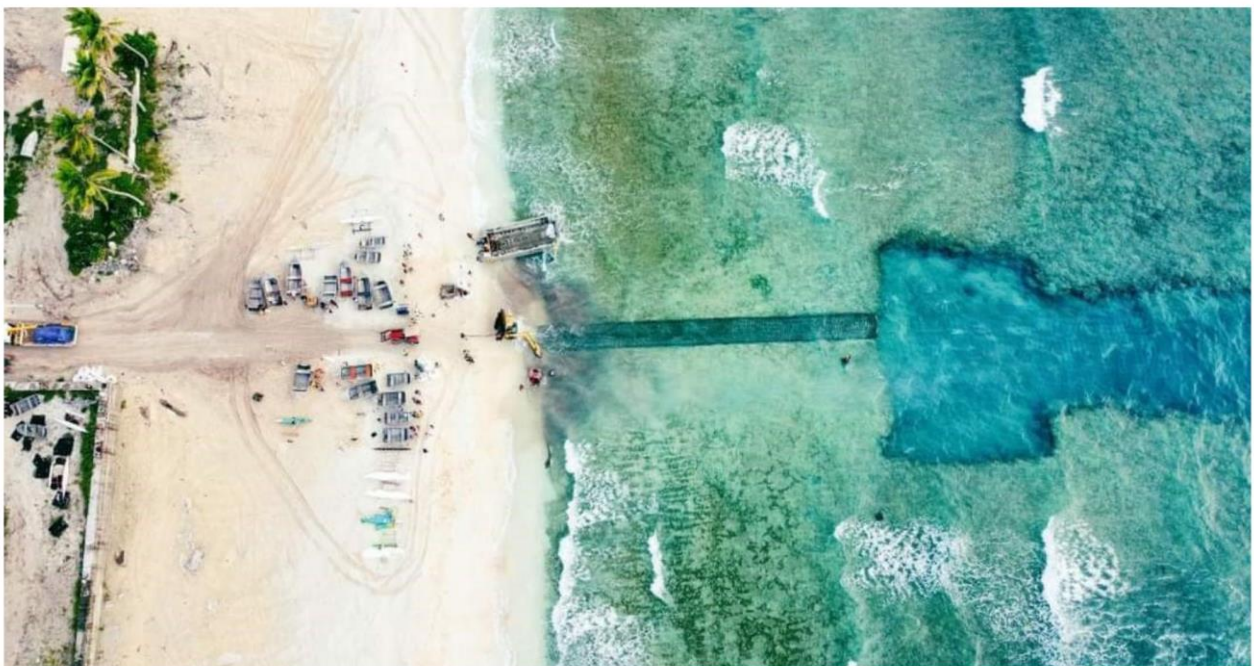




# *Kogotai o Nanumaga*

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



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## Foreword



Warm greetings to you all in the name of the Almighty God. Thus, never ceases to return back the glory and honour for his faithfulness and goodness upon each one of us.

On behalf of the Falekaupule, Kaupule, elders of the community, women, men, youth and children of Nanumaga, I would like to convey our sincere gratitude and thanksgiving to the man above for his never-ending guidance and support. For without him, we would have never been able to reach this far.

My huge appreciation is expressed to the elders of the islands, men and women for their oneness in putting up their collective insights to form this masterpiece.

I would also like to acknowledge all staff of the Tuvalu Fisheries Department, from the Director to all its officials, for their generous and helpful hands in preparing and collating this plan for the Nanumaga Community.

It is my humble pledge to all of us to be true caretakers in executing this essential masterpiece with heads up hoping that God Almighty will bless the *Nanumaga Coastal Fisheries Management Plan, Kogatai o Nanumaga (2024-2027)*.

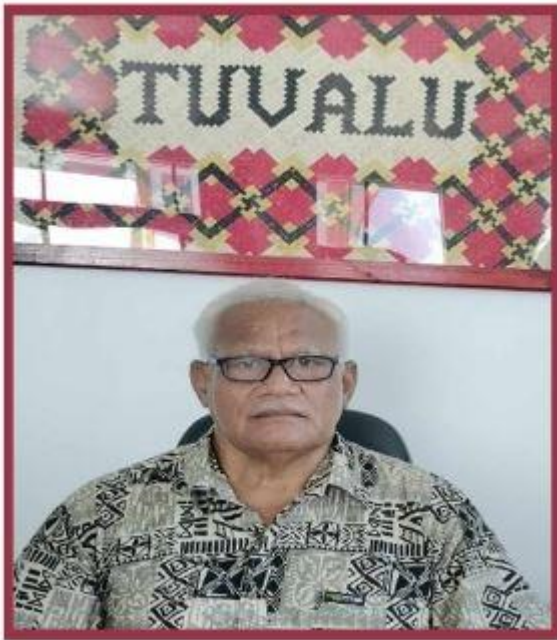
Fakafetai lahi

A handwritten signature in black ink, appearing to read 'Sikiga'.

