

Laeva Ataeao

NUKULAELAE COASTAL FISHERIES MANAGEMENT PLAN 2024 - 2027



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### <u>Foreword</u>



Kote manuia mo Nukulaelae I tena a taeao ite vaega taaua tenei o te maumea mai i tena kogatai io me ko te moana se tulaga e tau o fakataua i sose avanoaga e maua. Maumea maua mai te kogatai se maumea taaua e tasi tela e fakana kiei a te fenua i aso takitasi o te olaga kae mafai foki o faka maketi atu ki tua manafai ko uke. E taaua ke galue fakatasi o aofaga i loto i te palani atiake tenei a te minisituli o Maumea (Fisheries) ke paagatasi ei fanau o Nukulaelae kola e ola I luga I te fenua. Iloto ite palani tenei e fakataaua ei te iloa mote atamai i poto mo sose fanau ke mafai o fakaaoga i aso takitasi mo tausi ei te kaiga. Ko tena uiga e isi ne vaega o ika ka se mafai o fakaoga ona ko seai se atamai I tupulaga i aso nei ke fakamaua ei a figota io me ko ika konei kola e fakasae mai I te

palani. Nukulaelae se fenua e maumea I tena kogatai kae e taaua ke tausi a poto mote atamai mo fakamaua ei a figota (ika) valevale mote olaga o ana fanau I aso takitasi. Ka mafai foki o faite mai ei te alagasene foliki ma te kaiga.

The island of Nukulaelae depends heavily on its marine resources for main source of food and protein and livelihoods. Traditional fishing knowledge and skills are of significance and need to be saved and passed onto generation to generation.

Nukulaelae has a rich marine zone, and therefore, it is very important to maintain different methods of fishing in collaboration with the Tuvalu Fisheries Department as means of daily living or for a small family income. I hereby present "Laeva Ataeao", Nukulaelae's coastal fisheries management plan 2024-2027.

Siliva.Timo



### 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 the day of truet 2024

#### Photograph credits

Filipo Makolo, Lotokufaki Kaitu, Nukulaelae Kaupule, 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.

Baseline	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
Bye-law	A local law made by a specific island Falekaupule or as defined in the Falekaupule Act 2008
Coral bleaching	The process where the corals turn white due to various stressors, such as change in temperature, light, or nutrients
<b>Coral Restoration</b>	Any activity that increases the health and abundance of coral biodiversity
Creel Survey	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)
Dive Spearfishing	A method of fishing where a person dives underwater, usually to hunt fish using a spear, which is a long pole with a sharp point
FAD	A Fish Aggregating Device, and includes any floating object, whether anchored or drifting, used for the purpose of aggregating fish
Fish	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
Gleaning	The hand gathering of fish from the intertidal zone
Locally Managed Marine Area (LMMA)	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, landowning groups, partner organisations, and/or collaborative government representatives who reside or are based in the immediate area
Special Protected Area (SPA)	A Special Protected Area within the LMMA under the Falekaupule area
Territorial Sea	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
Traditional Fishing Knowledge	Knowledge or practices passed down from generation to generation that form part of the traditions or heritage of communities
Traditional Fishing Methods	Practices related to small-scale commercial or subsistence fishing methods that have been passed down from previous generations

# <u>Abbreviations</u>

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



Figure 1. Map of Nukulaelae





### Part 1: Introduction

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

The people of Nukulaelae have a deep connection to the sea and its resources. In particular, the coastal fisheries play a vital role in providing the main source of food and protein for the community's daily sustenance and traditional events.

However, in recent years, the community has observed significant difficulties in catching fish compared to past years and is likely due to the impact of population increase and climate change. The community has over the years also observed the effect of climate change on fish migration due to coral bleaching on the eastern coast of the main settlement, as strong winds and storm surges frequently cause movement of sands covering coral reefs.

