



# *Te Kaniva*

## **NANUMEA COASTAL FISHERIES MANAGEMENT PLAN 2024 - 2027**



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## Foreword



It is my sincere acknowledgement to the Tuvalu Fisheries Department for completing a daunting task of compiling and formulating our Coastal Fisheries Management Plan, **Te Kaniva** (2024-2027). In comparison to the process of formulating, this Plan has evolved to a more responsive and well-disposed approach.

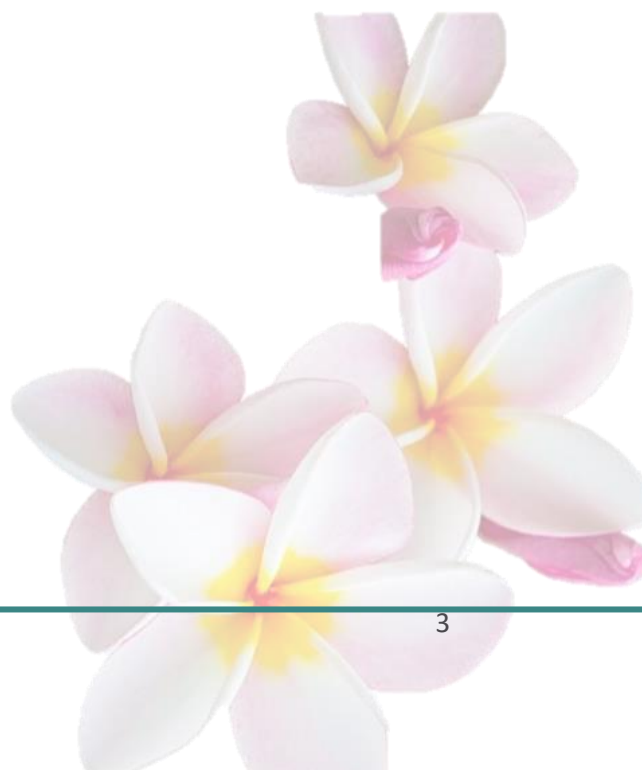
This Plan will give a great opportunity and support to our younger generations for their livelihoods. Marine fisheries are recognised as our primary resource for our livelihoods, and we can also use them in all our traditional ways.

Lastly, on behalf of the Kaupule of Nanumea and all its staff, we believe that achieving the Plan's expected outputs and goal is a shared responsibility. The Kaupule and the Tuvalu Fisheries Department must work together to fulfil the objectives of this Coastal Fisheries Management Plan.

Nanumea Fakavae ki te Atua.

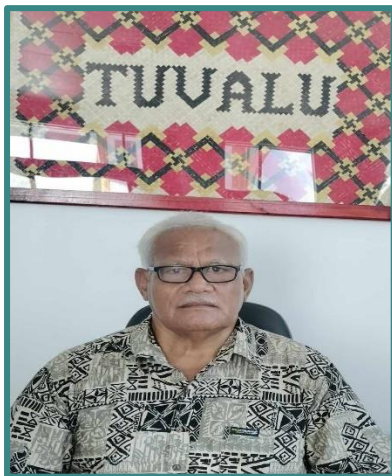
A handwritten signature in black ink, appearing to read 'Toai Tepou'. The signature is stylized and cursive.

Toai Vevea Tepou  
Ag Pule Kaupule.





## Statement from the Minister



The idea to develop fisheries management plans for the outer islands of Tuvalu came to light in 2021 as a result of the respective Island Strategic Plans that highlight fisheries as a key priority area.

In 2022, the Tuvalu Fisheries Department (the Department) commenced its work to collect fisheries information through a series of consultations with the outer islands' communities. A second series of consultations was held in the following year to validate the information collected previously. The Department also found that these communities find great value in having a management plan that provides guidance in their aspirations to sustainably manage and improve their coastal fisheries.

In light of the results from these consultations, the Department started to draft and formulate the different fisheries management plans for all the outer islands and to align them with the key objectives of existing plans like *Te Kete* (Tuvalu National Strategy for Sustainable Development 2021-2030), Tuvalu Fisheries Corporate Plan 2023-2025, and the respective Island Strategic Plans.

The successful management of each island's coastal fisheries resources lies heavily in the hands of the Falekaupule, Kaupule, and the people on the island. The Department will stand ready to provide technical and also partly financial assistance to each island community as requested.

Throughout the years, most of the work and services provided by the Department's Coastal Fisheries Section has contributed to the development process of the fisheries management plans. But these efforts would have been impossible without the continued support and financial assistance provided by our donor partners, for which I share my profound gratitude and appreciation – thank you!

I would like to express my sincere thanks to all the island communities in the outer islands, from the Falekaupule, the Kaupule, to groups of women, youth, and fishermen, for their continued support and trusting us to invest in this program. I look forward to your future cooperation in implementing this plan.

Also, *fakafetai lasi* to the New Zealand Ministry of Foreign Affairs and Trade for the financial and technical support of this work through the Tuvalu Fisheries Support Programme. I would also like to acknowledge the external review by the Pacific Community (SPC) and New Zealand Ministry for Primary Industries.

Lastly, my big *fakafetai lasi* to all staff of the Tuvalu Fisheries Department for their tireless efforts in achieving this important task.



Hon. Sa'aga Talu Teafa

Minister for Natural Resources Development

This plan comes into effect on the day it is signed and approved.