Sikiga Taimi  
Pule Kaupule  
Kaupule Nanumaga



## 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*

WanTech, Lotokufaki Kaitu

## Definitions

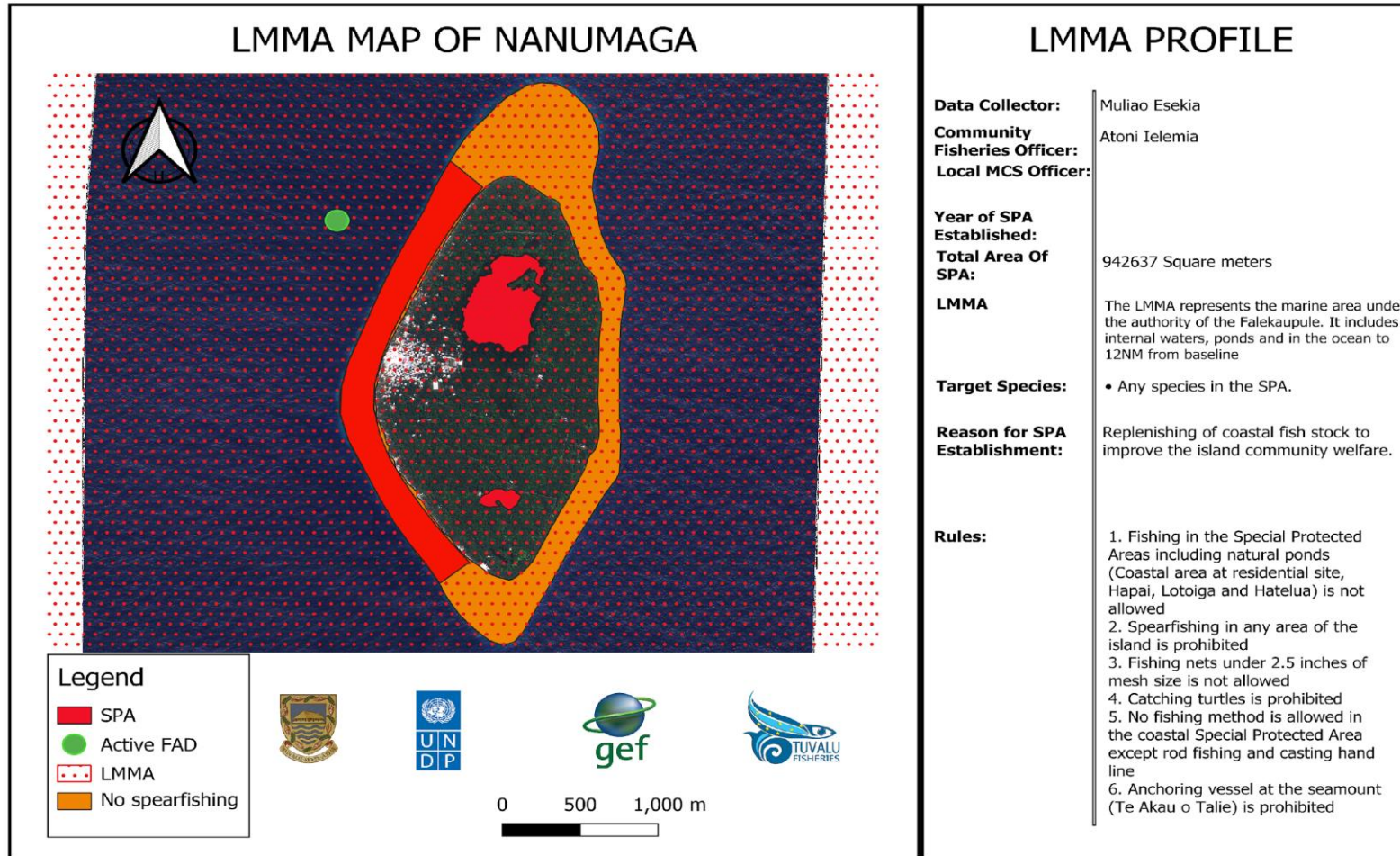
Unless otherwise expressed, words and expressions used in this plan have the same meaning as defined in the Marine Resources Act 2006 and Falekaupule Act 2008.

<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>Closed season</b>	A period of time during when certain fishing gear or activities are prohibited
<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, 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>Special Protected Area (SPA)</b>	A Special Protected Area within the LMMA under the Falekaupule area
<b>Territorial Sea</b>	The 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>	Local knowledge that is 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 practices that have been passed down from previous generations

## Abbreviations

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

Figure 1. Map of Nanumaga



# Part 1: Introduction

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

The Nanumaga Island community has traditionally relied on their coastal reef fisheries for their livelihoods, food security, and socio-economic benefits.