The people of Nukulaelae, with the support of the Tuvalu Fisheries Department (the Department), have developed this Coastal Fisheries Management Plan (the Plan) to address these issues. The Plan intends to guide the management of coastal fisheries resources, through effective collaboration between the Nukulaelae community and the Department, and aims to maintain the richness of Nukulaelae waters.

#### 1.2 Scope

This Plan applies to the area of authority of the Nukulaelae 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

A healthy and abundant coastal fisheries resource for the future generation of Nukulaelae

#### 1.4 Policy and legislation

This plan is aligned to the:

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

The implementation of this plan will follow the guiding principles set out in Kafoa III (2021-2024):

- 1. **Kafoa,** which refers to the strong spiritual life in all the people of Nukulaelae, which is the light of Christ.
- 2. **Skilful and experienced leadership**, from families, organisations, island, and church congregation. This leadership bases decisions on Christian principles.
- 3. **Working together**. The people of Nukulaelae work together not only with each other, but with others in the country and around the world.
- 4. **Honesty and a clear understanding** will underpin the development, implementation, and communication of outcomes of this plan.
- 5. **Communal way of life**, which reflects the unity and love of our people, and enables us to achieve our dreams.
- 6. **Equity for all**. There will be no discrimination to people, employment, funding, and the distribution of wealth.
- 7. **Monitor, decide and accomplish**. We will monitor and decide on the useful developments in fisheries stipulated in this plan. We will apply effective strategies to accomplish the activities in this Plan.



# 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

Au	thority	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

The people of Nukulaelae rely heavily on their coastal fisheries for food security and livelihood (approximately 56% of the recorded catch).

Among the coastal catch records, *Lutjanus gibbus* (locally known as Taea), *Myripristis amaena* (Malau), and *Hipposcarus longiceps* (Ulafi) are the most frequently landed species (Table 2). Fishers typically use handlines, spearfishing, slow trolling, and casting nets to catch coastal fish.

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

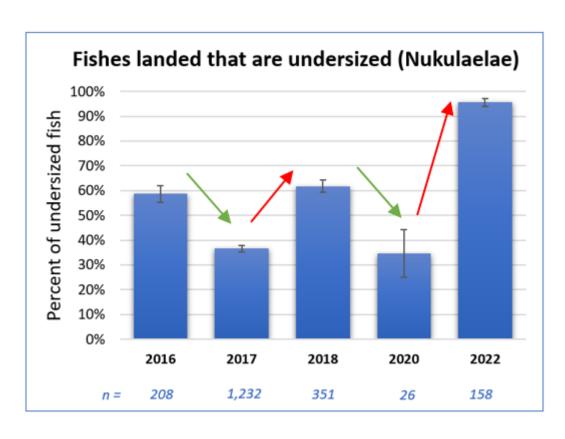
	Coastal Species*	Local Name	Family	Number	Total Weight (kg)	Fishing methods used
1	Lutjanus gibbus	Taea	Lutjanidae	615	930	Handline; Spearfishing; Casting net; Deep sea; Lead jigging; Slow trolling; Lama utuutu; sisi fakatapea; tulituli
2	Myripristis amaena	Malau	Holocentridae	280	39	Slow trolling; Spearfishing; lama utuutu; Casting net; tulituli; sisi sau
3	Hipposcarus Iongiceps	Ulafi	Scaridae	261	330	Peitili, Matau, Lafolafo, Sana, Tili peipei, Lamautuutu, Sisi, Taa, Tul ituli
4	Acanthurus leucopareius	Maono	Acanthuridae	173	27	Peitili ,Tili peipei,Sana,Lama utuutu
5	Lethrinus obsoletus	Tanutanu	Lethrinidae	152	36	Lafolafo,Matau,Fakatapea,Sisi, Sana,Peitili,Tili pei,Tili peipei,Lama utuutu,Tulituli
6	Acanthurus triostegus	Manini, Koinava	Acanthuridae	95	7	Peitili,Tili peipei,Sana,Lama utuutu,Taa,Tulituli
7	Gerres oblongus	Matu	Gerridae	75	16	Sana, Lafolafo, Peitili, Tili peipei, Lama utuutu, Velovelo, Molimoli, TaaS isi
8	Epinephelus macrospilos	Gatala, fapuku	Serranidae	62	13	Matau,Sana,Lama utuutu,Peitili,Tili peipei,Fakatapea,Sisi,Lafolafo, Deep sea,Suki,Taa,Tulituli

