, that are prone to becoming extinct.
- A need to have more protected areas especially now that all fishermen have GPS that could plot these patch reefs fishing areas that elders think could have been protected from overfishing.
- In order to choose LMMA, it is recommended to choose an area rich of corals so that fish could live healthy and they could breed freely as well.
- A cyclone in 1991 had severe effects on coastal areas around of the island especially that it buries corals that is suitable for the growth of fish. Now that they are dead, possibilities that fish could migrate to other places for survival.
- Unlike before, fish usually come onshore in which people in the olden days find it easy to collect for food.

#### **Presenter- Fish Poisoning (Paeniu)**

- A brief explanation on fish poisoning and awareness on how dangerous fish poisoning is.

#### **Comments and Questions**

- How would you treat that poisoned weed if it is accumulated in an area because fish will likely to get poison too since fish feed on them?
- We are now aware of some of the reasons to why people get poison, before people used to get poisoned from Ulua that are usually fished around areas where ship wrecks are but now it is safe to fish from those areas.
- Will oceanic species get poisoned too or not?
- If a ship sinks, like how many months after will the surrounding area get the poisonous thing?



- 1922-1948 – Years where poison got first discovered here in Nukulaelae.
- Majority of corals in the Asaga are dead, only a few remains, therefore we think that it is best to conduct a survey to see the marine status of the place.
- All recent workshops on the island where talks on marine issues: dying corals from harmful creatures and all other issues regarding sea resources were all raised thus projects to solve the issues were recommended, as of now nothing have been in action so wanting to have those prone-coral areas surveyed is a high priority.
- Are there any ways of protecting a person from getting poisoned while eating a poisoned fish?
- Can the eel be poisoned?
- A crisis in 1982 along the reefs next to the asaga where corals were all wiped out, majority of reef fish were dead, that resulted from the drying out of the sea in those reef areas happened for one week. So what could be the reason behind that? Badly need an investigation.

## **End of Presentations**

### **Fishermen Awareness Nukulaelae (Minutes)**

**Date: 4/06/2018**

**Koga: Avafoa III**

**Attendance: (Attendance form)**

**6:30- Devotion**

**7:00- Program starts**

- **Dinner first then followed by presentations**

### **Presentations-Filipo and Paeniu**

First presenter: Filipino (Sea Safety and FADS)

- Elaborated on the 5 minutes preparation that could save the life of the fisherman.
- Touched on sea safety and the use of FADS





### FADS

- Encourage fishermen to tie green leaves onto FADS
- Reports of any issues regarding FADS should be report to TFD
- Penalties to those who do not follow the regulations of FADS usage.

### Questions

1. We think that the 3 months in jail is too short, one year will do
  2. If that person cannot pay the amount, can be easily admitted to prison?
  3. In maintaining a FAD, how about you provide diving gears so we could know what is happening to the FAD through frequent check-up on FADS?
- **Checking of Grab Bags and GPS training**
    - Closing remarks from the President of the Island Fishermen Association (Tavita)
    - Acknowledgements for such a fruitful workshop.
  - A need to make sure each fisherman holds the right bag as registered as there has been a lot of confusion about which bag goes to who.

### End of Awareness Program

### DAY 1 Nukulaelae Community Integrated Management and Monitoring Plan

**8:40am** Workshop commenced. Word of greetings and welcome address by Kufaki followed by the Pulefenua

**8:50am** Ground rules presented by Kufaki

**8:55am** Kufaki presented on the purpose of the trip to Nukulaelae, explaining in terms of creating a management plan. She focused on using Fisheries as a primary example on developing such management plans due to such issues/problems that have a negative impact on the livelihoods of the people. In link with the problems in the sea may be the cause that arises from the land. Human activities on the land all end up in the sea and may cause problems for the organisms and species in the marine ecosystem. Kufaki concluded on the importance of carrying out survey on knowing the exact status of the marine and land resources in order for making a management plan in the managing of our natural resources that sustains the livelihood of the people.