However, in recent years, the community has observed a significant decline in the quantity and size of these resources compared to the past. This change is likely due to various factors such as population growth, climate change, the growing use of unsustainable fishing methods, pollution caused by littering along the coastline, and catching very small and potentially immature fish. Developments near coastal areas, the use of heavy machinery during cargo operations, and coral breakage or degradation are other factors that all have had an impact on these coastal fisheries.

The people of Nanumaga are deeply concerned about their future due to the alarming decline in their fisheries resources. As such, this *Coastal Fisheries Management Plan* (the Plan) aims to ensure healthy, sustainable, and well-managed coastal fisheries, through collaboration between the Falekaupule and Tuvalu Fisheries Department (the Department). In line with the objectives of *Te Kete* (Tuvalu National Strategy for Sustainable Development 2021-2030), Tuvalu Fisheries Department Corporate Plan 2023-2025, and the Nanumaga Island Strategic Plan, the Nanumaga 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 Nanumaga Falekaupule 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

An abundant, healthy, and improved coastal fisheries resources and ecosystems, where all community stakeholders are involved in their sustainable management.

## 1.4 Policy and legislation

This Plan is aligned to the:

- *Te Kete* National Strategy for Sustainable Development (2021-2030)
- Nanumaga Island Strategic Plan *Te Kaafaga* (2021–2024)
- Tuvalu Fisheries Department Corporate Plan (2023-2025)
- Falekaupule Act 2008
- Marine Resources Act 2008
- Maritime Zones Act 2012
- Wildlife Conservation Act 1975



The development and implementation of our Plan is guided by our values, as listed in the Te Kaafaga (2021-2024):

1. Kaipule: *Wise resource management and usage*
2. Atafai: *Using resources for their main purpose without wastage*
3. Alofa: *Careful use of resources to benefit everyone*
4. Agamaluu: *Silently happy about the achievements of our efforts*
5. Loto-fenua: *Being patriotic – the heart to love and defend our home island*
6. Loto-maulalo: *Humility – being modest in achievement*
7. Loto-kufaki: *Intense patience – long-term benefits for everyone demands forsaking instant gratification*
8. A’ava: *Respecting and honouring any final decision the island has collectively adopted as a community*



## 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

While the people of Nanumaga rely heavily on offshore fisheries resources, coastal fisheries remain very important as a source of food security and livelihood (approximately 30% of recorded catch).

Among the coastal catch records, *Acanthurus triostegus* (locally known as Manini or Koinava), *Sargocentron tiere* (Malau gutu loa or Malua mata loa), *Myripristis pralinia* (Malau puku) are the most frequently landed species (Table 2). Fishers typically use reef scoop nets, casting nets, and gillnets to catch coastal fish.

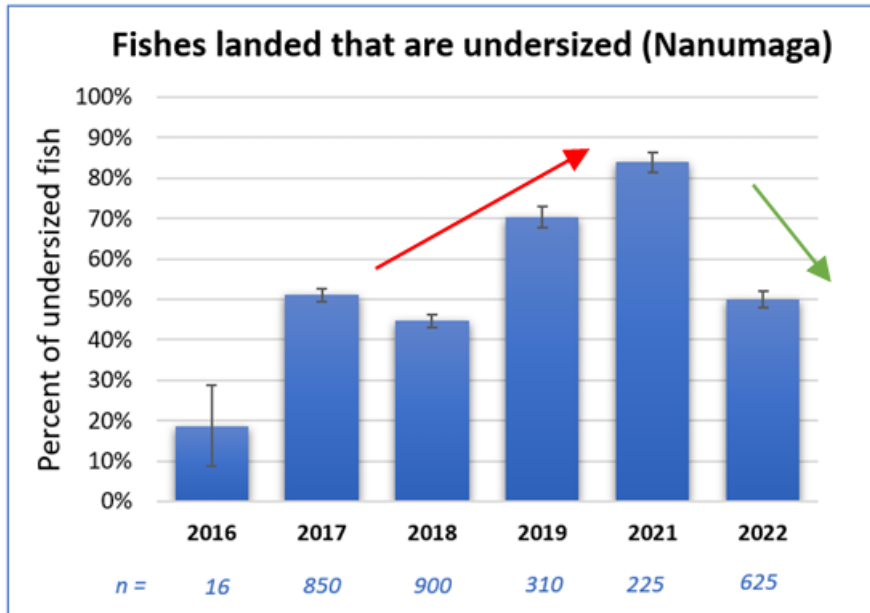
**Table 2: Most frequently landed species in Nanumaga based on creel surveys conducted from 2016 to 2022**

