Marine Spatial Planning

Targeted Consultations Report

20th – 30th November 2023

MARINE SPATIAL PLANNING SAMOA

WAITT INSTITUTE

MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT
Government of Samoa

IUCN

CONSERVATION INTERNATIONAL

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List of Acronyms

BET	Bigeye Tuna
CCT	Consultation Core Team
CFMAC	Commercial Fisheries Management Advisory Committee
CI (Samoa)	Conservation International (Samoa)
EBSA	Ecologically and Biologically Significant Areas.
EEZ	Exclusive Economic Zone
FD, MAF	Fisheries Division, MAF
FAD	Fish Aggregating Device
IUU	Illegal, Unregulated and Unreported
KBA	Key Biodiversity Areas
MAF	Ministry of Agriculture and Fisheries
MFAT	Ministry of Foreign Affairs and Trades
MNRE	Ministry of Natural Resources and Environment
MPA	Marine Protected Areas
MSP	Marine Spatial Plan
MWCSD	Ministry of Women, Community Service and Development
NGO/CSO	Non-Governmental Organisation / Community Service Organisation
NTZ	No-Take Zone
SIGFA	Samoa International Game Fishing Association
SPA	Samoa Port Authority
SP-ALB	South Pacific Albacore
SPCS	Samoa Police and Correction Services
SSS	Samoa Shipping Service
SUMA	Special and Unique Marine Areas
YFT	Yellowfin Tuna

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Foreword

The government of Samoa has implemented an Ocean Policy that promotes sustainable management of ocean resources from 2020 to 2030. The policy encourages integrated strategic solutions, such as Marine Spatial Planning, to balance economic, social, and cultural activities with ecological integrity. It reflects Samoa's commitment to sustainable development and conserving ocean ecosystems.

The zero-draft of the Marine Spatial Plan (MSP) map was created based on stakeholder feedback from the first nationwide consultations and scientific data from over 140 open sources about Samoa's ocean. The zero-draft map identified priority offshore areas that could become Marine Protected Areas (MPAs) to meet the 30% target. The zero-draft map underwent several revisions, resulting in version 1.1, which stakeholders reviewed during the second round of countrywide consultations.

Draft map 1.2 was created after incorporating stakeholder inputs from the second round of consultations. The next step was to review MSP draft plan 1.2 with stakeholders who believed the MSP would significantly impact their operations. One-on-one and group consultation meetings were held with targeted sectors to review the draft map 1.2 further, and they also reviewed the proposed operational approach for the MSP.

The targeted sectors reviewed the MSP draft map 1.2 without submitting significant changes, indicating their agreement and support. The MSP draft map 1.2 is ecologically inclusive and stakeholder-driven, designed to meet Samoa's ocean's economic, ecological, and social objectives. Further discussions are necessary to address some issues as the MSP progresses towards its final stages. The ultimate goal of an adopted Ocean Plan is to manage Samoa’s Exclusive Economic Zone sustainably for present and future generations.

I sincerely appreciate government agencies, SIGFA, CFMAC, and the Commercial Fishing Industry for their invaluable contributions to the review of draft map 1.2 and the implementation plan. The knowledge and insights shared were genuinely valuable and commendable. I would also like to extend my heartfelt gratitude to the Waitt Foundation for their generous funding support and Conservation International (Samoa) and MNRE (DEC) for supporting the MSP consultation process. The significant contributions made by all involved were instrumental in advancing the MSP towards its final stage.

In conclusion, I sincerely thank the CCT for their unwavering dedication and support throughout the targeted consultations, which progressed MSP to its finalisation.
Fa’afetai

Seumaloisalafai Afele Faiilagi
Chairman
MSP Support Working Group

Acknowledgement

The author wishes to sincerely thank the Government of Samoa, the Samoa Ocean Strategy National Steering Committee, the MSP Support Working Group, the Waitt Institute, and the Waitt Foundation for their invaluable support of the MSP project.

Grateful recognition is extended to the MSP CCT members for their immense and unwavering efforts in supporting the third round of ocean planning consultations with targeted sectors. The CCT comprises personnel from MNREs and the CI (Samoa), whose names are duly listed in the report.

The support of the MNRE is deeply appreciated for enabling their staff to participate in the Ocean Planning CCT. Similarly, Conservation International (Samoa) efforts are acknowledged for supporting the successful third phase of the MSP consultation.

Special thanks are extended to all the CEOs and participants of the Fisheries Division (MAF), SPA, SPCS (Maritime), and the SSS. Furthermore, representatives of the Commercial Fishing Industry, CFMAC, and SIGFA are acknowledged for their presence and invaluable contributions to the meetings. Their efforts are highly appreciated, and their valuable contributions form the foundation of this report.

Fa’afetai lava

Executive Summary

Preserving biodiversity and safeguarding marine habitats and ecosystems is crucial, and Samoa believes that establishing largescale offshore MPAs within its marine spaces is a significant step towards achieving these goals. As a part of this initiative, Samoa has developed an MSP to create offshore MPAs that would protect marine life within 30% of its EEZ, demonstrating its commitment to ocean sustainability.

Targeted consultations were held with specific sectors identified from the second round of ocean planning consultations as significantly impacted by the MSP. The purpose of these meetings was to address their concerns. Four one-on-one meetings were conducted consecutively with MAF (FD), SPA, SPSC (Maritime), and the SSS. Furthermore, three group meetings were held with the CFMAC and Commercial Fisheries, SIGFA, and government agencies responsible for ocean-related matters. These targeted meetings were held from November 20 to 24, 2024.

After consulting with various sectors, no significant modifications were proposed to the configurations and placements of MPAs on the MSP draft map 1.2. This indicates that these representatives endorse the draft map 1.2 considered as the final design for the spatial Ocean Plan, acknowledging its ecological representation, stakeholder-driven approach, and reduced user conflicts.

While the MSP draft plan 1.2 has been subjected to shared concerns, they have been put forward to improve its efficiency as it progresses towards the final stage. These concerns pertain to the impact of MPAs on sectors that depend on the ocean, conflicts surrounding NTZ 8, and other related matters aimed at enhancing the MSP's management. These concerns require careful consideration to ensure that the final plan is effective and suitable for its intended purpose.

Establishing a large-scale MPA system could lead to losing fishing grounds and declining economic and food security benefits, which is a challenge for those who rely on the ocean and its resources. The fishing industry is particularly concerned about losing 30% of fishing grounds, which could worsen the persistent decline in catches faced by the industry over the years. Moreover, implementing large-scale MPAs as management tools may negatively affect areas open to fishing, leading to displaced fishing efforts from MPAs shifting to the remaining open areas. This could lead to heavy fishing in the remaining areas that are still open to fishing, negating any positive effects from MPAs on open areas.

To tackle these challenges, allowing tuna fishing in MPAs is considered a possible solution for ocean-dependent sectors, especially the commercial fishing industry. Harvesting tuna stocks from the MPA network and open areas will be regulated using current and SIGFA are concerned about allowing tuna fishing within the protected areas and banning the harvesting of deepwater species. They believe they will continue catch fewer tuna fish as MPAs do not exist. The Alia and community fishers target deepwater species to meet local demands, as most tuna is fished for exports.

Nonetheless, allowing tuna fishing within MPAs conflicts with the purpose of MPAs, which is to preserve ocean biodiversity and the environment. Therefore, starting small with a 10% closed-off no-take MPAs is recommended as the first phase of operating MSP. This is the first time

Samoa will set up largescale MPAs and this initial phase will allow for assessing socio-economic and biological impacts of MPAs. It will also testing the coordination and delivery of service requirements for managing the MPA network. Additionally, this will help determine a viable and meaningful operational strategy for the MSP, whether MPAs can be managed, protected, or combined, and balancing competing interests.

SPA has proposed reconsidering the location of the NTZ 8 protected area due to its role in providing anchorage and harbouring space for inbound vessels when Apia Port is congested. However, despite this, it is recommended that NTZ 8 should remain a protected area because of its biological significance. The NTZ 8 protects the 5-mile Reef, a Significant Unique Marine Area and a Key Biodiversity Area and is home to diverse coral reef species and ecosystems. The 5-mile Reef is in dire need of recovery due to extensive damages from anchors and unsustainable fishing. Therefore, SPA and SSS should consider using other suitable anchoring sites closer to Apia Port.

Creating offshore MPAs can hinder fisheries enhancement programs that aim to boost fish production and improve food security. The Fisheries Division has deployed several offshore FADs to attract tuna and other pelagic species, helping Alia and community fishers increase catch and reduce operational costs. However, some FADs may overlap with MPAs, so the Fisheries Division needs to collaborate with the MSP coordination unit to avoid anchoring FADs within MPA sites.

During consultations, shared concerns were raised regarding the operational strategy for the MSP, including managed or protected MPAs, a phased approach of either 10% or 15%, additional tasks and costs related to MSP service requirements, and other related matters.
A critical challenge in implementing an offshore MPA network is determining a suitable operational strategy. Two strategies have been deliberated: a phased approach of 10% or 15%. Several management options have been suggested for the MSP, including managed MPAs, protected MPAs, or a combination of both typologies. Following the consultations, a small-scale phased implementation approach for the offshore MPA network has been recommended. The first phase will begin in 2025 and will include a combination of near-coastal and no-take MPAs. The initial phase will assess whether protecting, managing, or combining both typologies is viable for operating the final Ocean Plan for Samoa.

The participants discussed several issues, including the coordination approach for MSP's MCS service requirements. It was observed that the tasks associated with these requirements are additional to the routine duties of potential providers. Consequently, exploring financial support was recommended to assist MSC service providers in fulfilling these duties. Additionally, the session identified the need for fishing catch data from other sectors as a critical impediment to effective MSP management and fishery resources. The participants acknowledged that future dialogues among partners are crucial to confirm suitable operational options and coordination approaches, management regimes, and other critical issues for effective MSP management.

1. Background

The ocean has been the lifeblood of Samoa for generations, playing a vital role in the nation's economy, culture, and well-being. Samoa comprises two main islands, Upolu and Savai'i, and seven smaller islands, with a total land area of 2,844 square kilometres. Both main islands have a rugged, mountainous interior bordered by a flat, gently undulating coastal plain.

Samoa is an island nation surrounded by a vast ocean, 40 times larger than its land mass or 98% of its territory. The neighbouring island states of Tokelau, American Samoa, Tonga, and Wallis and Futuna limit its small maritime Exclusive Economic Zone (EEZ) of 120,000 km². Despite its small size, the entire EEZ is home to various marine habitats rich in biodiversity, such as seamounts, coral reefs, mangroves, and oceanic basins, which contribute significantly to the national economy and the well-being of the Samoan people.

Samoa's population of over 200,000 is concentrated in villages along the coastal margins, with 81 percent residing outside main urban areas (SBS, 2021). The country's rich culture is rooted in nature and is known as *Fa'aSamoa*.

Samoa's marine environment faces many challenges, such as declining marine biodiversity and ecosystem services, degradation and destruction of habitats and pollution. These challenges adversely impact dynamic oceanic ecosystem services and benefits to the people. The ecosystem services include food security, livelihood opportunities, and climate resilience.

In 2017, during the United Nations' Our Ocean Conference in New York, the Samoan Government declared its voluntary commitment towards Sustainable Development Goal 14, which aims to protect life below water. This commitment made the National Ocean Strategy a political priority for Samoa. The same year, during the Pacific Island Forum meeting, the Samoan Government also emphasised the importance of the National Ocean Strategy for development and conservation.

Samoa has identified a path to sustainably managing and using marine resources for the next decade. They plan to integrate sustainable use and management of Samoa's ocean to replace unsustainable practices. In 2020, Samoa launched the Ocean Strategy 2020-2030, which outlines solutions for ten years of marine space governance, including marine spatial planning (MSP) for sustainability. The strategy aims to protect 30% of Samoa's ocean by 2030 to preserve and improve the health of its ocean.

MSP is an approach to rationalising ocean management within the EEZ, balancing development with marine ecosystem protection and achieving economic and social goals in a planned way. It also streamlines managing multiple ocean uses, resolving conflicts and setting priorities for each area.

The vision of Samoa's MSP aligns with the Ocean Strategy 2020-2030, which seeks to maintain a healthy and abundant ocean through integrated management, robust coordination, and respectful use and stewardship that supports social and economic opportunities for Samoans.

Although the MSP provides an integrated framework for ocean management, it does not replace single-sector legislation or national plans. It will complement coastal management practices, including village-based fish reserves as a 'no-take' marine protected area, locally managed areas, district-wide MPA and village-based mangrove protected areas. The final ocean plan for Samoa will include identified areas for development and protection, areas where specific uses will be limited, and other services will be expanded and promoted.

1.1 Need for Marine Spatial Planning

The oceanic regions and resources within Samoa's EEZ are paramount to the nation's sustenance, food security, and economic growth. The EEZ is utilised for diverse activities, including but not limited to fisheries, shipping, tourism, and communication. Moreover, potential activities such as deep-sea mining and mariculture can further enhance Samoa's socioeconomic status.

However, the high demand for ocean spaces can lead to conflicts among the various users and activities. Furthermore, Samoa's marine environment is beset by numerous anthropogenic and human-induced challenges, significantly damaging the ocean's ecosystem, including declining marine biodiversity, degradation and destruction of habitats. This trend, in turn, adversely impacts the ecosystem services that benefit the local population.

Given the natural and human negative impacts and the challenges of high demand for marine spaces, the government has acknowledged the need to develop an integrated classification approach to categorise ocean spaces. This objective aims to identify protected areas for development and the conservation of marine habitats and biodiversity, thereby ensuring the sustainability of the ocean and its vital resources.

Marine Protected Areas (MPAs) are an essential tool for improving and preserving the health of marine ecosystems and preventing them from collapsing. Samoa is developing a Marine Spatial Plan to manage and protect 30% of its Exclusive Economic Zone (EEZ) in the oceanic region. Given that 99% of Samoa's marine space is oceanic, the focus is on developing a large-scale MPA network in the offshore area to protect the 30%, while protected areas at the coast are in process.

Protecting large areas is crucial to prevent marine decline and conserve critical ecological habitats. However, small MPAs are also necessary to preserve and improve the most frequently used coastal areas. Large MPAs will complement and enhance conservation efforts encompassing Samoa's marine ecosystem.

Several workshops have been organised to verify and validate scientific-based information related to Samoa's marine space, which was used in creating a Marine Spatial Plan (MSP) suitable for the country. Additionally, two phases of national consultations and one round of targeted consultations with specific sectors were conducted to gather relevant information and review a Marine Spatial Plan for sustainable management of Samoa's ocean.

This report offers an overview of the outcomes from the third round of consultations on ocean planning, which focused on addressing the concerns of specific sectors impacted by the draft Marine Spatial Plan. The consultations honed in on key issues and provided recommendations for revising the plan to minimise any impacts on the operations and functions of these sectors.

Furthermore, the report includes brief summaries of the initial three iterations of the MSP draft plan during the developmental process.

1.2 MSP Map 3 Drafts Completed

Samoa has developed a marine spatial plan to manage its ocean space sustainably and meet its commitment to ocean sustainability. The plan was created in three drafts based on priority biological areas, commercial fishing areas, and national stakeholder feedback. The draft plans are ecologically representative and stakeholder-driven and aim to reduce use conflict while achieving Samoa's 30% protection goal. Three versions of the MSP map have been developed to date, and the figure X maps provide a clear snapshot of its progression.

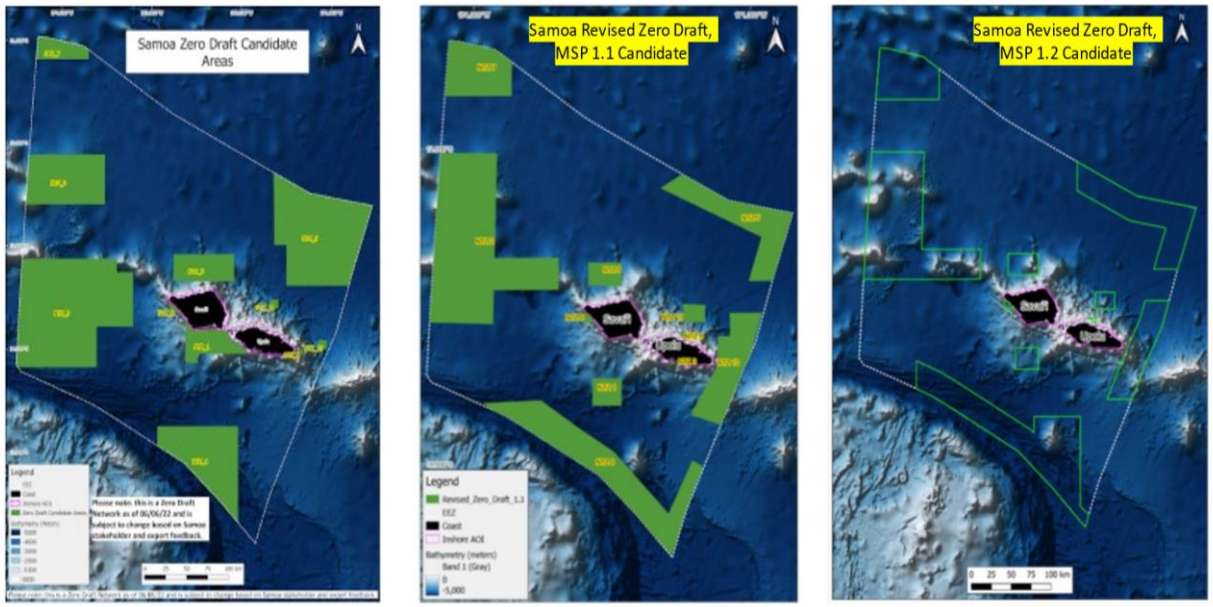

Figure 1. Evolution of the Marine Spatial Plan

1. Phase 1 National Consultations

The first round of MSP national consultation took place from 17th August 2021 to 4th March 2022, spanning eleven weeks. The consultation involved forty (40) communities nationwide and four key sectors, including Tourism, Fisheries, Government ministries and organisations, and NGOs/CSOs.

The MSP concept was introduced, and input was collected through consultations with 2,513 individuals from 185 coastal villages in 52 geopolitical districts. Community consultations were held from 17th August to 2nd November 2021. Sectoral consultations for Tourism, Fisheries, NGO/CSO, and Government sectors occurred from 1st to 4th March 2022.

Relevant information on ocean uses and management was collected and analysed as a result of the round one discussions. Scientific-based data and information on Samoa's ocean seafloor features and biodiversity were also sourced from 140 open-source datasets.

Priority areas (Figure 2) were identified based on stakeholder feedback and scientific-based information for consideration as 'no-take' zone protected areas for Samoa's Zero draft MSP map. The zero-draft plan was created by synthesising stakeholder information and scientific data.

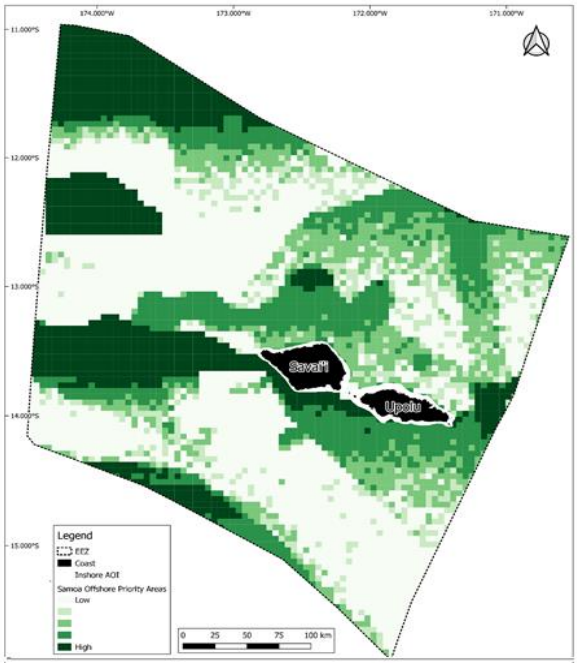

Figure 2. Map of prioritised biological areas in the offshore region considered for MPAs

2.1 MSP Zero-draft Map

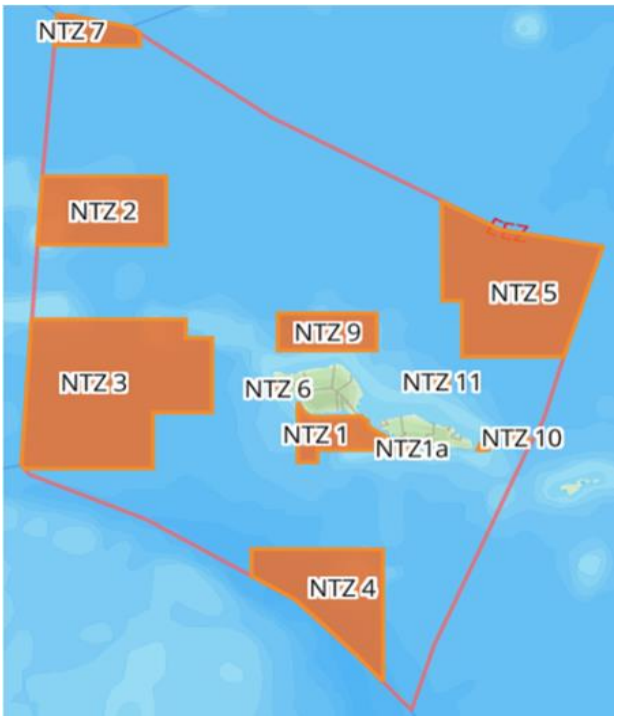

Figure 3. MSP Zero-draft map based on biological prioritised offshore areas

The zero-draft plan for Samoa's marine space was designed to prioritise areas based on biophysical targets, national stakeholder feedback, and conservation goals while minimising user conflicts. The plan included capturing biological hotspots. No cost data for fisheries, shipping, or communication was used as they were unavailable during the first plan design.

The zero-draft plan (Figure 3) identified eleven priority offshore areas for protection as No-Take Zones, covering 30.4% of Samoa's EEZ, or a total area of 39,978 km². The MSP zero-draft map is an ecologically representative plan meeting the 30% national protection size objective and achieving all targets for biophysical placement guidelines.

2.2 MSP Draft Map 1.1

On 25th-26th August 2022, national experts from government ministries and local and international conservation organisations in Samoa reviewed the MSP Zero-draft plan. They discussed the network, geographical location, data, methodology, justification for placement, and the SeaSketch Tool used for planning.

The MSP Zero-draft map 1.1 (Figure 4) resulted from an expert's review and contains eleven offshore potential NTZs. These zones were reconfigured and redesigned to safeguard important marine areas, and considering commercial fisheries data (LongLine fisheries 2015-2020) made available information about commercial fisheries from the Fisheries Division of the MAF.

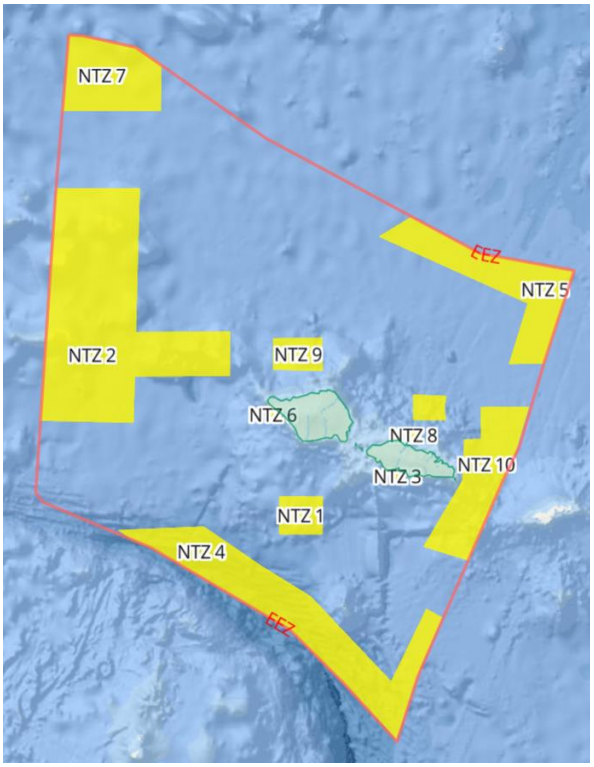

Figure 4. MSP Zero-draft map 1.1

The draft plan 1.1 appropriately meets the targets for biophysical placement guidelines for setting MPAs and doesn't overlap with other uses while achieving the goal of 30.1% protection of the EEZ. National stakeholders reviewed the revised zero-draft 1.1 plan during the second round of MSP public consultations.

2. Phase 2 National Consultation

In the second phase of national consultations, 1,242 individuals, belonging to 175 villages across 53 geopolitical districts and four key sectors, were consulted. Of these, 656 were males, 566 were females, and 20 did not disclose their gender. The male participants accounted for approximately 53% of the total attendees, while females accounted for about 45%, and the remaining 2% did not specify their gender. Furthermore, the youth group aged between 16 to 29 years constituted 11% of all the participants.

In reviewing Draft Plan 1.1, the consensus across all eleven candidate NTZs shows an acceptance rate of 91%, an unsure rate of 1%, and a refusal rate of 3%. Five percent did not respond but answered other sections of the survey. Although many have supported the MSP draft plan 1.1, almost all NTZs received feedback for changes. The mapping redesigning process was focused more on the candidate NTZs of the draft network that have received the most contentious input.

Draft plan 1.2 was created to protect biological and ecological habitats. The eleven no-take zones proposed achieved biological placement guidelines while also addressing stakeholder concerns. The plan also took into account economic information obtained from fisheries catch and effort data.

3.1 MSP Draft Map 1.2

Draft plan 1.2 proposes establishing an offshore MPA network in Samoa's marine space. The network aims to implement an area-based or spatial management approach to protect and maintain biodiversity and ecological habitats. The overarching objective of the network is to increase fish abundance and recover declining stocks.

The draft plan 1.2 comprises eleven candidate no-take MPAs, some of which have been modified based on feedback from the national consultation reviews. The plan is notable for satisfying 28.9% of the national objective of 30% for ocean protection. The MPA network is ecologically representative and encompasses an area of 39,150 km² offshore of the EEZ.

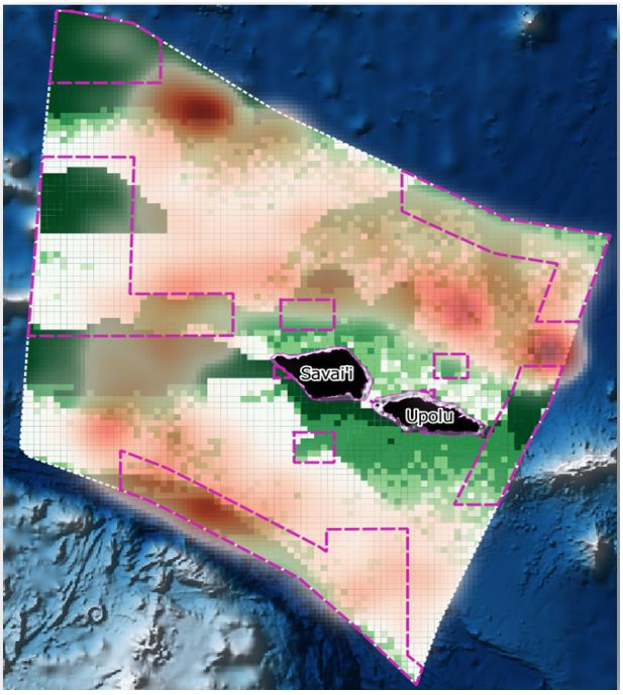

Figure 5. MSP draft map 1.2 underlay with biological hotspots and active longline fishing areas

The MSP draft map 1.2 development has been informed by stakeholder input and aims to balance conservation and sustainable development. This plan, which existing measures will complement, represents a comprehensive approach to balancing sustainable use and conservation of offshore areas. Figure 5 illustrates the MSP draft plan 1.2 underlay with biologically significant hotspots and active longline fishing areas.

3.2 Description of Draft Plan 1.2

a) NTZ 1

The NTZ 1 is situated approximately 39 km to the south of Savai'i Island, from the midpoint of the MPA. The proposed MPA lies between the Contiguous zone and Territorial seas, with most of the area falling within the Contiguous zone. The total area covered by it is 712 km², which accounts for 0.5% of the national protection objective of 30%. The NTZ protects underwater geomorphological features and habitats, providing a haven for diverse fauna and flora.

The NTZ encompasses roughly 5.7% of the *I'a-manu* offshore bioregion, known for the migration and aggregation of marine mammals. Including various geomorphological features, such as 0.2% of Escarpment, 2.7% of Slopes, 100% terrace, and 18.3% of Canyons, is of significant ecological importance. Furthermore, approximately 0.6% of ecologically and biologically significant areas (EBSA), representing 712 km², are featured in this proposed MPA.

b) NTZ 2

The proposed marine protected area, NTZ 2, is the network's largest offshore MPA. It spans an estimated area of 12,482 km², representing 9.8% of the national protection goal. The MPA is situated along the western boundary of the EEZ on the western side of Savaii Island, running parallel to the EEZ border with Wallis and Futuna. At its most eastern point, the MPA is approximately 34 km from Falealupo and around 165 km to the midpoint of the protected area.

The MPA encompasses several crucial ecological features, including the Pasco Banks, Pasco, *To'afilemu*, *Toafeai*, and numerous unnamed seamounts. These areas are considered oceanic "hotspots" of life and are home to diverse benthic communities and pelagic organisms. The NTZ 2 also includes mesophotic coral reefs, covering an area of approximately 279 km², contributing to the coral reef ecosystem found in this area. Additionally, the MPA comprises two underwater geological formations, Machias and Field Guyots, and their associated escarpments, which are rich in biodiversity. The *Si'usi'u* and *Tuapi'o* seamounts, located in the eastern arm of the NTZ, are benthic zone features that attract pelagic species and are home to diverse bottomfish stocks.

The NTZ 2 covers three offshore bioregions, which include 45.5% of *Fafa-o-Mauga*, 1.5% of *La'*i, and 1.9% of the *Vasa-i-Saute* subregions. The MPA also contains 25.5% of the Escarpment, 99.7% of Guyots, 43.4% of Ridges, 16.2% of Slopes, 2.7% of Canyons, and 9.4% of Shelf geomorphological features. The proposed MPA 2 encompasses 20.9% of all seamounts in the offshore region and 32.7% (8,197 km²) of the offshore special and unique marine areas (SUMA).

The primary objective of the NTZ 2 is to preserve biological hotspot areas, residential and pelagic biodiversity, breeding species, and larvae that will supply juveniles of reef species in coastal regions of the islands. The proposed MPA aims to achieve this objective by providing a haven for threatened species, enhancing the resilience of ecosystems, and promoting the sustainable use of marine resources.

c) NTZ 3

The proposed NTZ 3 offshore marine protected area is more than 4 km from the Sa'anapu/Sataoa Mangrove Protected Area. It covers an area of approximately one km², less than 0.1% of the national protection objective. This protected area includes various offshore features such as <0.1% Escarpments, <0.1% Ridges, <0.1% Slopes, and <0.1% Canyons.