Signed on this 16<sup>th</sup> day of August 2024

Photograph credits

Lotokufaki Kaitu, WanTech



## Definitions

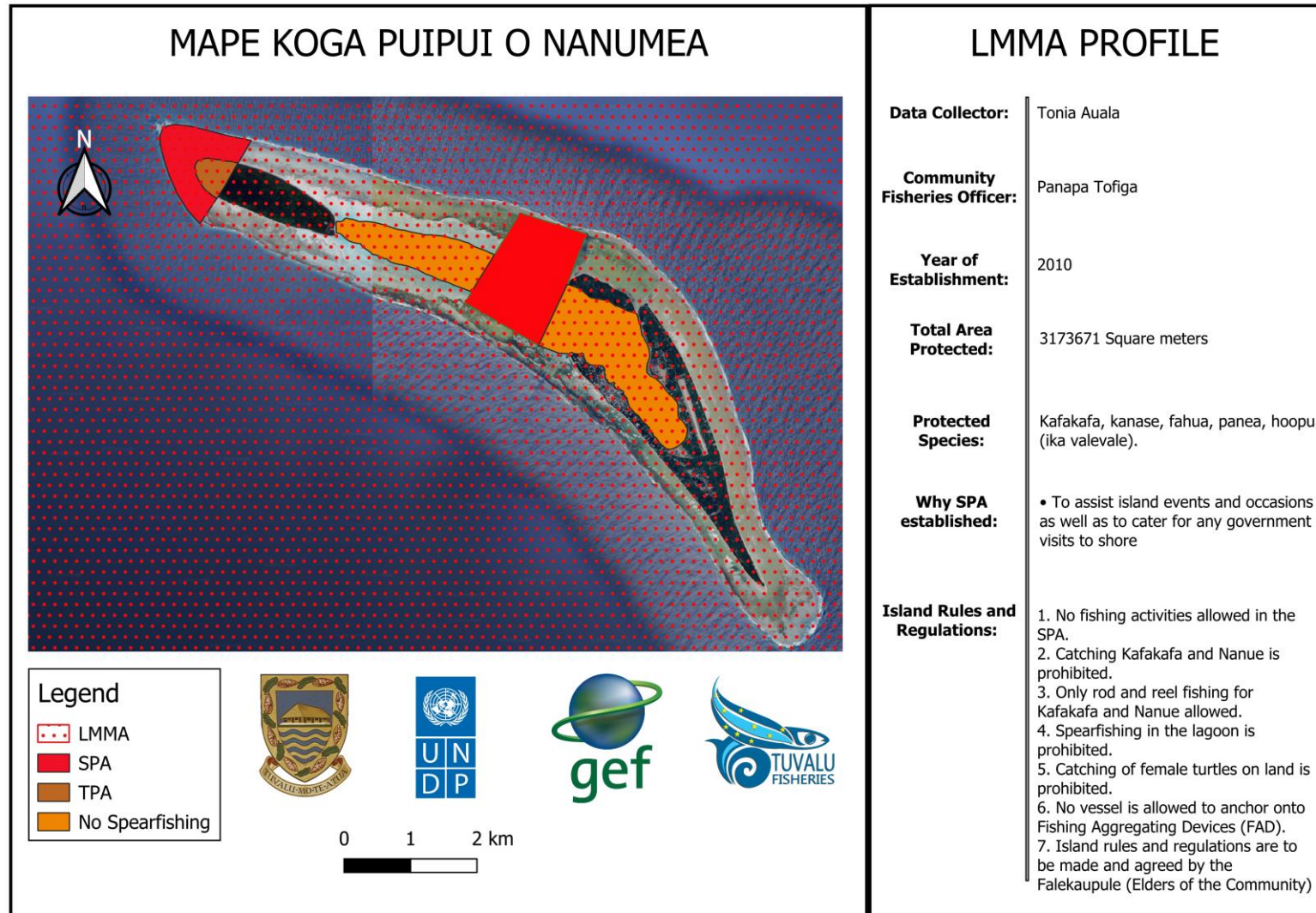
Unless otherwise expressed, words and expressions used in this plan have the same meaning as defined in the Marine Resources Act 2006 and Falekaupule Act 2008.

<b>Aquaculture</b>	The cultivation, propagation or farming of fish, whether from eggs, spawn, spat or seed, including rearing fish lawfully taken from the wild or lawfully imported into the country, or by other similar process
<b>Baseline</b>	The low-water line of the seaward side of the reef fringing the coast of any part of Tuvalu or bounding any lagoon waters adjacent to any part of the coast, or where a reef is not present, the low-waterline of the coast itself
<b>Bye-law</b>	A local law made by a specific island Falekaupule or as defined in the Falekaupule Act 2008
<b>Creel Survey</b>	A method to collect coastal fisheries data by interviewing fishers about the catch they have landed and their effort (i.e., fishing method and how long they have spent fishing)
<b>FAD</b>	A Fish Aggregating Device, and includes any floating object, whether anchored or drifting, used for the purpose of aggregating fish
<b>Fish</b>	Any marine or aquatic animal or plant, whether piscine or not, and includes shellfish, crustaceans, sponges, holothurians (beche-de-mer), sea urchins and turtles and their eggs
<b>Gleaning</b>	The hand gathering of fish from the intertidal zone
<b>Locally Managed Marine Area (LMMA)</b>	An area of nearshore waters and coastal resources out to 12 nautical miles that is largely or wholly managed at a local level by the coastal communities, land-owning groups, partner organisations, and/or collaborative government representatives who reside or are based in the immediate area
<b>Restocking</b>	The deliberate and controlled introduction of additional individuals of a particular species into a body of water, such as a pond or the ocean, for the purpose of replenishing or enhancing the natural population
<b>Special Protected Area (SPA)</b>	A Special Protected Area within the LMMA under the Falekaupule area
<b>Territorial Sea</b>	that part of the sea adjacent to the coast of any island of Tuvalu that is within the 12 nautical miles measured from the baseline
<b>Traditional Fishing Knowledge</b>	Knowledge or practices passed down from generation to generation that form part of the traditions or heritage of communities
<b>Traditional Fishing Methods</b>	Practices related to small-scale commercial or subsistence fishing methods that have been passed down from previous generations

## Abbreviations

<b>FAD</b>	Fish Aggregating Devices
<b>LMMA</b>	Locally Managed Marine Area
<b>SPA</b>	Special Protected Area
<b>TFD</b>	Tuvalu Fisheries Department

Figure 1. Map of Nanumea



# Part 1: Introduction

## 1.1 Why do we need a coastal fisheries management plan?

Coastal fisheries resources have been the mainstay of the Nanumea community for generations, providing both food security and socio-economic benefits. Preserving the knowledge of traditional fishing methods is of utmost importance as it holds significant value within the community and is essential to ensure sustainable use of these local resources.

With the increasing population on Nanumea Atoll, the fishing pressure on its reef resources has intensified, particularly on gastropods and bivalves. To address these challenges, this Coastal Fisheries Management Plan (the Plan) was developed to improve the sustainability of Nanumea's marine resources, through collaboration between the Nanumea Falekaupule and the Tuvalu Fisheries Department (the Department). In line with the objectives of *Te Kete* (Tuvalu National Strategy for Sustainable Development 2021-2030), the Department's Corporate Plan 2023-2025, and the MĀMAFA III (Nanumea Island Strategic Plan 2021-2024), the Nanumea community, with the support of the Department, held a series of workshops and consultations to develop this Plan to address these concerns.