**9.15am** The Pulefenua Fiavaai gave a word of thanks to the team for the presentation and the knowledge and information that was presented. He relayed his opinion on the issue of overfishing which is highly common in the island mainly to catching small sized fish



while they are well-aware that these have not yet breed other fishes as these have not yet reached maturity level for reproduction. However, he believes that other issues will be raised and more discussion would open and encourage the people to do right instead of being ignorant.

**9.18am** Another man from the audience also thanked for the presentation that was presented, with the information presented and the importance of holding such awareness so that everyone shares the same information and are all on the same page especially before making of management plans.

**9.20am** Then moving onto the development of the management plan, Siale Suamalie talked on the first tool which the “Resource Mapping” that is having a visual outlook on the resources that are present on the island. Then he divided up the groups into four which is: i) Kaupule/Falekaupule ii) Women Group iii) Youth iv) Fishermen Group.

**9.25 am** everyone moved to their groups.

**10.05am** Group Presentation on *Resource Mapping* began.

The first group to present is the Kaupule and Falekaupule. Tembeti presented on behalf of the group.

One issue they identified is that the soil is covering the corals and they result in many/most of the corals being dead.

Another is the invasive limu that is thriving and is killing or not allowing other organisms or living things to thrive.

They are problems/issues identified to be affecting the lagoon of the island.

An additional issue was the access of ships into the island, in which their anchorage damages the corals and wastes encourages unwanted algal bloom to thrive.

Solution: Demarcate buoys to indicate the restricted area only for anchorage of all ships.

Another member presented from the same group on the development/housing on the islands.

**10.16am** Fishermen Group presented.

The group presented on their map, and added on to the first group, the issue of the *Umaga*. One of their members presented on the different icons that are represented on their map.

Another problem he mentioned is tuamotu (outer-reef), whereby due to the changes of climatic patterns is moving majority of sand that affects the turtles on the island.

Another issue shown on the graph is the Ava (passageway) especially the kilikili (rocks/pebbles/pebble-like stones) that are increasing over time and rapidly.

Also the anchorage of ships along the marine coastlines that is endangering the corals.

Fasua are found in the outer-reef (kautua) but not really inside the lagoon except in the farthest scattered and small islets (motu likiliki).

There are reef patches named taulaga (fishing hotspot) by the elders. One of the impacts is because these are now showing above water (decline in sea-level) thus are affecting the fishing effort especially for households.

One of the islet Kalilaila is now gone and it showed a great impact to the island of Nukulaelae.



Auega raised a question if the fisherman can elaborate on their knowledge – Fatu o tautai (reef patches chosen fishing ground hotspot). They replied on sharing for everyone’s information. These are: Tefota, Saliga a Sione, Fogalei, Fatu vaega, Fatu papa, Fatu Kupega, Fatu Asia, Fatu likiliki, Fatu o tautai mai tua o Aula, Fatu mai tua o Teafaga, Fatu o Manu, Fatu I Fale-Atua. Akau I Vao-niu, Akau Pala, Akau a Onosemu, Akau a Filemoni, Akau a Petelu.

Women raised a query that there are some places foreign to them.

A fisherman replied that these places are knowledge passed down through generations and are relevant and known to a fisherman maybe that is why women are not aware.

Also, women raised if they can know the locations for the collection of panaea.

Filipo from the group of Fishermen replied those Strawberry/tiger conchs (panea) are found all around the island, including rough turban (alili) as well. Thus, it does not limit or any problem/issues in locating.

**10.25am** Recessed for morning tea

**10.45am** Workshop recommenced.

The Women Group were the first one to present on their findings and work.

One lady presented on behalf of the Women Group.

They identified different kind of fishing methods that are banned in different section of the lagoon/sea (coastal area).

There are some of the islets that have disappeared due to coastal erosion.

They marked spots that are allowed for fishing but are banned with some fishing methods.

Kufaki asked on behalf of the team the reasons as to why the islets have disappeared.

They said due to climate change and the movement of the sea.