9	Pseudobalistes flavimarginatus	Umu	Balistidae	38	66	Laolao umu,Peitili,Tili peipei,velovelo,Sana,Fakatape a
10	Epinephelus maculatus	Fapuku	Serranidae	35	27	Matau,Sana,Sisi,Deepsea,Lafol afo,Molimoli,Suki,Fakatapea,P ei tili,lama utuutu, suki, tulituli,taa
11	Decapterus macarellus	Atule	Carangidae	33	11	Futifuti,Takitaki,Sisi,Peitili,Mat au,
12	Naso lituratus	Maninila kau	Acanthuridae	32	12	Sana,Pei tili,Tili peipei,Lama utuutu,Laolao,Taa,Tulituli,
13	Liza macrolepis	Kafakafa	Mugilidae	31	12	Pei tili,Tili peipei,Sana,Sisi,Lama utuutu,Tao fua,Taa
14	Gnathodentex aureolineatus	Mu	Lethrinidae	30	14	Peitili, Sisi, Lafolafo, Sana, Lama utuutu, Fakatapea, Taa, Tulituli
15	Monotaxis grandoculis	Muu, Mufala	Lethrinidae	28	12	Takitaki,Sana,Peitili,Lamautuu tu,Sisi,Lafolafo,Taa,Tulituli

<sup>\*</sup>Other fish species recorded by creel surveys are listed in Appendix II.

Recent Creel Survey Reports indicate overall status of Nukulaelae's coastal fisheries resources has been poor, with an average of 49% of the fishes caught being undersized (2016 – 2022, Figure 2). This is well above the national average of 36%. Ideally, no undersize fish should be landed; hence management actions may be necessary to reduce catch of undersize fish and this would lead to improvements in the resources.





**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. There is no coastal fisheries data recorded for 2019 and 2021 to properly assess trends.



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

We will achieve our Goal by focusing on three main objectives: enhancing marine conservation and strengthen ecosystems, reviving traditional fishing knowledge and practices and strengthening coastal fisheries management and compliance to bring back the wealth of our coastal habitat for the future generation of Nukulaelae.

Table 3: Management objectives, and strategies

OBJECTIVES	STRATEGIES
To enhance marine     conservation and     strengthen     ecosystems	<ul> <li>1.1 Investigate coral restoration initiatives.</li> <li>1.2 Increase awareness on the importance of conservation of marine habitats and biodiversity.</li> <li>1.3 Develop a sustainable method for anchorage.</li> </ul>
To revive traditional     fishing knowledge     and practices	<ul><li>2.1 Promote and encourage participation of community in trainings for traditional fishing knowledge and practices.</li><li>2.2 Strengthen and preserve traditional fishing knowledge.</li></ul>
3. To strengthen coastal fisheries management and compliance	<ul><li>3.1 Improve the management of coastal fisheries resources.</li><li>3.2 Strengthen compliance through awareness programs.</li></ul>



### 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.

Mana	agement Measures
1	All fishing activities inside the Special Protected Area (SPA) are strictly prohibited. This prohibition does not apply to <b>casting rod</b> and <b>handline fishing</b> . (Illegal fishing activities include harvesting of coconut crabs, net fishing, hand spear fishing, dive-spear fishing, and all other types of fishing).
2	Fishing for <i>Epinephelus maculatus</i> (highfin grouper/gatala fapuku) and <i>Pseudobalistes</i> flavimarginatus (yellow margin triggerfish/umu) is strictly prohibited from <b>1</b> <sup>st</sup> <b>May to 1</b> <sup>st</sup> <b>September</b> , every year.
3	Fishing net with mesh size two (2) inches or less is strictly prohibited.
4	Bird hunting using guns is strictly prohibited from 1 <sup>st</sup> March to 1 <sup>st</sup> September, every year.