## 1.2 Scope

This Plan applies to the area of authority of the Nanumea Falekaupule, Nanumea Atoll under the Falekaupule Act 2008. This is the Locally Managed Marine Area (LMMA), which includes the lagoons, coastal, and all other waters extending out 12 nautical miles from the baseline. This Plan includes all coastal fisheries, and aquaculture and fisheries related activities within the LMMA, including traditional fishing.

This Plan does not include pelagic and oceanic fisheries.

## 1.3 Goal

Enriched coastal fisheries in Nanumea that support biodiversity and livelihood, managed sustainably by all groups in the community.

## 1.4 Policy and legislation

This plan is aligned to the:

- Te Kete National Strategy for Sustainable Development (2021-2030)
- Māmafaa III, Nanumea Island Strategic Plan (2021-2024)
- Tuvalu Fisheries Department Corporate Plan (2023-2025)
- Marine Resources Act 2006
- Maritime Zones Act 2012
- Falekaupule Act 2008
- Wildlife Conservation Act (1975)



## Part 2: Authorities and Roles

Table 1 states the authorities and roles involved in the development and implementation of this Plan.

Specific responsibilities pertaining to the Plan’s activities are outlined in the Implementation, Monitoring and Evaluation Plan (Appendix I).

**Table 1: Authorities and Roles**

Authority	Role
1. Minister for Natural Resources Development	Approves the Coastal Fisheries Management Plan.
2. Falekaupule	Development of bye-laws, decision-making, and governance under the Falekaupule Act 2008 in relation to this Plan.
3. Kaupule	Co-ordinate implementation of the Plan, key liaison between the community and government departments, and has responsibilities to enforce and ensure compliance with management measures and rules under the Plan.
4. Coastal Fisheries Management Committee	Oversee the implementation and progress of the Plan. Work with the community, Tuvalu Fisheries Department, and other agencies to ensure timely implementation of the Plan, including provision of annual progress reports.
5. Fishermen’s Association	Represent fishers’ rights and interests, FAD maintenance, and provide fisheries information.
6. Women’s Association	Represent women’s rights and interests in the fishery especially with gleaning and rod fishing, post-harvest activities, and raising awareness.
7. Youth Association	Represent youth’s rights and interests in the fishery, coordinate social participation in community events, and raising awareness.
8. Tuvalu Fisheries Department	Provide technical and financial assistance where appropriate, support and co-ordinate aquaculture and fisheries-related activities, and implement national plans and strategies.
9. Department of Environment	Assist with technical and financial assistance, and implement other relevant national plans and strategies.
10. Non-Government Organisations (NGOs)	Assist with technical and financial assistance.

## Part 3: Status of the Fishery

Coastal fisheries are very important to the people of Nanumea for food security and livelihood, comprising 73% of the recorded catch.

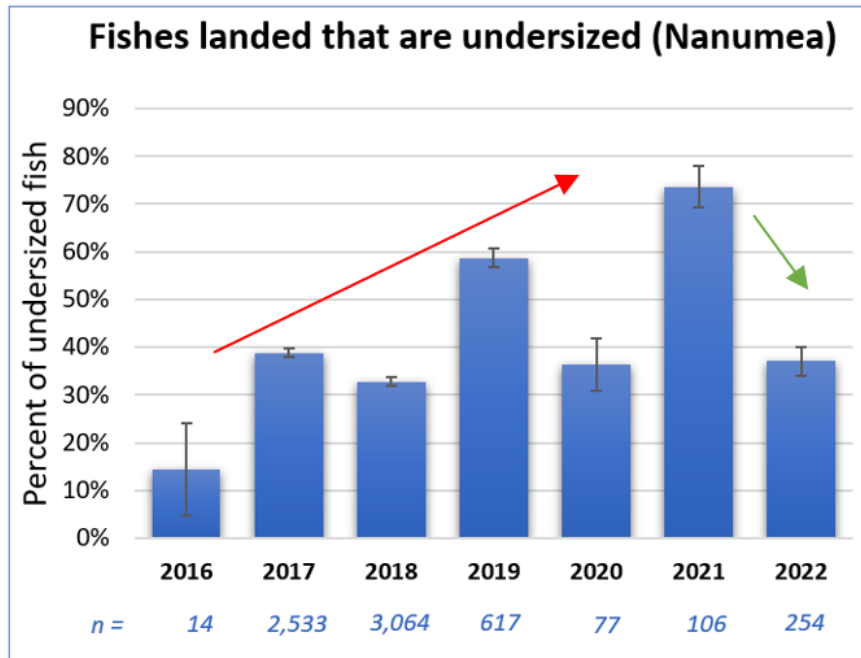
Among the coastal catch records, *Acanthurus triostegus* (locally known as Manini or Koinava), *Crenimugil crenilabis* (Kanase) and *Gerres oyena* (Matu, matu papa, te nini) are the most frequently landed species (Table 2). Fishers typically use gill nets, casting nets, and reef scoop nets to catch coastal fish.