In elaboration to the answer, Lotonuu answered on behalf.

Motu muamua – Moving of rocks from the islets due to the development of the island

Motu Maika – It happened from the huge movement of rocks, sand and soil to be used for the development of housing and buildings on the island.

Motu Kalilaia – Its huge from most of the island, however it has now disappeared.

All housing and buildings on the islands are built from the rocks, sand and soil from the islets, as well as the CFC.

The presenter summarized that it could be due to the Climate change and from the rocks, pebbles and sand from the islets that have both be contributing factors to the reason as to why the islets disappeared.

Semolina asked that they are some islets that have also have sand and pebbles taken from them but are still standing with an example of the island. Lotonuu corrected the name that Semoline gave since it is incorrect.

**10.55am** Youth group presented.



Lanu presented on behalf of the group. She started off with the symbolised or the important places on the island. She mostly stressed on the important icons that are of great significant or relevant to the Youth Group from the church to the courts or other places where they do most of their activities.

One of the places that they identified as the most affected area is where most of the sand is being flooded out that is burying the corals. Auega asked that they are not taking into consideration the impact of soil erosion in front of his land.

Lanu replied that previous survey and studies undertaken in the previous years and continuing onwards that though there are some lands that are depleting, there are lands that are increasing or sedimentation is involved.

**11.05am** Siale presented on the second tool “Historical Profiles” on the different issues/events that may have happened on the island from the past right up to now.

**11.10am** Participants were divided again for their groups.

**12.00am** Group presentation for the Historical Timeline begins.

The Youth Group first presented on their findings and information. They began on the recent events/factors that occurred on the island or those that have impacts on the island and the people of the island. Sepoima Kilei presented on behalf of the Youth group and continued by the Pisi. The group started with the most recent events as of last month to the dated events that occurred in the past that they can recall or are of most relevance to them.

Historical Timeline (Year and Significant Events)

May 2018 – Flooding on the island, destruction to personal properties, houses and local thatched houses, pig pens, coastal shorelines, electricity and land crops.

July 2015 – First Gold medal at the Olympics: Championship for Powerlifting from one of its own Telupe Iosefa.

May 2015 – Tropical Cyclone Pam: Destruction to household housings, plantations and pig pens.

May 2014 – Construction of the community water cistern

2013 – Formal opening ceremony of Peteli II

2012 – Tualoto: Reconstruction of the access passageway to the island.

2011 – Drought: Limited water on the island, and dying out of land crops.

150<sup>th</sup> Anniversary Celebration of Christianity on the island.

Peteli I demolition – Demolishing Peteli I.

2010 – Construction of the sea wall and monument at Olataga.

2009 – Youth Event: Get-together of all Youth representatives of Tuvalu on Nukulaelae.

2008 – Win Tuvalu Games: Nukulaelae team of the Manu-Laeva won championship at the First Tuvalu Games

2006 – Seminar of the Congregational Christian Church of Tuvalu (Ekalesia Kelisiano Tuvalu) with gathering of all the congregations from the various churches and islands.



Formal opening for Faikimua Primary School

2005 – Construction and formal opening of Teakaufakalava.

May 2000: Fire breakout at Motufoua: Passing away of dear ones of the nation.

Hurricane events:

Kina 1993: Destruction to land crops.

Ofa 1990: Strong winds causing destruction to houses on the island.

Alikeni 1972: Impacts of the hurricane on the island resulted in collapsed houses and land crops.

Other events:

1982: Lagoon dried for a whole week killing of fish species and all marine organisms, corals. Able to drive motorbikes to the islands from the main island of settlement.

1922: Shipwrecked (Eneleta)

1861: Arrival of Christianity – Gospel of the Good News to Nukulaelae

1989: The day when Youth and all the active people of the island went to catch the wild pig in the islet.

Tembeti queried that it is important to input the timeline according to the order of sequence that they occurred.

**12.00am** The presentations then followed by the presentation from the Fishermen Group.

They started with the Kasaga of a ship on the island, and then followed by the Introducing of the Talalei to the island.