NTZ 3 overlaps with less than 0.1% of the *I'a-manu* offshore bioregion. Similarly, the MPA covers a small portion of the ecologically/biologically significant areas. According to the 2015-2020 Fisheries commercial longline data, about 7.3% of the fishing effort (hooks) was deployed by the commercial fishers within the proposed location, and approximately 6.9% of the tuna fish was caught within the NTZ.

The NTZ 3 protects the residential and pelagic species that breed in offshore sites. It is crucial to preserve the biodiversity that migrates to the nearby coastal mangrove areas. Mangroves serve as nursery grounds for inshore and offshore species. Scientific research has shown a direct correlation between the offshore abundance (or lack) of adult fish and the presence (or absence) of mangroves (IUCN, 2017).

d) NTZ 4

This MPA is located in the upper northern part of the Tonga trench, runs along the southern boundary of the EEZ against Tonga. It stretches approximately 80 km from its northern point to Upolu and about 130 km from the midpoint. The site covers an area of 10,387 square kilometres, which accounts for 7.9% of the national protection goal of 30%. The NTZ is situated within the Tonga Trench and has a depth of 6000-9000 km. It also extends into the southern part of Samoa's EEZ. The NTZ 4 is a unique deep-water habitat that hosts distinct communities with high levels of species endemism. These species have adapted to the extreme conditions of darkness, hydrostatic pressure, low temperature, and limited food supply.

The protected area encompasses vital geomorphological and biological areas that house unique biodiversity. The large seamount named *Uo-mamae* on the southern seamount located closer to the trench is included in the proposed MPA and covers 25.1% of seamounts found in the EEZ. The seamount lies in an area with very high downwelling eddy frequency and high dissolved oxygen concentration, indicating high primary productivity and the potential for aggregations of marine life.

Significant biophysical features include 40.6% basins, 99.3% hadal, 99.3% trenches, and 5.7% abyssal structures. The NTZ lies with 60.5% of the *Loto-i-Toga* and 15% of the *Vasa-i-Saute* offshore bioregions. The trench is considered SUMA as it contains high-level endemism species, and the NTZ represent 25.4% or 6,348 km² of SUMAs.

The NTZ 4 is considered a hotspot for tuna fishing by the commercial Longline fishing industry due to the north-south migratory routes during the season. According to Fisheries LL data from 2015 to 2020, approximately 9.7% of fishing hooks were deployed in the proposed protected area and caught 12.7% of tuna and other pelagic species. The total volume of fish caught from the plan area during the five years was about 28%.

The NTZ 4 will protect and preserve unique biophysical structures and biodiversity, especially endemic species.

e) NTZ 5

The proposed MPA is situated in the northwest corner of the EEZ boundary, adjacent to Tokelau in the north and American Samoa in the east. The nearest point is over 100 km from Apia, and the midpoint is approximately 150 km away. The NTZ covers an area of 6,034 km², equivalent to 4.6% of the national target for protection set out in the SOS 2020-2030. The proposed protected area overlaps with 11.4% of the *La'i* offshore bioregion.

The NTZ 5 covers significant geomorphological and biological structures, including 21.3% of the Basin, 6.1% of the Abyssal, and 25.1% of the Seamounts. It also covers about 4% or 1,012 km² of Special Unique Marine Areas and 5.1% or 6,034 km² of Ecologically/Biologically Significant Areas.

Moreover, the NTZ includes a portion of an "Important Marine Mammal Area" (IMMA) (Marine Mammal Protected Areas Taskforce, 2020). The IMMA area surrounds the main islands, covering an area of 12,548 km² and extending into the southern portion of the O6 SUMA. The protected area aims to preserve the northern part of the Whale Migration Route.

The NTZ 5 provides protection to preserve offshore unique habitats, pelagic and residential fish species, and marine mammals.

f) NTZ 6

The proposed MPA)is situated parallel to the coast of Asau to Samata villages in Savaii, at a distance of over 1 km from the shore and more than 5 km to the NTZ's midpoint. It falls within the Territorial zone, which extends 12 nautical miles from the coastline. The NTZ covers an area of 87 km², which is equivalent to only 0.1% of the nationwide protection target. Although most of the site is in the offshore region, a minimum of 0.2% of the *Vasa-i-Saute* subregion and coastal ecological communities overlap with the candidate NTZ.

The NTZ includes a portion of the coral reef seafloor benthic zone, supporting several ecological structures. The protected area encompasses offshore ecological features such as ridges (0.6%), escarpments (0.3%), slopes (0.3%), and canyons (0.2%). Coastal ecological coverage includes less than 0.1% of coral, less than 0.1% of coral/algae, and 4.2% of unknown substrates. The NTZ encompasses 13km² or less than 0.1% of SUMAs.

The primary goal of the NTZ is to safeguard the offshore habitats near the coast and the biodiversity found along the targeted areas. The site also aims to protect breeding populations of migratory and residential species and help enrich stocks in nearby and surrounding areas, mainly fished by artisanal and commercial fishers.

g) NTZ 7

The proposed protected site is located on the northwest boundary of the EEZ, adjacent to Tokelau in the north and Wallis and Futuna in the west. The southernmost point of the site lies approximately 237 km away from Falealupo. In comparison, the distance from the midpoint of the MPA to the western end of Savai'i Island is approximately 280 km. The NTZ 7 covers an area of about 4,063 km², overlapping with 7.7% of the *La'i* offshore bioregion and representing 3.1% of the national protection target of 30%.

The site comprises the most northern seamount, which straddles the EEZ boundary and is shared with Tokelau, representing 6.2% of the target seamounts in the Plan. This seamount is a special and unique marine site, occupying an area of 1.5% or 381 km² of the target SUMA guideline required to place a protected area. The NTZ 7 contains several critical ecological structures, such as 1.2% of Escarpment and 4.1% of Abyssal ecosystems.

According to longline catch and effort data from 2015-2020, the NZT 7 site is not an active fishing ground. Over the five years of the longline fishery, only 1.2% of hooks were deployed, catching a mere 1.2% of tuna and other pelagic fish species out of 28% of fish caught in the plan area.

The primary objective of the NTZ is to preserve unique and special marine habitats and the biodiversity occupying these significant ecological habitats. The NTZ is expected to contribute towards achieving the national protection target of 30% while ensuring the sustainable use of marine resources.

h) NTZ 8

The no-take zone protected area, also known as Five Mile Reef or *To'atuga* Reef, is a unique and special marine area located approximately 7 km north of Apia Harbour, off the north Coast of Upolu Island. The NTZ has an area of about 27 km², representing less than 0.1% of the national protection target of 30%. The NTZ encompasses the Five Mile Reef, an elongated ridge that extends in an NW-SE axis, with a broad reef top of 1,303 hectares. The depth ranges from 15-22 meters and descends to a sand and rubble bottom at 35-40 meters. Small ridges and depressions with low topographic relief characterise the reef top.

The candidate NTZ includes the reef top, home to diverse coral reef species and ecosystems. Approximately 0.1% or 10 km² of SUMA and less than 0.1% or 27 km² of EBSAs are included in NTZ 8. The protected site also covers 5.7% or 10 km² of the Key Biodiversity Areas (KBA). The level of geomorphological structures overlapped with the NTZ are Escarpment, which is less than 0.1%, Shelf, which is 1.3%, and Canyons, which is less than 0.1%. The proposed MPA lies within the *Fafa-o-Mauga* bioregion.

The NTZ 8 provides partial protection for oceanic and coastal species. The protection site primarily aims to preserve unique, special habitats, coral reef ecosystems, and biodiversity. Moreover, the NTZ will protect the source of reef fish larvae, recruiting young fishes to the surrounding reef areas of Upolu Island. Protecting coral reefs and ecosystems on the To'atugā reef will strengthen resilience to high-energy waves impacting Apia port and facilities.

i) NTZ 9

The proposed MPA, a SUMA, extends over submarine ridges and guyots up to *Agavale* Seamount. The NTZ, which includes the *Agavale* seamount and a cluster of ridges and guyots, is located more than 30 km north of Savaii and covers the western half of the SUMA.

Agavale Seamount is classified as an intermediate-sized, large, tall, and deep seamount. It stands 1,986 meters tall, with its summit at a depth of 995 meters. On the eastern side of NTZ 9 lies *Taumatau* Seamount, which is 2,220 meters high, with its summit at 820 meters and the ocean floor at 3,040 meters. *Taumatau* Seamount is considered very small, has a volume of 869 km3, is relatively round and regular, has smooth edges, and is excluded from NTZ 9. The two seamounts and clusters of ridges and guyots are classified as offshore SUMA. However, the proposed protected area includes only 1.7% or 433 km² of all the offshore SUMAs.

NTZ 9 has an area of 962 km², representing 0.7% of the national protection target. It lies approximately between the Territorial waters and the Contiguous zone. The candidate MPA is fished by artisanal and commercial fishers targeting bottomfish species. The proposed MPA houses significant ecological and biological underwater structures, including 0.2% of Escarpments, 0.5% of Abyssal, 10.1% of Canyons, and 7% of Seamount features. Further, 0.8% or 962 km² of the Ecological and Biological Significant Areas (EBSA) overlap with the NTZ.

Based on the Fisheries Longline fishing data from 2015-2020, the proposed enclosed area is not a prominent fishing spot. Roughly 0.6% of longline hooks were deployed, and about 0.7% of fish were caught.

The proposed NTZ aims to protect residential fish stocks, other biodiversity inhabiting the marine protected area (MPA), unique and special marine habitats, and ecologically and biologically significant areas overlapping the protected site.

j) NTZ 10

The proposed NTZ is a protected area that runs parallel to the border of the Samoa-American Samoa EEZ, located east of Upolu Island and runs from north to south. The distance from the eastern end of Upolu Island to the nearest boundary of the NTZ is just over 8km, and it's about 25 km to the midpoint of the NTZ. The protected area covers a site of 3,559 km², which is 2.7% of the national protection objective. The NTZ falls within the Territorial seas and Contiguous zone and consists of three offshore subregions: *I'a-manu*, *Vasa-i-Saute* and *La'i* bioregions, which occupy 26.9%, 2.7%, and 1.1% of the protected area, respectively.

The NTZ is home to unique and special areas with high biodiversity values and marine mammal aggregation and migration areas. The protected area covers an area of 7.2% or 1,801 km² of SUMAs. The NTZ also includes two seamounts that fall under the intermediate size category of large, tall and deep, covering an area of 8.1% of Seamount to be protected. The NTZ protects approximately 3% or 3,559 km² of ecologically and biologically significant areas (EBSA).

The NTZ offers protection to oceanic pelagic and bottomfish species. The NTZ also protects unique and special habitats and ecologically and biologically significant areas, particularly the marine mammals' high aggregation and migration areas.

NTZ 10 is located within the fishing range of small-scale fishers who operate the Alia fishing vessel. The type of fishing employed by the Alia fleet depends on the season. During the tuna season, some Alia fishing vessels switch to longline fishing. However, during the tuna offseason, most are reverting to bottom fishing.

k) NTZ 11

NTZ 11 is approximately 32 km north of Upolu Island, between the Contiguous zone (24nm) and the Territorial seas (12nm). It covers an area of 478 km², equivalent to 0.4% of the national protection goal. The NTZ overlaps with 1.9% of the *Fafa-o-Mauga* and less than 0.1% of *La'i* offshore bioregions.

NTZ 11 comprises one seamount belonging to morphotype 1, located north of Upolu Island. The seamount is small, with a deep peak and short, moderately deep slopes. The northern part of the seamount is situated in waters with a very high upwelling frequency, indicating high primary productivity that favours the aggregation of marine life (CMEMS, 2015a).

The type 1 seamount is classified as an offshore special and unique marine area, of which 0.6% or 159 km² of seamount requirement for MPA placement is included. The NTZ covers several ecological and biological structures, including 1.2% of Escarpment, 1.8% of Slopes and 1.7% of Canyons. Ecologically/Biologically Significant Areas (EBSA) of 0.4% or 478 km² are contained within the NTZ.

3. Targeted MSP Consultations Planning

4.1 Planning Meetings

a) 8th August 2023

The Conservation International, MNRE staff and a consultant attended the first consultation planning meeting at the ACEO DEC office. During the meeting, the consultant presented draft map 1.2 based on stakeholder feedback and included changes to MSP map 1.1. The presentation focused on redesigning NTZs that received the most contentious comments. The redesign considered input from various stakeholders, including commercial fisheries (>15m vessels operators/owners and CFMAC), SIGFA, other marine tourism operators, and government ministries/organisations sector. The consultant explained how the modifications were made to address the concerns raised during the national consultations.

The meeting identified sectors for further consultations for the third round: the commercial fishery (>15m vessels operators/owners and CFMAC), SIGFA, other marine tourism operators, and government ministries/organisations.

In round 3 of consultations, it has been agreed that there will be both one-on-one and group consultations. The Fisheries Division of MAF, Maritime Division of the Ministry of Police and Corrections, Samoa Port Authority, and Samoa Shipping Corporation will be consulted one-on-one. On the other hand, the commercial fishery (>15m vessels operators/owners and CFMAC), SIGFA, other marine tourism operators, and government ministries/organisations will have collective group consultations. One-on-one consultations are scheduled for the 29th and 30th of August 2023, while group consultations will be held on the 4th, 5th, and 6th of September 2023.

i. Seasketch tool & technical assistance

Round three consultations require additional technical support from the Waitt Institute and IUCN for consultations. This includes using the Seasketch planning tool to gather and organise information and incorporating and addressing stakeholder feedback in a new draft of the MSP. MNRE will officially request IUCN for technical assistance for the targeted consultations at no cost, given that the MSP project has been completed.

ii. Consultation method & approach

Most of the concerns raised by different sectors and communities during the second round of the MSP countrywide consultation have been addressed in the revised MSP draft map 1.2. However, the commercial fisheries sector's concerns regarding the co-management of proposed offshore MPAs (NTZs 2, 4, & 5) have not been addressed yet. Commercial fisheries have proposed various co-management strategies for the implementation of the MSP, including a phased approach, allowing the harvest of migratory species only in hotspot longline fishing locations proposed as NTZs and an opening and closing NTZs during the on-season and off-season of tuna fisheries.

The meeting decided to hold one-on-one discussions with each ministry and organisation. Specific guiding questions will be tailored for each entity to address critical concerns not

considered in draft MSP map 1.2 for round 3 consultations. The team will work with technical partners to create these questions.

The R3 consultation program will be similar to the previous one. During this round, the Consultant will present the MSP process and the evolution of MSP draft maps, including Map 1.2, which addresses concerns raised by stakeholders. Additionally, the Consultant will prepare a tentative agenda to share with planning team members before sending out the invitation letters.

iii. Consultation core team

MNRE will officially write to reactivate the CCT and invite representatives from government ministries who provided support in previous rounds of consultation.

iv. Logistics

The responsibility of handling logistical arrangements for meetings, including venue and catering, lies with CI. On the other hand, MNRE will be drafting invitations to government ministries and organisations for one-on-one discussions. Additionally, MNRE and Mulipola will collaborate to send invitations for group consultations with the sector and government and collect names of participants to invite from commercial fisheries (>15m vessel operators), the Commercial Fisheries Management Advisory Committee, and SIGFA.

v. Other matters

It was decided to consult with the Minister and Executive Management of MNRE on the MSP update and to seek advice and direction on the Marine spatial plan. Some members of the NOSC will be invited to attend the MNRE consultation, which is scheduled for September 15, 2023, at 3 p.m. Political support and advocacy are crucial to achieving the final goal of MSP, especially when it comes to formalisation through the Cabinet.

b) 21st August 2023

i. R3 consultation schedules

During the second planning meeting, the consultations for the identified groups were discussed and scheduled as follows:

- Fisheries/CFMAC/Large Vessel Owners (greater than 15m) have confirmed their attendance on the 5th of September from 9:30 am to 12:30 pm.
- The date for government ministries and organisations is yet to be confirmed, but it will be either on the 4th or 6th of September.
- Similarly, the date for SIGFA and other marine tourism operator's consultation is yet to be confirmed, but it will be either on the 4th or 6th of September.

In addition, one-on-one meetings with government ministries and organisations have been scheduled as follows:

- Fisheries Division, MAF confirmed on the 29th of August 2023 from 9:30 am to 12:30 pm.

- Ports on the 29th of August 2023 from 1:30 p.m. to 3:00 p.m. have not yet been confirmed.
- Police on the 30th of August 2023 from 9:30 am to 12:30 pm to be confirmed.
- Shipping on the 30th of August 2023 from 1:30 pm to 3:00 pm to be confirmed.

However, MNRE suggested meeting with the MNRE Minister and the Executive management first to update them on the MSP process and seek advice and direction on a final spatial ocean plan. Both scheduled one-on-one and group consultations will be postponed after the consultation with MNRE on any day between the 18th and the 22nd of September, 2023.

ii. Seasketch tool and Technical assistance

Dr Will McClintok offered technical assistance to the CCT to train them on the new version of Seasketch. The data and layers from the legacy Seasketch were imported into the new version to make planning and data analysis easier. The update training is scheduled for August 21st, 2023. Members from various organisations participated in the training, including MNRE DEC, Mulipola, Fisheries, MNRE SIA, and CI.

MNRE has been assigned the responsibility of officially requesting technical support from IUCN. However, if IUCN cannot provide technical assistance, it is suggested that you seek technical advice from Will and McClintock Lab. Additionally, adding a new layer in the Seasketch tool that displays vessel movement is recommended, which can be handled by fisheries during consultations.

It has been agreed that the CI will stitch the layers from Legacy Seasketch to the newer version. Additionally, a meeting will be scheduled with Fisheries and/or Lui Bell to discuss the Global Fishing Watch Layer if the information is confidential or not. The goal is to make the information available before the meeting with the fisheries.

iii. Guiding questions

During the meeting, draft survey questions were presented and were reviewed by the participants. Some recommendations were made to improve specific questions, including changing Question 3 to ask about NTZs as a network/phase rather than on individual NTZs. There was an agreement to present the role of 30% protection (NTZ) within 100% management of Samoa's marine space. The tuna fishery is managed through a 5-year Tuna Development and Management Plan. Other marine species are also managed via specific management plans and sanctuaries, like inshore and coastal species, marine mammals and sharks.

At the 65th CFMAC meeting, the Committee proposed that NTZs can be managed via several options due to significant impacts on their fisheries operations. The proposals echoed the recommendations by the commercial fisheries (>15m vessel owners) during R2 consultations when operationalizing the MSP. However, these options will affect the 30% protection target.

Several management options were suggested, such as implementing the plan in phases harvesting migratory species in NTZs overlapped with fishing hotspots and in the network during the on-seasons of the tuna fisheries. Additional information is needed to understand the economic impacts and movement of fish within NTZs of the network. Although R1 answered the impact on fishing grounds by physically removing them, the economic impact on the fishing industry and the alternatives needed to be assessed and fully understood.

The meeting agreed on the importance of establishing cost modelling, cost-benefit analysis, and alternative financing mechanisms to address concerns about implementing the ocean plan. However, these concerns cannot be addressed now because ongoing assessments require more time. A phased approach is recommended to implement the plan, starting with blocking off 10% of the NTZ at a time. This will help us understand the impact on fishing movement. Restricting a smaller area allows us to observe how much movement changes in the EEZ.

In consultations for Draft 1.2, the targeted audience will be asked to suggest changes to the NTZs. However, instead of opening the NTZs, they will be asked to redefine their shapes. High-level feedback is required to ensure proper protection, so a political-level champion is needed to advance the MSP towards its final stage through Cabinet.

To implement the NTZs, 30% of the map will be endorsed, with the process being implemented in phases of 10%. The first 10% will focus on which NTZs to protect, starting with NTZ 1, 7, 9, 10 or NTZ 2. The extended NTZ 2 has been discussed with an extended change suggested downwards and half the section that extends towards the right (to be confirmed). It should be noted that NTZ 2, 5, and 4 overlap with the draft plan, and these are active fishing areas, which is why commercial fisheries have the most concerns about them.

The issue of Transboundaries was discussed but is yet to be finalised. Additionally, the legal instrument of MSP was discussed, and MNRE stated that the draft legislation is expected to be presented in Parliament in early 2024.

In 2024, efforts will be focused on establishing protected inshore areas for the MPA network. The Waitt Institute will provide further technical support for digitising the VFRs mapped during the R1 and R2 consultations.

For the consultation approach for R3, the meeting recommended having open round table discussions instead of consultations.

iv. Consultation Core Team

CCT members from round 2 will be requested to support R3 based on availability. MNRE will contact government ministries and organisations that previously supported MSP consultations to check availability for R3.

v. Other matter

The MSP process is underway, and we need guidance on the final ocean plan before seeking feedback from targeted sectors in round three. It's crucial that the Minister be updated on the draft plan and attend the meeting, as we need a champion to push the plan to its final stage and get it formally approved by the Cabinet and Government.

c) 10th October 2023

i. New consultation dates

The meeting confirmed the new dates for the third round of consultation with targeted sectors on the draft Plan 1.2. The new agreed dates for consultations will be from 20th to 24th November 2023. The consultation proposed schedules are:

- One-on-one consultations:
    - Day 1: Fisheries Division in the morning and SPA in the afternoon.
    - Day 2: Police in the morning and Shipping in the afternoon.

- Group consultations:
    - Day 3: CMFAC & Commercial Fisheries,
    - Day 4: SIGFA and marine operators
    - Day 5: Government (MNRE, MAF, MWIT, MWCSD, SSS, SPA, MOP, MFAT, NUS.

ii. Direction for the MSP next steps

The meeting discussed the direction for the next step on the marine spatial draft plan, as presented by the Minister. It was agreed for the MNRE team to coordinate a matrix of how it will deliver and achieve its 30 by 30 objectives, which will be used to promote the protection of selected land and marine designated sites.

To ensure the successful completion of this task, MNRE will work with the Consultant to complete the marine MPA matrix for the Minister. Furthermore, the Consultant and the Team will develop an operational strategy to implement the MSP Plan in 15% phases. They will select which NTZs to protect and should include a mixture of near coastal and far offshore MPAs as suggested by the Minister. Once the first 15% is completed, they will implement the selected NTZs of the Network in the second 15% phase.

4.2 MSP Consultation Core Team (CCT)

A consultation core team was formed from MNRE and CI (Samoa) staff to facilitate the targeted consultations for the third round of ocean planning in Samoa. The team comprised eleven representatives, as pictured and listed in Figure 6.

On August 21, 2023, Dr. Will McClintock, the creator of the web-based members of the CCT. These participants included members from MNRE (DEC and SIA), Fisheries Division (MAF), Conservation Internal Foundation (Samoa), and the MSP consultant. The training aimed to retrain the members on the new version of the Seasketch tool and its features.

SeaSketch is a web-based collaboration tool developed by the McClintock lab at the University of California, Santa Barbara, USA. It is designed to support multi-stakeholder planning and management processes, specifically focusing on marine and coastal resource management. The application is compatible with all desktop devices and can be used by anyone with an internet connection.

SeaSketch is an application that facilitates participatory planning by providing access to authoritative datasets through a publicly accessible web interface. It also includes tools that allow non-experts to contribute information about how ocean space is used and valued, sketch and evaluate spatial plans and share their ideas in public and private forums. The tool was instrumental in the planning and designing of several versions of draft spatial Ocean Plans for Samoa, which were reviewed by stakeholders.

Figure 6. Members of the CCT for the targeted consultations, 20-24 November 2023.

4.3 Consultations Schedules and Logistics

The third round of Marine Spatial Planning (MSP) targeted consultations was structured into two distinct phases: one-on-one and group meeting consultations. The first one-on-one meeting was scheduled for 21st November 2023. The meeting was with the Fisheries Division of the Ministry of Agriculture and Fisheries (MAF) in the morning and the Samoa Port Authority in the afternoon. Similarly, the second one-on-one meetings were planned for 22nd November 2023, with the Ministry of Police (Maritime Wing) in the morning and the Samoa Shipping Corporation in the afternoon.

The first group workshop, with the operators of fishing vessels greater than 15 meters and the Commercial Fisheries Management Advisory Committee members, was scheduled for 28th November, 2023. This was followed by a meeting with the Samoa International Game Fishing Association on 29th November 2023. The group meeting with the government ministries that share mandates on ocean responsibilities was scheduled for 30th November 2023.

4.4 Consultation Approach and Method

The implementation strategy for the third round of targeted consultations with one-on-one and group meetings with key sectors on the MSP draft map 1.2 was similar to the previous consultation phases. The meeting included a presentation on the update progress on MSP draft plan versions and key concerns raised during round two consultations from the specific sector and proposed approaches for managing and operationalization of a final MSP plan. Unlike

previous discussions in smaller groups, the large group held an open discussion this time. They discussed their challenges and how a final MSP might impact their operations and functions. The concerned sector was asked to consider the proposed phase approach and their future development activities that might conflict with an adopted plan.

The consultation process of the R3 group began with welcoming the participants, followed by an opening prayer. The ACEO of MNRE delivered a keynote address highlighting the Samoan Government's commitment to ocean sustainability and encouraged stakeholders to engage in dialogue to develop a final ocean plan that balances economic and social objectives while promoting ocean sustainability. The workshop's primary objectives and program overview were presented, followed by the introduction of the CCT team members. The agenda for the round three consultations is attached as Appendix 9.1

The Consultant presented the first part of the PowerPoint presentation (attached in Appendix 9.2) on findings on draft plan 1.1 and MSP draft map 1.2. A Q&A session followed each presentation, and an open discussion was held to address contentious issues related to the MPA network plan's impact on the economy and development operations. The second part of the presentation was the proposed operational approach for the marine spatial plan. The proposed operation plan presentation is attached in Appendix 9.3.

Stakeholder feedback was collected through the recordings and documentation of opinions expressed. A seasketch planning tool was on hand to document and redraw proposed changes to any of the NTZ of the offshore MPA network.

Below are questions guiding discussions on the review of the MSP draft map 1.2 and the open discussion session on possible impacts on their operations and the implementation of the offshore MPA network.

i. Do you have any major concerns on the MSP draft 1.2 or specific NTZ and the proposed implementation phased approach (%)?

ii. Do you recommend any changes to the locations and configurations for any NTZs of the Offshore MPA Network and why (reasons)?

iii. Any current or future development of your sector need to be considered by the offshore MAP Network?

iv. How your agency would collaborate and support the operationalization of MSP Offshore MPA Network? Ie.g MCS, Management measures, researches, impact assessments, cost-benefit assessment, capacity (skill, numbers), resources, awareness, etc.

4.5 Meeting with the Minister of MNRE

On the 2nd of October 2023, a meeting was held with the MNRE Minister to provide an update on the MSP process. Objectively, the meeting was to seek direction on the next steps and implementation of the Marine Spatial Plan as it progresses towards its final stage. It was

important to gauge the Minister's support for the MSP process, especially when the Plan will go through the formalisation and adoption process in the Cabinet.

The outcomes from the meeting are below following points outlined the direction suggested and issues we need to consider for the next step and direction for the Spatial Marine Plan for Samoa:

- To sell the MSP easily and to comply with the FFA Treaty, Samoa needs to establish a 30% goal offshore protected area network that allows the fishing of migratory species but prohibits the harvesting of sedentary species and any other extractive activities.
- Samoa should consider extending proposed NTZs and placing NTZs along the borders, especially with areas that are not active fishing spots, as per the FD data 2020-2015. This will aid the more accessible and efficient MSC effort of the MPA network.
- To test out the systems for inshore spaces with multiple uses and user compliance, 15% of the protection Network will be initially implemented. The initial implemented MPA network will be implemented by 2030. The MSP team will identify the relevant NTZs for the Minister's recommendations.
- A framework should be developed to deliver and accomplish each stage and proportion of marine and terrestrial MSP (protection). The MSP framework will assist the Minister in promoting and selling the overall protection and conservation plans.
- Since 30% of the offshore area is now set, the protection of the most used marine space (inshore) needs to provide the current proportion for each ecosystem (seagrasses, mangroves and corals) protected in the proposed MSP plan. The proportion of these ecosystems and critical locations of the unprotected inshore ecosystems should also be determined and further considered for conservation action.
- A breakdown of the information on inshore ecosystems gathered showing places currently and proposed to be protected community-based or district MPAs in the MSP and for expansion.
- A map of seagrass is required to determine whether sufficient inshore key ecosystems will be protected as part of the proposed Ocean Plan (MSP). It is important to evaluate how much of these crucial coastal ecosystems are not included in the plan and to consider taking future measures for their protection.
- While working on digitizing the inshore protected areas collected from the MSP consultation, it's crucial to also consider and factor in unprotected inshore key ecosystems.
- Samoa's main concern for EEZ space is its ability to monitor/surveillance and enforcement.
- A team is looking into Green, Blue and Brown Carbon for Samoa and is open to sharing any information from the MSP process that may be useful to their work.
- The Minister wants the MSP to wrap up soon.

4.6 Consultation objectives

The aims of the specific consultation with targeted sector are to:

i. Present an update on the MSP process and Draft Map 1.2 regarding the Offshore MPA Network.
ii. Collect feedback on the MSP Draft Map 1.2.
iii. Identify potential challenges key sectors may face when implementing the final MSP for managing Samoa's ocean spaces.
iv. Determine an agreed approach for managing and operationalizing the MPA network.

4. Outcomes of targeted consultation meetings

5.1 One-on-one meetings

Four targeted consultation meetings have been arranged with the Fisheries Division of the Ministry of Agriculture and Fisheries, the Samoa Port Authority, the Maritime Wing of Samoa Police and Correction Services, and the Samoa Shipping Service. These governmental bodies have been selected based on concerns raised in earlier consultations about the potential impact of a Marine Spatial Plan on their mandates and operations.

During one-on-one meetings, the ocean planning process updates and the draft version 1.2 of the MSP map were presented to the respective governmental bodies. They reviewed the draft map 1.2 and made suggestions for modifications to the MPAs of the network, if necessary. They also identified potential challenges they may encounter. The second presentation delivered was a proposed operational plan for MSP. It aimed to solicit relevant ideas and proposals on collaborating to manage and operate an offshore MPA network that would be conclusive.

5.1.1 Fisheries Division, MAF

a) Meeting and Participation

On the 21st of November, 2023, a meeting was held with the Fisheries Division of the Ministry of Agriculture and Fisheries to discuss the draft map 1.2 of the MSP. The meeting reviewed the draft map and identified challenges that could impact fisheries. Additionally, a proposed phased approach operational plan for the MSP was presented for review and feedback. The meeting provided a platform for the division to share constructive opinions and propose ways for collaboration in the operation and management of the phased approach for the plan.