**Table 2: Most frequently landed coastal species in Nanumea based on creel surveys (2016-2022)**

	Species	Local Name	Family	Total Weight (kg)	Number	Fishing Methods Used
1	<i>Acanthurus triostegus</i>	Manini, Koinava	Acanthuridae	452	3096	Gillnetting; Casting net; Reef scoop net; spearfishing
2	<i>Crenimugil crenilabis</i>	Kanase	Mugilidae	168	471	Gillnetting; Casting net; Reef scoop net
3	<i>Gerres oyena</i>	Matu, matu papa, te nini	Gerridae	92	370	Gillnetting; Casting net; Reef scoop net
4	<i>Liza vaigiensis</i>	Kafakafa	Mugilidae	84	343	Gillnetting; Casting net; Reef scoop net
5	<i>Hipposcarus longiceps</i>	Ulafi	Scaridae	210	280	Gillnetting; Casting net; Reef scoop net; spearfishing
6	<i>Liza macrolepis</i>	Kafakafa	Mugilidae	70	240	Gillnetting; Casting net; Reef scoop net
7	<i>Kyphosus cinerascens</i>	Nanue	Kyphosidae	122	220	Gillnetting; Casting net; Reef scoop net; spearfishing
8	<i>Acanthurus guttatus</i>	Api, Maono	Acanthuridae	70	190	Gillnetting; Casting net; Reef scoop net; spearfishing
9	<i>Lutjanus fulvus</i>	Tagau, Takape	Lutjanidae	64	183	Bait jigging; handline; gillnetting; casting net; spearfishing
10	<i>Lutjanus monostigma</i>	Taiva	Lutjanidae	42	183	Bait jigging; handline; gillnetting; casting net; spearfishing
11	<i>Kyphosus vaigiensis</i>	Nanue	Kyphosidae	91	172	Gillnetting; Casting net; spearfishing
12	<i>Gerres oblongus</i>	Matu	Gerridae	30	150	Gillnetting; casting net; reef scoop net
13	<i>Mulloidichthys flavolineatus</i>	Kaivete selesega	Mullidae	18	107	Gillnetting; casting net; reef scoop net
14	<i>Gnathanodon speciosus</i>	Filu, Fua'ala'ala, Fuaika, Kautea, Pakeva	Carangidae	81	104	Slow trolling; gillnetting; casting net
15	<i>Acanthurus lineatus</i>	Ponelolo, Alogo, Pone hamoa	Acanthuridae	42	100	Gillnetting; casting net; spearfishing; reef scoop net

\*Other fish species are listed in Appendix II

Recent Creel Survey Reports indicate that the overall status of Nanumea’s coastal fisheries resources has been poor, with an average of 39% of the fish caught being undersized (2016–2022, Figure 2). This is slightly above the national average of 36%. Ideally, no undersize fish should be landed; hence management actions will be necessary address the issue of undersize fishing in Nanumea with the view to improve overall status of the resource.



**Figure 2.** Percentage of fishes being landed undersized by year. The sample size (n) is reported in blue. Green arrow = good trend red arrow = bad trend.



## Part 4: Objectives and Strategies: What we want to achieve

We will achieve our Goal by focusing on four main objectives: ensuring conservation and management of Nanumea coastal fisheries, improving compliance with fisheries rules and regulations, improving stewardship and traditional knowledge, and improving food security and livelihoods.

**Table 3: Management objectives and strategies**

OBJECTIVES	STRATEGIES
1. <i>To conserve and manage Nanumea's coastal fisheries resources.</i>	<p>1.1 Investigate the use of minimum size limits for key coastal species.</p> <p>1.2 Increase awareness on Nanumea conservation areas.</p> <p>1.3 Develop a sustainable and cost-effective method of removing excess sand from Hahake Point.</p> <p>1.4 Improve fisheries data collection of key coastal non-fin fish (gastropods, bivalves).</p>
2. <i>To strengthen compliance with the fisheries rules &amp; regulations</i>	<p>2.1 Increase awareness on fisheries rules and regulations.</p> <p>2.2 Investigate a system to encourage reporting of non-compliance.</p> <p>2.3 Review penalties associated with fisheries offenses to ensure they are effective, fair and proportionate.</p> <p>2.4 Strengthen compliance within the Locally Managed Marine Area.</p>
3. <i>To improve stewardship of our resources and traditional knowledge</i>	<p>3.1 Increase awareness on the importance and value of coastal fisheries resources.</p> <p>3.2 Facilitate opportunities for community members (elders) to share and pass on traditional fishing knowledge.</p>
4. <i>To improve food security and livelihoods</i>	<p>4.1 Investigate options for restocking conch species (kalea) and acorn worm (ponuponu).</p> <p>4.2 Investigate aquaculture opportunities.</p> <p>4.3 Strengthen Fish Aggregating Devices program.</p> <p>4.4 Investigate new marketing opportunities.</p>





## Part 5: Management Measures

The following management measures will be implemented to sustainably manage our coastal fisheries resources.

These measures will be given legal effect through the national coastal fisheries regulations and bye-laws in accordance with the Marine Resources Act 2008 and Falekaupule Act 2008.

Management Measures	
1	All fishing activities in the Special Protected Area are strictly prohibited, except rod fishing and line fishing for Kafakafa (mullet) and Nanue (Brassy chub/ <i>Kyphosus vaigiensis</i> ).
2	Spearfishing in the lagoon is strictly prohibited, except when fishing within the vessel passage and outer reefs.
3	Harvesting of turtles on land is strictly prohibited.
4	Using Fish Aggregating Devices as anchorage buoys is strictly prohibited.

## Part 6: Review & Amendment

The Plan will be effective for three years (2024-2027) following date of approval by the Minister for Natural Resources Development.

A mid-term review will be conducted before the end of 2026, during which minor adjustments may be made to ensure the successful implementation of the Plan. An end-of-term review will take place by the end of 2027. The review will evaluate the current Plan and provide up-to-date scientific information for the drafting of the next plan.

The Fisheries Management Committee will produce an annual report on the status of the Plan, working together with the Kaupule Secretary.

## Part 7: Funding Strategy for the Plan

The activities outlined in this Plan will be supported by a combination of funding sources to ensure sustainability and self-reliance.

Communities will not solely depend on government funds. Instead, they will also utilise their island budgets and the Vessel Day Scheme community funds allocated to each Kaupule. Additionally, external financial assistance may be sought through funding proposals and collaboration with ongoing projects supported by external partners. This diversified funding approach will enhance the effectiveness and resilience of the activities stated in this Plan.