	Species	Local Name	Family	Total Weight (kg)	Number	Fishing Methods Used
1	<i>Acanthurus triostegus</i>	Manini, Koinava	Acanthuridae	56	603	Reef scoop net, Casting net, Gillnetting
2	<i>Sargocentron tiere</i>	Malau gutu loa, Malua mata loa	Holocentridae	52	359	Rod fishing, Slow trolling, Handline, Reef scoop net, Gillnetting
3	<i>Myripristis pralinia</i>	Malau puku	Holocentridae	21	202	Handline, Slow trolling
4	<i>Kyphosus vaigiensis</i>	Nanue	Kyphosidae	56	162	Casting net, Gillnetting
5	<i>Cirrhitus pinnulatus</i>	Patuki	Cirrhitidae	21	156	Rod fishing, Float Rod fishing, Float Line fishing
6	<i>Aphareus furca</i>	Palusega, Kotua, Taelepe, Takuoga	Lutjanidae	29	140	Slow trolling, Float Rod fishing, Float Line fishing
7	<i>Acanthurus leucopareius</i>	Maono	Acanthuridae	13	125	Gillnetting, Casting net
8	<i>Epinephelus merra</i>	Gatalaliki	Serranidae	14	108	Rod fishing, Float Rod fishing
9	<i>Gnathanodon speciosus</i>	Filu, Fua'ala'ala, Fuaika, Kautea, Pakeva	Carangidae	36	99	Rod fishing, Casting net, Gillnetting
10	<i>Cephalopholis leopardus</i>	Mataele	Serranidae	8	88	Stainless steel/Lead jigging, Bait Jigging, Float Line fishing
11	<i>Epinephelus macrospilos</i>	Gatala, fapuku	Serranidae	17	85	Float Rod fishing, Rod fishing, Bait Jigging, Float Line fishing
12	<i>Uraspis helvola</i>	Lupolupo	Carangidae	24	75	Rod fishing, Reeling, Gillnetting, Slow trolling, Stainless steel/Lead jigging
13	<i>Lutjanus fulvus</i>	Tagau, Takape	Lutjanidae	15	68	Rod fishing, Stainless steel/Lead jigging
14	<i>Epinephelus hexagonatus</i>	Eve	Serranidae	17	64	Rod fishing, Float Rod fishing, Bait jigging,

						Stainless steel/Lead jigging; Float Line fishing
15	<i>Anyperodon leucogrammicus</i>	Gatala lautalo, Gatala lautala	Serranidae	1	60	Rod fishing, Float Rod fishing, Bait jigging, Stainless steel/Lead jigging, Float Line fishing

\*Other fish species recorded by creel surveys are listed in Appendix II.

Recent Creel Survey Reports indicate overall status of Nanumaga’s coastal fisheries resources has been poor, with an average of 53% of the fishes caught being undersized (Figure 2). This is well above the national average of 36%. Ideally, no undersize fish should be landed; hence management actions will be necessary to reduce catch of undersize fish and this would lead to improvements in the resources.



**Figure 2:** Percentage of fish being landed undersized by year +/-SE. 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 three main objectives: ensuring fisheries sustainability to maintain and improve food security and livelihoods, improving compliance with our laws and regulations, and restoring and protecting our coastal marine resources.

**Table 3. Management objectives and strategies**

OBJECTIVES	STRATEGIES
<p><b>1. To ensure sustainability of coastal marine resources to maintain food security and improve livelihoods.</b></p>	<p>1.1 Improve understanding of the health of coastal marine resources.</p> <p>1.2 Promote sustainability of fisheries resources by implementing appropriate management measures.</p> <p>1.3 Strengthen and promote aquaculture and restocking programs initiatives.</p> <p>1.4 Enhance livelihoods through re-planting programs.</p>
<p><b>2. To strengthen and enforce existing coastal marine laws, regulations, and plans.</b></p>	<p>2.1 Develop community bye-laws to strengthen the management measures and customary laws.</p> <p>2.2 Develop community programmes to ensure all communities understand existing coastal marine laws, regulations and plans.</p>
<p><b>3. To restore and protect coastal marine resources.</b></p>	<p>3.1 Expand the coastal Special Protected Area.</p> <p>3.2 Promote educational programs to support responsible fishing practices.</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 methods are strictly prohibited in the Special Protected Areas (coastal and natural ponds, i.e. Hapai, Lotoiga and Hatelua). This prohibition does not apply when using handlines and fishing rods within the coastal Special Protected Area.
2	All spearfishing is strictly prohibited in all waters.
3	The use of fishing nets with a mesh size two (2) inches or less is strictly prohibited.
4	Harvesting turtles at sea and after they lay eggs on land is allowed, but harvesting turtle eggs is strictly prohibited.
5	Anchoring of all vessels on the seamount (Te Akau o Talie) is strictly prohibited unless prior approval from the Pulefenua (Island Chief) is obtained.