The meeting was held in Fisheries Division's conference room from 9:30 am to 12:00 pm. The meeting was attended by sixteen (16) individuals, including eight Fisheries personnel, three representatives each from CI and MNRE, and the MSP project coordinator. The names of all participants are listed in Table 1.

The one-on-one meeting with the Fisheries Division yielded several key outcomes summarised below, and the notes from the meeting inputs are included in Appendix 9.4.

Table 1. Participants for the consultation meeting with the Fisheries Division, MAF

Names	Designation	Organisation
Roseti Imo	ACEO (Fisheries Division)	MAF
Tauefa Autalavou Taua	PFO (Advisory)	MAF
Su'a Sapeti Ti'iti'i	PFO (Inshore)	MAF
Lauulu	PFO (Offshore)	MAF
Serafina Ah Fook	SFO (Offshore)	MAF
Stella Tuuau	SFO (MCS)	MAF
Jennifer	Fisheries Officer (Offshore)	MAF
Betty Sailivale	Fisheries Officer (Offshore)	MAF
Leausalilo Leilani Duffy-Iosefa	Director	CI (Samoa)
Danita Strickland	Marine Program Manager	CI (Samoa)
Sinalilo Ah Him-Vaai	Interim Officer	CI (Samoa)
Seumaloisalafai Afele Faiilagi	ACEO (DEC)	MNRE
Taiatu Maria Satoa	PMCO (Marine)	MNRE
Fimareti Selu	Marine Conservation Officer	MNRE
Vitolina Ah Kau	Marine Conservation Officer	MNRE
Atonio P. Mulipola	Project Coordinator	MSP Project

b) Review of MSP draft map 1.2 and Proposed Operational plan

The representatives of the Fisheries Division have suggested no further changes to the plan, thus indicating their agreement for the draft map 1.2 as the version of the Ocean Plan. They have expressed their agreement with the consideration of allowing the fishing of tuna species within the MPAs while prohibiting the harvesting of residential stocks and other extractive activities.

However, the FD (MAF) has voiced some concerns, as summarised in the following numbered points below:

i. Significantly impacting the commercial fisheries sector

The Fisheries Division has expressed concern about offshore MPAs. This network is expected to significantly impact the commercial fishing industry, especially those that catching tuna species. The MPA network could lead to a loss of fishing grounds, resulting in a decline in economic and food security benefits. The industry's primary concern is losing 30% of its fishing grounds, which would negatively affect the national commercial fleets.

The commercial fishing industry has been experiencing a persistent decline in catches over the years, with some operators unable to break even from fishing in the past 18 months. Figure 7 illustrates the annual aggregate catches of tuna and other pelagic fish species within Samoa's EEZ by domestic and foreign vessels licensed to fish. The graphical representation shows a declining catch trend, significantly reducing in 2020 and 2021 due to the COVID-19 pandemic.

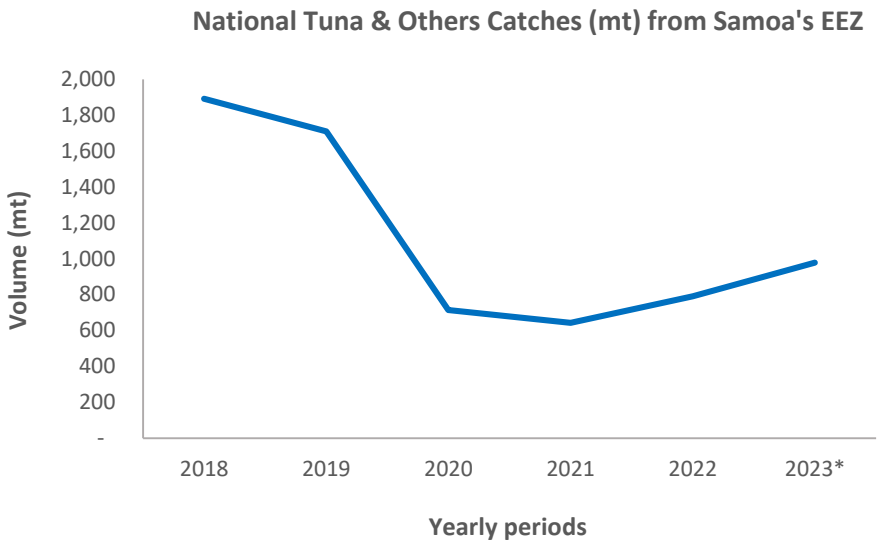

*Figure 7. Trend of Samoa's national fleet catches for period of 2017-2023 (*Jan to Oct period)*

Additionally, the Fisheries Division conveyed concern about the Sustainable Development Goals (SDGs) and their effects on the Pacific. Specifically, they were worried about the total allowable catches and zoned-based management areas imposed by these goals. These measures, proposed internationally and now being considered by the Pacific region, could make things worse for domestic fisheries. If implemented locally, they could hurt domestic fisheries, exacerbating the challenges they face.

The Division also raised concerns about the effects of the Marine Spatial Plan. The MPAs and other zone-based management measures that have been proposed not only limit fishing grounds but could also make the already-declining catches and fishery exports even worse. The restrictions would put additional financial burdens on fishing operators and reduce revenue earnings and fish for food security for the country.

Samoa has created a MPAs network covering 30% of its EEZ to ensure ocean sustainability. The network includes 11 no-take MPAs to preserve ocean biodiversity and conserve critical marine habitats. Including MPAs in conservation efforts is essential for managing tuna stocks sustainably within a country's marine space. The spawning grounds for species such as tuna are protected by protecting specific areas of the EEZ.

The closure of these areas as MPAs will significantly contribute to restoring and conserving fish stocks, ultimately boosting food security and supporting the fishing industry. However, the proposed offshore MPA network considers the need to allow fishing for tuna stocks to mitigate the considerable impact on domestic fisheries. The domestic commercial fishing sector raised this challenge during previous consultations, which the Fisheries Division highlighted.

The effectiveness and limitations of MPAs in conserving and managing tuna stock populations have been a topic of debate due to the highly migratory characteristics of tuna species. Despite scientific assessments that have been conducted to assess the positive effects of large-scale offshore MPAs on managing highly migratory species, including tuna, it remains to be questioned and debatable (e.g. Jones, 2007, Lesters *et al*., 2009, Hampton *et al*., 2023).

When it decides to allow tuna fishing in the MPA network, the primary consideration has been the impacts on the commercial fishing sector and the economic and food security benefits for the people. It is also taking into account that MPAs are limited as an effective tool for managing highly migratory species. However, the management of tuna stocks within the network and the entire exclusive economic zone (EEZ) will be regulated and controlled through current and future management measures that are nationally implemented.

The Fisheries Division has acknowledged and supported the decision for an MSP that permits tuna harvesting within the network to aid the domestic fishing industry. However, they are apprehensive about the MPA network's potential consequences and other constraints. Therefore, it is of utmost importance to approach the finalisation of the MSP with great diligence and to strive for a well-balanced outcome. All stakeholders involved in the process must remain aware of the potential risks and benefits of proposed measures and work together to ensure that the MSP is optimised for the best possible outcomes.

ii. MSP design not considering economic data.

The Fisheries Division has voiced concern about an MSP not considering economic information when developed. The draft MSP plan mainly rests on scientific information about ecological habitats, biodiversity, and catch and effort data from longline fishing. The selection of areas for MPAs is based primarily on biological marine habitats and the degree of conflict with fishery users. However, there needs to be more information regarding cost-benefit, fishery economic impacts or stock assessment, which could have been considered and utilised to prioritise areas for protection.

The initial stage of ocean planning was developing an MSP that complied with Samoa's national protection commitments, ecological representatives, and less user conflict. Subsequently, the stage of MSP will entail operationalizing the plan and devising strategies for managing the Plan. Economic impacts, operational costs and ramifications of the MSP on sectors and fishery resources will be addressed in due course to strengthen the enabling environment for managing the Network.

Discussions on this issue were centred on the need for economic impacts and cost-benefit modelling of the MSP. Moreover, there is a need for FD to provide updated economic data on fisheries. The cost modelling for operating and managing the offshore MPA network is now underway. Other assessment on impacts of MPA on sectors and fishery resources will be conducted during the first operation phase when no-take MPAs will be closed. The impact analysis of MPAs on the fisheries and tourism sectors will considered the first study to undertaken to understand the economic effects of the MSP on these sectors.

iii. Current and future controlling measures to sustainably manage tuna stocks

During the meeting, concerns were raised regarding the offshore MPA network. In response, FD is currently reviewing the TDMP and evaluating current measures guiding the harvesting of tuna stocks in Samoa’s EEZ. The new TDMP includes several controlling schemes to manage the tuna and other pelagic stocks. These schemes aim to ensure sustainable resource management and maximise the economic and social benefits for the people of Samoa.

The new TDMP will include controlling arrangements to regulate tuna fishing within the entire EEZ, including the offshore MPAs, if tuna fishing is allowed. The controlling measures are outlined as per the underlined points below.

- Interim Reference Point (*RP):* The Tuna Commission meeting in December 2023 considered a zone-based management measure aimed at controlling the harvesting of the SP-ALB. Samoa has proposed a review of the interim target reference point (*iTRP*) for the SP-ALB (*Thunnus alalunga*) tuna species. The Tuna Commission has agreed on an interim target reference point (iTRP) for SP-ALB specified as four percent below the estimated average spawning potential depletion of the stock over the period 2017-2019 (0.96 SB2017-2019/SBF=0).

The revised *iTRP* aims to establish a specific SP-ALB catch allocation limit for each South Pacific Group member country (SGP). Discussions are underway regarding the framework determining the allocation limits for each member country. Once agreed and approved, the allowable quota will applied nationally to regulate the catch limit of SP-ALB species within the EEZ of Samoa.

- Catch and Effort Limits: The plan sets catch and effort limits for tuna species, like SP-ALB, by fishing zones. Samoa's tuna longline fishing sector will allocate their catch according to these limits. The plan also includes harvest control rules and management actions.

- Licensing: The plan outlines licensing requirements for fishing vessels in Samoa's waters, with different vessel classes and limits on the number of vessels. The Fisheries Management Act 2016 governs the licensing process. Vessel number restrictions apply to domestic and foreign fishing licenses within Samoa's EEZ.

- Monitoring and Reporting: The plan emphasises the importance of a robust national monitoring system. It mandates the Samoan fleet to electronically report all fishing activities within the Samoa EEZ. This monitoring system helps in tracking and managing the fishing activities and ensures compliance with the set limits and regulations.

- International Commitments: The plan highlights Samoa's commitment to binding international, regional, and subregional agreements related to tuna fisheries and ecosystem management. By adhering to these agreements, Samoa aims to contribute to the sustainable management of tuna resources at a global level.

- Climate Change Adaptation: The plan acknowledges climate change risks for tuna fishing and seeks to enhance resilience. Promoting "green energy" in fisheries facilities is one of the proposed measures to mitigate the impact of climate change.

iv. Protected vs Managed MPAs

Establishing MPAs would significantly contribute to the conservation and restoration of fish stocks, ultimately enhancing food security and supporting the fishing industry. However, the Fisheries Division expressed concern about the substantial impacts of the no-take MPA network on the commercial fisheries sector and the effects of jeopardising economic and social benefits for Samoans. Furthermore, the effect of transferred fishing effort into fished areas may negate any positive results from MPAs.

The establishment of no-take MPAs raises important questions about managing MPAs and balancing conservation and resource extraction. While conserving marine ecosystems is critical, it is also essential to consider the needs of the resource users, like the communities and the commercial fishing sector that rely on marine resources for their livelihoods.

To comprehensively ascertain the impact of the MPA network on the fishing industry, other sectors, and resources, it has been discussed that the initial phase for the implementation of the network require to a small scale closed-off MPAs. It was advisable and more advantageous to commence on a smaller scale, given that this is the first time Samoa is implementing largescale MPAs to safeguard its ocean resources.

In the initial closed-off MPAs, it is essential to undertake an impact assessment to understand the ramifications of MPAs on ocean-dependent sectors and the benefits protected areas generate, such as the spillover of species into fished areas. Moreover, starting small will enable the fishery sector to gradually adjust to the network and its management conditions. The small-scale phase will assess the service delivery of requirements for managing the MSP and will determine whether this scale is a worthwhile effort for preserving Samoa's marine resources and environment.

v. MPA network hinders development efforts to enhance fisheries

The primary objective of the FD (MAF) is to enhance the fishery sector by implementing effective strategies that increase the production of fishery products to meet the food security needs and improve livelihoods while enhancing economic benefit for the people of Samoa. However, the importance of conservation tools to protect and manage the ocean often leads to conflicts with developmental efforts aimed at replenishing the ocean and sustaining the economic growth of the fisheries sector.

Figure 8. Fish Aggregating Devices (yellow) deployed by Fisheries Division, MAF in 2023

The FD (MAF) shared their concerns on the potential conflict between fishery developments and MPAs as conservation tools. The placement of MPAs offshore may be an obstacle to development programmes aimed at improving fisheries, increasing food fish, and saving costs for commercial and community fishers. The FD has deployed FADs in offshore areas to attract tuna stocks and other pelagic species, which helps fishers increase their catches while reducing operational costs. Figure 8 shows the positions of FADs deployed by the Fisheries Division in 2023.

The offshore MPAs, such as NTZs 6, 3, 8, and 10, are within a 10-mile radius of FAD deployment ranges. The biodiversity enrichment and habitat restoration in the new TDMP include replanting and deploying safe artificial components offshore. However, some suitable areas for deploying FADs and artificial components have been earmarked as MPA sites, thus posing a challenge between the two efforts. Therefore, it is essential for responsible agencies to collaborate, ensuring a balance between conservation and development objectives can be achieved efficiently.

vi. MSP service requirements are additional work and costs.

Again, FD raised concerns regarding the additional responsibilities that may arise if some of the functions for managing the offshore MPA network are to be provided by them. These tasks include monitoring the MPAs for IUU activities to ensure compliance at the highest level. Similarly, the FD is expected to provide extra services such as collecting catch data and reports of tuna species specifically harvested by vessels fishing within the MPAs.

The main worry is the cost associate in delivering these additional services as FD's annual operational budget may remain the same as usual every year. Although the FD can provide the necessary support for the operation and management of the MPAs, there should be a cost-sharing and finance mechanism to assist partners in giving continuous services for the successful operation and management of the offshore MPAs network.

vii. Different fisheries priorities with the new government

The Division has raised concerns regarding the potential for the new government to prioritise fisheries development over implementing a final MSP Plan, thereby undermining the latter. Nevertheless, the current government and Prime Minister support the MSP proposal to safeguard 30% of the EEZ to manage Samoa's ocean ecosystem, according to the CI (Samoa). The purpose of the marine spatial plan is to conserve the country's ecological habitat and biodiversity and ensure its food security by establishing largescale MPAs offshore.

c) Proposed suggestions to address issues.

The summary of proposed suggestions discussed during the meeting with FD to progress and address the concern issues raised in part a) above are outlined in numbered points below.

i. Significantly impacting the commercial fisheries sector

It is important to carefully assess the impact of the MSP on the ocean-dependent sectors, particularly the fishing industry. The socio-economic implications of reduced fishing grounds and the industry's long-term viability should be prioritised for examination. Despite

consideration for allowing tuna harvesting in MPAs, the major effects of the offshore MPA network on the commercial fishing industry need to be addressed.

Following the meeting, it has been recommended that closed-off MPAs be implemented for the initial 10% phase instead of the presented proposed 15% for the first phase. The MPAs will be fully protected, allowing for the evaluation of the implications of MPAs on ocean-dependent sectors and the benefits they generate for fishery resources. In addition, implementing the initial closed-off MPAs will provide ample opportunities for users to gradually adjust to the terms and conditions for MSP management. Furthermore, it is an opportunity for service providers to test the requirements involved in managing MSP and to determine a more suitable and viable option for implementing the MSP that can balance multiple competitive interests.

The 10% phased approach will offer a more measured and strategic way to consider integrating no-take MPAs into the offshore network while enabling the sector to understand the implications and benefits of such a network. As such, it is a prudent course of action consistent with sustainable development principles.

As the process of developing the MSP approaches its final stages, it is essential to have further discussions with partners to ensure that the final plan is well-balanced. FD has shown a willingness to participate in future meetings and provide relevant support in the form of technical fisheries information, as well as the capacity and capability required to implement and manage the MSP successfully. The proposed dialogues will provide an excellent opportunity to discuss critical components of the plan, including the establishment of efficient governance and management structures, coordination and collaboration on network management, and the development of appropriate monitoring and evaluation frameworks. It is recognized that effectively managing Samoa's marine space is crucial to the country's socioeconomic development, particularly in its fisheries sector. Therefore, a well-planned MSP is essential to ensure the sustainable use of these resources and protect the marine environment.

ii. MSP design not considering economic data

With the prioritisation of MPAs being based chiefly on biological and fishing hotspots, FD recommended evaluating the socio-economic impacts and associated costs of MSP. Results from these assessments should have been considered in developing the offshore MPA network. The FD will provide update fisheries economic data to aid the improvement of the MSP if necessary.

The participants were informed that once the MSP is finalised, evaluations will be conducted on its operational cost modelling, cost-benefit analysis, and socio-economic impacts. The initial phase of MSP operation will focus on cost modelling, cost-benefit analysis, and effects of MPAs. The Starling consultancy firm now undertakes the cost modelling for implementing the MSP. Other assessments will also be undertaken while finalising the plan, such as the ocean financing landscape, improving cohesiveness across Ministries, support for identifying gaps in MSC, and legislation to strengthen the enabling environment for MSP implementation. During the studies, MSP potential service providers and partners will be consulted.

iii. Effective current and future controlling measures to sustainably manage tuna stocks.

The successful management of highly migratory species, particularly tuna stocks, within the network of MPAs and the entire EEZ, will depend on the effectiveness of current and future national conservation measures. Tuna fishing is considered permitted within the MPAs.

However, the MPA network ensures the protection of all other species for conservation purposes.

The MPAs are essential for preserving residential stocks like bottomfish and demersal species. Studies have shown that MPAs have a positive impact on increasing the abundance of the demersal fish assemblage, increasing juvenile size, and a higher proportion of juveniles (Almeny D et al., 2013). These trends support the case for implementing offshore largescale MPAs like the MPA network for Samoa. Therefore, it is suggested that further research studies be conducted to evaluate the effect of the MPA network on local residential and demersal stocks.

iv. Protected vs Managed MPAs

To understand the implications of the offshore large-scale MPAs on the fishing industry, ocean-dependent sectors, and fishery resources, it has been recommended that the implementation of closed-off MPAs covering 10% of the EEZ is the initial phase of the MSP operation.

It is suggested that Samoa begin the MSP operation by starting small, given that this is the first time the country is establishing large-sized MPAs to manage its ocean and resources. The 10% closed-off phase including the no-take protected areas. The small-scale initial phase is considered crucial to evaluate and understand the effects of MPAs on the fisheries sector and other industries that rely on the ocean, as well as to assess the benefits generated by MPAs, such as spill-over into fished areas and the adverse impacts of transferring fishing efforts to the fished areas.

The small-scale initial phase will also enable the fishery sector to adjust and be aware of the measures in place to manage the MPAs. Furthermore, the services required for managing the MSP and any gaps in the operation and management of the MSP will be tested and identified during the first phase.

v. MPA network hinder development efforts to enhance fisheries

F The development of fisheries focusing on biodiversity enrichment and habitat improvement should be considered in the context of MPA network management. It is essential to engage in further dialogue with the MAF to identify the permissible and impermissible activities when developing the management plan for operating the MSP Plan. Notably, most Fish Aggregating Devices (FADs) deployed by the Fisheries Division are within a distance of 10 miles from the coast (5 to 7 km).

vi. MSP as an additional work but the FD's budget remains the same.

There needs to be further discussion to identify which duties will be delivered by FD and other potential service providers and how to manage any additional costs resulting from MSP services. Additionally, the delivery of these services should be well-coordinated, ensuring that partners and providers with similar assets, such as VMS, are not overburdened and performing their core functions sufficiently. It is essential to share the responsibility for operating and managing the MPAs network alternately.

vii. Government's ocean sustainability priorities

During discussions about ocean sustainability, it was mentioned that the new government favours supporting the MSP proposal. The Prime Minister of Samoa expressed her support for the MSP proposal to protect 30% of the EEZ to manage the country's ocean ecosystem. The

MNRE Minister also voiced his support for the MSP when his opinion on the implementation approach for the plan was sought. The support from these high-level political figures shows the new government's political commitment to ocean sustainability.

However, it is recommended that the MNRE Minister be at the forefront of promoting the plan to gauge the high level support of the Cabinet, ensuring the final MSP is formally endorsed.

5.1.2 Samoa Port Authority

a) Meeting and Participation

On November 21st, 2023, a consultation meeting was held with the Samoa Port Authority in their conference room in the afternoon. The meeting was attended by senior personnel from SPA and members of the CCT as listed in Table 3.

Table 2. Participants for the consultation meeting with SPA

Names	Designation	Organisation
Captain F. Faamausili	Port Master	SPA
Papali'i Ausetalia	Logistic Operation Manager	SPA
Leausalilo Leilani Duffy-Iosefa	Director	CI (Samoa)
Danita Strickland	Marine Program Manager	CI (Samoa)
Sinalilo Ah Him-Vaai	Interim Officer	CI (Samoa)
Seumaloisalafai Afele Fai'ilagi	ACEO (DEC)	MNRE
Taiatu Maria Satoa	PMCO (Marine)	MNRE
Atonio P. Mulipola	Project Coordinator	MSP Project

The meeting addressed concerns regarding the impact of the offshore MPA network on vessel routes, harbours, and anchor spaces within the coastal area. Representatives from SPA provided valuable input, resulting in several significant outcomes and recommendations to address concerns raised on the draft MSP map. A summary of the main points discussed during the meeting is summarised in the following section, and notes can be found in Appendix 9.5.

b) Review of MSP draft map 1.2 and Proposed Operational plan

SPA tender no changes to the draft plan 1.2 t, thus indicating their support of the plan and agreement with the locations and configurations of the offshore MPAs. Nonetheless, they raised due concerns on some of the issues when reviewing the draft map 1.2 and the proposed operational plan as summarised in the numbered points below.

i. Reconsider NTZ 8 as conflict with harbouring and anchoring sites.

Firstly, there was concern about some harbouring and anchoring spaces being identified by SPA for income vessels to anchor and harbour when the Apia port is congested. Secondly, they are concern if some of the sites identified for harbouring and anchoring sites are allow for vessels to anchor during times of emergency. The anchoring and harbouring sites around the country have been identified as suitable any vessels to anchor and seeking harbouring.

SPA has identified several harbour and anchoring locations closer to Apia port from the offshore of Apia to Faleula villages on the west and from Vaiala to Fagaloa bay on the east. These sites are utilised to anchor and harbouring incoming vessels in case the main port of Apia becomes congested. However, there is a concern regarding the most practical anchoring site, 5-mile reef, which is in close proximity with the Apia port and is often used by incoming vessels during peak times. This site has been earmarked as a protected area known as NTZ 8. SPA also concerns about other potential harbouring and anchoring coastal sites for vessels around the country being considered as near costal MPAs while finalising the marine spatial plan for Samoa.

According to the SPA, the anchoring site that is most frequently utilised is currently overlapping with the NTZ 8, resulting in a series of challenges regarding the berthing and unloading turnaround times of cargo vessels at the Apia port. Consequently, delayed cargo unloading could significantly impact the supply of goods to businesses nationwide.

c) Suggestions to address issues

The numbered points below summarised the suggestions proposed during the consultation to progress and address the concern issues raised by SPA as in part a) above.

i. Reconsider NTZ 8 as conflict with harbouring and anchoring sites.

During the meeting, a suggestion was made that SPA could install anchoring buoys for vessels waiting for berthing spaces on the wharf in Apia to unload. These buoys would allow ships to connect and link to the buoys for anchors, thereby preventing damage to the reefs that may occur if anchors are dropped on them. However, SPA considered the proposal to be a costly remedial action.

It was considered to address the quick turnaround issue by protecting half of the 5-mile reefs as part of the MPA network while utilising the other half for anchoring and harbouring purposes. SPA considered this option sustainable to achieve development and conservation objectives.

However, given the biological significance of the 5-mile reef, using other areas close to Apia port (Faleula to Vaiala) for anchoring and harbouring incoming vessels was discussed and considered. The 5-mile reef urgently requires protection for recovery, noting the extensive damages to the fragile reef ecosystems from anchors and unsustainable fishing.
NTZ 8 encompasses the *To'atugā* Reef, also known as the 5-mile Reef. This reef system is a crucial area for biodiversity, hosting diverse coral reef species and ecosystems. However, the reef system faces significant degradation due to cargo ships for anchoring and unsustainable fishing practices.

A Marine Protected Area, NTZ 8, is set to safeguard the unique habitats, diverse biodiversity, and coral reef ecosystems in the area. The 5-mile Reef, a crucial source of reef fish larvae and young fish vital in recruiting young fishes to the surrounding reefs north of Upolu Island, will also be protected. The establishment of this MPA will not only safeguard marine life, enhance coral reefs' resilience to high-energy waves, and provide shelter for Apia town and its critical utilities.

Further dialogues with SPA were recommended while progressing toward finalising the offshore MPA network. In future talks, SPA must provide updated navigational charts to guide redefining

areas for MPAs potentially conflicting with navigation routes and harbouring and anchoring sites within the coastal and offshore waters.

5.1.3 Samoa Police and Correction Services (Maritime Wing)

a) Meeting and Participation

On November 22nd, 2023, a consultation meeting was conducted with the Samoa Police (Maritime Wing) from 9:30 am to 12 pm at the Matautu Wharf Maritime Police conference room. Two senior maritime law enforcement representative joined the meeting since most of the police officers of the Maritime Wing Police personnel in Australia to undergo training and would bring home the new patrol boat. A list of the meeting participants is listed in Table 4.

Table 3. Participants for the consultation meeting with the Police (Maritime Wing)

Names	Designation	Organisation
Evile P. Ekueni	Senior Police Sargent	SPCS (Maritime Wing)
Tai Ta	Police Officer	SPCS (Maritime Wing)
Leausalilo Leilani Duffy-Iosefa	Director	CI (Samoa)
Danita Strickland	Marine Program Manager	CI (Samoa)
Sinalilo Ah Him-Va'ai	Interim Officer	CI (Samoa)
Esmay Tanielu	Marine Programme Officer	CI (Samoa)
Seumaloisalafai Afele Fa'iilagi	ACEO (DEC)	MNRE
Fuimaono Fatutolo Iene	PMCO (Marine)	MNRE
Mulipola Atonio P. Mulipola	Project Coordinator	MSP Project

The primary purpose of the meeting was to exchange information and expertise with the maritime police, who are responsible for monitoring all vessels within Samoa's exclusive economic zone (EEZ) and conducting surveillance of the EEZ. The maritime police have a vessel monitoring system tool and patrol boats. During the meeting, the attendees discussed different ways and approaches to monitor the offshore marine protected area (MPA) network, focusing on the experience of the Maritime Police and Fisheries Division. They also discussed collaboration and planning for the shared implementation of EEZ monitoring and surveillance actions to prevent illegal, unreported and unregulated (IUU) activities. The key outcomes of the meeting are summarised in numbered points below, and the meeting notes are attached in Appendix 9.6.

b) Review and Concerns on MSP draft map 1.2 and Operational plan

At the consultation meeting with the Maritime Police Unit, no changes were proposed to the draft map 1.2. Their silence on modifying the draft plan indicates their agreement and support for it and all the MPAs. This plan is ecologically representative, stakeholder-driven, and causes lesser conflicts with multiple ocean users. The plan also meets Samoa's 30% national protection commitment. However, Maritime Police has voiced concerns about the MSC issues, which relate to the added operational costs and resources, procedures on infringements, and planning process required to carry out monitor and enforce illegal, unreported, and unregulated activities effectively within the closed-off MPAs, along with their routine functions. The following

numbered points summarise the concerns and suggestions to address the issues raised. The meeting notes are attached in Appendix 14.6 as a reference.

i. Conducting monitoring, surveillance, and enforcement operations

Undertaking the task of monitoring, control, and surveillance is resource-intensive and costly, especially when conducting sea surveillance of the EEZ, which comprises vast areas. Monitoring the offshore MPA network requires significant resources and adds to the operational cost of monitoring the usual EEZ duties. According to the SPSC, a sea-patrolled surveillance operation spanning three days and covering the EEZ costs approximately SAT 30-60k, incorporating expenses such as fuel, salaries, and supplies. The monitoring of unprotected EEZ areas and MPAs results in a significant increase in both days and operational costs for patrolling.

The Maritime law enforcement officials have expressed their apprehension regarding the MSP plan. Additionally, they are concerned about the financial burden of monitoring the offshore MPA network. Moreover, law enforcement personnel require capacity building to comprehend the procedures for handling infringements within the MPAs.

The government's budgetary constraints pose a significant challenge in meeting the escalating demand for surveillance days due to MPAs while simultaneously carrying out the agency's regular operations. The Maritime Police necessitate further assistance to perform the additional MCS tasks. This support includes specialised training on handling infringements within the MPAs, an in-depth understanding of the coordinates of MPAs, reporting of infringements, and other relevant procedures.

Moreover, there is a need for specific training for personnel from other collaborative agencies on vessel boarding procedures, infringement processing, and reporting of IUU activities suspected or caught from within the MSP offshore network. The maritime police and fisheries compliance officers have been trained to board fishing vessels suspected of IUU and report and process IUU activities.

ii. Effective planning for delivering MSC service requirement.

The surveillance of the EEZ for illegal, unreported, and unregulated activities is the responsibility of the maritime police. However, effective collaboration and planning by government ministries and organisations with vested interests and concerns about IUU activities within Samoa’s EEZ are crucial. The maritime police have expressed concern about the lack of interest among agencies in pursuing such cooperation.

Nonetheless, the Fisheries Division, MAF, is the only government agency that has joined hands with the maritime police in the surveillance of the EEZ. Their joint efforts are aimed at deterring IUU fishing while ensuring that high levels of compliance are maintained with the national measures put in place to manage Samoa’s ocean and resources sustainably.

In monitoring Samoa's EEZ, an operational plan is typically developed in collaboration with the Fisheries Division (FD). This plan outlines targeted fishing areas based on hotspot fishing grounds during specific times of the year, and a list of locally registered and licensed vessels authorised to fish within the EEZ. In some cases, personnel from the Fisheries Division accompany the surveillance operation to board fishing vessels suspected of engaging in illegal, unreported, and unregulated (IUU) fishing. These personnel, along with MP (Marine Police) personnel, are

specially trained to board vessels, report any infringements, and process evidence related to such violations.