### Part 6: Review and Amendment

The Plan will be effective for three years (2024-2027) following the 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
Objective 1: To enhance	marine conservation an	d strengthen ecosys	tems						
	Submit formal request to TFD			2024	Copy of formal request			Nukulaelae Kaupule,	
	Conduct a coral survey		Coral Expert	2024	submitted Feasibility	Formal request drafted and	ormal request lrafted and ent to TFD easibility ssessment	community, TFD	
Strategy 1.1: Investigate coral	<ul> <li>Identify transplanting sites</li> </ul>	Coastal Section, TFD in collaboration	TFD Nukulaelae Kaupule	Metronome trip 2024	assessment report published	sent to TFD  Feasibility assessment undertaken  Transplanting sites identified and corals restored			Lack of funding  Lack of human and
restoration initiatives	I collaboration	with Nukulaelae	NGO (Fuligafou) Nukulaelae community	Depends on assessment	Sites for transplanting activity identified  Coral restoration progress report published				equipment resources
Strategy 1.2: Increase awareness on the importance of conservation of	Conduct community and school awareness workshop	Coastal Section, TFD in collaboration with Nukulaelae	NGO (Fuligafou)	Metronome trip 2025	Awareness workshop conducted	Awareness workshop conducted Posters	Planned	Nukulaelae Kaupule, community,	Lack of funding  Lack of staff and equipment
marine habitats and biodiversity	Develop and disseminate	Kaupule	Posters	2024-2025	Coral posters developed	developed and disseminated		TFD, Department	resources

	posters on protecting corals  Submit a formal request to TFD to assist in addressing issues with crazy ants and coconut crabs (Motutala Islet)  Conduct marine and terrestrial biodiversity survey		Department of Environment  Department of Agriculture  Nukulaelae community  Nukulaelae Kaupule	2024	and disseminated  Copy of formal letter submitted to Agriculture Department  Biodiversity survey conducted  Biodiversity survey report published and	Formal request to Agriculture Department submitted and crazy ants controlled  Marine and terrestrial biodiversity survey undertaken  Survey report		of Agriculture, Department of Environment	
	<ul> <li>Produce survey report</li> <li>Consult community on</li> </ul>			2025-26	shared	produced and results consulted with the community			
Strategy 1.3: Develop a sustainable method for anchorage	<ul> <li>the results</li> <li>Submit a         proposal to TFD         to fund the         procurement of         the new         anchorage buoy</li> <li>Procure the         anchorage buoy</li> </ul>	TFD (Coastal and Operation Development Sections)	Nukulaelae Kaupule TFD Field survey	2024  Metronome trip 2025	Copy of formal request submitted  Anchorage buoy procured	Formal request submitted to TFD  Anchorage buoy procured	Planned	Nukulaelae Kaupule, TFD	Lack of funding  Lack of staff and equipment resources
	Deploy the anchorage buoy		equipment	2025 or 2026	Anchorage buoy deployed	and deployed			

Objective 2: To revive t	raditional fishing knowle	dge and practices							
Strategy 2.1: Promote and encourage participation of community in trainings for traditional fishing knowledge and practices	Develop a training program on traditional fishing knowledge and practices	Nukulaelae Kaupule in	Local Fishing experts  Training materials	2025	Training program on traditional fishing knowledge and practices developed	Training Program developed and followed  Trainings conducted and community involved		Nukulaelae Kaupule, TFD	Lack of funding  Lack of staff and equipment resources
	<ul> <li>Conduct hands- on training on traditional fishing knowledge and practices</li> </ul>	collaboration with Local Experts and Nukulaelae CFMC	Nukulaelae Kaupule Nukulaelae community Tuvalu Fisheries	Metronome trips 2025 and 2026	Hands-on training on traditional fishing knowledge and practiced conducted		Planned		
	<ul> <li>Conduct a household survey on traditional fishing knowledge</li> </ul>		Funds for Youth allowances Interview	Metronome trip 2025	Household survey form developed and survey conducted	Household Interview undertaken		Nukulaelae Kaupule, TFD	
Strategy 2.2: Strengthen and preserve traditional fishing knowledge	<ul> <li>Produce a video documentary on traditional fishing knowledge and methods</li> </ul>	Coastal Section, TFD	materials  TFD  Nukulaelae  Kaupule	2025 to 2026	Video documentary produced Database	Video documentary produced and shared to community	Planned		Lack of funding  Lack of staff and equipment resources
	Record and develop a database on traditional fishing knowledge		Nukulaelae CFO Nukulaelae DC	2026	developed and traditional fishing knowledge recorded	Database developed and data stored			