The number of people were much higher but decreased after he returned. This is because were stolen on the ship.

The Captain lied to the people (Blackbirders) that the ship will take them to Elekana, from the people that were stolen and taken; a population of 50 were left behind.

Ciguatera fish poisoning was quite evident in the previous years due to the shipwrecked in the marine areas, but has greatly decreased over the recent years.

Another event that has great impact on the islands are the hurricanes or strong winds that occur on the island that led to water shortage, dead plants and affect the vegetation of the island, it also led to the pollution of the sea due to rubbish.

Another aspect that the Group of Fishermen looked into were the different type of fishing methods that were usually practiced in the past until now. Some are still practiced but are not like the past, some are rarely seen and most of the fishing methods are no longer practiced.

Then they moved on to the fishing methods that are still practiced and carried on or were practiced in the past till now.

Lotonuu asked that sana is not a Nukulaelae fishing method but was introduced.

Tembeti wanted to know more about the fishing method called ponopono.

Reasons as to why these are no longer practiced:



- Most of the recent practiced fishing methods are most effective and they caught more fishes. The recent fishing methods were recently introduced and seen to be more effective thus are practiced.

**12.23pm** Then the Women Group presented.

They covered the events that have major impacts on the island such as the population, number of housing, the type of fishing methods, inundation of land, Gospel, other development construction such as the building of the seawall, the maneapa Avafoa 3, the schools Faikimua, electricity, and weather.

They also included development from the government agencies that helped the island to develop.

**12.30pm** The Kaupule/Falekaupule group presented.

They started from the World War II as the events that have major impacts to their group.

1862 – Traders took people from the island – human trafficking (People were stolen after Elekana left to go and study at Samoa)

1861 – Elekana arrived on the island of Nukulaelae, arrival of Christianity (Good News Gospel)

He touched on Hurricanes as they had a huge impact on the island and also destroyed a lot plants/trees and crops/vegetation on the island.

One of the issues is that people are not aware/affected, not well-informed on the changes/climatic patterns that occur due to building an unsuccessful seawall for the island that did not work and was not able to serve the purpose that it was built for.

2011 – Drought even had a huge impact especially in terms of shortage of water but led to having negative impacts on a lot of other factors. A disease outbreak from this event upon livestock especially chicken, roosters and ducks.

2018 – Due to the Low Pressure upon the South Pacific islands led to a huge wave that blocked the roads with huge rocks that require labor to remove the rocks.

There was no governance system in place before for the island but the regulations and laws of the island were established by the elder people of the island and passed in the Falekaupule.

Falekaupule (Mataniu)

The population greatly decreased from the past due to the Blackbirders arriving on the island, but have gently increased over the past years.

The type of fishing methods that were practiced was a few but gill net fishing were introduced especially by those from Banaba and Nauru. In the past there were no gillnets, spears, hooks and spears.

In times of appointing a new chief to govern the community, the community is given notice of the time as well as the menu during the ceremony, usually matched menu from all the families for the event, which is the main customary during the recent times but most are not sure of what used to happen in the past.



12.42pm Kufaki wrapped up the discussions and asked Tembeti to give a word of thanks for the food. Tembeti blessed the food.

12.44pm Lunch

1.18pm Commenced on to the next tool

1.20pm Siale presented on the Root Cause Analysis Tool.

2.20pm Kufaki reminded the participants in each groups that there is only 10 minutes left to work on the given activity then the presentation of the work will be done tomorrow.

2.30pm Concluded for the day.

Day 1 workshop successfully ended.

### **NUKULAEALAE DAY 2 – 5<sup>TH</sup> JUNE 2018**

Facilitator: Fakatokaga Namoto

Presenter: Siale Suamalie

Pusi Sogo: Lotokufaki Paka

Time Keeper: Tautalo lese

Ice Breaker: Filipino Makolo

- ❖ The programme was relayed by the facilitator together with the recap from the previous day (Day 1) of the workshop.
- ❖ Word of prayer by Galuafi Moeava
- ❖ Presentation on the tool on *Community Vision*; vision, mission and goal.