However, if the Maritime Police will provide surveillance requirement for the MPA network, there is a concern about who is responsible for coordinating targets and planning surveillance activities.

iii. Require effective Collaboration and Coordination.

The Maritime Police have expressed concern over the lack of collaboration and coordination among government agencies with interests and concerns on IUU within Samoa's marine spaces and border security issues. This lack of cooperation and coordination may subsequently affect the delivery of necessary MSC requirements for the offshore MPA network, if some of the requirements for MPS are to provide by certain government agencies. While certain government agencies have assets and planning to install VMS tools in the future, a well-coordinated approach must be taken among potential service providers to ensure the effective operation and management of the MSP.

Both Maritime Police and FD have extensive experience and knowledge on surveillance for Samoa's EEZ and also engage in sub-regional and regional MSC operations from time to time. Sometimes, Maritime Police joined patrol boats and VMS capabilities of several small island states in joint MSC operations, ensuring broad surveillance and monitoring coverage of the EEZ.

Experiences and knowledge shared by the Police and Fisheries on MCS will significantly support the planning and coordination of future operations for monitoring the MPA network plus other areas of the EEZ. Monitoring the network will be an added task for the Maritime Police, requiring ample financial and capability resources for effective MSC operations. The additional responsibility creates challenges for the SPSC regarding costs, capability and personnel.

iv. VMS tools on the Alia fishing fleet

The maritime law enforcement authorities have expressed concern regarding the absence of VMS equipment on the Alia fleet. A similar issue was raised during a consultation meeting with the Fisheries Division, which further accentuated this concern. Consequently, only foreign, locally-based large domestic fishing vessels have been equipped with VMS tools onboard, which allows the Maritime Police to monitor all ships, including fishing vessels licensed to fish and those transiting within Samoa's EEZ.

In addition, the Maritime Police can monitor the activities and routes of all FFA-registered and Pacific Island States licensed foreign fishing vessels that cross Samoa's exclusive zone. Proper observation tools ensure the authorities have a comprehensive and robust system to monitor and address potential risks to Samoa's maritime security.

The domestic Alia fishing fleet does not have the VMS equipment. They claim their vessels lack the necessary platform to support the VMS equipment. Lacking VMS tools makes it difficult for the authorities to monitor their movements and activities within the EEZ and protected areas. Similarly, the Alia fleet will face the challenge of being aware of the MPA locations and their boundaries if there is no VMS equipment suitable for the type of vessels they have.

All fishing vessels operating within the EEZ and the MPA network must carry VMS equipment to allow service providers to observe their movement and activities. The Alia fleet is no exception to this rule. Fishing for tuna is only permitted within the MPA system. Collaborative agencies responsible for providing service requirements for the MSP must receive specific capacity building on vessel boarding procedures, infringement processing, and reporting of IUU activities suspected or caught within the MSP offshore network. The maritime police and fisheries compliance officers have been trained to board fishing vessels suspected of IUU activities and follow reporting and management processes.

c) Proposed suggestions to address issues

During the consultation meeting with SPCS (Maritime Wing), there were certain proposals to progress some of the challenges identified and deliberated. The way forward suggestions includes the following:

i. Resources need for the implementation of the MPA network

The next step in the marine spatial planning process is identifying the resources that implementing agencies require to operate the offshore MPA network. This step will involve assessing the needs of various stakeholders and agencies involved in managing and protecting the protected areas.

In the future, there will be specific and targeted discussions on the financial and resource needs of the MSP MPA network. These dialogues are expected to occur this year and onwards, focusing on identifying funding mechanisms and allocating funds and resources necessary to implement and manage the MPA network successfully.

ii. Effective planning for delivering MSC service requirements

Establishing an offshore MPA network is a significant initiative that has raised concerns about the adequacy of resources to meet the MSC requirement for MPA networks. Potential service providers need to develop and coordinate a plan beforehand that guides the surveillance and monitoring of MPAs. Adequate resources must be made available to the service providers, including the Maritime Police, to ensure practical observation and protection of the protected zones.

Implementing the MSC requirement for the offshore MPA Plan will require increased services provided by the Maritime Police agency. This increase in service requirements will pressure the agency to deliver more services. Consequently, there will be a need for increased collaboration and coordination with other concerned ministries or agencies to provide MSC services for the MSP MPA Network. To meet the growing demand for its services, the Maritime Police should be ready to improve its operational capacity as needed. This could involve upgrading the current infrastructure, investing in new technologies, or collaborating with other organizations to share resources and knowledge.

To ensure the effective delivery of these services, it is necessary to establish clear communication channels and protocols to facilitate a seamless flow of information among the relevant parties.

iii. Effective Collaboration and Coordination.

Effective stakeholder collaboration and coordination is crucial for successfully implementing and managing the MSP offshore MPA network. The stakeholders that need to be involved are government agencies, non-governmental organizations, and local communities. Effective engagement of stakeholders and partners in the management of the MSP is essential for open communication, transparency, and a shared commitment to the conservation and sustainable use of marine resources. This collaboration will ensure the MSP offshore MPA network is efficiently implemented and managed.

iv. Suitable VSM tools for Alia Fleet

A suitable VMS for the Alia fleet should be developed to support the MSP offshore MPA network implementation. This system will enable the fleet to accurately know the locations and boundaries of MPAs, ensuring that their operations do not negatively impact these conservation areas.

In conclusion, the successful implementation and management of the MSP offshore MPA network rely on identifying and allocating resources, effective collaboration and coordination between collaborating service providers and developing suitable tools and technologies to support the network's goals. By addressing these challenges, the MSP process can effectively contribute to the conservation and sustainable use of marine resources.

5.1.4 Samoa Shipping Services

a) Meeting scheduled and Participation

The consultation meeting with the Samoa Shipping Services (SSS) was convened on the 21st November 2023 from 1:30 pm to 3:30 pm. The meeting was held at the SSS conference room. The meeting was attended by senior personnel of SSS and members of the MSP consultation core team. The names of participants are listed in Table 5.

Table 4. Participants for a one-on-one meeting with Samoa Shipping Service

Names	Designation	Organisation
Lei'ataualesa Samuel Phineas	General Manager	SSS
Taulapapa A. Tuiletufuga		SSS
Papali'i		SSS
Leausalilo Leilani Duffy-Iosefa	Director	CI (Samoa)
Danita Strickland	Marine Program Manager	CI (Samoa)
Sinalilo Ah Him-Vaai	Interim Officer	CI (Samoa)
Seumaloisalafai Afele Faiilagi	ACEO (DEC)	MNRE
Fuimaono Fatutolo Iene	SMCO (Marine)	MNRE
Atonio P. Mulipola	Project Coordinator	MSP Project

The meeting provided an updated progress on the MSP draft Plans developed and to consult the Samoa Shipping Services on potential impacts of the MSP offshore MPA network to the organisations and its services. A proposed operational plan with a phased approach for implementing the MSP was also presented for discussion.

b) *Reviews of MSP draft map 1.2 and Proposed Operational plan*

The representatives of SSS did not submit any proposal to modify the draft map 1.2 or change the positions and configurations of the proposed offshore MPAs. This absence of significant adjustments suggests they agree with the proposed offshore MPA network to protect 30% of Samoa EEZ. However, they expressed concerns about shipping routes and harbour and mooring sites closer to the coast, which may overlap with the MPAs. The suggestions to address these concerns and move forward are summarised in the following sections, and meeting notes are attached in Appendix 9.7 for reference.

i. *NTZ 8 as the most frequent anchoring spot for incoming vessels*

SSS is concerned about the proposed MPA called NTZ 8 and they stated the suitability and importance of the site designated as the NTZ 8 protected area for anchoring ships. This is due to their proximity to Apia port, which allows for a quick turnaround time for unloading. The NTZ 8 will protect the 5-mile Reef, locally known as *To'atuga* Reef. This Reef has been extensively used as an anchoring spot for vessels calling into Apia when the port is busy. Unfortunately, the reef site has suffered significant damage from anchors and unsustainable fishing practices. That's why it has been selected for protection, as it urgently requires recovery of the reef habitats, ecosystem, and diverse biodiversity.

The 5-mile Reef is biologically significant because it hosts diverse coral reef ecosystems and biodiversity. The MPA is closer to the barrier reefs on the northern side of Upolu Island, and protecting the site will help replenish and enrich these reef systems with larvae and young species from the 5-mile Reef.

ii. *Shipping routes, harbours and anchoring sites.*

The Samoa Shipping Service has expressed concern about the proposed offshore MPAs and their potential interference with established shipping routes, harbours, and anchoring sites. SSS has identified suitable locations for anchoring and harbour sites and routes on navigational charts to guide all vessels operating within Samoa's Exclusive Economic Zone (EEZ). In addition, SSS has designated offshore sites closer to the coast as areas for harbour and anchorage for its own vessels and other vessels during emergencies. These measures aim to ensure the safety and efficiency of SSS-managed ships and maritime activities within Samoa's EEZ.

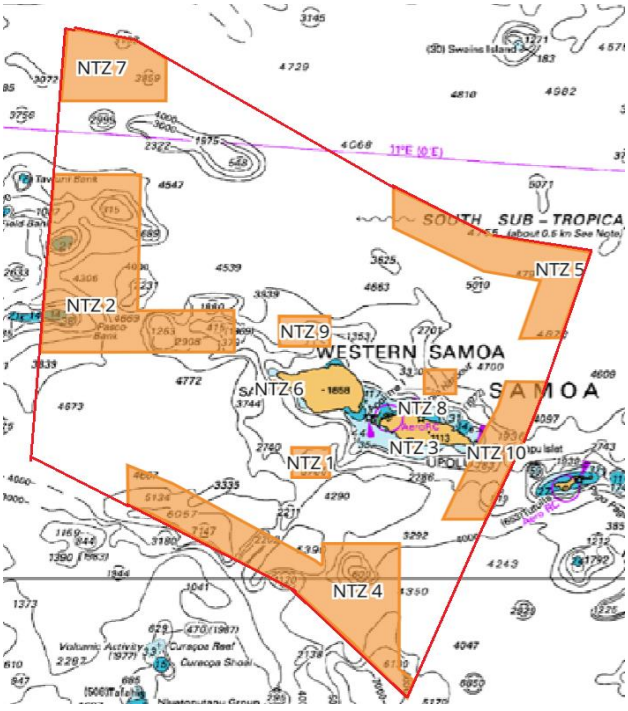

Figure 9. Largescale offshore MPAs of draft map 1.2 on the Nautical Chart of Samoa

On the north side of Upolu Island, there are some shallow offshore areas located between Faleolo and Fagaloa Bay that can be used to anchor incoming ships that are waiting for space to dock at the Apia main port. SSS and SPA were involved in developing the MSP, in which their representatives engaged in ocean planning consultations where they provided guidance while identifying offshore areas for MPAs.

The MSP process was further guided by navigational information provided by representatives of SSS and SPA based on the existing nautical chart for Samoa, as shown in Figure 9. However, SSS claims that many changes have been made to navigational aspects, which have been incorporated into Samoa's most updated nautical chart. The SSS have been requested to provide updated navigational charts that have the most recent important information about anchoring harbour sites and shipping routes, which could have been useful in improving the design of the MSP.

iii. Transit or passage through MPA

During the MSP discussions, SSS raised some concerns regarding the permissibility of vessel passage or transit through MPAs. It was clarified by the Planners that free passage and transit through protected areas are allowed as long as the ships maintain continuous courses. The management plans outline the activities allowed and not allowed within MPAs, and free passage is considered an allowable action.

However, it's important to note that while passage is free within MPAs, certain activities like discharging ballast waters, chemicals, oils, pollution, and waste from passing ships are strictly prohibited. These activities are non-permissible and must be avoided to comply with national and international environmental and marine pollution regulations. The MSP management considers these illegal activities as non-permissible.

c) Suggestions to address issues raised

Several suggestions to address the concerns raised and help move the issues forward were discussed during the meeting SSS.

i. NTZ 8 as the most frequent anchoring spot for incoming vessels

The 5-mile Reef site is designated as a protected area called NTZ 8. It is a valuable location that anchors SSS-operated ships and inbound cargo vessels when the Apia port is congested. However, the 5-mile Reef site is in urgent need of protection. Incoming ships have often used the 5-mile Reef as an anchoring location, significantly damaging the coral reefs and ecosystems in the area. It is important to recognise the biological significance of the site and its role in replenishing adjacent reefs with larvae and juvenile species. Therefore, it is crucial to safeguard the site to enable the reef ecosystem and species to rebuild and recover. In that regard, it is suggested to maintain the 5-mile Reef site as a marine protected area (NTZ 8) in the final MSP to support achieving ocean sustainability.

ii. Shipping routes, harbours and anchoring sites.

According to the nautical chart and statements from SSS and SPA, the offshore areas from Faleolo to Fagaloa Bay, closer to the coast, are appropriate for anchoring and harbouring inbound ships to Apia port. These sites can also be used for anchoring and harbouring vessels during

emergencies. Therefore, it is suggested that SSS-owned and operated ships utilise these identified sites while supporting the designated MPAs of the marine spatial plan by not dropping anchors in those areas.

ii. Transit or passage through MPA

It is allowed for ships to pass through (MPAs, but it is prohibited for them to discharge ballast waters, chemicals, oils, pollution, and waste during their passage. This is following national and international environmental and marine laws. Within the network of MPAs, these illegal activities are strictly not allowed as per the MSP proposed management plan.

As responsible ocean users, it is highly suggested that the SSS support the conservation efforts through the offshore MPA network by ensuring that all vessels under their management comply with the laws. It is also advised that ships under their operation and management refrain from engaging in illegal activities that could jeopardise biodiversity sustainability within the MPAs. The MSP regulations and management plan provide a comprehensive list of permissible and non-permissible activities within MPAs.

Finally, it is suggested that the SSS continue engaging in future discussions while MSP progresses toward finalisation. It is also vital for the SSS to provide relevant navigational information and update nautical charts to improve the MPA network and lessen conflicts with the shipping sector.

5.2 Group meetings

Three targeted sector consultations were held as part of the third round of ocean planning consultations. Invited commercial fishing industry members, the Commercial Fisheries Management Advisory Committee, government agencies, and the Samoa International Game Fishing Association participated in these consultations. The consultations were held jointly with the Commercial Fisheries Industry, specifically those with vessels larger than 15 meters, and the CFMAC. Meetings with the SIGFA and specific government agencies were conducted separately.

The consultations followed a structured approach, similar to the one-on-one meetings with targeted government technical agencies. The primary objective was to discuss the proposed MSP operational plan. The consultations provided a platform for targeted groups to review the MSP draft map 1.2 and the operating plan. It also offered a structured engagement to identify potential challenges and share relevant ideas towards managing and operating a final offshore MPA network.

The interactive and constructive discussions highlighted the need for collaboration among stakeholders and government agencies. The stakeholders appreciated the opportunity to participate in the consultations and expressed their willingness to continue collaborating with the government agencies to realize the final offshore MPA network.

5.2.1 Commercial Fishing Industry (>15m) and CFMAC

a) Meeting and participation

The commercial fishing industry is the leading group that utilises the ocean and its resources and is considered to have significant impacts from the offshore MPA network once implemented.

Owners and operators of large commercial fishing vessels and members of the CFMAC were invited to attend the targeted consultation. The CFMAC plays a vital role in advising Government on developments for the commercial fishing industry and promoting sustainable management of offshore fishery resources.

Figure 10. Participants for the meeting with the Commercial Fishing Industry and CFMAC

The participation from the industry and the CFMAC was poorly attended despite invitations were extended to all the known operators and CFMAC members. Table 6 listed participants who attended the consultation meeting and pictured in Figure 10.

The joint meeting was held on 28th November 2023, from 9:30 am to 12:30 pm at the MNRE conference room. The purpose of the meeting was to review MSP draft map 1.2 and exchange information regarding potential challenges that could adversely affect their operations and businesses. The operational plan for the MPA network was also presented for review and discussion.

Table 5. Participants for consultation meeting with the Commercial Fishing Industry and CFMAC.

Names	Designation	Organisation
Rudy Ah Wong	General Manager	Wong Boat Craft Builder
Tanuvasa Toetu Pesaleli	NUS – Senior Lecturer	CFMAC
Ellen Titimaea	Commercial Fishers/Exporters	Apia Fisheries Export Packers
Mathew Sianava	Representative	CFMAC
Hope Latu	Representative	CFMAC
Asiata Gerard Anapu	ACEO (MFAT)	CFMAC
Leausalilo Leilani Duffy-Iosefa	Director	CI (Samoa)
Danita Strickland	Marine Program Manager	CI (Samoa)
Nolani Hazelman	Interim Officer	CI (Samoa)
Sinalilo Ah Him-Vaai	Interim Officer	CI (Samoa)
Seumaloisalafai Afele Faiilagi	ACEO (DEC)	MNRE
Maria Satoa	PMCO (Marine)	MNRE
Fuimaono Fatutolo Iene	SMCO (Marine)	MNRE
Fimareti Selu	MCO (Marine)	MNRE
Atonio P. Mulipola	Project Coordinator	MSP Project

The joint meeting between the commercial fishing industry and CFMAC was essential in clarifying and addressing the challenges posed by the MSP draft map 1.2. The stakeholders exchanged valuable information and proposed solutions that could help mitigate the challenges and ensure sustainable operations in the industry. The key concerns raised and suggestions proposed to progress the MSP toward its final stage are summarised in the following sections below and the meeting notes for references are attached as Appendix 9.8.

b) Reviews of MSP draft map 1.2 and Proposed Operational plan

During the consultation meeting, representatives of the commercial fishing industry and the CFMAC offered no significant alterations to the MSP draft plan 1.2. However, they raised concerns about the impacts of the MSP and proposed approach options for the operationalisation of the MSP. The problems are detailed in numbered points in section b.

i. Offshore MPAs impacting the Fishing Industry

Accordingly, the commercial fishing industry in Samoa that operates within the country's EEZ has been facing a decline in tuna catches for several years. The movement and availability of tuna stocks within Samoa's EEZ is influenced by seasonal changes and the amount of biomass available, which influencing fishing operations. Table 7 shows the volume (metric tonnes) of the national fleet total catch by key tuna and other combined pelagic species over a period of seven years (69th CFMAC Tuna Fishery Updates, 2023).

Table 6. Volume (mt) of total national fishery catch by Key Species 2018 - 2022, 2023 (Jan to Oct)

Species	2017	2018	2019	2020	2021	2022	2023 (Jan to Oct)
Albacore	2,374	2,032	2434	976	552	1,295	1,284
Yellowfin	644	462	498	376	252	302	231
Bigeye	150	71	146	104	49	99	73
Others	170	183	357	179	75	122	116
Total	3,338	2,748	3,435	1,635	928	1,818	1,704

According to the fishing industry, larger longline fishing vessels tend to fish anywhere, often in areas closer to shore during high seasons when more fish are available. However, when fewer fish are in nearby areas or during off seasons, large fishing vessels usually travel to areas proposed as NTZs 2, 4, 5, and 7 near the borders to catch fish. Even after fishing for 30 to 40 days, they only return with a catch of 200 fish, which is not economically viable.

The government's plan to protect 30% of the EEZ has raised further concerns among the industry and CFMAC representatives. They fear it will exacerbate the uncertainty of the fishing sector's future. The 30% protection will have a considerable economic impact on the domestic fishing industry and could compromise its sustainability. The decline in tuna caught over the years, combined with the escalating operational expenses due to elevated fuel prices, will worsen the problems faced by the domestic fishing industry in Samoa following the 30% reduction in fishing grounds. Figure 11 displays the trend of Samoa's national fleets' annual tuna and other pelagic catches.

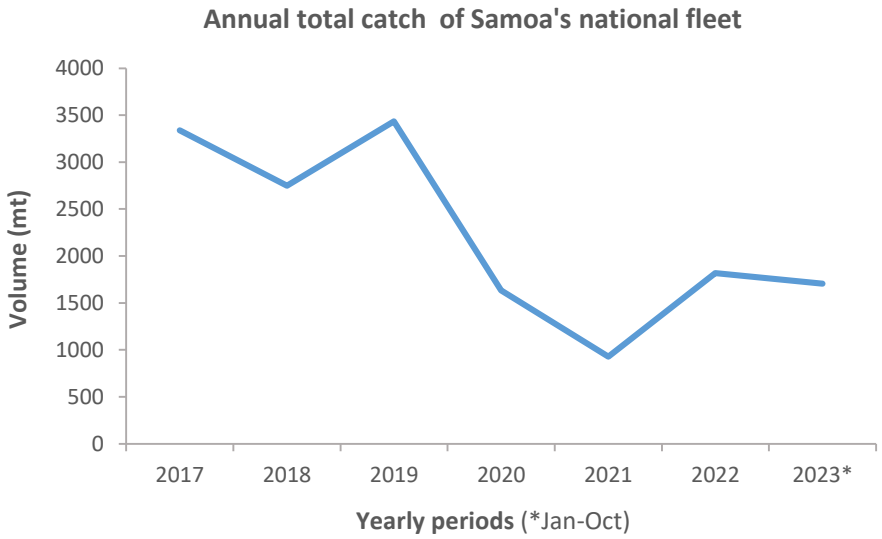

Figure 11. National fishery catches of tuna and other pelagic caught by domestic and foreign fishing vessels fishing in Samoa's EEZ and other EEZs and locally landed.

The fishing industry is also concerned about adding more foreign, locally-based fishing vessels to fish in Samoa's EEZ. With a limited EEZ and a current decline in fish catches, too many vessels already fishing in the EEZ may contribute to the collapse of the domestic fishing sector.

The government of Samoa is contemplating a phased approach to close off MPAs to implement the proposed 30% Exclusive Economic Zone (EEZ) protection plan. They are also considering allowing tuna fishing within the MPAs while regulating the conservation of tuna species through current and future national and regional management regimes. This approach could encourage the fishing industry to meet high operational costs and poor economic returns. The commercial fishing industry has acknowledged the government's foresight and decision to allow tuna fishing in the proposed offshore MPA network. However, the first phase of implementation will determine the final viable option for the operationalization approach for the MSP.

ii. Fewer fish catch by Alia and Community fishers.

Establishing large-scale offshore MPAs within EEZ offers significant benefits to the preservation of biodiversity and protection of marine habitats and ecosystems. An offshore MPA network can provide crucial protection to various tuna species such as Skipjack (*Katsuwonus pelamis*), Yellowfin (*Thunnus albacares*), and Bigeye (*Thunnus obesus*), which frequently spawn in tropical waters and also provide a home to residential bottom-dwelling species within the EEZ. However, concerns were raised by the CFMAC and Industry reps regarding the highly migratory nature of tuna stocks, which can be influenced by seasonal variability, affecting their availability and numbers. The season viability only provide a very limited time to fish for tuna in Samoa's EEZ before moving elsewhere.

During the phase two of national consultations on ocean planning, the Alia fishing fleet supported the establishment of offshore MPAs for conservation of species they depend upon. The Alia fleet is engaged in commercial fishing of tuna mostly during on season and bottom fishing when offseason for tuna species. However, CFMAC member stated the MSP draft plan

1.1 received a 91% support rate due to most of the respondents were Alia and community fishers.

The reason behind Alia fishers supporting the offshore network is to improve the tuna fish population in the areas designated for them to fish. They claimed that highly migratory fish species including tuna predominantly (about 80%) are taken by larger vessels outside the contiguous zone (24 nm), leaving fewer tuna fish reaching the areas they fished. Table 8 shows the catches of the domestic fleet vs foreign fishing fleet operates within Samoa's EEZ.

Table 7. Domestic and foreign fishing fleets annual catches

Year	Foreign Fishing Vessels	Domestic Fishing Vessels	Total National Catches (mt)
2018	1,903	845	2,748
2019	2,545	980	3,525
2020	1,178	457	1,635
2021	568	360	928
2022	1,523	295	1,818
2023*	1,394	310	1,704

Note: * Jan-Oct period

The Samoan Alia fleet has been fishing beyond the 24 nautical mile limit assigned by the TDMP, which is a matter of concern. They cannot catch enough tuna within their designated area and must expand their fishing range. However, this practice can risk their safety, lives, and assets. Therefore, it is necessary to establish conservation and management measures that take into account the needs of both smaller domestic vessels and larger ones. These measures will ensure that fishing activities are carried out within the designated areas, which will help mitigate the risks to the Alia fleet's safety and assets.

The proposed management plan for the offshore network is considering allowing the harvesting of highly migratory species within all NTZs. However, this could still pose a problem for smaller Alia fishing vessels as they may continue fishing beyond their limits to catch fish. Despite this challenge, representatives from the Alia fleet have expressed support for the MPA conservation effort. The offshore MPA network will help certain tuna stocks reach their designated fishing areas.

iii. Viable Operational approach: Protected vs Managed MPAs

The government of Samoa is planning to establish offshore MPAs to protect 30% of its EEZ for ocean sustainability and to enhance biodiversity, including tuna species and other fish. The proposed MSP aims to allow tuna fishing within MPAs while managing them through current and future controlling schemes using management measures in the new TDMP. However, all other extractive activities, like fishing for bottomfish species, will not be permitted. The idea behind permitting tuna fishing within MPAs is to ensure the sustainability of the fishing sector and that socioeconomic benefits for Samoa are not compromised.

A proposed 15% phased approach of a combination of closer and far-positioned MPAs has been presented to operate such a plan. The first phase is expected to commence in 2025, with the

remaining phases scheduled for completion by 2030. The fishing industry has acknowledged the decision and the foresight of the proposed operational plan presented. While the conservation of marine ecosystems is crucial, it is also essential to consider the needs of the fishing industry and the communities that rely on ocean fisheries for their livelihoods.

The decision of whether to permit tuna fishing in Samoa's established MPAs raises critical questions about the efficacy of these sites as a conservation tool. Given Samoa's lack of experience with such MPAs, it is essential to identify an operational strategy that balances the interests of all stakeholders, including the competitive commercial fishing industry, to promote ocean conservation.

The commercial fishing industry has proposed an alternative phased approach, wherein the closed-off MPAs would cover 10% of the EEZ rather than the initially proposed 15%. Some participants have suggested starting small, with closed-off MPAs covering 10% of the EEZ and having no-take zones where any extraction activity is prohibited. These initial MPAs will be utilised to assess and determine the most suitable and viable option for operating them, whether as protected, managed, or a combination of both typologies. It is crucial to consider that losing a significant portion of fishing grounds through MPAs could significantly impact the fishing sector by exacerbating declining catches and economic losses. Therefore, a careful and balanced approach is necessary for the long-term sustainability of the fishing industry and the marine environment.

iv. Overall protection target: 20% vs 30% EEZ protection

The commercial fishing industry expressed reservations regarding the offshore MPA network being fully protected. While they acknowledge the government's efforts towards marine resource conservation, they are highly concerned about the impacts of MPAs on the industry's future sustainability and the socioeconomic benefits accrue for Samoans.

During the second phase of national consultations on ocean planning, the commercial fishing industry acknowledged the government's efforts towards ocean sustainability by proposing the establishment of offshore MPA networks. In Figure 12 shows the key MPAs (brown colour) the industry (>15m vessels) would like to operate as co-management. They have suggested that specific candidate NTZs be designated MPAs while proposing that others be co-managed.

The fishing industry has proposed that NTZ 1, NTZ 7, NTZ 8, and NTZ 9 should be designated as protected areas as these regions are not active fishing grounds. Similarly, they have agreed with NTZ 3 as an MPA because of its proximity to the Safata/Sataoa mangrove protected area, which serves as nursery grounds for offshore species.

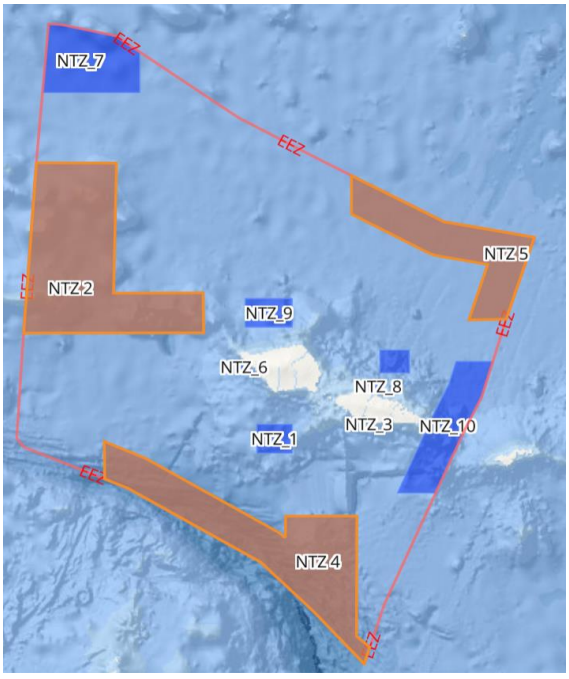

Figure 12. Hotspot fishing grounds (brown colour) proposed for consideration to allow tuna fishing

The fishing industry has suggested that the management of NTZ 2, NTZ 4, and NTZ 5 - which are active fishing grounds for smaller vessels (<15m), such as the Alia fleet, using the longline method - should be co-managed using the existing national fishery management measures. They have further requested that tuna fishing be allowed within these MPAs. The industry has proposed that NTZs overlapping these hotspot fishing grounds should be managed through existing and future national management regimes while being open for tuna fishing.

As per the industry's opinion, the proposed restrictive measures aimed at protecting 30% of Samoa's EEZ through offshore large MPAs would worsen the problem of declining tuna catches. The measures will lead to the loss of a significant portion of their usual fishing grounds, causing a negative impact on commercial fishing. These declining catches have resulted in poor economic returns and decreased Samoa's fish exports. Figure 13 illustrates the annual exports of tuna and other pelagic species caught by domestic and foreign fishing fleets over six years (Fisheries Division, 2023). The export figures include catch from Samoa EEZ and other EEZs, which are landed locally and exported as Samoa.