## Appendix I: Implementation, Monitoring and Evaluation

Strategies	Actions	Responsibilities	Resources	Timeline	Indicators	Target	Progress	Reporting	Risks
<b>Objective 1: To conserve and manage Nanumea’s coastal fisheries resources</b>									
<b>Strategy 1.1</b> Investigate the use of minimum size limits for key coastal species.	• Submit formal request to TFD	Coastal Section, TFD in collaboration with Nanumea community	Nanumea Kaupule  Nanumea community  Tuvalu Fisheries Department  Size limit materials and equipment	2024	Copy of formal request submitted	Formal request submitted to TFD  Key Coastal Species identified by the Nanumea Falekaupule  Size limit study completed and report published	Planned	Nanumea Kaupule, TFD, community	Lack of funding  Lack of staff and equipment resources
	• Identify key coastal species during Nanumea Falekaupule assembly			2024	Key coastal species identified				
	• Conduct size limit study for key coastal species identified			2024-27	Size limit study conducted for key species identified				
	• Develop and implement new management measures on size limit			2027	Size limit study completed and report published				
<b>Strategy 1.2</b> Increase awareness on Nanumea	• Demarcate LMMA Boundary	LMMA Officer, TFD and Coastal Section	Nanumea Kaupule  Nanumea Falekaupule	Metronome trip 2024	LMMA Boundary demarcated	LMMA boundary demarcated	Planned	Nanumea Kaupule, TFD, community	Lack of funding  Lack of staff and equipment resources
	• Set up billboards to			2024-25					

<b>conservation areas.</b>	create more awareness of the rules and penalties		Tuvalu Fisheries Department		Billboards installed	Billboards installed			
	<ul style="list-style-type: none"> <li>• Conduct community awareness program on protected areas</li> </ul>		Billboards	Metronome trip 2024 or 2025	Community awareness program conducted and report shared	Community awareness conducted			
<b>Strategy 1.3 Develop a sustainable and cost-effective method of removing excess sand from Hahake Point</b>	<ul style="list-style-type: none"> <li>• Submit a formal request to Tuvalu Fisheries Department</li> </ul>	Nanumea Kaupule in collaboration with TFD	Nanumea Kaupule	2024	Copy of formal request submitted	Formal request submitted	Planned	Nanumea Kaupule, TFD, community	Lack of funding Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>• Tender and contract dredging company</li> </ul>		Dredging Company	2024	Dredging company contracted	Contract for dredging company signed			
	<ul style="list-style-type: none"> <li>• Dredge and remove excess sand from the affected areas</li> </ul>		Dredging materials and machineries	2024	Dredging progress reports shared	Excess sand at Hahake Point removed			
<b>Strategy 1.4 Improve fisheries data collection of key coastal non-fin fish (gastropods, bivalves).</b>	<ul style="list-style-type: none"> <li>• Conduct training with community fisheries officer and data collector on data collection and reporting (including e-reporting)</li> </ul>	Coastal Section, TFD	Tuvalu Fisheries Department	Metronome trip 2024 or 2025	Training Report published	Training conducted on data collection and reporting	Planned	Nanumea Kaupule, TFD, community	Lack of funding Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>• Conduct workshop with fishermen and</li> </ul>		Data Collector		Nanumea CFO	MOA between Kaupule, TFD and Fishermen prepared and signed			
			Nanumea Kaupule	2024-25					

	Kaupule to promote and improve data collection		Nanumea Fishermen Association						
<b>Objective 2: To strengthen compliance with the fisheries rules &amp; regulations</b>									
<b>Strategy 2.1 Increase awareness on fisheries rules and regulations.</b>	<ul style="list-style-type: none"> <li>Set up billboards on fisheries rules</li> </ul>	LMMA Officer and Coastal Section, TFD	Tuvalu Fisheries Department	2024-25	Billboards materials procured	LMMA Billboards installed	Planned	Nanumea Kaupule, TFD, community	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Conduct community consultations on fisheries rules and regulations</li> </ul>		Nanumea CFO  Nanumea Kaupule  Nanumea community	Metronome trip 2025	Community consultation report published and shared	Community consultation on fisheries rules and regulations conducted			
<b>Strategy 2.2 Investigate a system to encourage reporting of non-compliance</b>	<ul style="list-style-type: none"> <li>Investigate suitable mechanisms to individuals who report fisheries violations and non-compliance</li> </ul>	Coastal Section, TFD in collaboration with Nanumea Kaupule	Nanumea Kaupule	Metronome trip 2024	Investigation on suitable mechanisms undertaken	Suitable mechanisms for individual reporting investigated	Planned	Nanumea Kaupule, TFD, community	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Investigate feasibility to allocate budget for a non-compliance rewarding</li> </ul>		Tuvalu Fisheries Department	2024-25	Feasibility study for a non-compliance rewarding program investigated	Funding reward program established and implemented			



<b>Strategy 2.3</b> <b>Review penalties associated with fisheries offenses to ensure they are effective, fair and proportionate.</b>	<ul style="list-style-type: none"> <li>Conduct a review of Nanumea Conservation area bye-laws</li> </ul>	Fisheries Legal Officer/Legal Consultant, in collaboration with Coastal Section, TFD	Nanumea Kaupule	Metronome trip 2024 or 2025	Nanumea Bye-Law Review Report published and shared	Nanumea Bye-Law reviewed	Planned	Nanumea Kaupule, TFD, community	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Review and amend penalties and offenses</li> </ul>		Fisheries Legal Officer/Legal Consultant	2024-25	Amended copy of Penalties and Offenses published and shared	Penalties and offenses amended			
<b>Strategy 2.4</b> <b>Strengthen compliance within the Locally Managed Marine Area.</b>	<ul style="list-style-type: none"> <li>Submit a request to create a new compliance position</li> </ul>	Nanumea Kaupule in collaboration with Coastal Section, TFD	Nanumea Kaupule	2024	Formal request submitted to TFD and Nanumea Falekaupule	Formal request submitted	Planned	Nanumea Kaupule, TFD, community	Lack of funding
	<ul style="list-style-type: none"> <li>Recruit compliance officer</li> </ul>		Tuvalu Fisheries Department	2025-26	New compliance officer recruited	New compliance officer recruited			
<b>Objective 3: To improve stewardship of our resources and traditional knowledge</b>									
<b>Strategy 3.1</b> <b>Increase awareness on the importance and value of</b>	<ul style="list-style-type: none"> <li>Develop a community awareness program on traditional fishing methods</li> </ul>	Coastal Section, TFD in collaboration with Nanumea Kaupule, Local expert and	Nanumea Kaupule  Local Experts	Metronome trip 2024	Copy of Community awareness program developed  Community awareness program developed	Community awareness program developed  Community training	Planned	Nanumea Kaupule, TFD, community	Lack of funding  Lack of staff and equipment resources