Strategy 3.1: Improve the management of coastal fisheries resources	Conduct     workshop to     review the     Nukulaelae bye- law	Fisheries Legal Officer in	LMMA Billboards	Metronome trip 2025 or 2026	Community Awareness on bye-laws conducted  Bye-law	Community awareness conducted		Nukulaelae Kaupule, TFD, Office of the Attorney General	Lack of funding
	Update and endorse the bye law	collaboration	Nukulaelae community Nukulaelae	Metronome trip 2025	updated and endorsed	Bye-law reviewed, endorsed, implemented	Planned	Constant	Lack of staff and equipment resources
	Implement and enforce the bye- law		Kaupule	2025-27	implemented and enforced	and enforced			
Strategy 3.2: Strengthen compliance through awareness programs	Conduct     awareness     programs on     island     management     measures and     rules		Billboards Pamphlets	Metronome trip 2025 or 2026	Awareness program conducted with the community  Billboards installed and pamphlets created and disseminated	m management ted measures and rules inity  Education Pla materials like d and billboards and lets pamphlets set l and up and	Planned	Nukulaelae Kaupule, TFD	Lack of funding
	Set up billboards at public places	Coastal Section, TFD	TFD	2025-26					Lack of staff and equipment
	Create and disseminate pamphlets to the community on island management measures and rules	-	Nukulaelae Kaupule	2025-26					resources

# Appendix II: Nukulaelae landings reported from creel surveys (2015-2022)

	Species	Local Name	Family	Weight (kg)	Number landed
1	Katsuwonus pelamis	Atu	Scombridae	8469.5	924
2	Thunnus albacares	Kasi, Takuo, Takua, Tavatava	Scombridae	1442.0	273
3	Lutjanus gibbus	Taea	Lutjanidae	929.6	615
4	Thunnus obesus	Kasi matalasi	Scombridae	548.9	109
5	Hipposcarus longiceps	Ulafi	Scaridae	330.2	261
6	Sphyraena barracuda	Ono, Pauea	Sphyraenidae	287.1	79
7	Sphyraena jello?	Ono, Oso, Nn	Sphyraenidae	234.1	66
8	Caranx lugubris	Tafauli, Tino tafauli (large), Aheu tafauli, Uluat	Carangidae	167.5	91
9	Sphyraena qenie	0	Sphyraenidae	115.3	38
10	Caranx sexfasciatus	Teu	Carangidae	74.3	72
11	Promethichthys prometheus	Palu	Gempylidae	74.0	5
12	Pseudobalistes flavimarginatus	Umu	Balistidae	65.8	38
13	Caranx melampygus	Aseu	Carangidae	64.8	163
14	Elagatis bipinnulata	Kami, Kamai	Carangidae	61.5	26
15	Acanthocybium solandri	Paala	Scombridae	58.9	10
16	Myripristis amaena	Malau	Holocentridae	39.3	280
17	Lethrinus obsoletus	Tanutanu	Lethrinidae	35.6	152
18	Balistoides viridescens	Umu fatu, Humu papa	Balistidae	28.3	13
19	Cheilinus undulatus	Tagafa	Labridae	28.2	6
20	Gymnosarda unicolor	Valu	Scombridae	27.5	5
21	Acanthurus leucopareius	Maono	Acanthuridae	27.1	173
22	Epinephelus maculatus	Fapuku	Serranidae	26.7	35
23	Macolor macularis	Tonu	Lutjanidae	25.1	16
24	Exocoetus volitans	Isave, Sasave	Exocoetidae	23.6	77
25	Naso caesius	Ume (Ff?), pokapoka (Nm?)	Acanthuridae	22.4	18