More elaboration was on helping the community understand each component on the tool in working towards achieving the vision.

#### **Vision**

**Te manuia mo te ola lei o tino o Nukulaelae mo te tausaga 2025 ka mafai o fakataunu e auala mai ite lei o akoakoga, tumau te maumea, taupulega lei, ke galue kae aofaga tasi ona tagata kae fakavae katoa kite Atua mo te manuia o te ataeao.**

**Wealthy and Prosperity of Nukulaelae people by 2025 can be achieved through proper training for sustainable development, good governance and work together in God's name for a successful future**

#### **Mission**

**TE MAOPOPO, TE MALOSI, MO AKOAKOGA, SE KILOGA MAO E FAKATUMAU EI TE MAUMEA MO TE LUMANAI OTE FENUA O NUKULAEALAE**

**Unity, strength and training is a long term goal for a future sustainable economic development of Nukulaelae**

**Goal: Ko fiafia tino Nukulaelae me ko oti ne fakataunu a aofaga mo akoakoga ke oko ki taupulega lei kola ko oti ne palanigina.**

**Happy were the people of Nukulaelae that plans for projected training and good governance have been achieved.**



## **GROUP PRESENTATIONS FOR ROOT CAUSE ANALYSIS & SOLUTION TREE**

### ***Falekaupule & Kaupule***

The following are problems and their proposed solution by the individual groups.

1. Coastal erosion – climate change such as sea level rising, strong winds and tropical cyclone, storm surges, development and constructions, massive use of sand and pebbles/rocks as well as the lack of knowledge and understanding.

Proposed solution – Planting of huge trees such as fetau, kanava (local names) etc., construction of a seawall, discontinue the bringing of sand and pebbles/rocks from coastal shoreline and coastal areas, construction of fakapae? Paefatu

2. Littering of rubbish – hard for people to follow as well as the disobedient of people, not using the rubbish dump site, not enough understanding, not enough waste disposal containers, no fence at the dump site to segregate the area permitted for dumping rubbish, not enough time for Waste officers to clear the rubbish properly.

Proposed solution – Increase awareness programs, respect and love your home island, create a by-law for bringing in non-biodegradable products and rubbish to the island, as well as careless littering of rubbish, build a fence to designate the dumpsite and obtaining recycling machines to be of use.

3. Decline of marine species and various fish species – due to overfishing, excessive fishing of juvenile fish, introductions of various new fishing methods such as gill netting and spear fishing, reef patches fishing grounds are now covered with sand killing many of the corals, also climate changing resulting in migratory of fish species.

Proposed solution – Make a by-law for the seasonal fishing methods, continue and strengthen coastal shoreline campaigns, make a by-law for the use of fishing gears for the different spawning seasons of fish species e.g. fishing hooks, gill net, also to strength fishing matured fish only that have birthed other fish species. Also survey of the dead corals around the island can be conducted to review the condition of the corals and extending the *locally managed marine area (LMMA)*.

4. Hard to find coconut crab compared to the past – overharvesting of coconut crab, taking of coconut crabs to Funafuti, many local traditions and customs that requires coconut crabs for the festivity events, invasive crazy ants species killing coconut crabs.

Proposed solution – Make a by-law for the allowed times for catching coconut crabs, regulate festivity events for the need of coconut crabs, contact the departments of Health and Agriculture to help with the crazy ants invasion.

5. Rare edible birds (local birds of lakia, gogo, kotaa) – excessive bird hunting, polluted noise, few huge trees thus no nest for the birds to lay eggs on, disappearing of reef patches (due to sea level rising)





Proposed solution – Make a by-law for bird hunting, strengthen and teach the young generation by passing on to the knowledge of the traditional method of hunting birds by the use of a scooping net.