<b>coastal fisheries resources.</b>	<ul style="list-style-type: none"> <li>• Conduct training workshops with the community</li> </ul>	Nanumea CFMC	Nanumea community  Tuvalu Fisheries Department  Training workshop materials	2024-25	Community training workshop report published and shared	workshop conducted			
<b>Strategy 3.2 Facilitate opportunities for community members (elders) to share and pass on traditional fishing knowledge.</b>	<ul style="list-style-type: none"> <li>• Conduct a household survey on traditional fishing knowledge</li> </ul>	Coastal Section, TFD	Nanumea Kaupule  Nanumea community  Tuvalu Fisheries Department  Survey materials	2024	Household survey report published and shared	Household survey on traditional fishing knowledge conducted	Planned	Nanumea Kaupule, TFD, community	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>• Produce a video documentary on traditional fishing knowledge and methods</li> </ul>			2025	Video documentary produced	Video documentary on traditional fishing knowledge produced			
	<ul style="list-style-type: none"> <li>• Record and develop a database on traditional fishing</li> </ul>			2025-26	Database developed and information recorded	Database for traditional fishing knowledge developed and information recorded in database			

**Objective 4: To improve food security and livelihoods**

<b>Strategy 4.1</b> <b>Investigate options for restocking conch species (kalea) and acorn worm (ponuponu)</b>	<ul style="list-style-type: none"> <li>• Submit formal request to TFD</li> </ul>	Coastal Section, TFD in collaboration with SPC	SPC Expert  Nanumea Kaupule  Tuvalu Fisheries Department	2024	Formal request submitted to TFD	Formal request to TFD and SPC submitted  Feasibility study on restocking opportunities conducted	Planned	Nanumea Kaupule, TFD, community	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>• Submit request to the Pacific Community for a specialist</li> </ul>			RTCMFA 2024	Formal request submitted to SPC				
	<ul style="list-style-type: none"> <li>• Conduct feasibility study for restocking opportunities</li> </ul>			2025-26	Feasibility study conducted and report published and shared				
<b>Strategy 4.2</b> <b>Investigate aquaculture opportunities</b>	<ul style="list-style-type: none"> <li>• Submit formal request to TFD</li> </ul>	Coastal Section, TFD in collaboration with SPC	SPC Expert  Nanumea Kaupule  Tuvalu Fisheries Department	2024	Formal request submitted to TFD	Formal request to TFD and SPC submitted  Feasibility study on aquaculture opportunities conducted	Planned	Nanumea Kaupule, TFD, community	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>• Submit request to the Pacific Community for a specialist</li> </ul>			RTCMFA 2024	Formal request submitted to SPC				
	<ul style="list-style-type: none"> <li>• Conduct feasibility study for aquaculture opportunities</li> </ul>			2025-26	Feasibility study conducted and report published and shared				

<b>Strategy 4.3 Strengthen Fish Aggregating Devices program</b>	<ul style="list-style-type: none"> <li>Evaluate existing FAD program to confirm the need for maintenance and additional FADs</li> </ul>	Operation Development Section, TFD	Nanumea Kaupule	2024-25	FAD program evaluated and need for maintenance and adding new FADs confirmed	FAD program evaluated and confirmed	Planned	Nanumea Kaupule, TFD, community	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Conduct workshop with fishermen on FAD maintenance</li> </ul>		Tuvalu Fisheries Department	Fishermen	Metronome trip 2025	Workshop on FAD maintenance conducted and report shared			
<b>Strategy 4.4 Investigate new marketing opportunities</b>	<ul style="list-style-type: none"> <li>Undertake feasibility study on new market opportunities</li> </ul>	Operation Development and Coastal Section, TFD	Nanumea Kaupule	2024-25	Feasibility study report published and shared	Feasibility study undertaken	Planned	Nanumea Kaupule, TFD, community	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Conduct a training workshop with community on potential new marketing opportunities of local marine resources</li> </ul>		Tuvalu Fisheries Department	Nanumea community	Metronome trip 2025	Training workshop conducted and report shared			



## Appendix II Nanumea landings reported from creel survey (2016-2022)

	<b>Species</b>	<b>Local Name</b>	<b>Family</b>	<b>Weight (kg)</b>	<b>Number landed</b>
1	<i>Abudefduf saxatilis</i>	Mutumutu	Pomacentridae	1.68	14
2	<i>Acanthocybium solandri</i>	Paala	Scombridae	222.61	33
3	<i>Acanthurus blochii</i>	Kapalagi, Maa	Acanthuridae	50.06	66
4	<i>Acanthurus dussumieri</i>	Kapalagi, Maa	Acanthuridae	42.24	77
5	<i>Acanthurus guttatus</i>	Api, Maono	Acanthuridae	69.51	190
6	<i>Acanthurus leucocheilus</i>	Pone	Acanthuridae	8.21	16
7	<i>Acanthurus leucopareius</i>	Maono	Acanthuridae	5.87	33
8	<i>Acanthurus lineatus</i>	Ponelolo, Alogo, Pone hamoa	Acanthuridae	42.24	100
9	<i>Acanthurus nigroris</i>	Pone	Acanthuridae	1.29	8
10	<i>Acanthurus triostegus</i>	Manini, Koinava	Acanthuridae	451.58	3096
11	<i>Alectis cilia</i>	Laulaufao, Matapa, Ika fa la ulu	Carangidae	0.11	1
12	<i>Aphareus furca</i>	Palusega, Kotua, Taelepe, Takuoga	Lutjanidae	16.74	50
13	<i>Aprion virescens</i>	Utu	Lutjanidae	4.8	1
14	<i>Arothron hispid</i>	sue (Ff) hue (Nm), punÄ« (Nui)	Tetraodontidae	3.46	5
15	<i>Atule mate</i>	Atule, Atule papa	Carangidae	0.14	1
16	Balistidae spp	Sumu magasega, Suma, Sumu lautalo, Sumu niu	Balistidae	0.27	2
17	<i>Balistoides viridescens</i>	Umu fatu, Humu papa	Balistidae	5.85	4
18	<i>Caesio caerulea</i>	Ulia, Ulihega	Caesionidae	0.97	4
19	<i>Carangoides ferdau</i>	Pula, Lupolupo, Fuaika, Filu, Lupo, Pakeva, Kata	Carangidae	86.17	120
20	<i>Carangoides fulvogttatus</i>	Lupolupo	Carangidae	5.4	40
21	<i>Carangoides plagiotaenia</i>	Aseu uluuli	Carangidae	17.26	60
22	<i>Caranx ignobilis</i>	Tino ulua (lge), Lupo (small), Aseu (med); Mea tal	Carangidae	13.38	27
23	<i>Caranx lugubris</i>	Taufauli, Tino tafauli (large), Aheu tafauli, Uluat	Carangidae	37.09	36
24	<i>Caranx melampygus</i>	Aseu, Ulua, Fuaika	Carangidae	130.98	195
25	<i>Caranx papuensis</i>		Carangidae	16.54	55