26	Naso unicornis	Ume, Pokapoka	Acanthuridae	22.4	21
27	Lethrinus microdon	Filoa, Kapatiko	Lethrinidae	20.6	24
28	Gerres oblongus	Matu (Ff, Nm)	Gerridae	16.0	75
29	Balistidae spp	Sumu	Balistidae	14.2	37
30	Chlorurus japanensis	Laea (Ff), kamutu maga (Nm)	Scaridae	14.0	12
31	Gnathodentex aureolineatus	Mu	Lethrinidae	13.5	30
32	Epinephelus macrospilos	Gatala (Ff), fÄpuku (Nm)	Serranidae	12.8	62
33	Naso lituratus	Maninilakau	Acanthuridae	12.4	32
34	Sphyraena forsteri	Taotao	Sphyraenidae	12.1	9
35	Liza macrolepis	Kafakafa	Mugilidae	12.0	31
36	Acanthurus blochii	Kapalagi, Maa	Acanthuridae	11.9	10
37	Monotaxis grandoculis	Muu, Mufala	Lethrinidae	11.6	28
38	Decapterus macarellus	Atule	Carangidae	11.0	33
39	Lutjanus bohar	Fakamea, Fagamea	Lutjanidae	10.8	5
40	Sphyraena putnamae	0	Sphyraenidae	10.0	4
41	Lethrinus amboinensis	Noto, Gutulo, Sapotu	Lethrinidae	9.6	18
42	Aphareus furca	Palusega, Kotua, Taelepe, Takuoga	Lutjanidae	8.8	22
43	Seriola rivoliana	Palu matu, palu fuaika	Carangidae	8.7	5
44	Epinephelus fuscoguttatus	Munua	Serranidae	8.7	7
45	Albula glossodonta	Kiokio	Albulidae	8.6	9
46	Plectropomus leopardus	Tonu	Serranidae	8.3	4
47	Lethrinus variegatus	Noto, Tanutanu	Lethrinidae	8.2	18
48	Kyphosus vaigiensis	Nanue (Ff, Nm)	Kyphosidae	7.9	13
49	Fistularia petimba	Taotaoama (NB, Tvd)	Fistulariidae	7.8	6
50	Acanthurus triostegus	Manini, Koinava	Acanthuridae	6.9	95
51	Coryphaena hippurus	Masimasi	Coryphaenidae	6.8	1
52	Cephalopholis argus	Loi	Serranidae	6.7	19
53	Crenimugil crenilabis	Kanase	Mugilidae	6.5	13
54	Scarus forstenei	Laea	Scaridae	5.7	10
55	Lutjanus monostigma	Taiva	Lutjanidae	5.1	14