6. Rare found of turtles – Excessive hunting of turtles, killing young turtles that haven't birthed.

Proposed solution – Make a by-law for hunting turtles as well as taking/killing young turtles.

The facilitator then opened up the floor for questions and comments from the presented work from the Kaupule and Falekaupule group.

*The following questions and comments were raised by the seated audience:*

**i) What materials do you plan on using for fakapae?**

**Ans: coconut husks**

**(E fai kia a fakapae? Ki putu niu)**

**ii) And what are you planning on filling it with?**

**Ans: With coconut leaves**

**(Kae fakafonu ki aa? Ki launiu)**

**iii) Who will be responsible for making a by-law for the recycling of various kinds of rubbish?**

**iv) Concerning the dump site, what is the condition of the area as storm surges are huge problems to the area.**

Then moving on to the Womens' Group:

1. Coastal erosion (Kaina o te laukele)
2. Encourage women's participation and involvement in the community affairs
3. Problem on cutting the fish heads for the CFC standard
4. Bingo is a huge problem that is taking up all the women's time in the community.
5. The Women's Handicraft Centre is not effective at all – There are now 2 buildings constructed solely for the purpose of selling women's handicraft but most women are not making handicrafts or using the centre to sell their handiworks.

A question raised by the women during their presentation wants to know the authoritative power that permitted only headless/decapitated fish in the CFC. The women wanted if there can be some sort of recommendation and views on the CFC again considering as most women are not satisfied with permitted fish to be sold at the CFC are only the headless/beheaded fishes.

Moving on to the Fishermen Group and their presented issues and solutions.

1. Channels are closed (Saliga ko pono) – these channels are now closed due to reef patches.
2. Improve management of fishes – an expert on the area of fisheries management is needed to help improve the fisheries condition on the island.



3. The beheaded of head fish when being taken to sell at the CFC – salted fish, Fisheries have to appreciate and take into consideration the fact the fishing effort of the fishermen and their costs on fuel and other additional costs. Thus it would be highly valued if the matter of permitting only decapitated fish to be sold at the CFC is to be reconsidered.
4. NAFICOT on Funafuti perished due to the issue of beheading fishes’ heads. The heads and internal organs of the fish can still be sold out to people such as for the pig’s food.

After the Fishermen Group presented, it was the Youth Group (Talavou):

- ❖ Prioritization of problems in which problems have a highly more impact on the people.

YOUTH GRP		
Problem	Cause	Solution
1. Decline of marine species	Excessive fishing of non-matured fishes that have not given birth to other fishes.	<ul style="list-style-type: none"> <li>• Make a by-law for the size of fishes to be caught</li> <li>• Increase awareness for fishermen</li> <li>• Make a by-law for the management of fisheries</li> <li>• Extension of the LMMA – have an MPA on the island.</li> </ul>
2. Lack of resources for developments and projects coming on the island	Lots of developments happening that are using up the natural resources, buffers for the island.	Make a by-law that any development/projects doing any sort of work/development on the island have to provide all necessary materials for the job e.g. stop taking sand and pebbles/rocks from islets and coastal areas.
3. Waste	Proper buildings codes for septic tanks are not enforced, as well as for piggery, waste, oil spillages, by-laws are not	<ul style="list-style-type: none"> <li>• Improve or introduce waste recycling – for fertilizer.</li> </ul>

	enforced or strengthened, lack of rubbish bins etc. for dumping wastes, lack of awareness.	<ul style="list-style-type: none"> <li>• Reinforce building codes for septic tanks and piggeries.</li> <li>• Reinforce laws on waste recycling and littering.</li> <li>• Improve assistance from the Waste Department on awareness programs on wastes</li> </ul>
4.Salt spray	Climatic changes	<ul style="list-style-type: none"> <li>• Planting huge trees along the coastal shorelines</li> <li>• Reduce cutting down of trees along the shorelines or making vast clearings</li> <li>• Plant trees that offer coastal protection or are natural buffers e.g. mangroves</li> <li>• Minimize the use of fuel and other means that contributions of carbon dioxide into the atmosphere</li> </ul>
5.Poor communication	Poor condition of the building and having low capacity of staff working at the Telecom base.	<ul style="list-style-type: none"> <li>• Improve telecom services</li> <li>• Improve facility, tools etc</li> <li>• Awareness program</li> <li>• Disseminate and circulate to ensure that</li> </ul>