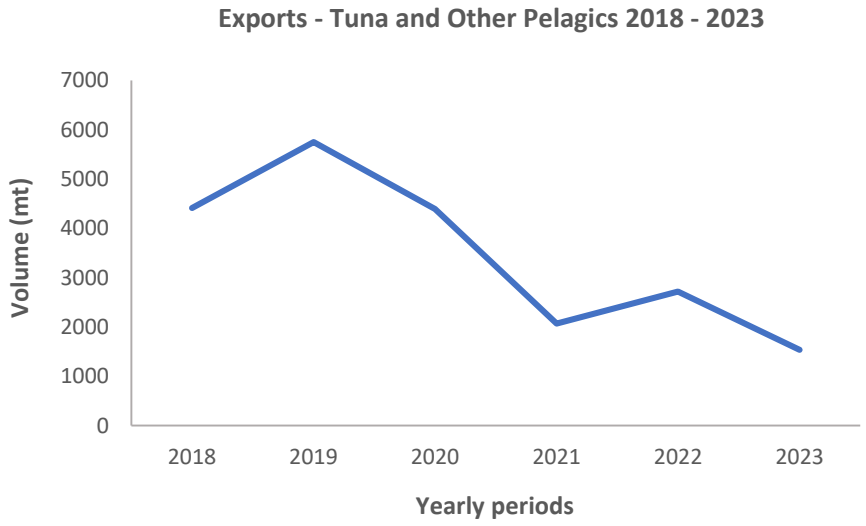

Figure 13. Export amount and Value (SAT), 2018 - 2022 with provisional estimates for 2023

Although the fishing industry and CFMAC supported the government's effort on ocean sustainability, they have proposed an overall 20% rather than 30% protection target. Such reduction will assist in alleviating the impacts and challenges that could be faced by the fishing sector from the substantial 30% loss of fishing grounds. The 20% protection target aims to create more space for the industry to deal with various challenges, such as decreasing tuna catches, high fuel prices, increasing operational costs, and reducing fishing pressures on unprotected regions. The proposed measure is expected to help mitigate the impact of these difficulties and enable the industry to operate more sustainably.

v. Effectiveness of tuna management if allow in MPAs.

During the meeting, representatives from the fishing industry and CFMAC expressed their concerns about the efficient control schemes to manage tuna stocks in case fishing from MPAs is allowed. Their primary concern is related to managing and enforcing these measures within the MPAs. They were also worried about the MPA network operations, whether they emphasize

species or habitat-specific conservation. They are concerned about the duration of the MPAs' closure, whether permanent, temporary or in an opening and closing format, as the duration of MPAs might significantly impact the industry.

The representatives have inquired about the role of the MNRE in fisheries management. Given their prominent role in its development, whether they will be held accountable for the operation and management of the Plan. Furthermore, they have raised concerns similar to those previously voiced by SPA and SSS regarding the potential for fishing vessels and other ships to breach the MPA. The representatives have emphasized the issue of anchoring and harbouring in optimal sites earmarked as MPA, notably during emergencies.

It is imperative to address these concerns as they pose a significant threat to the effectiveness of the MPA. Additionally, the accountability of the MNRE for the operation and management of the Plan is crucial to ensure its success and sustainability. Proper measures must be implemented to prevent fishing vessels and other ships from violating the MPA. Moreover, the issue of anchoring and harbouring in designated MPA areas, especially during emergencies, needs to be addressed through appropriate protocols and guidelines so it will stay consistent with the objective of MPA.

vi. Bottomfish stocks are harvested by alia fishing fleets

The Alia fleet primarily engages in domestic fishing activities that target both tuna and demersal or bottomfish stocks. Seasonal changes influence the fishing activities of the Alia fleet in tuna stocks. During the off-season of tuna stocks, some Alia fishing vessels focus on fishing for bottomfish species around the seamounts and offshore reefs. In contrast, others continue fishing for bottomfish species all year round. The Alia catamarans used for fishing are typically 9 to 11 meters long, un-decked, and equipped with outboard motors. These fishing vessels operate a few miles offshore and mainly engage in surface trolling for Skipjack *(Katsuwonus pelamis*) and bottom fishing for deepwater snappers, a crucial part of oceanic fisheries.

The proposed offshore MPA network aims to protect the demersal or residential bottomfish species from fishing activities. This proposal, however, has put the Alia fleet, which relies on fishing in the seamount habitats, in a precarious position. Most of the seamount habitats within the fishing zone for Alia fishing vessels are included in the offshore MPA network, which restricts their fishing areas.

The proposed network of offshore marine protected areas (MPAs) has the potential to significantly impact the operations and sustainability of the Alia fishing fleet and the fishing industry as a whole. The proposed MPA network includes a prohibition on fishing for demersal or residential species, which could severely impact the Alia fleet's ability to maintain profitability and economic viability and provide food security for locals. However, despite these potential challenges, the Alia fishers have shown their support for the conservation effort through the offshore MPA network, recognising the potential benefits of improving the tuna stocks they can fish within their range.

c) *Proposed suggestions to address issues*

i. *Offshore MPAs impacting the Fishing Industry.*

The government has proposed an operational plan to address the concerns of the commercial fishing sector and the CFMAC. The proposed plan involves a co-management approach to implementing the offshore MPA network. As per the plan, all MPAs will be closed to fishing activities targeting local residential fishery stocks occupying marine biological habitats within the NTZ and other extractive activities. However, fishing for tuna stocks within the MPAs and the entire EEZ will be managed through existing and future national and regional fisheries and marine environmental management regimes.

There is a concern regarding the conflict between using Marine Protected Areas (MPAs) as a conservation tool and allowing fishing in these areas. This has raised questions about the objectives of establishing a network of MPAs to manage Samoa's ocean sustainably. It has been suggested to close off 10% of the total MPAs to evaluate and fully comprehend the impacts of MPAs on the fishing sector. The initial closed-off phase will assess whether the MPA network is managed, protected, or combined, which is viable for operating the remaining offshore MPAs.

Fishing sector representatives should participate in future meetings to voice their concerns while finalising the MSP. It is crucial for the sector to engage in the most relevant approach to implement a final and adopted Ocean Plan. Therefore, any CFMAC meeting scheduled in 2024 is suggested as a reasonable possibility to further consult the industry and CFMAC on the MSP before finalising it.

The involvement of the fishing sector in the decision-making process for finalising the marine spatial Plan and the operation plan is essential. This will help address their concerns and create an inclusive, comprehensive, and stakeholder-driven final plan that balances ocean sustainability and fishery development.

ii. *Fewer fish catch by Alia and Community fisher*

During the second round of national consultations on ocean planning, the Alia fishing fleet expressed their support for establishing offshore Marine Protected Areas (MPAs) to conserve the species they depend on. The main reason behind this proposal is to improve the population of tuna fish in the areas accessible by the Alia fleet, as they have reported that foreign and larger fishing vessels are catching most of the fish before they reach the contiguous zone (24 nautical miles). This leaves fewer tuna fish for the Alia fleet, forcing them to fish beyond their designated areas and putting their safety, lives, and assets at risk.

However, even though the proposed management plan will allow the harvesting of highly migratory species within the MPAs, the problem of catching lesser fish and fishing beyond their limits persists. Therefore, it is recommended that more discussions be held to identify relevant conservation and management measures that consider the balance between the Alia fleet and larger fishing vessels. Such measures would ensure that fishing activities are carried out within designated areas, mitigating risks to the Alia fleet's safety and assets.

iii. *Viable Operational approach: Protected vs Managed MPAs*

The government has proposed allowing tuna fishing in offshore, which has raised questions about the difference between protected and management MPAs. This decision highlights the

need to balance conservation with resource extraction. While preserving marine ecosystems is vital, it's also essential to consider the fishing industry's needs and the communities that rely on it for their livelihoods.

It has been proposed that allowing tuna fishing can meet the needs of the industry, but it is important to ensure the sustainable conservation of tuna resources. To achieve this, a combination of approaches can be taken to balance the competing interests.

One possible solution is to implement 10% closed-off MPAs during the initial operational phase of MSP. These closed-off MPAs will operate under a no-take condition. During this phase, impact assessments of large-scale MSP on the sector and resources will be conducted. A more suitable operational option will also be analysed, and a viable approach will be considered for the implementation of the remaining MPAs that will balance resource conservation and development.

After the meeting, it is highly recommended to keep the ocean planning process open to receive further feedback and advice from the commercial fisheries and CFMAC sector. These additional comments will help guide the draft MSP to its final stage. Members of the Industry and CFMAC are strongly advised to attend upcoming meetings to voice their concerns and have their opinions taken into consideration. An upcoming CFMAC meeting in 2024 is a reasonable avenue to consult the industry and CFMAC further on the updated progress of the MSP.

The fishing sector needs to be given enough chances to participate in the decision-making process for finalizing the marine spatial Plan and the operation plan. Their involvement will not only address their concerns but also help create a final plan that is stakeholder-driven, inclusive, and comprehensive. Therefore, it is highly recommended that the sector remains engaged throughout the process and provides valuable insights and suggestions as necessary.

iv. Overall protection target: 20% vs 30% EEZ protection

Samoa's government has committed to ocean sustainability by protecting 30% of its EEZ via offshore MPAs under the Samoa Ocean Strategy. The latest MSP draft map 1.2 version aims to achieve this goal.

Despite the proposal from the Fishing sector and CFMAC to reduce the target to 20% and the potential impact of the MPA network on the fishing sector, MSP will remain committed to the 30% goal for ocean sustainability. However, the MSP will be implemented in phases, allowing the Fishing industry to adjust to the applied conservation efforts before the remaining MPAs are established and operated.

The proposed first phase begins with the closure of 10%, consisting of both near and farther MPAs by 2025. The remaining phases, totalling 20% closed-off MPAs by 2030, will operate according to a suitable and viable operation option determined from the first phase. This initial phase will provide an understanding of operating and managing the 10% of MPAs to applied on the implementation of the 30% of the EEZ. Again, it is vital for the engagement and support of the fishing sector while more practicable operational approach is decided for the MSP.

v. Effectiveness of tuna management if allow in MPAs.

The sustainable management of oceanic resources and the environment in Samoa's EEZ is contingent upon the effectiveness of existing and forthcoming conservation and management measures encompassed within the new TDMP. Correspondingly, successful management of the MSP relies on the efficacy of monitoring, controlling, and surveying the terms and conditions that govern the MPA network.

The TDMP's conservation and management measures will regulate the fishing of tuna stocks within the MPAs and the EEZ. It is imperative that these measures are implemented with efficiency and that the fishing sector demonstrates responsibility by adhering to the guidelines, ensuring that the marine resources and the MSP are managed sustainably and effectively. It is recommended that the fishing industry engage with the relevant authority and the MSP planner to deliberate on their mutual responsibilities for monitoring and enforcing regulatory measures pertaining to fishing activities. Such discussions are essential in ensuring that all parties involved clearly understand their roles in upholding these regulations. By fostering a collaborative approach to monitoring and enforcing these measures, the fishing sector can contribute towards the sustainable management of fisheries resources and support an effective MSP. Upon noticing some of the measures being inefficient, then it warrants to impose more stringent regimes such as MPA.

vi. Bottomfish stocks are harvested by alia fishing fleets

Studies have shown that creating large marine protected areas (MPAs) can positively impact increasing the abundance of demersal fish populations (Alemany D. *et al.*, 2013). Even though Alia and community fishers harvest demersal species, they fully support the government's conservation efforts in MSP to manage fishery biodiversity and marine habitats sustainably. However, small-scale fishers want to evaluate the benefits of MPAs on bottom fish populations. Additionally, the study needs to identify the gaps and challenges that small-scale fishers face due to MPAs and determine how to address these challenges.

Following the meeting, it is proposed that local MSP and scientific partners engage in further dialogue to determine how to undertake and fund impact assessments of MPAs on demersal fishery resources. Regional and international scientific and donor partners can also provide support to reinforce the effective management of Samoa's final and adopted Ocean Plan.

5.2.2 Samoa International Game Fishing (SIGFA)

a) Meeting and participation

The Samoa International Game Fishing Association provides services for recreational and sport fishing tournaments, catering to both tourists and locals. The association is committed to promoting the development of the local fishery, with particular emphasis on game and recreational fishing activities. This sector is a vital stakeholder relying on the ocean and its resources for business.

The association members were invited to attend a consultation meeting (Figure 14) to review the draft MSP plan 1.2 and discuss any concerns or challenges that could negatively impact the sector. The meeting with SIGFA was held on November 29, 2023, at the conference room of

MNRE, scheduled from 9:30 am to 12:30 pm. Although invitations were sent to all SIGFA members, the turnout was low.

Figure 14. Consultation meeting with the SIGFA sector

The participants present at the meeting are listed in Table 9. The meeting outcome is outlined in the numbered points below in sections b and c, while the detailed meeting notes are available in Appendix 9.9.

Table 8. Participants for the group consultation with the SIGFA

Names	Designation	Organisation
Dr Rachael Dempsey	Environmental Scientist	SIGFA
Brent Devenport	NUS – Senior Lecturer	CFMAC
Tu'uu Ieti Taulealo	Consultant	Local
Leausalilo Leilani Duffy-Iosefa	Director	CI (Samoa)
Nolani Hazelman	Interim Officer	CI (Samoa)
Sinalilo Ah Him-Vaai	Interim Officer	CI (Samoa)
Seumaloisalafai Afele Fai'ilagi	ACEO (DEC)	MNRE
Maria Satoa	PMCO (Marine)	MNRE
Fuimaono Fatutolo Iene	SMCO (Marine)	MNRE
Fimareti Selu	MCO (Marine)	MNRE
Atonio P. Mulipola	Project Coordinator	MSP Project

b) Reviews of MSP draft map 1.2 and Proposed Operational plan

While reviewing the MSP draft map 1.2, SIGFA representatives did not propose any modifications or changes to the NTZs. This implies that they agreed with the latest MSP draft map and the locations and configurations of the proposed MPAs. Nevertheless, they brought up some concerned issues listed below as numbered points.

i. Fewer fish caught by game fishing activities.

SIGFA representatives raised concerns about the current depletion of fish stocks, adversely affecting their recreational and sporting activities. The sector has expressed apprehension about foreign longline fishing vessels, which have been catching vast quantities of fish, potentially contributing to the decline of fish caught. They have also voiced their discontent over permitting fishing for tuna within MPAs, arguing that this will intensify the scarcity of fish caught by their sector, as fishing will continue as usual.

The sector predominantly utilises trolling gear to catch pelagic species comprising tuna stocks inhabiting the surface and subsurface regions of the ocean. In particular, the representatives noted a significant decrease in the catches of wahoo species.

SIGFA hosts game fishing tournaments for local and international adult competitors every year. Apart from that, they also organize a monthly fishing tournament for both youth and adult recreational fishers. The tournaments usually involve 6 to 25 boats, each carrying four to seven fishing rods for two to six people. Game fishing usually happens within the 24 nm whereas certain larger boats tend to fish beyond.

The target species are key tuna species and pelagic species like billfish, sailfish, wahoo, barracuda, and trevallies. The catches are either taken home for family consumption or donated to charity. However, it is unfortunate that records of catches and fishing efforts from these tournaments are not documented or provided to MFA for marine resource monitoring and conservation.

SIGFA has an active programme focused on preserving fisheries targeted by the association, both offshore and inshore. To achieve this goal, SIGFA has implemented a range of conservation programs, including a tag and release program for caught fish and discouraging the capture of billfish species weighing less than 100 kg. Additionally, SIGFA has been actively promoting awareness among its members about the requisite conservation measures for preserving various species.

Overall, the SIGFA is committed to responsible and sustainable fisheries management. Their efforts towards conservation will continue to be a priority to ensure the future of fisheries for generations to come.

ii. Lack of fishing catches and effort records.

During the meeting, the MSP designers expressed concern about the need for fishing catch and effort data from the SIGFA. The Fisheries Division of MAF should maintain or provide records of catch and effort from sports and recreational fishing tournaments organised by the Association. While SIFGA is supposed to collaborate with the Ministry of Fisheries to promote sports and recreational fishing, it must also ensure that the resources their business activities depend on are sustainably managed. Therefore, it is necessary to provide documented records of the fish caught, the level of fishing effort, and the areas targeted for these activities to MAF. Additionally, the Ministry needs to document records of SIFGA fishing activities, especially fishing tournaments.

The absence of documented records makes it difficult to obtain a clear and transparent picture of the status of the ocean and resource usage by SIFGA during the ocean planning process. The

lack of relevant fishing catch and effort data has made it challenging to prioritise areas for offshore MPAs with less conflict with the sector and develop a plan that promotes balance in conservation efforts and sports and recreational fishing activities.

iii. Exports vs local consumptions

SIGFA has noted a growing concern regarding the scarcity of fresh fish in local markets and outlets. The shortage of tuna and pelagic fresh fish locally has been attributed to a significant amount of tuna being caught by both local-based Chinese and foreign fishing vessels and subsequently exported. Representatives of the CFMAC operating fishing alia vessels echoed similar sentiment concerning most of the fish during meetings, indicating that foreign and larger fishing vessels have taken, resulting in fewer fish available for them to supply local demands. Figure 15 denotes the volume of tuna and other pelagic species caught, landed in Samoa, and exported yearly.

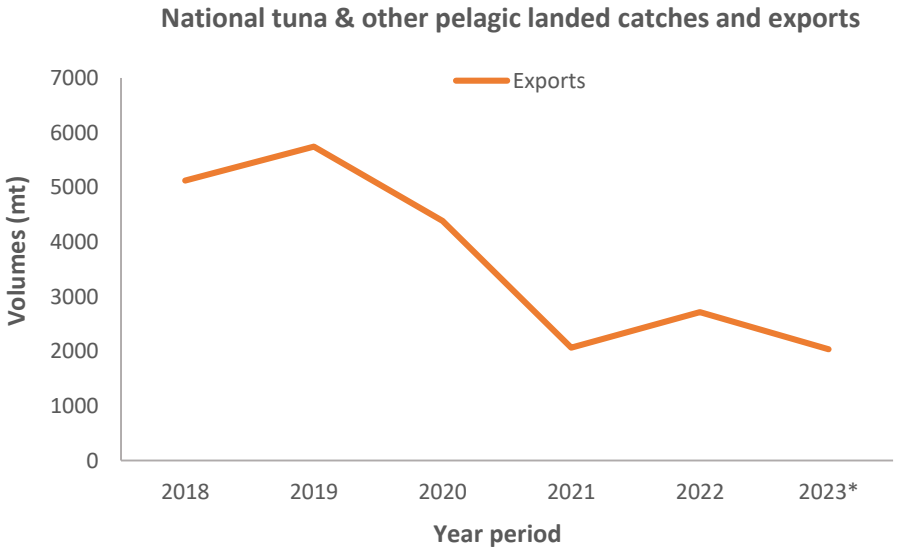

Figure 15. Tuna and other pelagic caught, landed in Samoa and exported annually

This trend has been observed in many restaurants and markets in Apia, where there has been a shortage of fish, leading to a rise in prices. This development is worrisome and raises concerns regarding the sustainability of local fisheries and the livelihoods of those who depend on them.

Approximately 90% of tuna caught and landed in Samoa is exported overseas annually (69th CFMAC Tuna fisheries update, 2023), with a preference for US dollars over the local currency. The commercial longline catch is mostly SP-ALB, accounting for 75% to 80% of the total annual catch. ALB, YFT and BET's key tuna species comprised over 90% of the total tuna and other pelagic species caught and landed annually in Samoa. Due to the high proportion of national catches being exported, there is limited availability of fish for sale to restaurants, markets, and hotels that cater to local consumption. Consequently, there will be an increased fishing pressure on inshore fishery resources to meet the shortfall in local fish demands. Most inshore fishery resources are being overfished, as 80% of the coastal population depends on them for food and income generation.

The limited availability of fish for local consumption is a significant concern for Samoa, especially regarding nutritional and health benefits. Since the country relies on fish as a healthier food alternative to imported meats, this substantially impacts public health. As a result, the people of Samoa have no choice but to depend on imported meats, which can adversely affect their health in the long run.

c) Proposed suggestions to address issues

i. Fewer fish caught by game fishing activities.

SIGFA has noted the decline in fish catches in their game fishing activities over the years. They claimed this decline is attributed to the shiploads of fish caught by foreign fishing vessels licensed to operate within Samoa's EEZ.

Given that the offshore MPA network is considered open for tuna fishing, the sector has urged the government, particularly the responsible authority, to ensure effective measures to safeguard the fishery resources within the EEZ. These controlling regimes imposed via the new Fisheries TDMP are recommended to be actively monitored to ensure sustainable fishery resources.

As such, the responsible authority must consider the dwindling fishing catches and collaborate with the relevant stakeholders to institute measures to ensure the sustainability of fishery resources within Samoa's EEZ. Such measures must be developed, implemented, and monitored effectively to guarantee the sustainable management of fishery resources. The applied management regimes must prioritise equal opportunity for all ocean resource users, including SIGFA. Such policies can help maximise economic benefits while promoting the sustainable preservation of marine resources.

As per SIGFA representatives, foreign and local-based fishing vessels licensed to fish in Samoa's EEZ are contributing to the rapidly depleting of the available fish supply. As a result, SIGFA has suggested that the Fisheries TDMP should re-evaluate the number of these boats permitted to operate in Samoa's EEZ. Limiting the number of foreign fishing vessels can significantly ensure the economic viability and sustainability of other fish-dependent businesses, particularly for species such as tuna and pelagic fish. Moreover, implementing the management schemes per TDMP effectively will stimulate local operations and provide tangible benefits for Samoa. Such measures are necessary to promote Samoa's marine resources' long-term growth and prosperity. However, if these management schemes do not result in sustainable fishery resources, it may consider imposing no-take for MPAs as frontline conservation tools.

ii. Lack of fishing catches and effort records.

For sustainable management of marine resources, particularly the species targeted by SIGFA in their game fishing activities, it is imperative to furnish the MAF or other relevant ministries with catch and effort data. This data should comprehensively document catches and efforts made during tournaments, detailing the species caught and the corresponding locations of the fishing activities, especially if from with MPAs.

To acquire a complete understanding of the impact of the Marine Spatial Plan on the resources that SIGFA fishes and the effect of the network of MPAs on their business operations, it is crucial for SIGFA to collaborate with government ministries to document data from their activities and

engage in planned MPA impact assessments. By sharing this data, SIGFA can facilitate a more effective and sustainable management of marine resources and the offshore MPA network.

iii. Exports vs local consumptions

The shortage of fresh fish, such as tuna species, for local consumption in Samoa is a primary concern, as many fish caught are mainly exported for foreign currency. As a result, Samoa will continue to depend on imported meats and low-grade fish products to meet local demands, which can have adverse effects on the population's health in the long run. Moreover, fishing pressure will further add to the depletion of inshore fishery resources in meeting the shortfall in fresh fish, worsening the decline in many coastal resources.

The SIGFA sector urges the authorities to take swift action to address the situation. Balancing the fish export with the local demand is essential to ensure the local population can access adequate and healthy food sources. The availability of offshore fresh fish would alleviate pressure from fishing for inshore fisheries. The sector believes a comprehensive strategy is required to address the fish shortage issue, guarantee the population's health, help conserve inshore resources, and stimulate the local economy.

5.2.3 Government Ministry and Organisations

a) Meeting and participation

A consultation meeting for ocean planning was held with specific government agencies, particularly those with ocean-related mandates. This was the third round of meetings, and it was held on 30th November 2023 in the conference room of the MNRE. The objective of the meeting was to provide members of technical agencies with an opportunity to review the latest draft of the MSP map, share their feedback on changes to the map, and discuss strategies to progress towards finalizing the plan. They also had the chance to review the initial proposed strategy for operating the MSP.

The convened meeting (Figure 16) played an instrumental role in the development process of finalising the MSP map. It provided a comprehensive and inclusive platform for the review of version 1.2 of the map, with due consideration to the offshore MPA network that will fulfil Samoa's 30% protection obligation. The inshore EEZ.

Figure 16. Consultation meeting with representatives from government agencies.

Moreover, the meeting provided an opportunity for government agencies to raise any concerns regarding the candidate MPAs of the network and their potential impact on the delivery of their functions and services. Likewise, they reviewed the proposed implementation plan and offered input for improvement. The feedback tendered allows for a more transparent and participatory decision-making process, ensuring that the MSP map and operational strategy provides a balanced and effective approach to marine conservation.

The current consultation with the targeted sector, including the government agencies, will formulate suitable advice to the Cabinet on the final Ocean Plan. The advice will based on the participants' extensive experiences related to ocean works and how their agency will support and collaborate in the operation and management of an adopted Plan.

Figure 17. Participants for the round three MSP meeting with the government sector

Although invitations were sent to various government ministries and organizations that share responsibilities related to the ocean, only four ministries were represented at the meeting. Members of the Starling Consultancy, who are currently undertaking a cost model study for operating the offshore MPA network, joined the meeting.

Table 9. List of participants for consultation meeting with targeted government agencies

Names	Designation	Organisation
Asiata Gerard Anapu	ACEO	MFAT
Tilomai G	Police Constable	SPCS (Maritime)
Evile P. Ekueni	Police Sargent	SPCS (Maritime)
Leiataualetaua Joe Eteuati	Police Sargent	MWCDS
Agnes Wulf	Officer	UNDP
Carla Kerstan	Consultant	Starling Consultancy
Taufik Hidayat	Consultant	Starling Consultancy
Leausalilo Leilani Duffy-Iosefa	Director	CI (Samoa)
Nolani Hazelman	Interim Officer	CI (Samoa)
Sinalilo Ah Him-Vaai	Interim Officer	CI (Samoa)
Seumaloisalafai Afele Faiilagi	ACEO (DEC)	MNRE
Maria Satoa	PMCO (Marine)	MNRE
Fuimaono Fatutolo Iene	SMCO (Marine)	MNRE
Vitolina Ah Kau	MCO (Marine)	MNRE
Atonio P. Mulipola	Project Coordinator	MSP Project

The participants who attended the meeting can be seen in Figure 17 and are listed in Table 10. A summary of the key points raised during the meeting is highlighted in numbered points below, and the meeting summary notes are attached in Appendix 9.10.

b) Review and Concerns on MSP draft map 1.2 and Operational plan.

Government ministry representatives proposed no significant modifications or changes to the candidate MPAs of the MSP. This indicates their concurrence with the placement locations and configurations of MPAs illustrated in the MSP draft map 1.2. However, if future dialogues with key sectors, including government agencies, propose altering the draft map 1.2, there will be an alternative draft plan 1.3.

The consultation talks have focused on ways to operationalise the MSP that address the interests of competitive users and provide ample time for users to adjust to the MSP's applied management terms and conditions. Although no further changes were offered for the draft map 1.2, government participants did express some concerns relating to the MSP, which are enumerated in sections below as numbered points.

i. EEZ boundaries are yet to be formally endorsed.

There is a concern that the official boundary of the Exclusive Economic Zone (EEZ) with neighbouring countries still needs to be formalized. This delay may affect the setting up of Marine Protected Areas (MPAs), especially those that straddle the EEZ boundaries, as the first phase of closing off offshore MPAs is scheduled to begin in 2025. Finalizing and officially signing the EEZ boundaries may take longer than expected, thereby impacting the selection of MPAs for the initial operation phase. The first phase of MSP operation will include a combination of nearer-positioned MPAs and MPAs located along the EEZ borders. If formalizing the EEZ boundary is delayed, it may affect the placement of crucial, much larger MPAs bordering the EEZ of neighbouring nations and impact the implementation of a final Ocean Plan for Samoa.

The MFAT has claimed that all four borders with neighbouring countries have yet to be finalised or officially signed despite ongoing negotiations for many years. The eastern boundary with Am. Samoa is being challenged, hence why MFAT is negotiating hard on a specific demarcation line between Samoa and American Samoa and hopeful to complete it by next year. On the border with Tokelau, the northern corner point of the EEZ is the biggest issue as the USA and Tokelau had an agreement concerning the Swains Island which will influence a final boundary line. Our government negotiated with France on the west side boundary with Wallis and Futuna states. However, a treaty is ready to be finalised and formally signed for the south boundary with the Kingdom of Tonga as MFAT is currently waiting on Tonga's internal processes with their Privy Council and the King.

ii. Operationalization of the offshore MPA network

Implementing monitoring, compliance, and surveillance (MCS) activities within the Exclusive Economic Zone (EEZ) is crucial yet expensive. However, it is a necessary step in combating illegal, unreported and uncontrolled (IUU) activities within the offshore MPA network. Of equal importance is the effectiveness of monitoring the MPA network, which has been raised as a

primary concern by government agencies and other targeted sectors. To ensure these objectives are met, adequate resources must be allocated to these efforts by the government.

Several government representatives have confirmed that their respective agencies have access to vessel monitoring systems (VMS) to regulate the movement of vessels within Samoa's exclusive economic zone (EEZ). The Fisheries Division operates a VMS to monitor all fishing vessels licensed to fish in Samoa's waters. Similarly, the Maritime Wing of the Samoa Police and Correction Services (SPCS) also employs a VMS tool that oversees all categories of vessels, encompassing fishing vessels and cargo ships that operate within Samoa's marine space. Additionally, the police employ patrol boats to carry out surveillance of illegal, unreported, and unregulated (IUU) activities undertaken by vessels in the EEZ. Furthermore, the Ministry of Works, Transport, and Infrastructure (MWTI) and the Samoa Ports Authority (SPA) have expressed an interest in installing a new VMS to oversee and manage all incoming vessels within Samoa's EEZ.

At the meeting, a number of concerns surfaced regarding the implementation of Samoa's Spatial Ocean Plan. These concerns included operational costs, funding for maintenance, MSC activities, required capabilities and resources, coordination and collaboration, and the evaluation of the effects of the Plan. Consequently, the Starling Consultancy consultants joined the meeting were invited to share valuable insights on cost modelling for Samoa's Spatial Ocean Plan. The, Starling Consultancy was enlisted through the CI (Samoa) to conduct a cost modelling study that would comprehend the costing to manage Samoa’s largescale offshore MPA network effectively and to address some of the aforementioned concerns, particularly the operational cost issue raised.

The expertise and experience of the firm, in this regard, were based on their prior success in executing a cost modelling study for similar MSP plans in other countries. The overall operational costs are based on the activities to manage the MPA network. For instance, the frequency of sea patrols based on the needs of stakeholders thus affects the cost. The SPCS has described the surveillance of the EEZ as a costly undertaking due to its vast size. Accordingly, the cost of managing a new Plan is mostly based on the overall planning with stakeholders. Subsequently, with the additional monitoring of the MPAs, the cost of the MSC activities will significantly ensure effective compliance with the network. It is essential to understand the primary objectives of the overall plan and how it pertains to the costing models for the MPAs.

Moreover, it is imperative to determine the requisite governing body that would effectively manage the plan. The governing body could either be a newly established management unit or a coordinating unit that delegates specific functions to various government ministries.

Given that several critical capabilities and resources necessary for the successful implementation of the plan are available across multiple ministries, it is crucial to foster collaboration to develop a cost-effective plan. The feedback from the Consultants are invaluable for effectively guiding the operational and coordination planning required to manage Samoa's Marine Spatial Planning (MSP) plan.

iii. Effectiveness of monitoring the offshore MPA network

The effectiveness of monitoring the offshore MPA network has been discussed. The largescale of some MPAs, coupled with their locations, which are located along the EEZ's borders, has raised

fundamental concerns. Additionally, there are limitations in the available resources and capabilities, making it challenging to sustain the monitoring effectively.

It is crucial to note that although the Fisheries and SCPS (Maritime Wing) have VMS to oversee fishing vessels licensed to operate within the EEZ and engage in EEZ surveillance, these agencies have primary responsibilities to deliver first.