## Part 6: Review and 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 ensure sustainability of coastal marine resources to maintain food security and improve livelihoods</b>									
<b>Strategy 1.1: Improve understanding of the health of the coastal marine resources</b>	<ul style="list-style-type: none"> <li>Conduct reef assessment on resource abundance and biodiversity</li> </ul>	Coastal Fisheries Section, TFD	Coastal Fisheries Section, TFD	2024-25	Resource assessment undertaken	Status of reef resources is assessed	Planned	Nanumaga Kaupule, community, TFD	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Develop a report on the current status with key findings and recommendations</li> </ul>		Nanumaga community including youth and fishers	2025	Report developed	Survey Report published and shared with Nanumaga community			
	<ul style="list-style-type: none"> <li>Publish Report</li> </ul>		Nanumaga Kaupule  Survey materials	2025-26	Report published				
<b>Strategy 1.2: Promote sustainability of fisheries resources by implementing appropriate management measures</b>	<ul style="list-style-type: none"> <li>Investigate the feasibility of gear-related management measures</li> </ul>	Coastal Fisheries Section, TFD	Coastal Fisheries Section, TFD	2024-25	Investigations on fishing restrictions undertaken	Investigation report published and shared with Nanumaga community	Planned	Nanumaga Kaupule, community, TFD	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Investigate the use of minimum size limits and spawning seasonality restrictions for key coastal species</li> </ul>		Nanumaga community including youth and fishers	2026		New gear, size limit and season fishing related restrictions implemented			
	<ul style="list-style-type: none"> <li>Publish and consult on investigation report</li> </ul>		Nanumaga Kaupule	2026-27	Investigation report published				

<b>Strategy 1.3: Strengthen and promote aquaculture and restocking programs initiatives</b>	<ul style="list-style-type: none"> <li>Identify species for restocking in the Vaiotoa pond during Falekaupule assembly</li> </ul>	Coastal Fisheries Section, TFD in collaboration with Falekaupule	Nanumaga Kaupule	2024	Restocked species identified and recorded in Falekaupule assembly minutes	Restocking list of species selected	Planned	Nanumaga Kaupule, community, TFD	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Restock tilapia and selected fish species in the Vaiotoa pond</li> </ul>		Restocking materials	2025	Restocking activity undertaken	Selected species restocked in the Vaiotoa pond			
<b>Strategy 1.4: Enhance livelihoods through re-planting programs</b>	<ul style="list-style-type: none"> <li>Identify suitable areas for re-planting activities</li> </ul>	Coastal Fisheries Section, TFD in collaboration with Falekaupule and community	Nanumaga Kaupule	2024	Suitable areas for re-planting activities identified	Replanting areas identified	Planned	Nanumaga Kaupule, community, TFD	Lack of human and equipment resources  Lack of funding
	<ul style="list-style-type: none"> <li>Plant and monitor the growth “hagale” and “gigie”</li> </ul>		Talafai Youth Association	2025-27	Planting and monitoring progress report published and shared	Hagale and Gigie planted and monitored			
	<ul style="list-style-type: none"> <li>Replenish Paikea/crabs in all natural ponds and mangrove areas</li> </ul>		Women association	2024	Monitoring reports on restoration and conservation of Paikea/crabs shared and published	Paikea population replenished			

**Objective 2: To strengthen and enforce existing coastal marine laws, regulations and plans on the island**



<b>Strategy 2.1: Develop community bye-laws to strengthen the management measures and customary laws</b>	<ul style="list-style-type: none"> <li>Consult with the Nanumaga community to develop fisheries bye-laws</li> </ul>	Fisheries Legal Officer (FLO), TFD in collaboration with Falekaupule and Community	Coastal Section and FLO, TFD	2024 (during Metronome trip)	Nanumaga community consulted and awareness improved on fisheries bye-laws	Fisheries bye-laws developed and enforced	Planned	Kaupule, community, TFD	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Improve awareness within the Nanumaga community of fisheries bye-laws</li> </ul>		Nanumaga Falekaupule	2025 (develop information tools)					
	<ul style="list-style-type: none"> <li>Recruit an enforcement and compliance officer</li> </ul>		Nanumaga Kaupule	2025	A new enforcement and compliance officer recruited	Enforcement and compliance officer position advertised and recruited			
	<ul style="list-style-type: none"> <li>Investigate a demerit system to encourage compliance and promote responsible behaviour</li> </ul>		Nanumaga Community	2025-27	A demerit system to encourage compliance and promote responsible behaviour investigated	Demerit system investigated			
<b>Strategy 2.2: Develop community programmes to ensure all communities understand existing coastal marine laws, regulations and plans.</b>	<ul style="list-style-type: none"> <li>Compile all marine laws, regulations and plans that relate to Nanumaga's coastal fisheries</li> </ul>	LMMA Officer with the assistance from Coastal Section and FLO, TFD	Nanumaga Kaupule	2024 (during Metronome trip)	Marine legislations and bye-laws compiled	All marine/fisheries laws, regulations and plans compiled	Planned	Kaupule, community, TFD	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Develop easily understandable and accessible information tools (e.g. posters,</li> </ul>		Nanumaga Falekaupule	2025					