56	Scarus chameleon	Ulafi	Scaridae	4.8	8
57	Monotaxis heterodon	Mū gutu pukupuku (Ff), Mū (Nm), mū gutu puku (N	Lethrinidae	4.7	13
58	Aprion virescens	Utu	Lutjanidae	4.1	1
59	Sargocentron spiniferum	Tamalau	Holocentridae	3.4	10
60	Trachinotus baillonii	Lai	Carangidae	3.2	6
61	Lethrinus elongatus	Filoa	Lethrinidae	3.2	5
62	Euthynnus affinis	Atu alo, Autualo	Scombridae	3.1	1
63	Parupeneus ciliatus	Afulu (Ff)	Mullidae	3.1	7
64	Ctenochaetus binotatus	Pone uli	Acanthuridae	3.0	24
65	Strombus Iuhuanus	Panea	Strombidae	2.9	6
66	Lutjanus kasmira	Savane	Lutjanidae	2.7	24
67	Acanthurus guttatus	Api, Maono	Acanthuridae	2.7	15
68	Epinephelus hexagonatus	Eve	Serranidae	2.4	14
69	Carangoides fulvogttatus	Lupolupo	Carangidae	2.4	1
70	Liza vaigiensis	Kafakafa	Mugilidae	2.2	8
71	Lutjanus argentimaculatus	Tagau	Lutjanidae	2.1	10
72	Caranx ignobilis	Tino ulua (Ige), Lupo (small), Aseu (med); Mea tal	Carangidae	2.0	3
73	Lutjanus fulvus	Tagau,Takape	Lutjanidae	1.8	8
74	Epinephelus merra	Gatalaliki	Serranidae	1.6	14
75	Neomyxus leuciscus	Fuagutuloa	Mugilidae	1.5	8
76	Siganus argenteus	Maiava	Siganidae	1.3	4
77	Uraspis helvola	Filu	Carangidae	1.3	3
78	Ablennes hians / hians	Sumu moana, Humu moana	Belonidae	1.2	8
79	Calotomus carolinus	Lupolupo	Carangidae	1.2	3
80	Myripristis adusta	Malau fagamea, Malau matakelkele	Holocentridae	1.1	7
81	Naso vlamingii	Pokapoka lanulanu	Acanthuridae	1.1	2
82	Gnathanodon speciosus	Filu, Fua'ala'ala, Fuaika, Kautea, Pakeva	Carangidae	1.1	3
83	Pristipomoides zonatus	Palu Savane	Lutjanidae	1.0	2
84	Acanthurus lineatus	Ponelolo, Alogo, Pone hamoa	Acanthuridae	1.0	3

85	Lethrinus erythracanthus	Saputu	Lethrinidae	1.0	1
86	Lethrinus xanthochilus	Tanutanu	Lethrinidae	0.9	1
87	Chrysiptera	Tikuku (Ff), takuku (Nm), moimoi (Ff)	Pomacentridae	0.8	1
88	Abudefduf saxatilis	Mutumutu	Pomacentridae	0.8	8
89	Epinephelus melanostigma	Fapuku	Serranidae	0.8	2
90	Panulirus longipes bispinosus	Ula	Palinuridae	0.6	2
91	Carcharhinus amblyrhynchos	Tapatapa	Carcharhinidae	0.6	4
92	Acanthurus leucocheilus	Pone	Acanthuridae	0.5	1
93	LABRIDAE spp	Uloulo, Kimoa, Kiole	Labridae	0.5	2
94	SERRANIDAE spp		Serranidae	0.5	2
95	Parupeneus cyclostomus	Kaivete piniki	Mullidae	0.5	2
96	Myripristis pralinia?	Malau puku	Holocentridae	0.4	4
97	Epinephelus longispinis	Gatala moeo	Serranidae	0.4	1
98	Lethrinus microdon	Filoa, Kapatiko	Lethrinidae	0.4	1
99	Sargocentron tiere	Malau gutu loa, Malua mata loa	Holocentridae	0.3	3
100	Aethaloperca rogaa	Sikuku sinu	Serranidae	0.3	1
101	Cephalopholis sonnerati	Pula (Ff, Nm)	Serranidae	0.2	1
102	Pterocaesio tile	Ulia	Caesionidae	0.2	1
103	Heteropriacanthus cruentatus	Matapa (Ff), matapula (Nm, Nt)	Priacanthidae	0.2	4
104	Carangoides plagiotaenia	Aseu uluuli	Carangidae	0.2	1
105	Valenciennea muralis	Manoko	Gobiidae	0.1	1
106	MULLIDAE spp		Mullidae	0.1	1
107	Chelonia mydas	Fonu telaa	Cheloniidae		2
	(blank)			1.9	
	Grand Total			13606.5	4480