The cost of monitoring is a significant concern regarding the effectiveness of monitoring the MPA network. The high level of compliance of vessels operating and transiting within Samoa's EEZ requires frequent surface and aerial surveillance, which is very expensive for the providers. However, the current local resources, capacity and funding are limited and could improve, which presents a significant challenge in ensuring effective monitoring of the offshore MPA network.

c) Proposed suggestions to address issues

i. EEZ boundaries are yet to be formally endorsed

Despite several years of negotiation, Samoa's EEZ borders with neighbouring countries have yet to be finalised and formally endorsed. In order to address this issue, it is recommended that the Commonwealth Heads of Government Meeting (CHOGM) in 2024 be utilised to push for the finalisation of Samoa's boundaries with neighbouring countries. Additionally, it is suggested that the ministerial level, particularly the Fisheries and MFAT ministers, should take up the matter to be included in their talks with counterparts when opportunities arise.

It is crucial for Samoa to establish clear borders for its Exclusive Economic Zone. This is because it will greatly impact the implementation of the offshore MPA network and the country's economic and political relationships with neighbouring countries. Without defined borders, there may be disputes over the placement of MPAs along the boundaries, affecting the allocation of resources, fishing rights, and other related matters. Therefore, it is of utmost importance that this issue is addressed with urgency and given the attention it deserves.

By utilizing the CHOGM meeting and engaging with ministerial counterparts, Samoa can effectively push for the formalisation of its EEZ borders. This will not only ensure that Samoa's interests are protected but also contribute to regional stability and cooperation.

ii. Operationalization of the offshore MPA network

The proposed operation of the Marine Protected Area (MPA) network is set to be implemented in a phased approach, consisting of a combination of nearer coastal and farther MPAs. During consultations, the phased approach proposed was found favourable to implementing the phased approach by 10% stages, starting with the first in 2025. For government agencies with the resources and capabilities to operationalise the network, effective collaboration and coordination of efforts and assets are paramount to supporting activities and cost-effectively managing the plan.

It is proposed that additional dialogues and meetings be organised to identify practical implementation approaches that are both cost-effective and well-coordinated among providers collaborating to manage Samoa's offshore MPAs complex. The benefits of such collaborative efforts cannot be overstated; with a concerted approach, these complex offshore MPAs can be

effectively managed to ensure maximum conservation benefits. Therefore, the importance of the identified actions and the need to coordinate them effectively must be considered. Thus, engaging in a thorough and collaborative process is essential to ensure a successful outcome.

iii. Effective monitoring of the offshore MPA network

Monitoring the offshore MPA network within Samoa's EEZ has been considered a significant challenge due to the involvement of multi-service providers and operational costs. The intricacies of effective monitoring and proper planning and coordination can result in a substantial cost burden. There is a need for collaboration among government agencies possessing the necessary resources and capabilities to provide MPA monitoring to address these challenges.

While implementing the network's monitoring, controlling, and surveillance activities may incur additional tasks and costs, coordination is necessary to ensure effective delivery and cost-sharing of these actions for the better operation and management of the offshore MPAs. Additionally, the government should seek donor partners to provide funding and surveillance assistance to increase patrol days covering the EEZ and MPAs. It is suggested to solicit more support for aerial surveillance in addition to surface surveillance by local providers for the EEZ and MPAs.

MFAT and SPCS have mentioned assistance from the New Zealand and Australian governments, which have provided aerial surveillance support for Samoa and other Pacific Island states' EEZs throughout the year. It is, therefore, imperative to seek more assistance in terms of funding and resources to enable the provision of a practical MSC of the MPAs. Increasing surveillance frequency would help prevent IUU activities, including fishing from Samoa's EEZ and within MPAs, thereby significantly improving stakeholder compliance.

5. Recommendations

The establishment of large-scale offshore MPAs within a country's marine spaces is believed to offer significant benefits towards the preservation of biodiversity, as well as the protection of marine habitats and ecosystems. Samoa shares this belief by developing an MSP in which offshore MPAs will be established as management tools to protect marine life in 30% of the EEZ. The various tuna species, such as skipjack (*Katsuwonus pelamis*), yellowfin (*Thunnus albacares*), and bigeye (*Thunnus obesus*), which frequently spawn in tropical waters, will benefit from this network's protection. Furthermore, this MPA network will safeguard the diversity of species occupying ecological marine habitats on the ocean floor.

The efficacy of large marine protected areas (MPAs) in conserving mobile pelagic species, particularly tuna, continues to be a topic of debate among experts ((e.g. Jones, 2007; Lesters *et al*., 2009; Hampton *et al*., 2023). Research studies have questioned the positive impact of MPAs on managing highly migratory species.

For instance, a study conducted on the interaction between yellowfin tuna (YFT) and bigeye tuna (BET) with the British Indian Ocean Tropical (BIOT) MPAs found no direct evidence of improvement in standardized catch per unit effort (CPUE) indices of either species almost eight years after its establishment (Curnick DJ *et al*., 2020). Another study by Hampton *et al*. (2023) evaluated the Phoenix Island Protected Area (PIPA) as a conservation tool for tuna species. It

established that the benefits of the MPA for such species needed to be stronger to non-existent. The study concludes that large oceanic MPAs may not be effective in managing highly migratory species like tropical tunas owing to their wide larval dispersal and high mobility of later life stages, which diminish the protective effects of MPAs.

Marine Protected Areas have been commonly employed to manage demersal fishery species that are not highly mobile. A study by Alemany D. *et al*. (2013) analysed the effect of large-scale MPAs on Patagonian fisheries. It confirmed that the MPAs appeared to be trending towards an increase in the abundance of demersal fish within the MPAs. These results make a compelling case for the use of offshore large-scale MPAs.

However, implementing large-scale MPAs as management tools may negatively affect managed fisheries due to the displacement of fishing efforts from MPAs to the remaining open areas. The remaining open areas will suffer from heavy fishing, and any positive effects that trickle from MPAs to the open areas will be dissipated negatively.

Given these findings, it is essential to consider the potential drawbacks and benefits of large-scale MPAs carefully. While they can potentially increase the abundance of demersal assemblage and have debatable benefits for highly mobile species, their implementation may also negatively affect managed fisheries. Therefore, a balanced approach is needed to ensure that implementing MPAs does not lead to unintended negative consequences.

The government has considered open the offshore MPA network for tuna fishing and using existing and future management regimes to control their harvesting. The fishing for demersal or residential species and other forms of extractive activities will not be permissible in MPAs. Such operational to manage the MSP is consider a balanced and ensuring socioeconomic benefits for Samoa are not compromised.

During the third round of ocean planning consultations, several shared challenges and concerns were raised, which have been considered for improvement of the draft Marine Spatial Plan towards its final phase and implementation approach. We have formulated recommendations to improve the plan based on the most common suggestions received from these targeted meetings.

It is important to note that these recommendations have been developed in response to the feedback received during the consultations and to ensure that recommendations are aligned with the goals and objectives of the plan. By incorporating these recommendations into the final MSP and the operational plan, we can address the concerns and challenges raised by stakeholders and create a plan that is both effective and sustainable. However, certain meetings have low turnout and views of the few may not possibly representing decisions for the sector, inspite invitations were extended to all known fishing operators and association members.

While the MSP is progressing toward its finalisation, stakeholders and partners must committed to working closely to ensure that the Marine Spatial Plan is a success. Any feedback or suggestions that can help in the final MSP and improving the implementation and management of the Plan are welcomed. By working together, a plan that is responsive to stakeholders' needs, ecologically representative and protective our oceans and marine resources can be created.

6.1 MSP draft plan 1.2

i. MSP draft 1.2 is consider the final map version

It has been determined after the third round of targeted consultations on ocean planning that the MSP draft map 1.2 (Figure 18) does not require any major revisions. The stakeholders consulted did not make any significant recommendations for changes.

However, it is recommended that further dialogues be held with the Fisheries Division, SPA, and SSS to finalize the locations of MPAs. This is necessary in consideration of areas that may conflict with their operations. The revisions will take into account information about fisheries development areas and navigational routes, harbouring and anchoring sites. Additionally, SPA and SSS are expected to provide an updated nautical chart to aid in the improvement of the final MSP map.

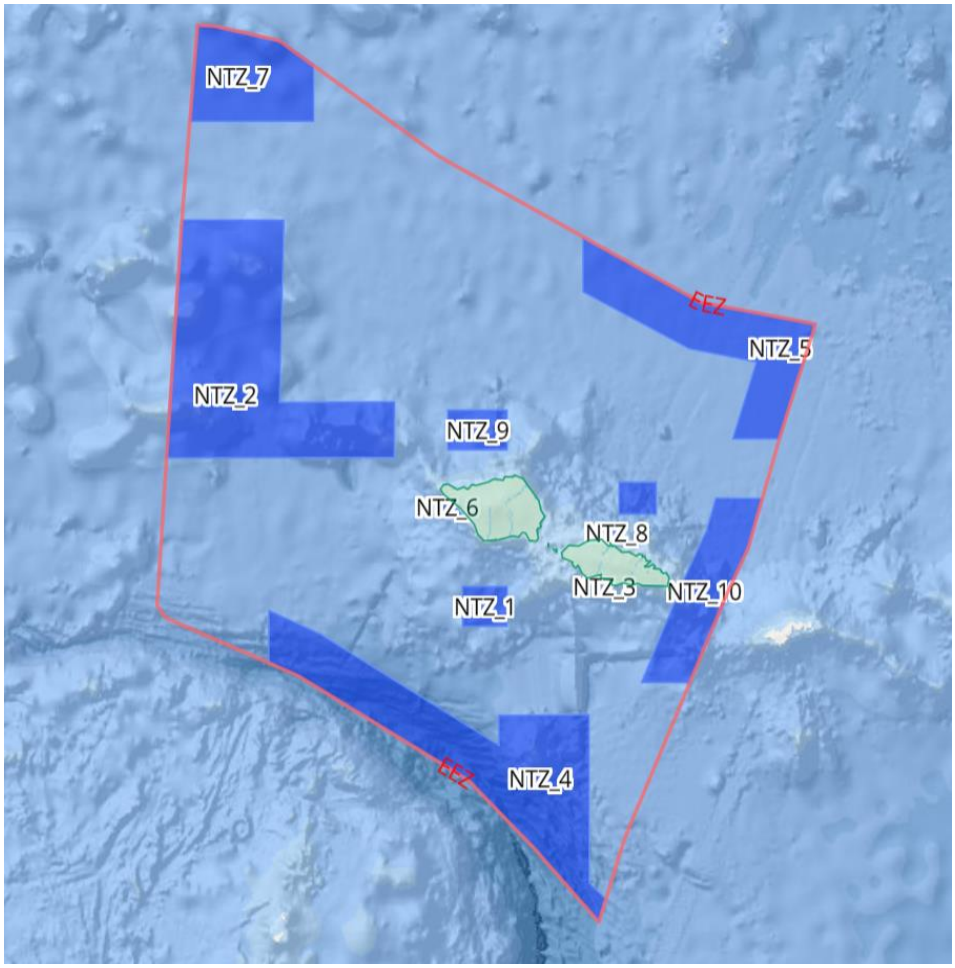

Figure 18. Marine Spatial Plan for Samoa including largescale offshore MPAs

The MSP consultation process was carried out with targeted sectors whom the Plan may significantly impact. In addition, 91% of stakeholders supported MSP draft map 1.1 during nationwide consultations phase two. Several change proposals have been considered, resulting in the MSP draft map version 1.2. Participants of the targeted consultations have expressed their support for the current version of the MSP draft map 1.2 as no major changes have been presented. Therefore, draft map 1.2 is recommended for consideration to be the definitive

representation of Samoa's proposed Marine Spatial Plan, which is ecologically representative and stakeholder-driven, meets Samoa's national commitment, and reduces user conflicts.

ii. NTZ 8 remains as MPA

SPA and SSS proposed to reconsider the NTZ 8 protected area, given its critical role in providing anchorage and harbouring space to inbound vessels in the event of congestion at Apia Port. NTZ 8 is a biologically significant area that safeguards the 5-mile Reef, which hosts diverse coral reef species and ecosystems. The 5-mile Reef is classified as a Special and Unique Marine Area and a Key Biodiversity Area. However, the 5 mile Reef needs urgent recovery and rebuilding due to extensive damage caused by the continuous uses as anchoring spots and unsustainable fishing. Consequently, it is recommended that the 5-mile Reef or *To'atuga* Reef be maintained as a protected area NTZ 8 for the MSP. SPA and SSS are seeking their support for this proposal by using other suitable sites near Apia Capital for anchorage and harbouring purposes.

It is recommended that further dialogues should be conducted with SPA and SSS to resolve any issues that may arise from the anchoring and harbouring sites, which could potentially conflict with the MSP MPA network. Such discussions are essential to ensure the smooth and efficient functioning of the MSP MPA network. All parties must cooperate to identify and address any areas of concern to guarantee that the MSP MPA network is optimised to its fullest potential and that the environment is protected and conserved for future generations. Besides, SPA and SSS to provide updated nautical chart for Samoa or any relevant navigation information that aid in finalising the MSP.

iii. Protected vs Managed MPAs

The decision to operate the MPA network as either Managed or Protected MPAs presents a significant challenge, as it requires a balanced approach to promoting sustainable economic development for Samoa while conserving the ocean and its resources. The Commercial Fishing Industry has acknowledged the decision to consider permitting tuna fishing within the MPA network to ensure the sustainability of the commercial fisheries sector. The Fisheries' new TDMP will include management measures to regulate the harvesting of offshore species such as tuna and other pelagic stocks within MPAs and the EEZ.

Establishing MPAs is a crucial step towards safeguarding marine life. However, if tuna fishing is allowed within MPAs to address the concerns of the fishing and game fishing sectors, it may not ensure the sustainable conservation of tuna resources. Moreover, allowing fishing within MPA network may contradict the aim of using MPA as a tool for conservation. Evaluations are required to determine a more balanced and suitable operational approach for the final Ocean Plan. Therefore, an initial phased plan should include the closing off of MPAs as no-take zones to protect 10% of the EEZ.

Starting small would enable stakeholders to adjust and recognise management measures governing the MPA network and test the service requirement to manage the MPA system. Consequently, the initial phase of 10% MPAs, with no fishing or extraction activities allowed, will assess MPA impacts and determine a feasible operational approach that balances ocean sustainability and optimises socioeconomic benefits for the nation, whether managed MPA, protected MPA or a combination of both.

iv. MPAs conflicting with fisheries development programmes

The network of offshore marine protected areas is seen as an obstacle to development programmes aimed at enhancing fisheries, increasing food fish production, and reducing costs for both commercial and community fishers. As part of the fisheries enhancement programme, the Fisheries Division has FADs, which have been deployed in select offshore areas to attract tuna and other pelagic species, thereby enabling Alia fishers to increase their catches while reducing operational costs.

Encouraging enhancement efforts that balance conservation and development is advisable, ensuring that both objectives can be met efficiently. Achieving this balance will require a coordinated approach where responsible authorities must collaborate on conservation and development that recognises the importance of sustainable practices.

v. Sharing fishing data for better MSP and fisheries management.

Samoa's commercial fishing industry has collaborated with the Fisheries Division; MAF documents catch and effort data from their fishing activities. This partnership aims to facilitate effective management of fishery resources within Samoa's EEZ. However, the responsible authority has noted that other ocean-dependent sectors have yet to be forthcoming in collaborating or providing data on their fishing activities.

This situation has prompted a recommendation that the sectors utilising ocean fishery resources collaborate and share information with the responsible authorities. Such collaboration will enable the identification of impacts and effective management of MSP and fishery resources. Therefore, it is recommended that all sectors exploiting oceanic fishery resources should share data to efficiently understand the implications and management of MSP and fishery resources.

iv. Alia fleet, SIGFA and Community fishers continue catching fewer fish

Despite the MPAs being placed to safeguard oceanic resources, the Alia fishing fleet and SIGFA have indicated their apprehension about the allowance of tuna fishing within the protected areas. They are of the view that their sectors will continue to experience reduced fish catch due to the unchanging or increasing fishing levels as in the absence of the MPA network.

As such, it is recommended that current and future measures for controlling fishing should be implemented effectively to ensure sustainable management of resources. In this regard, management measures should take into account the needs of other ocean-dependent sectors and their operations. It is crucial to balance these management measures with due consideration for the interests of smaller users who rely on the ocean and its resources.

6.2 Operational plan for the offshore MPA network

i. Operationalization of MSP: Start small with a 10% phased approach.

After conducting targeted consultations, it has been decided that a phased implementation approach for the offshore MPA network would be more advisable. While the MSP designer had initially proposed a 15% phased approach, a more practical 10% phased approach has been recommended. The first phase of this approach will start in 2025 and consist of a combination of near coastal and further MPAs.

It is crucial to start small and utilise the closed-off MPAs to assess the impact of MPAs and test the terms and conditions of a management strategy. The initial phase will allow stakeholders to adapt accordingly and evaluate their compliance ability. The 10% phased approach will also facilitate assessments to assess the socio-economic and biological impacts of the MSP on various sectors, their operations, and, most importantly, fishery resources. Additionally, the initial 10% phase of MPAs with no fishing or extraction allowed, will determine a practicable approach, whether managed MPA, protected MPA or a combination of both for implementing the remaining MPAs.

ii. MSP service requirements are additional tasks and costs

The provision of MSC requirements for adequate MSP offshore MPA network management has been identified during consultation with various sectors as an additional task and cost to their regular operations. Moreover, concerns have been raised regarding the responsibility for funding these requirements, given the agency's limited budget.

Following the consultation meeting, it is recommended that financial resource mechanisms be explored supporting partners in delivering of the service requirements for the MSP. Furthermore, it is advised that the coordination and sharing of MSC tasks among partners with the necessary tools and capabilities for effectively managing the offshore MPA network be pursued. Future dialogues among partners are essential to discuss how best to coordinate the delivery of these MSC requirements.

In summary, addressing the additional costs and responsibilities of the MSP offshore MPA network's MSC requirements is vital. The effective management of the offshore MPA network can be achieved by pursuing funding mechanisms for donors and coordinating MSC tasks among partners with the necessary tools and capabilities.

iii. Lack of coordination and collaboration among partners to deliver MSC requirements

During the consultation meetings, a notable issue that emerged was the coordination of partners in the provision of service requirements for the MSP. Some partners possess the tools and assets to provide these service requirements for the MSP. In order to ensure effective service delivery, it is crucial to establish a collaborative and well-coordinated framework among partners.

Therefore, it is recommended that further discussions be undertaken to identify relevant coordination and collaboration approaches among potential service providers for the successful management of the Ocean Plan.

iv. Effectiveness of controlling measures for managing tuna stocks

MPA is a crucial conservation tool for the sustainable management of marine resources and the environment. There are current and future controlling schemes to manage offshore fishery species, including tuna stocks, should the MPAs allow tuna fishing. However, the effectiveness of these measures in managing these species in the MPA network has been questioned if the MPAs are to be co-managed.

As a result, it is recommended to evaluate the effectiveness of the management measure regulating the harvesting of fishery in initial phase closed-off MPAs. By applying management

measures in the TDMP and using no-take MPAs, marine habitats and biodiversity can be effectively controlled, and ocean sustainability can be strengthened.

The initial phase of the proposal will determine the efficiency of managing and sustaining biodiversity within the closed-off MPAs, particularly in terms of the positive impacts on tuna fishery resources. Based on the outcomes of the impact evaluation during the first phase, a more appropriate approach will be determined for future applications.

The closed-off MPAs will be an effective measure in conserving marine resources and the environment. The impact evaluation will provide valuable insights to inform a more suitable approach to managing the MPA network, ensuring the long-term sustainability of marine habitats and biodiversity.

v. Exports over local consumption

The shortage of fresh fish, particularly tuna species, for local consumption in Samoa is a major concern. Over 80% of the fish caught are exported for foreign currency, leaving the country dependent on imported meats and canned fish products to meet local demands. This dependence on imported products can potentially adversely affect the population's health in the long run. The increasing demand for fish will further add to the depletion of inshore fishery resources, worsening the decline in many coastal resources.

To effectively address the fish shortage issue, a comprehensive strategy is recommended to be promptly implemented. The swift action will help to alleviate the burden of fish shortage, enhance food security, and promote the economic well-being of the local population. Achieving a healthy balance between fish exports and local demand is crucial to ensure the local population has access to sufficient and nutritious food sources.

vi. Alia fleet target bottomfish species

The offshore MPA network is designed to protect and conserve marine species like bottomfish that inhabit deep water marine environments, such as seamounts. Once the final MSPan is implemented, fishing of deepwater fishery species from within MPAs will be prohibited, while tuna fishing is considered permitted. However, most of the Alia fleet operated by local and community fishers focuses on catching deepwater species year-round to meet local demands.

It is recommended that an impact assessment is carried out on the demersal fishery. This will help in understanding the positive impact of MPAs on conserving deepwater fisheries. Therefore, the support of regional and international scientific and donor partners should be sought to facilitate the impact assessment of MPAs on deepwater species and the socioeconomic of smallscale fishers. Other evaluations should also be carried out to reinforce the effective management of Samoa's final and adopted Ocean Plan.

6. Conclusion and Next Steps

The objective of the consultation process was to review and improve the Marine Spatial Plan (MSP) for Samoa. However, the process did not significantly modify the draft map 1.2. This outcome suggests that the participants concur with the proposed locations and configurations

of the MPAs and consider version 1.2 as the final map for the Ocean Plan for Samoa. Notably, the draft plan is ecologically inclusive, stakeholder-driven, less conflicting with users, meets a 30% target, and aligns with Samoa's national commitment to ocean sustainability. Nonetheless, the participants provided valuable inputs that could further improve the draft plan. Hence, it is recommended that specific partners be engaged in further dialogues to address any outstanding concerns before adopting the MSP as the final Ocean Plan.

Although permitting tuna fishing within MPAs was considered to address the interest of the fishing sector, a different operational approach was considered following consultations for the initial phase. It is recommended to start small with a 10% no-take MPAs being closed off for the first phase of implementing the MSP. The most feasible strategy for implementing the MSP will be determined after analysing which option of managed, protected, or a combination of typologies is preferable. The first phase will evaluate the impacts of MPAs on ocean-dependent sectors and their operations to determine the most effective way to operate and manage Samoa's final adopted Ocean Plan.

The next step in the MSP process involves further discussions with specific partners to share information and improve the draft map design for the final Ocean Plan. The draft plan 1.2, or if necessary, draft plan 1.3, will be presented to the Minister and Executive Management team of MNRE for their awareness and consideration. Additionally, further meetings with partners are required to finalise the operational strategy and determine how service requirements for MSP are to be coordinated and delivered for effective management of Samoa's Ocean Plan.

More robust and technically sound input is welcome to assist in finalising the Marine Spatial Plan to manage Samoa's marine space sustainably. The importance of the stakeholders' contributions is acknowledged, and continued collaboration is anticipated to achieve an adopted Ocean Plan for Samoa that balances ocean sustainability and development objectives for the benefit of Samoans.

7. References

i. Alemany D, Iribarne O, and Acha EM. (2013). Effects of largescale and offshore marine protected area on the demersal fishing assemblage in the Southwest Atlantic. ICES Journal of Marine Science, 70: 123-134.

ii. Ceccarelli DM, Wendt H, Kaitu'u J, Mulipola A, Satoa M and Chinnamma R (2020) Biophysically special, unique marine areas of Samoa. IUCN, Suva.

iii. Ceccarelli DM, Wendt H, Kaitu'u J, Bhurrah M, Mulipola AP, and C Reddy (2021) Marine bioregions of Samoa. GCCA+(The EU, MNRE, IUCN), Suva, Fiji. 40 pp.

iv. Curnick DJ, Collen B, Koldewey HJ, Jones KE, Kemp KM and Ferretti F (2020). Interactions Between a Large Marine Protected Area, Pelagic Tuna and Associated Fisheries. Front. Mar. Sci. 7:318. doi: 10.3389/fmars.2020.00318.

v. Fisheries Division, MAF (2022). Samoa's Annual Report to the Commission Part 1: Information on Fisheries, Research and Statistics 2022. Scientific Committee Eighteenth Regular Session Electronic Meeting, 10-18 August 2022. WCPFC-SC18-AR/CCM-21.

vi. Fisheries Division (2023). Commercial Fisheries Management Advisory Committee 69th Meeting. Tuna Fisheries Updates. Information Paper. Ministry of Agriculture and Fisheries.

vii. Hampton J, Lehodey P, Senina I, Nicol S, Scutt Phillips J and Tiamere K (2023). Limited conservation efficacy of large-scale marine protected areas for Pacific skipjack and bigeye tunas. Front. Mar. Sci. 9:1060943. doi: 10.3389/fmars.2022.1060943.

viii. Mulipola AP, Strickland D, Satoa M, Iene F and Selu F (2022) Marine Spatial Planning First Phase National Consultations Report. IUCN, Suva.

ix. Mulipola AP, Strickland D, Satoa M. Iene F, Selu F and Ah Kau V. (2023). Marine Spatial Planning Second Phase National Consultations Report. IUCN and Conservation International. Conservation International.

x. Ram-Bidesi V, Mulipola AP, Wendt H, Reddy C, Kaitu'u J, and M. Gauna. (2021). Samoa Marine Ecosystem Service Valuation. Summary Report. GCCA+ (The EU, MNRE, IUCN), Suva, Fiji. 15pp.

xi. Ram-Bidesi V, Mulipola AP, Wendt H, Reddy C, Kaitu'u J, and M. Gauna. (2021). Samoa Marine Ecosystem Service Valuation. GCCA+ (The EU, MNRE, IUCN), Suva, Fiji. 155 pp.

8. Appendices

9.1 Agenda for MSP round three consultations with targeted sectors

Samoa MSP Meeting with Targeted Sector to Review the Draft Map 1.2 for the MSP Protected Areas Network
Venue: MNRE Conference Room, Level 3 TATTE Building.
9:30 am – 12 pm

Workshop Objectives:

1. To present an update on the MSP process and Draft Map 1.2 regarding the Offshore MPA Network.
2. To collect feedback on the MSP Draft Map 1.2.
3. To identify potential challenges key sectors may face when implementing the final MSP for managing Samoa's ocean spaces.
4. To determine an agreed approach for managing and operationalizing the MPA network.

Time	Agenda Item	Responsible
9.00 AM	Registration	Vitolina and Nolani
9.30 AM	Welcoming & Prayer	MNRE & Delegation
9.40 AM	Keynote Address	ACEO MNRE
10.00 AM	Agenda Overview • Consultation Objectives • Introductions Participants • Housekeeping matters	MNRE
10.20 AM	Presentation 1: MSP Updates and Draft Map 1.2 and concerns raised by the sector	MSP Coordinator
Q&A		
11:40 AM	Photo & Tea Break	
11.00 AM	Presentation 2: Proposed Implement plan for MSP offshore MPA network	MSP Coordinator
11.50 PM	Group Discussions • Way forward approaches for implementing and managing the Offshore MPA network	MNRE / CI
12.30 PM	Groups report back presentations	MNRE / CI
12:50 PM	Final Q&A and Next Steps	MNRE / CI
1.00 M	LUNCH & DEPART	

9.2 MSP updates and Draft map 1.2 and stakeholder concerns raised presentation.

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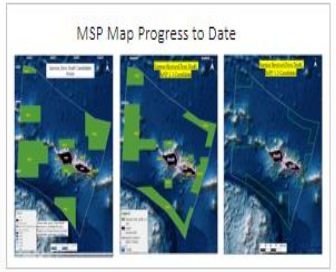

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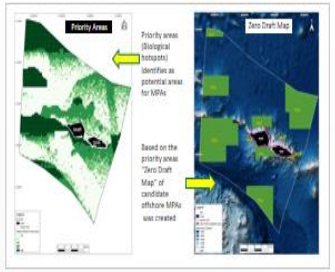

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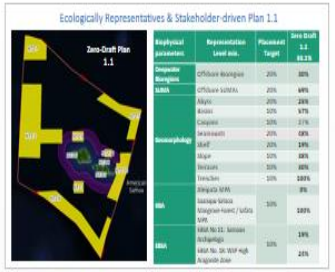

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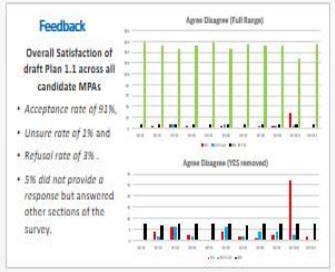

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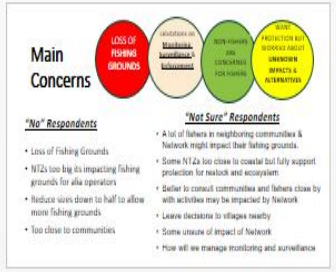

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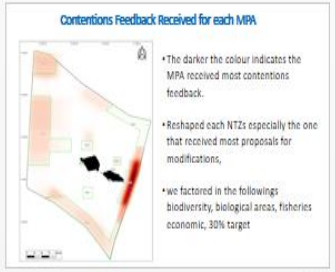

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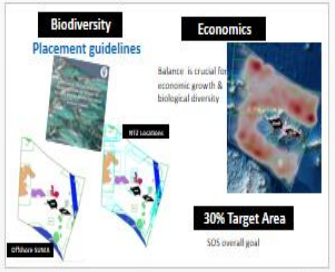

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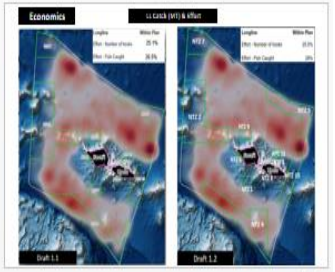

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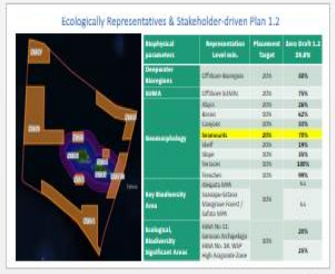

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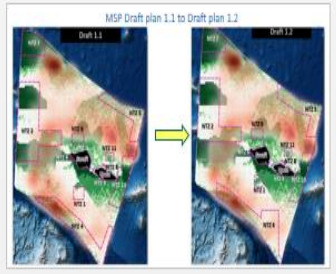

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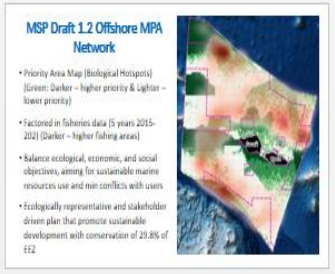

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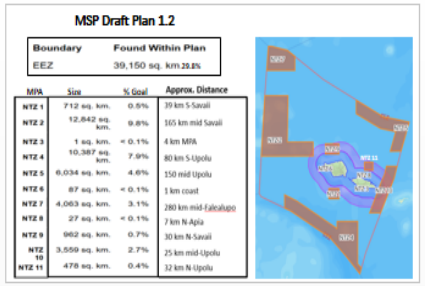
9.3 Presentations on Major concerns raised by sectors and Proposed operational approach for MSP.