		the Kaupule on the outer islands are on the same page with new policies and movements that have been approved or are in motion on Funafuti.
6. Expensive costs of products at stores	Low wages for the income earners and workers on the island	<ul style="list-style-type: none"> <li>• Reduce cost of fuel</li> <li>• Reduce costs of products in the shops</li> <li>• Multiply financial assistance from the government agencies</li> </ul>
7. Water shortages	Not enough water storage capacity	Build a community water cistern and add water tanks per households.

<b>FISHERMEN GRP</b>		
<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
1. Closed channels	Strong winds, storm surges Deposition of sand and pebbles/rocks closing off the channels	Removal of these deposited sand and pebbles/rocks – requiring external help
2. Unsafe access passageway	Currents, waves and strong winds	Construct lights for the old channel passageway Bomb/blast a new channel behind Vaiafua
3. CFC	Lack of tools and machines in the building for the running of the Fisheries on the island. Not all fish species are permitted to be sold at the CFC. Beheading of fishes heads.	Have maintenance for the machines inside the building such as freezers, ice broker, generator, renovate the facility, coolers etc. Permit all fish species to be sold at the CFC.



		<p>Restrict cutting of heads of fish. Continue salted fish. Improve the staff capacity to work at the CFC in running the services. Improve Fisheries management especially to align with the needs of the fishermen on the island as they are aware of contemporary issues and know the best methods to improve their CFC.</p>
4. Mechanical Problem, boat (welding), horse power	<p>Lack technical training No spare parts</p>	<p>A supplier to be set apart from the Fishermen Group to mainly deal with mechanical problems such as in ordering and supplying of the required needs of the fishermen</p>
5. Expensive cost of fuel	<p>Shipping freight (business – locals)</p>	<p>Propose to the government (subsidies). Construct a fuel business only for the fishermen on the island.</p>
6. Not enough fishing gears/equipment	<p>No supplier to supply such fishing gears and equipment</p>	<p>Find a supplier</p>
7. Less fishing time and effort	<p>Developments on the island are taking up most of the fishermen time, energy and effort</p>	<p>Increase the cost of kilos per fish</p>
8. Lack of awareness and knowledge on the spawning seasons for the various fish species	<p>No conduction of awareness or survey for the spawning seasons of fishes.</p>	<p>Enhance awareness workshops and educating fishermen on the spawning seasons of the fish species</p>
9. No VHF base station	<p>One VHF per grab bag VHF signal is weak over miles</p>	<p>Construct a VHF base station</p>



10. Few turtles found on the island	Mismanagement of turtles Hunting/Killing of pregnant female turtles before giving birth	Ban hunting of female turtles or most importantly pregnant female turtles Demarcate LMMA for years
11. Saltwater intrusion into the community plantation land pit ('Pua e suatai kite laukele(umaga))	Storm surges and king tides	Construct a cemented wall

**FAFINE - RANKING**

1. Littering of rubbish
2. Disease breakout
3. Coastal erosion
4. Underappreciated of women their position in the community
5. No sources of income
6. Lack of pandanus leaves (kie)
7. Unjust Policies and regulations of the fisheries market.