	pamphlets and billboards) regarding the compiled laws, regulations and plans		and Coastal Section) Community Fisheries Officer						
	<ul style="list-style-type: none"> <li>Distribute the information tools to all communities within Nanumaga</li> <li>Monitor changes in behaviour to assess the effectiveness of these information tools</li> </ul>			2025 (distribute information)					
				2025-27	Changes in behaviour monitored	Changes in community behaviours towards information tools monitored and reported to Kaupule and TFD			

**Objective 3: To restore and protect coastal marine resources**

<b>Strategy 3.1: Expand the coastal Special Protected Area</b>	<ul style="list-style-type: none"> <li>Seek endorsement from the Falekaupule</li> </ul>	Coastal Fisheries Section, TFD in collaboration with Kaupule, Falekaupule and community	Nanumaga Kaupule, Falekaupule, community, TFD	2024 (obtain endorsement)	Approval from Falekaupule confirmed	Issue on enlarging the CSPA raised and endorsed in the Falekaupule assembly	Planned	Kaupule, community, TFD	Lack of funding Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Establish new boundary coordinates</li> </ul>			2024		New boundary demarcated			
	<ul style="list-style-type: none"> <li>Inform the community about the new boundary</li> </ul>			2024	New boundary demarcated and informed to the community				

<b>Strategy 3.2: Promote educational programs to support responsible fishing practices.</b>	<ul style="list-style-type: none"> <li>Conduct workshop with Nanumaga community on responsible fishing practices</li> </ul>	Coastal Fisheries Section, TFD	Tuvalu Fisheries Department  Nanumaga Kaupule	2024	Community workshop on responsible fishing practiced conducted	Community workshop conducted	Planned	Kaupule, community, TFD	Lack of funding  Lack of staff and equipment resources
	<ul style="list-style-type: none"> <li>Develop and distribute easily understandable and accessible information tools (e.g. posters, pamphlets, billboards)</li> </ul>		Nanumaga Community  Nanumaga CFO	2025	Accessible information tools developed and distributed	Accessible information tools developed and distributed			

## Appendix II: Nanumaga landings reported from creel surveys (2016-2022)

	<b>Species</b>	<b>Local Name</b>	<b>Family</b>	<b>Weight (kg)</b>	<b>Number landed</b>
1	<i>Ablennes hians / hians</i>	Sumu moana, Humu moana	Belonidae	6.8	9
2	<i>Abudefduf saxatilis</i>	Mutumutu	Pomacentridae	5.2	45
3	<i>Abudefduf sexfasciatus?</i>	Matagi, Katoatoa	Pomacentridae	0.2	1
4	<i>Acanthocybium solandri</i>	Paala	Scombridae	1558.1	237
5	<i>Acanthurus blochii</i>	Kapalagi, Maa	Acanthuridae	2.4	1
6	<i>Acanthurus guttatus</i>	Api, Maono	Acanthuridae	1.1	7
7	<i>Acanthurus leucopareius</i>	Maono	Acanthuridae	13.3	125
8	<i>Acanthurus lineatus</i>	Ponelolo, Alogo, Pone hamoa	Acanthuridae	0.1	1
9	<i>Acanthurus triostegus</i>	Manini, Koinava	Acanthuridae	55.6	603
10	<i>Acanthurus xanthopterus</i>	Kapalagi, Maa	Acanthuridae	1.9	1
11	<i>Aluterus</i>	Sumu kaleva, Humu kaleva, Sue kaleva	Monacanthidae	0.9	7
12	<i>Anampses caeruleopunctatus</i>	Gole, Uloulo, Kiole	Labridae	0.8	3
13	<i>Anyperodon leucogrammicus</i>	Gatala lautalo, Gatala lautala	Serranidae	0.9	60
14	<i>Aphareus furca</i>	Palusega, Kotua, Taelepe, Takuoga	Lutjanidae	28.6	140
15	<i>Aphareus rutilans</i>	Palupalu sega, Palu sega	Lutjanidae	5.9	2
16	<i>Aprion virescens</i>	Utu	Lutjanidae	11.1	4
17	Balistidae spp	Sumu magasega, Suma, Sumu lautalo, Sumu niu	Balistidae	7.6	52
18	<i>Carangoides ferdau</i>	Pula, Lupolupo, Fuaika, Filu, Lupo, Pakeva, Kata	Carangidae	11.7	23
19	<i>Carangoides fulvoguttatus</i>	Lupolupo	Carangidae	3.1	13
20	<i>Caranx ignobilis</i>	Tino ulua (lge), Lupo (small), Aseu (med); Mea tal	Carangidae	1.6	9
21	<i>Caranx lugubris</i>	Taufauli, Tino tafauli (large), Aheu tafauli, Uluat	Carangidae	149.7	240
22	<i>Caranx melampygus</i>	Aseu, Ulua, Fuaika	Carangidae	182.4	74