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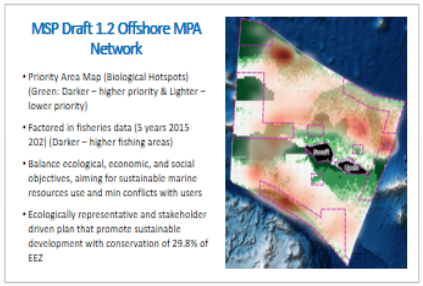

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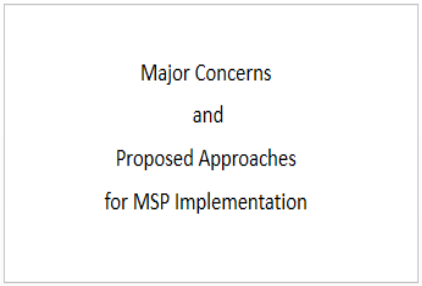

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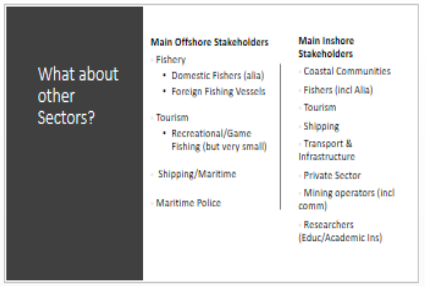

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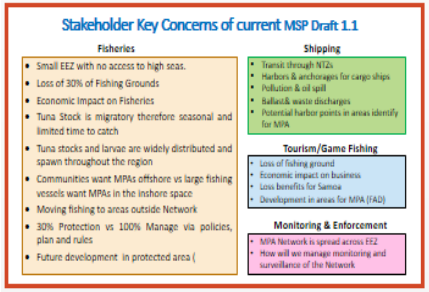

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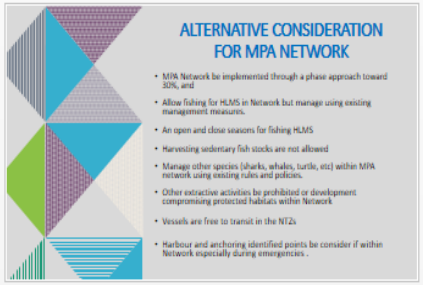

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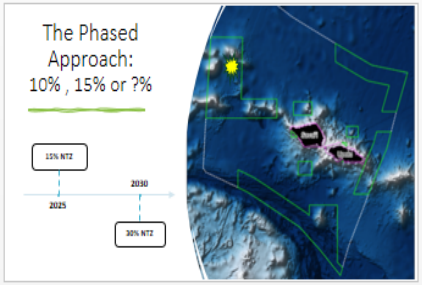

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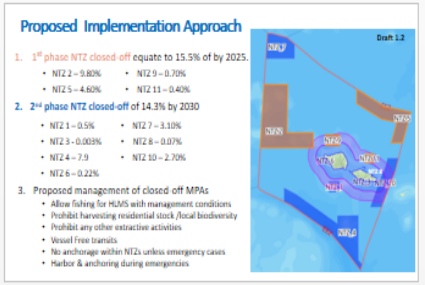

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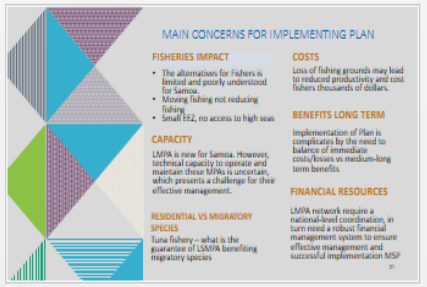

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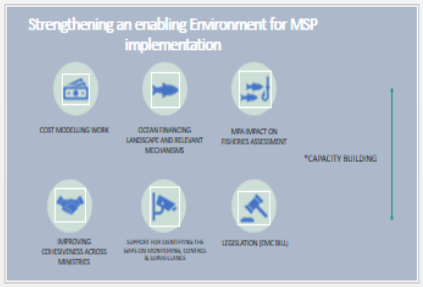

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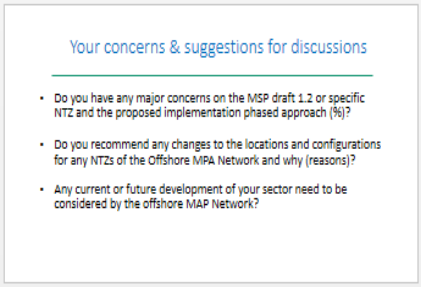

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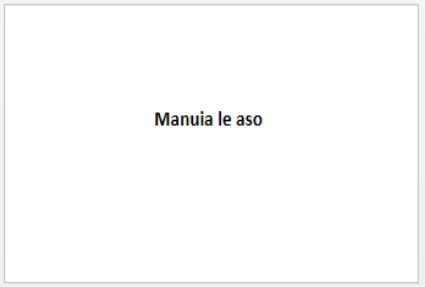

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9.4 Notes from the one-on-one meeting with the Fisheries Division, MAF.

Items	Concerns/ Comments on Presentation	Follow up actions/ Comments
	Roseti (MAF) • Concern about the development of the MSP as per the SOS 202-2030 endorsed and supported by the former government as the new government may have different fisheries development priorities. • Raised a question on the map design based not on the fisheries economic data, but on the segregated commercial longline fisheries catch and effort information and active fishing grounds. • Need to understand MSP further. • MSP will greatly impact the commercial fishing sector, especially those targeting tuna species due to the loss of fishing grounds. • Fisheries support the conservation effort of stocks and ecological habitats within the EEZ through the offshore MPA network. Such as the bottom fish stocks, as they are important economically and for food security. **Mulipola** • The impact on the commercial fisheries sector of loss fishing grounds has been considered in the Plan's implementation approaches. • Resolving concerns for MAF's Tuna development plan will allow the fishing of tuna species within the MPAs of the network. • The conservation and sustainable management of tuna species and other pelagic species within the MPA network and the entire EEZ can be managed and strengthened through existing and future conservation measures imposed by the Fisheries Division. • The question is, are there any tuna controlling and management regimes prepared while finalising the new Tuna development and management plan (TDMP) • Are there any other areas being affected so we can ensure sustainable management conservation in these areas? **Taua (MAF)** • MAF's main concern/ focus is on food security for our people as well as improving livelihoods & benefits from development programs such as Fish Aggregating Devices. • Agreed to the importance of having conservation tool to protect and manage ocean resources but not to compromise fisheries developments. • Network not only for conservation but we need to enriching the conserve areas through development activities like stock enhancement, artificial coral or habitat restoration, and deploying devices to attract and aggregate fish.	• The incumbent government and current PM acknowledge and endorse the proposed 30% protection of EEZ commitment declared by former government to manage Samoa's ocean to safeguard ecological habitats and biodiversity for conservation and food security. • The design of locations and configurations of candidates of offshore MPAs was based on commercial longline fisheries catch and fishing effort data obtained from the Fisheries Division. Notably, no information on fisheries cost-benefit or stock assessment was available and used to prioritise areas for protection. • Concerns by smaller vessels on lesser tuna reaching the areas designated for their operation and gear conflicts were considered in the repositioning of most of the candidate NTZs in map 1.1, first based on biological hotspots along the EEZ boundaries. • Any other development should be restricted within offshore areas designated as MPAs. FADs are encouraging to deploy outside of the allocated areas.

• Is there an opportunity for the MPA network to include development activities that enriching biodiversity and restore habitats? Concern if these activities are not allowed to promote enhancement of biodiversity and improvement of habitats in areas closer and accessed by our local fleets and community fishers.
• Current ongoing program to develop FADs in areas where fishermen usually fish.
  • Proposed to the establishment of FADs within one of the NTZ as it was mentioned Tuna fishing within the NTZ will still be allowed. Thus development within these areas should also be prioritized.
  • In terms of deep offshore waters, we are trying to apply the same methods currently used within the coastal areas – e.g. reef enhancement, coral planting, clam farms, FADs. On this note, suggesting to bring up ways to develop these areas and further improve them. May these areas be taken to supply the vulnerable areas that will be heavily fished.
  • Concern for local fleets in regards to migratory species. Also to mention larger incoming vessels, there will be even greater pressure within these areas.
  • Key concern regarding the TDMP which will hinder due to the MPA network.
 	
<u>Mulipola (Consultatnt)</u>
• Concern not only for just tuna but other species as well. Looking at it from a biodiversity enrichment perspective.
• Allow fishing of tuna but we should also conserve them at the same time via existing national controlling scheme under Fisheries Div and other ministry.
• Will discuss further on the management plan write up of what can be done/ can't be done within these zones when draft the management plan for the Network. The first phase focus more on designing the plan and we have the map 1.2 as the best ecological representative, stakeholder drive, less user conflict while balancing economic, ecological and social objectives.
• Most **FADs** were deployed within the 10 mile from coastal (5 to 7km).
• Several MPA closer to coastal like NTZ 6, 3 8 and 10 are within 10 miles from the coast
• Need positions of current and future FADs to consider when developing management plan of the MPA network
 	
<u>Leilani (CI Samoa)</u>
• Concern for MPA network being fishing activities allow within NTZs
• First time we have the LMPA, hence the need for us to start little for the closing off MPAs for the first phase of implementation;
• A lot of different competition needs to be considered within Samoa EEZ.
• Doing conservation more for the purpose of biodiversity as well as priority and food security.
• Installing FADs – main purpose is for fishing. It is worrisome as in terms of observation, we are only doing this to show on paper but business as usual if we allow deployment of FADs within NTZs for fishing tuna and other pelagic fish within MPAs.	

• **Propose** to start efforts with 10% instead of the proposed 15%:
  • This is Samoas first time in proposing large MPAs on the ocean.
  • Start small to test the waters first
  • Concern for impact on our commercial fishers and the need to understand impact of MPA on fisheries sector. If 15% phase, then it will be a challenge to fully know the benefit and impacts of MPAs as the offshore network is already 50% closed off.
  • What benefit would we generate with there being abundance of biodiversity because this area is being left protected?
  • Allow closed-off small to allow more commercial fisheries to gradually adjust the network and for us to carry out monitoring and impact assessment and benefit from spill off of protected areas to fished areas.
  • Maybe we start with 5% closed off and allowing ourselves to determine whether this approach is worthwhile or not.
 	
Su'a (MAF)
• When the map 1.1 was put forward for review, the Fisheries alert about potential positions of FADs to be deploy in the future as some will overlap with candidate NTZs that are closer to the coast.
• Commercial fishermen previously proposed to start the implementation phase of the MSP with 5% closed-off as a pilot
• 10 % approach will quickly complete the 30% faster while going steady of 5% giving us more time to assess impacts and benefits scientifically as well as challenges facing in monitoring and managing MSP.
• Support 5% closed-off as proposed by the commercial fisheries during the 65th CFMAC
 	
Mulipola (Consultatnt)
• Initially started with 10% in mind but due to concerns of ministers it was shifted to 15%.
• Reason of 15% proposed due to the tuna fishing is allowed in closed off NTZs and instalment of closed-off NTZs is too close in every two years with no real outcomes from assessments.
• Proposed first 10% closed-off approach for implementing MSP was NTZs selected were further apart.
• Therefore, for us to understand how the MSP operation, Minister suggested to select NTZs farther out and some closer to coastal.
• This approach will letting us test and understand the operation approach from our perspective and type of fishing. Allowing us to see different scenario
 	
Danita (CI Samoa)
• Best to be clear on the activities allowed and not allowed within the NTZ before we get to the management plan phase so that we can directly move on to discussing strategies to address these activities.
	Danita (CI Samoa)
	- Cost-benefit analysis: potentially a next step or activity that could be added to the financial work if we see value in that in addition to the assessment work of direct impact on sectors.
	3 sectors of interest for a detailed assessment of MPA impact
	1. MAF
	2. Tourism
	3. Shipping (potential)
	
	Mulipola
	• In regards to monitoring resources and capacity, will discuss further with Maritime police for their input.

• Additional concern by the minister for the initial proposed 10% was because it was far out. In regards to testing and understanding of operation, he would prefer a distant location that is close enough so we can look at the different lifts from an operational point of view as well as impacts on different types of fishing.
• If looking to reduce the % closed-off, then NTZ 4 and some closer to communities so we can determine different implementation approach scenarios.
• Need to reconsider the 15% closed-off but start smaller and select NTZs farther out and one closer to communities.
•
• Addressing the economic impacts
  • Currently in the beginning phase at looking at cost-modelling for operating the offshore MPA network. Near future there will be discussions & consultations on the financial work on cost analysis.
  • Potential future activities added to the financial works is the impact assessment of the network.
  • Two sectors earmarked for assessing the direct impacts of the MPA network are fisheries and tourism. This will give the overall understand on the impact of network on sectors.
 	
Mulipola (Consultant)
• Reconsider doing by 10% as the proposed 15% was not set in stone. Views being shared favoured implementation approach to start small like 10% closed-off phase approaches.
  • 2025: 1st 10%
  • 2027/2028: 2nd 10%
  • 2030 : Final 10%
 	
Leilani (CI Samoa)
  • If we are confident after 2 years, maybe we can do more than 10% following the initial pilot round around 16%.
  • Concern for available resources and human capacity for monitoring & groundwork, therefore proposed to closed-off NTZs that are closer proximity for effective and easy MCS.
 	
Mulipola
  • Proposed 15% for the first phase of implementation with NTZs being strategically selected for ease of MCS and nearer coastal located NTZs are areas normally targeted by bottomfishing.
 	
Moli (MAF)
• Special arrangements in the Pacific for Samoa having the smallest EEZ
• MAF economic data: numbers of fish (September 2022)	

• Tuna management plan: currently consulting a feasible target/ number of catch to impose onto fishermen especially towards Samoa's targeted species. Hard to put a limit on these numbers that can satisfy Fisheries stakeholders due to the limited EEZ.
• Offshore is currently working with maritime police to monitor for IUU fishing activities happening within our EEZ. As MNRE will be taking the lead in this plan, who will be conducting the monitoring?
• An area of concern for the Offshore Div regarding FADs: One of the areas planned to launch a FAD next week is within one of the areas planned to be an MPA.
 	
Mulipola
• Though MNRE leads in the developing of the MSP, all relevant mgovt agencies who already have the capacity and resources need to collaborate cohesively in implementing and managing the MPA network.
 	
Roseti (MAF)
• Concerns about MSP as an additional work, but the FD's budget remains the same.
• Concern on domestic fisheries, as they have not had a breakeven from fishing over the past 18 months
• Concern on **total of allowable catches** & **Zoned-based management** areas imposed on the Pacific as Samoa chaired Committee under the SDG. It seems they are bringing in a lot of constraints of the region, international community and pulling us along but they are not considering the impact on the domestic fisheries and local people.
• Concern for SPC records from fisheries as numbers are going down and we are still imposing more restrictions on the people.
  • Samoa export volume: 4000 tonnes (2021) vs. 2000 tonnes (2022)
  • How much export: From 31 million (2022) vs 13 million (2022)
  • Pelagic fish export: 1, 600, 000 (?) vs 200, 000 (2022)
  • With these concerns in declining in exports and catches, whatever conservation need to imposed need to be dynamic to the needs of our donmestic fisheries and for food security availability for our people.
  • Recommendation for ongoing dialogue on best possible solution to manage the MPA network while not constraining the needs of our domestic fisheries.
 	
• **Request to continue this dialogue to encompass concerns with our domestic industries.**
• Governments wish to utilize our resources to create employment opportunities hence why they are going headfirst into economics studies.
• Move together with research to quickly move and area to another if there is not benefit.
• Negotiated 2.3 million USD a year (with FFA) under US Tuna treaty
• NTZ#5: Pathway for vessels to go through and deploy their nets on the way to American Samoa. So there is a lot more impact economically that just what is seen on the charts.
	Mulipola
	• Although MNRE will be taking lead, there are guidelines within the SOS of the roles and responsibilities of each stakeholder. For the MSP, the responsibility will fall onto whoever has the resources and capacity at the time
	
	Leilani (CI Samoa)
	• Would not intend for MSP to negatively affect fishermen livelihood.
	• *Q: Was catch declining is due to overfishing?*
	• Cost modelling to look at alternative options and compensation options for loss of livelihood / income.
	• Upcoming Project: JA. Helps fishing communities.
	
	Danita (CI Samoa)
	Enhancing the environment for managing and operating 10% or 15% of MSP network. Recommendations to address gaps:
	• Need to start investing in the targeted (areas?)
	• Offer support in assessment gaps. Impact of these spaces on the industry.
	• Becoming likely that we do need the cost-benefit analysis targeted on these activities.

Q. *Is it possible to include some sort of compensation mechanism into the MSP? If fishermen / fishers are affected?* Countries where vessels under the US vessels fish: Samoa, Tuvalu, Cook Island, Tokelau, Kiribati. • FD support of biodiversity conservation to ensure the unique genetics within our EEZ but there are issues far greater than fisheries that also needs to be considered. **<u>Mulipola</u>** • Address concern about catch decline. (also brought up in Consultation 1) • Concern by Seiuli Roy: Bringing in of more large vessels thereby resulting in a further decrease in catchment rate (+ IUU) and leaving domestic fishers with even less. Too many people, too little EEZ area. • Q. *As fishing of tuna will still be allowed, is there a plan by Fisheries to conserve /a manage the tuna stock*? **<u>Roseti (MAF)</u>** • Proposal to the Tuna Commission: Interim target reference point Ava (?) Suggested under the interim, it will be up to the Tuna Commission to decrease the amount of fishing within these zones. Especially within countries in the whole of North and Central Pacific. **SDG + Australia proposal. • In terms of the Target Reference Point, need also to talk about allocation per EEZ. How much of the albacore can be caught by each. • Above details not mentioned in the Tuna Management plan, however Fisheries is supporting a zone-based management approach. • Opposed by the industry last week during discussion asking why they were adding more constraints on them. They were told, "If we can constrain the fishing in our zones, we can constrain fishing in the high seas." Targeting the high seas because that's where a lot of fishing takes place therefore less tuna is coming through country's EEZ. • Mentioned proposal has been tabled to the Commission and supported by the CCMs including China. • Trying to get incoming vessels to fish in the high seas. Some large domestic vessels also wish to fish in the high seas. • MWTI trying to open up Samoa's registry just for fishing vessels. • SIDS, exemption under the Tuna Commission that domestic vessels may fish in the high seas as long as we impose flag state responsibility. Mulipola • Open up the closed-off NTZs for fishing of highly migrate species is to address the key concern by the CFMAC, domestic fishers and US vessels under the US-Treaty fishing. • Losing 30% fishing grounds through MPA exasperate the primary problem of catch decline currently faced by our domestic fleet which significantly impacting them economically. • Primary concern by domestic fishery is that govt will bringing in more larger vessels to fish within Samoa's EEZ plus with proposing of closing off 30% of the fishing ground, it is magnifying the decline catch problem dramatically.	• Fishing activity within MPAs on tuna specifically. Prioritizing capacity to monitor that its only tuna being fished. Larger vessels. Maybe start looking to the alia fleet and how we can assist domestic fishers with their activities and so they are aware of placements. • Offer support to Fisheries or other agencies on any gaps in these activities if they have already started. • Next 2 years to really invest in the addressed areas so to be fully operational within the target implementation year (2025?) on the agreed starting percentage. Collected post assessments and key information to help with decision making and operationalizing of the implementation. • Need more dialogue to happen to go into detail on the needs in order to identify the gaps and look for the right support to invest in those areas over the next 2 years. • Ross to send link of proposal to Tuna Commission. **<u>Moli</u>** • To provide FAD positions layer to incorporate into the layers of the SeaSketch tool.

• To strengthening the conservation of tuna resources, does FD have additional controlling scheme or management measures to sustainably manage by tuna within our zone. • Interim Target Reference Point (iTRP)proposal to limit fishing for through catch allocation like Albacore tuna now submit to WCPFC annual meeting. • Such tuna allocation controlling scheme will be another measure for the MSP management.	

9.5 Notes from the one-on-one meeting with the Samoa Port Authority.

Items	Concerns/ Comments on Presentation & Discussions / Description	Follow up actions/ Comments
Portsmaster • Concern for the coastal area and incoming vessels due to Samoa's social and economic needs being dependent on shipping activities from overseas. • **Coastal areas:** Impact on ships entering Samoa's EEZ and possible disruptions/ restrictions coming into port. • Concern on the restrictions impacts to navigation when cargo enter coastal areas from MSP network, especially through the navigation pilot is concerns. • **Navigational Waters:** Impact on International shipping routes (12 mile zone, Harbour & Approaches. Apolima Strait.) • Navigational areas as some ships can't come too close due to shallow waters. • Consider international shipping routes beyond the coastal area **Mulipola** • A lot of the proposed 30% put far out from the coastal. • NTZ nearby the coastal in still farther out. **Danita** • Anchoring spots: anchor a little bit outside • Key Area of interest: located north in close proximity to 5 mile reef. • Try to find an alternative. If no alternative try to find a way to turn this into an environmentally friendly activity. • Goals aligning with Green Port Initiative	**Mulipola** • Restrictions may consider within NTZs of the network in a management plan for all vessels includes: ○ harbouring and anchoring ○ disposal of wastes ○ discharge of oil and ballasts • All vessels will have free passage in NTZs as along as transit continuously. • # NTZ lies within the contiguous zone and 3 within the Territorial sea.

• Safe Passage is also prioritised from the beginning international and national vessels. Room to improve if need in relation to network. <u>Key activities for discussion :</u> • Potential in anchoring areas • Potential increase in mooring activities from the tourism industry **Mulipola** • NTZ 8: 5 mile reef: common alternative anchoring area for vessels = damage of coral reefs. Reef is very important as bank supply of fish for the coastal reef. • SPA to discuss on alternatives for anchorage to protect and develop these reefs. **Portmaster** • Should prioritize areas within Harbour approach and no MPA should placed in these areas. • Not necessary to establish a protected area within anchorage areas as it will be hard for incoming vessels when the harbour is congested and there are no alternatives for anchorage as we only have one port. • Lack of facilities to provide boarding pulleys. Very expensive. • Propose that the reserve this area should reserve for ship anchorage. Anchorage spots are from Faleula to Apia. • Concern if the potential anchoring spaces are to be reserved as MPA, there will be nowhere else for incoming vessels to anchor. • We can work on a navigation chart for designated anchorage areas. • Can include anchorage areas for emergencies. **Afele** • Biggest concern for anchorage of vessels damaging reefs. • Concern for waste & pollution. Dumping of waste water. • Damage assessment for identified areas for anchorage. (if funds allow) • In terms of expenses, we could do a bilateral with NZ & Aust or any other country for aid. • Pov from conservation, if part of these areas from Faleula to Apia are not protected, then will be a huge damages to the marine ecosystems. • Need to advise our leaders on the best strategy where port and harbours development and conservation effort are balanced.	

Portmaster • Maritime leisure areas examples : Falealupo,, Safotu, Fagamalu, Salailua, Satupaitea. • Recommended positions areas already allocated by navigation chart. • All navigation charts have recommended anchorage areas. • No guarantee that these areas can be used as often. • Can impose restrictions on these vessels through MSP plan. SPA can then specifically allocate areas for them. • ***Large supply vessels currently have the freedom to anchor (Faleula – Vaiala)*** • **Big concern:** a lot of infrastructure currently under development in preparation for expected increase of incoming cargo vessels in the upcoming 2-3 years. • Breakwater, Increase containers, Terminals. • Predicted areas to be used a lot for anchoring in the future: Apia, Salelologa, Mulifanua, Asau. • Yatchs: out of SPA jurisdiction. **Leilani**: Are there any records of vessels coming into each area for anchorage? **Portmaster** • Vessel traffic services and shipping records for ships coming into dock. • Records the number of ships docked and how long they stay docked. • SPA to provide advice on harbour space availability. Decision to anchor is optional and up to the captain (anchor vs drift). • 2Able to restrict necessary areas on a chart to restrict ships from entering them. **Afele/Mulipola** • Need to carry out impact assessment of anchor damages to the reefs and other ecosystems to get data helping make decision on areas to consider for protection, include 5-mile reefs. • Given the important of the 5-miles for biodiversity, perhaps part or whole of the 5-mile reef be consider for protection. • Based on outcome of the assessment, a recommendation will present to Cabinet for consideration. • Activities not allowed under the SPA legislation, will factor into as activities not allowed in the management of the MSP network. • Records of vessels anchor in the areas are needed to decide where to preserve. • Need to collaborate with SPA when they will install their VMS system to monitor all merchant vessels coming into our EEZ whether infringing the MPA network. Similar to the VMS at Fisheries and Police, but only interest in fishing vessels. • SPA generally supported the MSP draft map 1.2 with some consideration to the NTZ 8.	• SPA to monitor harbour approaches and traffic only • SPA to provide existing navigation charts to help with planning. • Will work to provide areas of concern for anchorage (including primary and secondary prioritized areas)

9.6 Notes from the one-on-one meeting with the SPCS (Maritime Police Wing).

Items	Discussions / Description & Comments on Presentation	Follow up actions/ Comments
Presentation by Mulipola		
<u>Martime commnets</u> • Quarantine Act • Fisheries Act • Custom Act **CCT: Concerns** • What impacts of the monitoring and enforcement of a final MSP to the Ministry and their current responsibilities? • What supports do you think MOP needs to enable to perform the added monitoring and enforcement tasks relating to the MSP? **SPCS**: **Concerns** • Concern on who is responsible for the monitoring of the MPA network?		Unsure if there is an agreement They will do it if the plan is approved • Although the MNRE is leading the development of the Ocean Plan (MSP), government agencies and partners with shared mandates for the ocean have supported and collaborated in designing a relevant plan to manage Samoa's ocean sustainably. • MOP representatives participated in the country-wide consultation for the MSP draft map 1.1 and shared information in workshops to guide the development of the Offshore MPA network. • Implementing an MSP Plan will be done collaboratively with agencies and partners with the necessary VMS tools and patrol boats to carry out the MSC activities.

• Is there a regulation develop to legally support and approve MSC activities for the MSP Plan? Are there boundary coordinates determined for each MPA of the offshore network? • Monitoring, surveillance and enforcement for the MSP offshore MPA network creates additional responsibility, resources and costs to the MOP • Tuna fishing is considered to allow within protected areas of the network. MOP concern for communities seeing MPA nearer the coastal fish by fishers while the areas are called MPA. • Processes for reporting and management of IUU MOP VMS & MSC operations: • Daily monitoring for IUU fishing vessels operating and transit through Samoa's EEZ. • It is a 24/7 monitoring activity. • Most of the monitoring of the EEZ is done through the VMS on land except when surveillance operations are carry out twice a month using the patrol boat M.V Nafanua. MOP: MSP Plan Regulation: have co-ordinates: official • Must have an act approval for enforcement • Need map when finalized • 24/7 monitoring of VMS	• Once the management plan of activities for the offshore MPA network is finalised, the official coordinates for each MPA will be made available to feed into the existing systems for MSC purposes. However, the coordinates are yet to be finalised as the draft plan 1.2 is currently under review in R3 consultation. The Samoa Information Agency, a division of MNRE, will refine and confirm the coordinates for each NTZ of the offshore network before their implementation. The MSP regulation is developing, and official coordinates for each NTZ will be included. • The regulations provide legal support for the operation and management of the Plan, including procedures for MSC operation planning, IUU reporting, and non-compliance management. The implementation of the MSP offshore MPA network will require financial and capability resources. • There will be an increase in the services provided by MOP due to the MSC requirement for the offshore MPA Plan. • Although some offshore areas are designated as protected marine areas, fishing for highly migratory species such as tuna is allowed to address the significant impact on the fisheries sector and food security. However, the HLMS will be managed through current and future controlling schemes governed by national fisheries, conservation agencies, and regional fisheries organisations. • A management plan for implementing the MSP offshore network will be developed, including

EEZ patrolling surveillance operations. • On average, require 3 <u>days</u> on average to cover the EEZ for monitoring IUU fishing vessels and any other illegal activities. Usually takes one week per patrol operation. • There an annual planning for EEZ surveillance operations which coordinated and planned together with the Fisheries Division, MAF. • During the year, there are Regional surveillance operations where resources from involved countries and partners are pooled to carryout MSC activities for about 2 weeks. • Supports require for surveillance of the MPA network and the EEZ through vessel patrol monitoring are including: - Financial supports in terms of overnight and risk allowances, fuels for the vessels, supplies, etc. - Budget: 60, 000 a month for two surveillance patrol operations. 30k per one patrol trip which on average lasted 3 days or one week to cover Samoa's EEZ. **<u>Danita</u>** • Next step for MSP is to identify how much support in resources need by implementing agencies for implementing the MSP offshore MPA network. • Future, there will be specific and target discussions on finances resources needs. These targeted discussions are expected to happen next year. • Concerns on the resources require for Patrolling the network. Like needing a plan before hand to guide surveillance operation. • Concern in the increase in services provided by MOP due to the MSC requirement for the offshore MPA Plan. • Increase operation upon request <u>Border control:</u> Are there any Ministries or agencies you are working together for the monitoring of the IIU activities in Samoa's EEZ? • Work with Fisheries Division when drawing up plan for the surveillance operation in particularly identifying target areas and vessel boarding to check for illegal fishing. Trying to include other Ministries like Custom during patrol to verify other illegal activities but were not interested. • MOP and FD personnel have trained by FFA on MSC functions like vessel boarding, IUU reporting and management not only fishing but other illegal activities. <u>Long term:</u> need someone attached to the team Must have a plan in place for monitoring Impacts • Only on illegal basis on the zones • What are consequences • In terms of communities	processes and procedures for reporting, handling, and managing IUU activities. • Currently, MOP addresses the safety of inspected vessels while FD conducts boarding and confirms fishing licenses, noting any suspicious or illegal activity. • The management plan for the MSP (Marine Spatial Planning) will be thoroughly socialised to generate awareness among stakeholders, including communities. Though fishing of tuna stocks will be allowed within the network, the habitats, ecosystems, and residential biodiversity will be protected from extraction. The tuna stock will also be managed within the MPA (Marine Protected Area), utilising existing and future management regimes. • A management plan will include processes and procedures for reporting and managing IUU (Illegal, Unreported and Unregulated) activities in the network. Moreover, the procedures and processes for IUU management will also be included in the regulations guiding the reporting and managing of IUU activities.