**YOUTH - RANKING**

1. Expensive costs of products and goods at the shops
2. Lack of awareness
3. WASTE – septic tank, piggery and rubbish wastes
4. Lack of resources for developments and projects
5. Lack of capacity for water storage
6. Salt spray
7. Decrease of marine species
8. Poor communication

**FISHERMEN - RANKING**

1. No VHF Base station
2. Decline in turtle population
3. 'Pua access resulting in salt water intrusion into the community plantation land pit
4. Lack of awareness on the spawning seasons for the fish species
5. Mechanical problem



6. Unsafe access passageway on to the island
7. CFC
8. Expensive costs of fuel
9. Not enough fishing gears/equipment
10. Less time for fishing
11. Closed channels for schools of fishes

#### KAUPULE/FALEKAUPULE - RANKING

1. Careless littering of rubbish and wastes
2. Coastal erosion
3. Decline of marine species
4. Hard to find coconut crabs
5. Decline in population of edible birds
6. Decline in the turtle populations compared to the past

### 6.3 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"/>	<b>How many others:</b> Ate this meal?
Bivalve <input type="checkbox"/>	Outer reef <input type="checkbox"/>	Smoked <input type="checkbox"/>	Other <input type="checkbox"/>	
Other mollusc <input type="checkbox"/>	Ocean <input type="checkbox"/>	Pickled <input type="checkbox"/>	Specify:	Felt sick?
Specify:	Specify:	Specify:	Specify:	Were admitted to hospital?
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.



## 6.4 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):	
<b>C1 Basic Information on Fishers</b>			
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.e. exclude closed months)		months fished	
What fishing methods do you usually use (over the last year)?		Method 1:	
Method 2:		Method 3:	
Method 4:		Method 5:	
Where else do you land your fish? What other locations? (List by priority and use map)			
Most often	#	Location	# trips/month
↓	1		
	2		
	3		



	4	
Least often	5	

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)*

Species Name	cm	kg	cm	kg	cm	kg	cm	kg	cm	kg




**C5 Effort data for CPUE**

How many hours spent fishing today? hrs

Fishing method / gears used for each species group (separate pelagic fish, reef fish, crabs, lobsters etc) and how much they cost the fisher to buy

#	Species / Group	Methods / gears used	Cost buy
1			\$
2			\$
3			\$
4			\$
5			\$

Did you have any gear losses during this fishing trip? What and how much to replace or repair?

#	Gear	What loss / damage?	Cost r/r
1			\$
2			\$
3			\$
4			\$
5			\$

Please list any other costs of this fishing trip. Include fuel, wages, ice, food, drink, any other items

#	Item description	Price
1		\$
2		\$
3		\$
4		\$
5		\$

What is the distance to the furthest site you fished in today?  
(ask person to show you on map and draw, we will extract coordinates later) km

#	Site name	Latitude (DD)	Longitude (DD)
1			
2			
3			
4			
5			

What kind of boat used today?

Construction:  Wood |  Fibreglass |  Plastic |  Steel |  Concrete

Type of boat:  Alia |  Canoe |  Dinghy |  Punt |  Skiff |  Other |  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):	
<b>C7 Perceptions of fishers</b>			
How long have you been fishing?		years	
How long have you been doing <b>this type</b> of fishing?		years	
What <b>other types</b> of fishing have you done in the <b>past</b> ?			
Do you do <b>other</b> types of fishing now?			<input type="checkbox"/> Yes   <input type="checkbox"/> No
Describe:			
Are you fishing in the same <b>areas</b> as 5 years ago?			<input type="checkbox"/> Yes   <input type="checkbox"/> No
Please explain:			
Are you catching the same <b>quantities</b> as 5 years ago?			<input type="checkbox"/> Yes   <input type="checkbox"/> No
Please explain:			
Are you catching the same <b>sizes</b> as 5 years ago?			<input type="checkbox"/> Yes   <input type="checkbox"/> No
Please explain:			
If catches are <b>different</b> , what has changed?			
Are you aware of any existing Fisheries Laws?			<input type="checkbox"/> Yes   <input type="checkbox"/> No



Please explain:

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

Thank you

### 6.5 Independent Boat Survey



## Tuvalu Fisheries Independent Boat Survey Data Sheets

### Boat and Canoe Survey

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 (DD):	
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)



<b>Comments and observations</b>				





## 6.6 Appendix: 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 onono 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 eiloa a tino io mese fakapotoptoga 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

## 6.7 Appendix: Photographs