23	<i>Caranx sexfasciatus</i>	Teu	Carangidae	30.2	19
24	<i>Carcharhinus leucus</i>	MagÅ	Carcharhinidae	18.9	1
25	<i>Carcharhinus amblyrhynchos</i>	Mago	Carcharhinidae	29.2	1
26	<i>Cephalopholis argus</i>	Loi	Serranidae	2.6	4
27	<i>Cephalopholis leopardus</i>	Mataele (Ff, Nm)	Serranidae	8.4	88
28	<i>Cephalopholis miniata</i>	Pula (Ff, Nm), pula kula (Ff)	Serranidae	12.2	30
29	<i>Cephalopholis sonnerati</i>	Pula (Ff, Nm)	Serranidae	1.7	14
30	<i>Cephalopholis urodeta</i>	Mataele	Serranidae	0.3	4
31	<i>Cheilinus trilobatus</i>	Gole	Labridae	0.3	1
32	<i>Cirrhitus pinnulatus</i>	Patuki	Cirrhitidae	21.4	156
33	<i>Conger macrocephalus</i>	Tuna (Ff)	Congridae	10.3	6
34	<i>Coryphaena hippurus</i>	Masimasi	Coryphaenidae	51.8	3
35	<i>Crenimugil crenilabis</i>	Kanase	Mugilidae	6.0	15
36	<i>Decapterus macarellus</i>	Atule	Carangidae	1.5	37
37	<i>Elagatis bipinnulata</i>	Kamai, Kamaa, Kami	Carangidae	492.0	223
38	<i>Epinephelus hexagonatus</i>	Eve	Serranidae	218.1	64
39	<i>Epinephelus macrospilos</i>	Gatala (Ff), fÄpuku (Nm)	Serranidae	16.7	85
40	<i>Epinephelus malabaricus</i>	Gatala (Ff, Nm)	Serranidae	15.6	57
41	<i>Epinephelus merra</i>	Gatalaliki	Serranidae	14.3	108
42	<i>Epinephelus ongus</i>	Gatala (Ff, Nm)	Serranidae	7.2	20
43	<i>Epinephelus polyphekadion</i>	Gatala (one dot)	Serranidae	0.4	4
44	<i>Euthynnus affinis</i>	Atu alo, Autualo	Scombridae	3.6	3
45	<i>Exocoetus volitans</i>	Isave, Sasave	Exocoetidae	529.1	2110
46	<i>Gempylus serpens</i>	Palu palagi	Gempylidae	4.6	1
47	<i>Gerres oyena</i>	Matu (Ff, Nm, Nf, NI, Vt), matu papa (Ff), te nini	Gerridae	1.6	5
48	<i>Gnathanodon speciosus</i>	Filu, Fua'ala'ala, Fuaika, Kautea, Pakeva	Carangidae	35.7	99
49	<i>Gnathodentex aureolineatus</i>	Mu	Lethrinidae	3.7	5
50	<i>Grammatorcynus bilineatus</i>	Tavatava	Scombridae	404.2	132
51	<i>Grammistes sexlineatus</i>	Patuki, Lafalafa	Serranidae	0.1	1