Maritime commitments: • Hardly domestic fisheries activities at these areas, only commercial fisheries • Good to consult companies @ commercial levels AIS – systems UMS • Domestic no VMS (some can reach to these areas) • Foreign only VMS on board	

9.7 Notes from the one-on-one meeting with the Samoa Shipping Services

Items	Discussions / Description	Follow up actions/ Comments
Concerns/ Comments on Presentation Q. <u>Can vessels/ boats cross over/ safe passage on the allocated NTZ?</u> Yes, only concerns when there's anchorage or fishing activities occurs. • SPA: harbour approaches charts • Special provisions in emergencies SPA + SHIPPING + FISHEERIES - Moving forward **NTZ8:** Tokelau, NZ , AUS IMO – beyond 24 nautical mile - Rubbish disposal **NTZ 2**: Shipping dumping of ship wreckage Trans stock: Tokelau ships through NTZ 11 & 5		• In agreement with the 30% approach • Area around 5 mile reef. - Ship anchorage for incoming vessels bound for Matautu wharf • Changes/ adjustments to Samoa charts • Consider International consultation • Safety reason why anchor at 5 mile reef - Shallow whereas many vessels dock for entry • International Consultation - Emergencies: can it allow vessels to anchor during disasters • Network cables lines activities allowed not allowed? - No new cables allowed Options for 5 mile reef (Next steps) - Alternatives for anchorage - Disaster emergencies Routes: routing of the world

Recommend consulting the Tokelau transportation as they pass through some of the allocated NTZ	

9.8 Notes from the group consultation meeting with the Commercial Fishing Industry and CFMAC

Discussions / Description	Follow up actions/ Comments
Concerns/ Comments on MSP draft map 1.2	
CFMAC (NUS) - Seeing as there is a draft 1.1 & 1.2, could there also be a 1.3 map? Due to some members from CFMAC who have just joined the consultations or are not able to join today. - Regarding the 91% of those in agreement for the 1.1 draft, majority are from the communities who fish in the coastal areas. - Would be nice to see more representatives from those who fish beyond the coast, especially commercial fishers because since it is much further out, the communities do not reach these areas. - Hotspots/ fishing areas laid out on maps – does this mean that there was no long line fishing activities in the unmarked areas? - Concern for tuna as it is a migratory species. - Bottom fishing – fished more by those close to the coast. - Targeting tuna but we do not reach so deep down to the beddings of the MPAs. → 50 nautical miles for domestic. Beyond that, it is difficult to reach the bottom. - Request for more updated data to give a true clear picture → Due to COVID affecting a lot of things since 2020 - From the commercial side of things, when there is no fish in the nearby areas we can go as far to the border to fish including some of the areas (NTZ7) shown on the map which is not showing fishing activities. → Boats would go for 30 – 40 days and return with a catch of only 200. It is not good. → Restriction on fishing vessels at 50 nautical miles. - Supports the conservation of the coastlines. - Proposed 20% for now due to petrol being expensive - Targeted species: Tuna Albacore → Migratory species	**Mulipola (MSP)** →Small vessels in definite support of MPAs due to less incoming fish which is usually caught by larger vessels further out. →Compromising safety as they move further out beyond 24 nautical miles due to a lack of fish inshore. →Trying to balance between domestic/ small & large vessels. **Mulipola (MSP)** - The commercial longline fisheries data for 2015-20 is the only one available from Fisheries. The data showed that LL fishing occurred throughout the EEZ. - However, the synthesized catch data shows areas of active fishing to aid in locations of NTZs in areas of less conflict. - NTZ allocated to areas of less conflict/ less fishing

- If these areas are to be conserved, how long for? How will they control these reserves? Open & close? Period of 4 months? 6 months? What are the limits? - Are there any specific species within the chosen area that we are trying to preserve? - Regarding the 1.3 map, would it be possible for another consultation before finalizing the network? **2nd Presentation Discussion: Proposed operational Plan for MPA network** **Seumalo (Direction from Minister)** - The MSP draft plan 1.2 was first presented to the MNRE Minister seeking direction for the R3 consultations with targeted sectors the plan may have significant impacts on their operations. - Minister advised MSP planners consider benefit opportunity for the country and for the fishing industry from harvesting highly migratory species. - Additionally, Samoa is currently party to a fishing agreement that we are receiving economic benefit from harvesting tuna. - Consider for the conservation of the highly migratory species through current and future national and region conservation and management measures. **Mulipola (Operational plan)** - Highlight the proposed implementation plan for the MSP draft plan 1.2 with the harvesting of highly migratory species using current and future national and regional measures. - The operation include two 15% phased closed-off of MPAs. By 2025, the initial phased will closed-off a combination of NTZs closer to the coast and the ones father out at the EEZ borders. - The mixture of closed-off NTZs will offer evaluation of effects of the largescale MPAs on the commercial fisheries and the resources. - The initial closed-off NTZs will also trial the management of close by and father out NTZ and the compliance ability of domestic fishing vessel types to the conservation network. - The remaining 15% closed-off NTZs will be completed by 2030 to achieve Samoa's commitment to ocean sustainability - Some activities allowed and not allowed within the NTZs under the proposed operational plan: o Fishing for highly migratory species including various tuna stocks is permitted o Fisheries for localised or residential stocks are not allowed o Any other forms of extractive activities are not permitted	**Seumalo (MNRE)** - The government has a commitment to ocean sustainability of which 30% of the EEZ is proposed to protect as MPAs. - The 30% target will be implemented gradually in phases to the year 2030. - The government would not proceed with the 30% target without considering the views of stakeholders. - There is room for dialogue process and proposals on the phase implementation to achieve the 30% protection target during this consultation and future meetings. - The government is considering a phased approach to operationalizing the Plan. However, your views and proposals are welcome on the best practical operational approach for the management of the final Marine Spatial Plan enabling Samoa to meet its commitment. **Leusalilo (CI Samoa)** - Feedback shared from the industry is commendable, but only a few reps participated in the meeting today. - It is desirable for members of the industry and CFMAC to attend future meetings toward the finalisation of the marine spatial Plan. - Work with SPA / improve coordination between ministries

○ Discharging of ballast water, oils, pollution, and wastes is not allowed. ○ All vessels traffic through Samoa's EEZ are allowed to transit and free passage. **Industry** - Does the fishing Vessel allow crossing the MPAs of the network? free transit – is it only for Samoa's NTZ? → MP: Any vessel has free passage over MPAs → AF: Meeting with SPA. - Concern with anchor points (Faleula – Fagaloa) when the harbour is busy. - No current restrictions. Boats free to drop anchor. → Beyond 10/12 nautical miles -> not allowed to discharge ballast - Approaching EEZ/ocean of another country, you are not allowed to discharge anything at all → The same rules applied to NZ **Fishing of Tuna** - By nature, the fish does not stay in place - Allow fishing of tuna but work together with Fisheries to manage /conserve. **Industry (AEFP)** - Does this plan also include the shore around Sogi and the Fisheries wharf? - Law for offshore? Where is MNRE involved regarding fish management (not fishing) and coastal line? → under MNREs mandate to protect as a whole **CFMAC (MFAT)** - Currently negotiating official borders of the EEZ and noting the initial phased of closed-off MPAs will starting in 2025.	**MNRE** - Free transit through MPAs is free. Same question was raised by SPA and SSS. - Free transit or passage is one of the allowable activities in the management plan of the MPA network. - Similarly, the discharging of wastes, ballasts, chemicals, and oils, as confirmed by MWIT, are activities included in the operational plan. - Need collaboration with SPA and MWTI to understand the scale of the discharging wastes, chemical pollution and ballasts. **Seumalo (MNRE)** - The coastal marine environment is governed by the MNRE through its environmental regulations. However, the fisheries resources are regulated under national fisheries regulations and policies. - The MSP with the 30% protection target includes both the offshore and the inshore marine spaces. - The MSP is starting off with the offshore MPA network as it meets the national protection target. - The inshore MPAs are currently mapping and will be part of the overall MSP. **Seumalo/Mulipola (MNRE)** - Several PI countries have embarked on developing MSP to manage their ocean. Tonga has completed their MSP process, while Cook Island will

- Hopefully by that time the EEZ borders will be finally and officially demarcated.
- Seeking Lessons from other PI countries on their MSP and their experiences and concerns on the impacts of the MSP in stakeholder activities and operations.
- Is there a legal instrument for operating the MSP offshore MPA network being developed?

CI SAMOA

Fishing of Tuna within the MPA – could this still be called an MPA or a managed area?

- AF – MAF – open fishing but under locked conditions
  → Establish a management plan (MAF)
- Managed area vs protected area
  → Need to clarify the message to the country/ people, though the offshore net will have MPAs, but fishing for tuna is allowed. Contradicting ourselves?
- Marine vs Terrestrial protected areas.

CFMAC

Pati – definition of MPA – different for coastal & offshore

- Aleipata district coastal MPA include village-based fish reserves, and fishing are allowed in others areas of the protected reefs but managed through a Management plan which include measures to regulate unsustainable fishing and undersized fish.
- Easier to manage the coastal
- Open the definition to suit the industry in question
- Consider the location & environment of the industry

- land vs marine
- Fishing-wise is very different because fish do not stay in one place.
- MAF – quota on fishing
- Open-close fishing season.

Eseta – only for the local fishermen or will this apply to international vessels?

→ To be further discussed & clarified with relevant sect

Industry

- Due to concerns regarding the protection of 30% of the EEZ and the restrictions imposed by TDMP, the commercial fishing industry is in a precarious situation that could significantly jeopardize the survival of businesses.

start sooner. The MSP ocean planning in Vanuatu, Solomon Islands and Fiji are currently underway.

- We shared information and experience during the development of the various drafts of the MSP maps.
- Other PI countries with MSP have similar stakeholder concerns with our own ocean planning process.
- However, Samoa's MSP is transparent and a stakeholder driven process.

Seumalo (Regulation)

- The MSP regulation is now developed with the MSP provision is include in the EMC Bill, the MNRE Principal Act. The Bill is on its final review.
- The MSP regulation developmental process will soon be initiated.
- There will be dialogues and consultations with sectors when the regulation will begin.
- Official boundary coordinates of all the largescale MPAs will be included in the regulation.

Seumalo (Appropriate approach for MPA network)

- Protected vs Managed MSP offshore MPA network
- It is challenging to determine the appropriate approach for operating and managing the MSP offshore MPA network. Concerns regarding declining tuna catches have prompted the need to protect highlighted NTZ areas.
- However, considering the highly migratory nature of the tuna species then will warrant a more specific conservation effort to manage these tuna stocks.
- Noting the concern from the CI regarding the nature of MPAs, we are still in the planning process and taking into account the interests of other sectors that depend on marine resources.
- The outcomes from this meeting will be communicated to MNRE management and the Minister to seek direction advising appropriate approach to manage the offshore MPA network.
- On the additional foreign fishing vessels, MNRE will touch base with the Fisheries Division, MAF regarding any limit entry measure regulating entry into the Samoa tuna fishery.

- Acknowledge the consideration for allowing tuna fishing in MPAs while the process of finalising of marine spatial plan is progressing. - Happy to assist with future consultations to develop a sustainable fishing plan and manage marine resources while ensuring sector sustainability. **MFAT** - Asked about additional foreign-owned locally based fishing vessels bringing to fishing in Samoa's EEZ. - Due to limited EEZ size, declining catches, and too many fishing vessels already fishing, there is concern that additional large boats may contribute to the collapse of the domestic fishing sector.	

9.9 Notes from the group consultation meeting with the SIGFA

Items	Discussions / Description / Concerns/ Comments on MSP draft map 1.2	Follow up actions/ Comments
Rachael Dempsey (SIGFA) - Lived in Samoa for 12 years. Environmental scientist - Obvious change: → In number of fish caught compared to before. → In the species caught. - Spanish mackerel is invasive and becoming more popular because SIGFA is catching it and saying it is edible. - Not catching enough wahoo – possibly living in the same territory. - Do we have bio-indicators which tells us the health of fish outside the commercial side? (e.g. from run-offs) and need to understand the impact of run-off from the island on the fishery resources. - Very concerned about foreign commercial fishing activity. - Seeing a lot of fish coming in by the shipload while there is a decline of fish available for the public and businesses. - Create some frictions with local fishers in particular with the SIGFA members. - Most fish were exported leaving very fewer for business and local consumption - Questions arising acutely in the last couple of years as we have gone through months without fish being available. **Brent Devenport (SIGFA)** - Alias catch compared to the Chinese fleet. - 80 – 90% commercial - Long line fishing not practised by SIGFA		

SIGFA CATCH DATA

- Data not collected/ provided to Fisheries.
- Catches collected during tournaments are recorded but provided to the Ministry responsible for Fisheries.
- Individual member's catches are not reported/kept. ONLY during tournaments.
- The documented catch records are not provided to the Ministry, nor is MAF invited to record catch data during the tournament.

How far does SIGFA go out?

- Most members fish within the contiguous zone (24 nautical miles – yes. Fewer members with much bigger boats tend to fish a little bit beyond the contiguous zone.
  - → Too much fuel to carry out on a small boat.
  - → Conscious of time – must be in before sundown

- Concern with the lack of fish available for local outlets
- How much stress can local businesses take?

SIGFA suspicions: exporting of fish rather than input back to the community

- Most fish are caught & exported by large companies. E.g. Chinese long line fishing most of the tuna.
- People prefer USD over our currency.

Rachael Dempsey (SIGFA)

Encourage the consumption of fish over exported meat. :

- → Fish is the healthier option
- → Focus efforts to take care of it?

SIGFA: Tournaments

International Tournament

- Duration: 5 days yearly. 1 week long
- Target: adults (local & international)
- Target species: Tuna, Billfish, Wahoo, Barracuda (Offshore)
- Catch is usually donated to sponsors/ charity OR to the BBQ during the tournaments to host guests.

Monthly Tournament

- Duration: Once a month. 6 am – 6 pm.
- For Adults & youth

Mulipola (MSP)

Most of the catch from the Fisheries sector is aimed for export.

Alia: most catches end up on the local market.

- → Don't have the quality/resources to accommodate a larger catch
- → No capacity/ not reach export level.

- 6 – 25 boats. Will not go out of less than 6 boats.
  - → Will no go out if less than 6 boats
  - → 2 – 6 people on each boat.
  - → 4 – 7 rods per boat
- Catch stays on the boat
  - → SIGFA encourages donations for a BBQ/cause from the catch,
  - → Otherwise, they do not interfere, and it is up to the members onboard what they do with the fish
    - → Some members sell their fish to local shops
    - → Tag & Release

Juniors Competition
- For ages 16 & under
- Monthly competition
- Duration: half-day
- Crew of 5 kids, driver, deckhand per boat
- 8 – 25 boats go out
- 4 – 6 rods per boat
- Fishing only in the inner reef

Doe SIGFA have interest in conservation of fisheries in particularly the coastal fishery?

Conservation program include:
- Tag & release of Bill Fish
- To discourage unnecessary harvesting: no points are given to billfish under 100 kg
  - → Rule for internationals
  - → Trying to gradually adjust Samoans into this

2nd Presentation - Discussions

Brent (SIGFA)
- How to monitor the proposed zones?
- Chinese will continue to fish thereby turning off everything (radios & VMS)

Rachael (SIGFA)
- Maritime traffic app – pinpoints daily activity in a certain area.
- NTZ 7: If it's out of our capacity maybe we are losing the potential to focus our monitoring to other more accessible areas.

MNRE/MSP

FFA: all vessels licensed to fish within the Pacific Ocean under each member country of FFA need to carry VMS.
- Same conditions apply when applying for a license in Samoa
- Fisheries & MOP – monitor fishing vessels through their VMS tool plus surveillance of the EEZ by the patrol boat

Skipjack: What are we doing to protect them? - stress from lack of food, habitat stress, -> (MP) Skipjack is no problem according to SPC assessment within the whole region. - Fast growing species - Main concern species: Big-eye, Yellow-fin, Albacore **Brent (SIGFA)** - 25 – 30 years ago – NZ & AUS bringing in No Fish Zones → Very good output in NZ & AUS fishing activities (game fishing, snapper fish, kingfishing, etc.)	- Illegal boats without VMS – deals with patrol boats and spot check by Fisheries - Apart from patrol boat – monthly aerial surveillance by AUS & NZ to assist in patrolling FFA members areas.

9.10 Notes from the group consultation meeting with the Commercial Fishing Industry (>15m) and CFMAC

Items	Discussions / Description / Concerns/ Comments on MSP draft map 1.2	Follow up actions/ Comments
Ministry Of Police (MOP) • Nafanua 3 coming in • Main concern on MCS (Monitor Control & Surveillance). Assist with surveillance and enforcement **<u>MFAT (+spatial information agency)</u>** • Currently working to finalize Samoa's EEZ boundaries in all sides • MSP is moving ahead to try and finalize the zonation • Border is to monitor any illegal intervention from the outside. Currently negotiating all 4 boundaries. None have been finalized/officially signed. - <u>Boundary with American Samoa:</u> being the most challenging boundary. Unsure of where the line will go. - Issue being that they already have Swains Island north of them and they have already signed their boundary with Tokelau through NZ. Corner point being the biggest issue with them right now. - If we do with overlay style (like what we do with other countries) then we lose out. Hence why MFAT is trying to see how they can negotiate on a certain demarcation line between Samoa and American Samoa.		

- Hopeful to finalize it by next year. Commonwealth Heads of Government Annual Meeting (CHOGAM) - West side (boundary) we had to go through France. France said it's okay to deal directly with them in France. - Tonga: Currently have the treaty with Tonga but MFAT is currently waiting on their internal processes with their Privy Council and King. (Unsure of what their internal processes are). (NOTE: The Privy Council of Tonga is the highest-ranking council to advise the Monarch in the Kingdom of Tonga.) • Looking to use Fisheries VMS and any system that is being implemented under the surveillance services of the MOP. **Vaelua S. Brown (MWTI)** - Because we are dealing with hydrology, all of this needs to be in a hydrography chart for the maritime staff. - MP – we have Seasketch, we need those layers of the VMS to know when we overlay the hydrographic module. - /mp: falls under fishing area of less than 50 m **Carla (Starling)**: NTZ 10 had the most pushback from stakeholders, yet it doesn't seem to coincide with some of the major fishing spots (red shown on the map). Why is that? Is it a fishing ground? **2nd Presentation:** **Discussions & Concerns** **MAF** - In regards to network 1.1 - Shipping - Tourism - NCA - Concern from stakeholders how effective and how we can manage such a big area and the inherent NTZs given we don't have the capacity so far and the capability to do so. Addressing given concerns: Alternatives - Implement the MPAs in phases approach towards achieving 30 % target	**Mulipola (MSP)**: • Most of the NTZ 10 falls into the fishing area for the less than 15m class fishing vessels (alia fleet). • Samoa Tuna Management & Development Plan – all large vessels should not be fishing within the contiguous zone (within 24 nautical miles) Only the large vessels that fish outside have location s on the map because they carry the VMS locator whereas the smaller boats do not have VMS but they do fish around this area which creates problem for MFAT in terms of a lot of illegal fishing from the Alia boats fishing across American Samoa's EEZ because its only about 20 miles from our side. • Also shown in map 1.1, the proposed NTZ is quite large almost crossing into the fishing grounds for people living in the eastern part of Upolu so they need to reduce the size to provide more fishing areas for these communities.

- We can still set up the MPAs but allow fishing for highly migratory species (referring to the tuna species and other pelagic fish such as swordfish (and more) as they are highly moving in and out of our zones seeking balance between conservation and sustainable development. - Request from the Fisheries sector specifically for an open/closed season for Tuna fishing only while restricting/ prohibiting the harvesting of sedentary/local stock. Managing species such as dolphins, sharks, whales, etc., utilizing existing policies, rules, and plans that other ministries have. - Any other extracting activity (such as mining) within the NTZ will be prohibited. - Concern with the transit of vessels, provide free passage for vessels coming in and out of the EEZ, as long as they continue on and not stopping, which could indicate that they are doing something illegal. - Harbouring & Anchoring spots, identify especially the spots which fall within the NTZ - Given our port is very small and busy at times, advice boats to anchor outside. - Phase approach: request by several sectors to start with protection of 5%, 10%, or 15%. - Proposed startup: 15% - Request from Fisheries to allow fishing within NTZ for tuna with conditions as they have conditions to manage the conservation of tuna species as stipulated under the Fisheries Tuna Development & Management Plan. <u>Main Concern for Implementation</u> - Cost for implementation: Starlight to look at cost modelling. - MCS: tool capacity, etc. - Impact Assessments: effect of MPA on all sectors impacted by the implementation on the MSP Network. - Capacity: Available capacity. Relative to costs, tools, and resources. - Funds for maintenance & monitoring. Finance mechanisms - How to collaborate and improve synergy to work and cooperate together. **MWCSD** According to maps, NTZ 7 not being fished. Wouldn't it be easy to conserve this area? **Mulipola:** When considering which areas to close off first was looking into setting a balance to both areas close-by vs farther out areas. Set-up of NTZ within both contiguous zones and beyond will help set restrictions on both large and smaller vessels at the same time. Also took into consideration MOPs vessel monitoring route.	**Mulipola**: - Fisheries Division, MAF provided the longline fishery catch and effort data map for 2015-2020. It shown that fishing occurred everywhere of the EEZ as indicated on the map based of large commercial fishing vessels carrying VSM to indicate the positions. - The same fishing data was synthesized to show all the hotspot areas for fishing as indicated by darker colours but there are still activities within the selections of placements for candidate MPAs to areas with lesser conflict with users

Vaelua S. Brown (MWTI): Monitoring of NTZ areas: Dependent on only the MOP boat/ will there also be a boat from Fisheries who could conduct monitoring?

Maria Satoa (MNRE):

- Collaborative efforts amongst ministries in terms of resources needed. To be further discussed once have completed the design.
- Narrative: management -> fa'atalanoa ai rules and responsibilities.

MOP

- There are currently 3 systems for monitoring the whole EEZ of Samoa in place
  * VMS being used the most
- The biggest setback for this program is that only large vessels could be detected through the system right now.
- MOP & Fisheries cannot monitor areas within 3 – 24 nautical miles as most of the domestic /smaller vessels do not have VMS installed.
- MOP conducts 4 large operations per year in collaboration with Fisheries under FFA to target IUU fishing within Samoa's EEZ. Could integrate the MSP into these operations for monitoring.
    - 6 days. 8 hours patrol
    - Sets out a plan prior for areas to cover during patrol for each day.
    - The dilemma is that the boat rarely goes out and only moves on a set program for the year.
- The current system for monitoring (VMS) is 24/7 all throughout the year
    - In conversation with FD look into setting their own schedule for monitoring as the only asset they are depending on now is the MOPs and the incoming vessels

Vaelua S Brown (MWTI):
Not worried about the close shore fishing vessels as not much fish is caught by them. MWTI will install a VMS of their own and will monitor all vessels including fishing vessels, cargo ships, and cruiser lines, entering and transiting through Samoa's EEZ.

MOP: Every vessel within Samoa's EEZ is monitored by MOP via the system.

- Foreign fishing vessels, cargo ships, etc. (working with fisheries on VMS)
- Would be able to track fishing vessels going over the proposed NTZs

Vaelua S. Brown (MWTI)

- Is unaware of the collaborative monitoring via the VMS system between the MOP & Fisheries. MWTI is mandatory to manage and know all vessels coming into Samoa's EEZ. These vessels including fishing vessels, cargo and merchants ships, cruiser liners, yacht, etc.
- MWTI will install a new Vessel Monitoring System (VMS) soon to monitor all incoming vessels into Samoa's EEZ.

MOP
- MOP is currently working with the Ministry of Fisheries on patrol operations, and both MOP and Fisheries, MAF are working together in planning surveillance operations throughout the year.
- For every boat entering Samoa must do so with permission

Joe Eteuati: (MWTI)
- Village by-laws
- For any boat anchored in the village coastal area, villagers are aware to alert the MOP and seek clarification.
- Before stepping foot on land, individuals onboard must provide a letter of clarification from relevant ministries.

Starlight Team: Share from experience the monitoring, control and surveillance. Gaps and what is needed to be effectively monitored.

Taufik (Starling)
- Have conducted similar costing for Indonesia and other places
- Basic thing should understand is the overall ideas and what we want to do for the MPA
- Doing costing for other places, some of the activities have already started, and the management plan has already been put in place. Easy to plan/help with how much cost is needed & what type of capacity id needed -> also data & ideas costs.
- What kind of organization or units will manage the MPA? Whether it's a management body, coordinating unit, etc. as it is also related to the cost.
    - New management unit: looking into new staff. Secretary, enforcement person, monitoring, and other functions
    - Coordinating unit: Maybe other functions are emitted in other ministries
- What also needs to be understood now is 'What is the big picture?'

  Overhearing front he conversation that there needs:
    - More surveillance, more monitoring, more frequency of sea patrol
        - Dependent on the stakeholders.

- More patrol days will affect the cost.

- Cost mostly based on the overall planning with the stakeholders, then we can calculate the costs
  - → Current cost is 'How much'
  - → Any add-ons would be 'Additional Cost'
  - → **Minimum scenarios:** Minimum/MUST have thing that is needed in terms of cost to manage the area.
  - → **Optimum Cost**: If you have more money. How much we need or what kind of activities you can do if you have more money.

Mulipola (MSP)

- Now trying to finalize the design of the network
- In terms of implementation, looking at how to coordinate.
  - Will definitely be implemented with ministries that already have the resources/ tools. Bringing them into collaboration and coordination to use existing infrastructure and resources.
- Which approach as far as coordination and implementation is more cost-effective?

Carla (Starling)

- Utilize the resources & capacity of existing ministries: a collaborative effort.
- Even such a situation would still need a co-ordinate body to coordinate the activities and make sure that everything is aligned.
  - Cheaper than setting up a specific management body where you would have to hire personnel that is specifically focused on the MPA.
- Details of costing. Main components required
  - Research
    - → It was mentioned that the NTZs have already been determined based on specific unique ecological characteristics.
    - → Monitoring of the impact of MPA in the future: need for specific indicators that will be regularly monitored
      - What are the unique characteristics of NTZs?
      - What do you intend to research there?
        - Migratory patterns for cetaceans
        - Sea mounts: spawning aggregation
  - Education & Outreach
  - Patrol & Surveillance
    - → Lead organization: Maritime Police

→ Type of details needed: ▫ current surveillance schedule ▫ how many days spent out at sea ▫ coverage on the MPA network area when overlaying route ▫ Is there a need to change route now with the new NTZs to make it more effective? Or would you need an additional boat to split surveillance? ▫ Which NTZ you think needs more surveillance than others? ▫ Which has higher risks or violation? - Patrol in all MPAs always the biggest challenge. Really difficult to get coverage. - Samoa having several bilateral agreements which also supports in surveillance which also plays in a factor, → Does Samoa accord their schedule to their support or are they a bonus support? → Would we change the plan according to them or not? - Costing-wise there are a lot of details in which only specific agencies that are experts in that area can really provide. **Q (Carla) to MFAT (Asiata)** – Maritime Police Website on aerial surveillance. Is that currently ongoing? - **FFA & Fisheries** → Latest meeting with Fisheries Division was the arrangement with FFA → Small aircraft dedicated to the Pacific mainly for research purposes, but we have also requested if they could conduct surveillance and monitoring, especially IUU. → They had a certain schedule where they would fly into the airport and then continue on around the Pacific. → 5 biggest operations within the year – 5 times a year, the aeroplane comes in to patrol Samoa. - **Government Partners** → Sought out assistance from other countries such as the US, NZ, and other government partners for surveillance. The assistance would come in the form of either a vessel or aircraft. → Dependent on what they have to offer. → Most of the time, it is free of cost. **Carla (Starling)**: Envisions that the base patrol/ surveillance plan probably does not rely on the supplementary. → Supplementary should be regarded as a bonus; otherwise, it would be difficult to coordinate schedules with so many different partners. **Asiata (MFAT):** The primary source of patrol is the Maritime Police.	

> Only when not available that outside help was sought after.
> Currently in the process of replacing the vessel.
> Supplementary assistance is most welcomed but also to the schedule of our local maritime security agency.

Q. (Carla) for MOP – Based on the current 1.2 Map: How do you envision changes/influence in patrol routes/ agenda? What would be required to enforce all of the NTZs?

MOP:
- Set up a coverage plan before going out on patrol
- Patrol for 2 weeks. Was able to cover the whole EEZ when Nafanua was here.
- Current patrol does not go out as far however should be able to once Nafanua is back and we work with MNRE and other units in collaboration so that we know which areas for coverage. It wouldn't be a problem to adapt.

Carla: How many days does it take to cover all?

MOP
- It will depend on the weather.
- For the EEZ it would depend on the plan that must be set out before leaving.
- The plan works together with the weather to estimate how many days and the speed to cover the whole EEZ.
- For monthly patrol, duration of 3 days. Not covering the whole EEZ. Only the areas that had been planned out in advance with the Fisheries.

Asiata (MFAT)
- Currently, the SPCS schedule mainly aligns with Fisheries monitoring of illegal fishing in Samoa
- Once this is finalized, MNRE and relevant coordinating units could also come in to monitor the NTZ.

Taufik (Starling)
- A lesson learnt from other MPAs is that surveillance is never enough because the area is huge and expensive. Cannot cover everything.
  → Use of technology (such as VMS)
  → Awareness & compliance from stakeholders
- How do you envision these internal things using technology? Can we optimize the use of VMS?

→ E.g. Install VMS on Alias? **Maria Satoa (MNRE):** - That will be part of future discussions. - There are existing mandates. Have to ensure what we put in place does not overlap/ overstep those responsibilities but rather come together so to complement the work of each sectors. **Mulipola (MSP)** - As a general comment, given that we have not received much in regards to changes to the 1.2 network, I take it that we generally agree and hopefully will not have a 1.3 map. - Similar to the consultations in the last 2 days, rather than the design of the network we are now focusing more on the implementation approach. **Asiata (MFAT)**: Are there any implications on the 30% management arrangements in regards to opening of fishing activities within the NTZ.	**Mulipola (MSP)** - Though the MSP network contains MPAs, fishing for tuna stocks is consider allowed. Managing of highly migratory species by controlling schemes bas per the TDMP (Management plan by Fisheries) and existing national conservation measures. - Concern about MPS vs Managed areas such protected areas with fishing allow but managing through TDMP and other measures. - Debatable to use an MPA to manage a highly migratory species → In particular with Tuna, they can breed anywhere but it is not guaranteed that they will remain within those zones. → Something that could be assessed as a part of research in the future. Observe how much stays within the zone. → Hence why there is consideration to allow fishing within NTZ in addressing concerns by key stakeholders, the Commercial Fishery → Harvesting & fishing tuna while protecting the local/ non-highly migratory species. - Our 30% is still valid as it is being protected/ managed. - Ocean Sustainability.