26	<i>Caranx sexfasciatus</i>	Teu	Carangidae	260.54	521
27	<i>Carcharhinus leucus</i>	MagÅ	Carcharhinidae	4.9	1
28	<i>Carcharhinus melanopterus</i>	Sekili	Carcharhinidae	117.7	6
29	<i>Carcharhinus melanopterus</i>	Mago	Carcharhinidae	44.75	3
30	<i>Cephalopholis argus</i>	Loi	Serranidae	4.63	26
31	<i>Cephalopholis sonnerati</i>	Pula (Ff, Nm)	Serranidae	0.88	8
32	<i>Cephalopholis spiloparaea</i>		Serranidae	0.14	2
33	<i>Cheilinus fasciatus</i>	Gole	Labridae	2.16	6
34	<i>Cheilinus trilobatus</i>	Gole	Labridae	0.54	1
35	<i>Cheilinus undulatus</i>	Tagafa	Labridae	3.64	8
36	<i>Cheilopogon unicolor</i>		Exocoetidae	3.32	20
37	<i>Chelonia mydas</i>	Fonu telaa	Cheloniidae	335.5	14
38	<i>Chlorurus (Scarus) microrhino</i>	Laea	Scaridae	4.69	7
39	<i>Chlorurus japanensis</i>	Laea (Ff), kamutu maga (Nm)	Scaridae	2.7	3
40	<i>Crenimugil crenilabis</i>	Kanase	Mugilidae	161.748	471
41	<i>Ctenochaetus binotatus</i>	Pone uli	Acanthuridae	0.5	4
42	<i>Decapterus macarellus</i>	Atule	Carangidae	0.93	6
43	<i>Elagatis bipinnulata</i>	Kamai, Kamaa, Kami	Carangidae	10.85	3
44	<i>Epinephelus fuscoguttatus</i>	Munua	Serranidae	64.85	7
45	<i>Epinephelus hexagonatus</i>	Eve	Serranidae	0.12	1
46	<i>Epinephelus macrospilos</i>	Gatala (Ff), fÄpuku (Nm)	Serranidae	4.55	10
47	<i>Epinephelus maculatus</i>	Fapuku	Serranidae	2.37	5
48	<i>Epinephelus melanostigma</i>	Fapuku	Serranidae	4.25	28
49	<i>Epinephelus merra</i>	Gatalaliki	Serranidae	3.68	30
50	<i>Epinephelus miliaris</i>	Gatala	Serranidae	1.82	4
51	<i>Epinephelus polyphkadion</i>	Gatala (one dot)	Serranidae	1.46	2
52	<i>Epinephelus retouti (truncat</i>	palu pÄtuki (NB)	Serranidae	17	1
53	<i>Epinephelus spilotoceps</i>	Gatala (Ff, Nm)	Serranidae	2.74	19
54	<i>Euthynnus affinis</i>	Atu alo, Autualo	Scombridae	0.6	1
55	<i>Exocoetidae</i>	sipa (Ff), hipa (Nm, Ng) - juv; isave (Ff, Nf, NI,	Exocoetidae	26.17	142

56	<i>Exocoetus volitans</i>	Isave, Sasave	Exocoetidae	13.47	63
57	<i>Gerres oblongus</i>	Matu (Ff, Nm)	Gerridae	30.42	150
58	<i>Gerres oyena</i>	Matu (Ff, Nm, Nf, NI, Vt), matu papa (Ff), te nini	Gerridae	91.85	370
59	<i>Gnathanodon speciosus</i>	Filu, Fua'ala'ala, Fuaika, Kautea, Pakeva	Carangidae	80.96	104
60	<i>Gymnosarda unicolor</i>	Valu	Scombridae	4.17	6
61	<i>Halichoeres melanurus</i>	Ulo'ulo (Ff, Nm)	Labridae	0.29	2
62	<i>Hemiramphus far</i>		Hemiramphidae	21.4	87
63	<i>Hipposcarus longiceps</i>	Ulafi	Scaridae	210.27	280
64	<i>Katsuwonus pelamis</i>	Atu	Scombridae	2856.88	655
65	<i>Kyphosus bigubbus</i>	Nanue	Kyphosidae	2.95	11
66	<i>Kyphosus cinerascens</i>	Nanue	Kyphosidae	202.63	220
67	<i>Kyphosus vaigiensis</i>	Nanue (Ff, Nm)	Kyphosidae	91.19	172
68	<i>Labrichthys unilineatus</i>	Kiole	Labridae	0.31	3
69	<i>Lactoria cornuta</i>	Moamoa (Ff, Nm)?	Ostraciidae	0.59	1
70	<i>Lethrinus elongatus</i>	Filoa	Lethrinidae	3.5	1
71	<i>Lethrinus erythracanthus</i>	Saputu	Lethrinidae	1.27	1
72	<i>Lethrinus harak</i>	Noto	Lethrinidae	19.32	25
73	<i>Lethrinus obsoletus</i>	Tanutanu	Lethrinidae	14.75	12
74	<i>Lethrinus olivaceus</i>		Lethrinidae	10.43	3
75	<i>Lethrinus semicinctus</i>		Lethrinidae	1.39	1
76	<i>Lethrinus variegatus</i>	Noto, Tanutanu	Lethrinidae	0.99	2
77	<i>Lethrinus xanthochilus</i>	Tanutanu	Lethrinidae	9.91	12
78	<i>Liza macrolepis</i>	Kafakafa	Mugilidae	70.21	240
79	<i>Liza vaigiensis</i>	Kafakafa	Mugilidae	84.42	343
80	<i>Lutjanus argentimaculatus</i>	Tagau	Lutjanidae	4.57	24
81	<i>Lutjanus bohar</i>	Fakamea, Fagamea	Lutjanidae	1.6	3
82	<i>Lutjanus fulvus</i>	Tagau, Takape	Lutjanidae	63.83	183
83	<i>Lutjanus gibbus</i>	Taea	Lutjanidae	5.99	6
84	<i>Lutjanus kasmira</i>	Savane	Lutjanidae	5.84	42
85	<i>Lutjanus malabaricus</i>		Lutjanidae	4.21	22