52	<i>Gymnosarda unicolor</i>	Valu	Scombridae	6.8	5
53	<i>Halichoeres melanurus</i>	Ulo'ulo (Ff, Nm)	Labridae	1.2	5
54	<i>Hemiramphus far</i>		Hemiramphidae	9.8	9
55	<i>Hemiramphus sp</i>	Ise	Hemiramphidae	0.2	1
56	<i>Katsuwonus pelamis</i>	Atu	Scombridae	4099.8	1281
57	<i>Kyphosus cinerascens</i>	Nanue	Kyphosidae	15.4	42
58	<i>Kyphosus vaigiensis</i>	Nanue (Ff, Nm)	Kyphosidae	56.3	162
59	LABRIDAE spp	Uloulo, Kimoa, Kiole	Labridae	4.7	10
60	<i>Lampris guttatus</i>	Palu malau puku (Ff)	Lampridae	8.4	1
61	<i>Lethrinus elongatus</i>	Filoa	Lethrinidae	0.3	1
62	<i>Lethrinus erythracanthus</i>	Saputu	Lethrinidae	6.3	15
63	<i>Lethrinus microdon</i>	Filoa, Kapatiko	Lethrinidae	2.2	7
64	<i>Lethrinus obsoletus</i>	Tanutanu	Lethrinidae	0.7	3
65	<i>Liza vaigiensis</i>	Kafakafa	Mugilidae	6.0	18
66	<i>Lutjanus argentimaculatus</i>	Tagau	Lutjanidae	0.8	3
67	<i>Lutjanus bohar</i>	Fakamea, Fagamea	Lutjanidae	15.2	17
68	<i>Lutjanus fulvus</i>	Tagau, Takape	Lutjanidae	137.1	68
69	<i>Lutjanus kasmira</i>	Savane	Lutjanidae	0.2	1
70	<i>Lutjanus monostigma</i>	Taiva	Lutjanidae	11.6	33
71	<i>Melichthys niger</i>	Sumu lega	Balistidae	0.6	3
72	<i>Melichthys vidua</i>	Sumu kula felo, moana, sumu uli	Balistidae	5.0	24
73	<i>Monotaxis grandoculis</i>	Muu, Mufala	Lethrinidae	3.3	8
74	MULLIDAE spp	Vete, Teve, Kaivete, Kalo, Sikumanuau	Mullidae	0.7	5
75	<i>Mulloidichthys flavolineatus</i>	Kaivete selesega	Mullidae	1.0	8
76	<i>Myripristis amaena</i>	Malau	Holocentridae	2.7	33
77	<i>Myripristis berndti</i>	Malau	Holocentridae	0.4	7
78	<i>Myripristis pralinia?</i>	Malau puku	Holocentridae	21.2	202
79	<i>Naso lituratus</i>	Maninilakau	Acanthuridae	0.7	3
80	<i>Naso vlamingii</i>	Pokapoka lanulanu	Acanthuridae	0.9	2
81	<i>Neoniphon argenteus</i>	Talakisi	Holocentridae	0.1	1

82	<i>Octopus cyaneus</i>	Feke	Octopodidae	4.8	6
83	<i>Ostracion cubicus</i>	sumu	Ostraciidae	1.3	6
84	<i>Parupeneus barberinus</i>	Malili, Kaivete	Mullidae	2.8	5
85	<i>Parupeneus cyclostomus</i>	Kaivete piniki	Mullidae	1.1	6
86	<i>Parupeneus multifasciatus</i>	Afulu	Mullidae	0.3	3
87	<i>Pempheris analis</i>	Maanifi, Bronze sweeper	Pempheridae	2.2	21
88	<i>Plectropomus areolatus</i>	Tonu gatala	Serranidae	0.7	1
89	POMACENTRIDAE spp	Mutumutu, Moimoi	Pomacentridae	0.3	2
90	<i>Promethichthys prometheus</i>	Palu	Gempylidae	196.4	23
91	<i>Rhinecanthus aculeatus</i>	Sumu	Balistidae	0.1	3
92	<i>Ruvettus pretiosus</i>	Palu taesi	Gempylidae	99.3	10
93	<i>Sargocentron spiniferum</i>	Tamalau	Holocentridae	6.2	12
94	<i>Sargocentron tiere</i>	Malau gutu loa, Malua mata loa	Holocentridae	51.9	359
95	<i>Scomberoides lysan</i>	Ata, Lai	Carangidae	0.9	2
96	<i>Selar crumenophthalmus</i>	Salala, Atule	Carangidae	1.1	10
97	SERRANIDAE spp	Gatala	Serranidae	2.6	12
98	<i>Sphyraena barracuda</i>	Ono, Pauea	Sphyraenidae	524.6	132
99	<i>Sphyraena jello?</i>	Ono, Oso, Nn	Sphyraenidae	385.2	113
100	<i>Thalassoma purpureum</i>	Gole lanulauniu	Labridae	1.2	6
101	<i>Thunnus albacares</i>	Kasi, Takuo, Takua, Tavatava	Scombridae	7232.2	1799
102	<i>Thunnus obesus</i>	Kasi matalasi	Scombridae	2580.2	645
103	<i>Trachinotus bailloni</i>	Lai	Carangidae	4.8	12
104	<i>Turbo marmoratus</i>	Alili	Turbinidae	0.1	1
105	<i>Tylosurus crocodilus</i>	Maliolio	Belonidae	3.0	7
106	<i>Uraspis helvola</i>	Lupolupo	Carangidae	23.7	75
107	<i>Xanthichthys caeruleolineatus</i>	Sumu moana	Balistidae	3.55	3
	(blank)			30.4	
	<b>Grand Total</b>			<b>19571.0</b>	<b>10205</b>