86	<i>Lutjanus monostigma</i>	Taiva	Lutjanidae	42.17	183
87	<i>Makaira indica</i>	SakulÄ, hakulÄ	Istiophoridae	32	1
88	<i>Monotaxis grandoculis</i>	Muu, Mufala	Lethrinidae	16	42
89	MULLIDAE spp	Vete, Teve, Kaivete, Kalo, Sikumanuau	Mullidae	0.23	1
90	<i>Mulloidichthys flavolineatus</i>	Kaivete selesega	Mullidae	17.68	107
91	<i>Mulloidichthys vanicolensis</i>	Kalo	Mullidae	2.36	13
92	<i>Myripristis amaena</i>	Malau	Holocentridae	0.86	12
93	<i>Myripristis kuntee</i>	Malau	Holocentridae	0.22	2
94	<i>Myripristis murdjan</i>	Malau	Holocentridae	3.73	20
95	<i>Myripristis pralinia?</i>	Malau puku	Holocentridae	2.41	19
96	<i>Myripristis violacea</i>	Malau	Holocentridae	6.26	33
97	<i>Naso annulatus</i>	KosotÄ« (Ff), tativi (Nm); kilikilia (NB)	Acanthuridae	0.59	1
98	<i>Naso lituratus</i>	Maninilakau	Acanthuridae	2.15	8
99	<i>Naso unicornis</i>	Ume, Pokapoka	Acanthuridae	11.14	3
100	<i>Neomyxus chaptalii</i>	Fua gutuloa (Ff, Nm)	Mugilidae	0.15	1
101	<i>Neoniphon argenteus</i>	Talakisi	Holocentridae	0.58	5
102	<i>Neoniphon opercularis</i>	Talakisi	Holocentridae	0.68	5
103	<i>Oxycheilinus digrammus</i>	Gole (Ff)	Labridae	0.11	1
104	<i>Oxycheilinus unifasciatus</i>	Gole (Ff), lautÄtonu? (KHR)	Labridae	1.29	4
105	<i>Panulirus longipes bispinosus</i>	Ula	Palinuridae	3.88	3
106	<i>Parupeneus barberinoides</i>	Afulu (Ff, Nm), ika faitalafa (Nm)	Mullidae	3.1	7
107	<i>Parupeneus barberinus</i>	Malili, Kaivete	Mullidae	5.98	22
108	<i>Parupeneus ciliatus</i>	Afulu (Ff)	Mullidae	3.11	11
109	<i>Parupeneus cyclostomus</i>	Kaivete piniki	Mullidae	17.35	43
110	<i>Parupeneus multifasciatus</i>	Afulu	Mullidae	0.24	1
111	<i>Pempheris oualensis</i>	Maanifi, Cooper sweeper	Pempheridae	1.1	10
112	POMACENTRIDAE spp	Mutumutu, Moimoi	Pomacentridae	5.5	42
113	<i>Promethichthys prometheus</i>	Palu	Gempylidae	63.3	4
114	<i>Pseudobalistes flavimarginatus</i>	Umu	Balistidae	31.18	13
115	<i>Pterocaesio tile</i>	Ulia	Caesionidae	2.09	10

116	<i>Rhinecanthus aculeatus</i>	Sumu	Balistidae	3.74	4
117	<i>Ruvettus pretiosus</i>	Palu taesi	Gempylidae	44.93	4
118	<i>Sargocentron caudimaculatum</i>	Malau	Holocentridae	4.41	15
119	<i>Sargocentron spiniferum</i>	Tamalau	Holocentridae	6.63	33
120	<i>Scarus atropectoralis</i>	Ulafi	Scaridae	0.33	3
121	<i>Scarus frenatus</i>	Ulafi	Scaridae	60.12	68
122	<i>Scarus oviceps</i>	Laea	Scaridae	0.9	1
123	<i>Scarus psittacus</i>	Taona	Scaridae	1.89	6
124	<i>Scomberoides lysan</i>	Ata, Lai	Carangidae	1.8	2
125	<i>Selar boops</i>	Salala, Atule	Carangidae	4.72	14
126	<i>Selar crumenophthalmus</i>	Salala, Atule	Carangidae	0.26	1
127	SERRANIDAE spp	Gatala	Serranidae	2.88	2
128	<i>Siganus argenteus</i>	Maiava	Siganidae	0.36	1
129	<i>Sphyraena barracuda</i>	Ono, Pauea	Sphyraenidae	30.01	11
130	<i>Sphyraena forsteri</i>	Taotao	Sphyraenidae	10.07	2
131	<i>Sphyraena jello?</i>	Ono, Oso, Nn	Sphyraenidae	7.2	2
132	<i>Spondylus varius</i>	Sopuu, Hopuu	Spondylidae	7.2	2
133	<i>Strongylura incis</i>	Maliolio, Galiolio, KÄsufe?	Belonidae	3.2	1
134	<i>Thunnus albacares</i>	Kasi, Takuo, Takua, Tavatava	Scombridae	1499.41	348
135	<i>Thunnus obesus</i>	Kasi matalasi	Scombridae	2200.13	307
136	<i>Trachinotus baillonii</i>	Lai	Carangidae	2.44	7
137	<i>Tylosurus crocodilus</i>	Maliolio	Belonidae	4.2	30
138	<i>Upeneus taenioptera</i>	Afulu	Mullidae	1.45	7
139	<i>Upeneus vittatus</i>	Malili	Mullidae	4.97	24
140	<i>Uraspis helvola</i>	Lupolupo	Carangidae	18.54	36
141	<i>Valenciennesa muralis</i>	Manoko	Gobiidae	4.18	5
142	<i>Variola albimarginata</i>	Pula	Serranidae	1.88	2
	Fish with no ID			63.549	
	<b>Grand Total</b>			<b>10502.64</b>	<b>10203</b>