

Oneisomw Municipal Fisheries Management Plan



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“We the people of Oneisomw know and understand that the earth is the giver of life and that the ocean is what sustains us, therefore it is our responsibility to protect and care for our nature resources for the health, safety, and economic prosperity of our people today, tomorrow, and into the future”

December 2024

Approval and Endorsement

This plan provides a general guide to the management of fisheries resources for the municipality of Oneisomw, and aims to achieve long-term rather than immediate, short term benefits. The success of the management

program depends largely on the Oneisomw Resource Management Committee's (ORMC) implementation of new initiatives and its introduction of programs to assist the community in supporting management actions.

As members of the team that developed this management plan, representatives of state authorities and the municipality of Oneisomw, hereby approve and endorse our commitment to this plan.

Chief
Oneisomw

Enrino PAul
Mayor
Oneisomw

Chairman of ORMC

Director
Chuuk State Department of Marine
Resources

1. INTRODUCTION

Oneisomw is one of eight municipalities within the Faichuuk region, located within the Chuuk Lagoon, Chuuk State, Federated States of Micronesia. Oneisomw municipality is comprised of a high volcanic island that covers $\sim 10\text{km}^2$ and has a population of 638 (2010 Census) and is surrounded by mangrove forests and fringing reefs, and extensive deep-lagoon and lagoon patch reefs that connect with over 15 km of barrier reef (Figure 1). The area managed by this comprehensive fisheries management plan encompasses all these habitats, including major reefs, channel, mangroves and other important marine habitats. It includes all marine resources under the ownership and management of Oneisomw municipal government and its reef owners ($>100\text{ km}^2$).

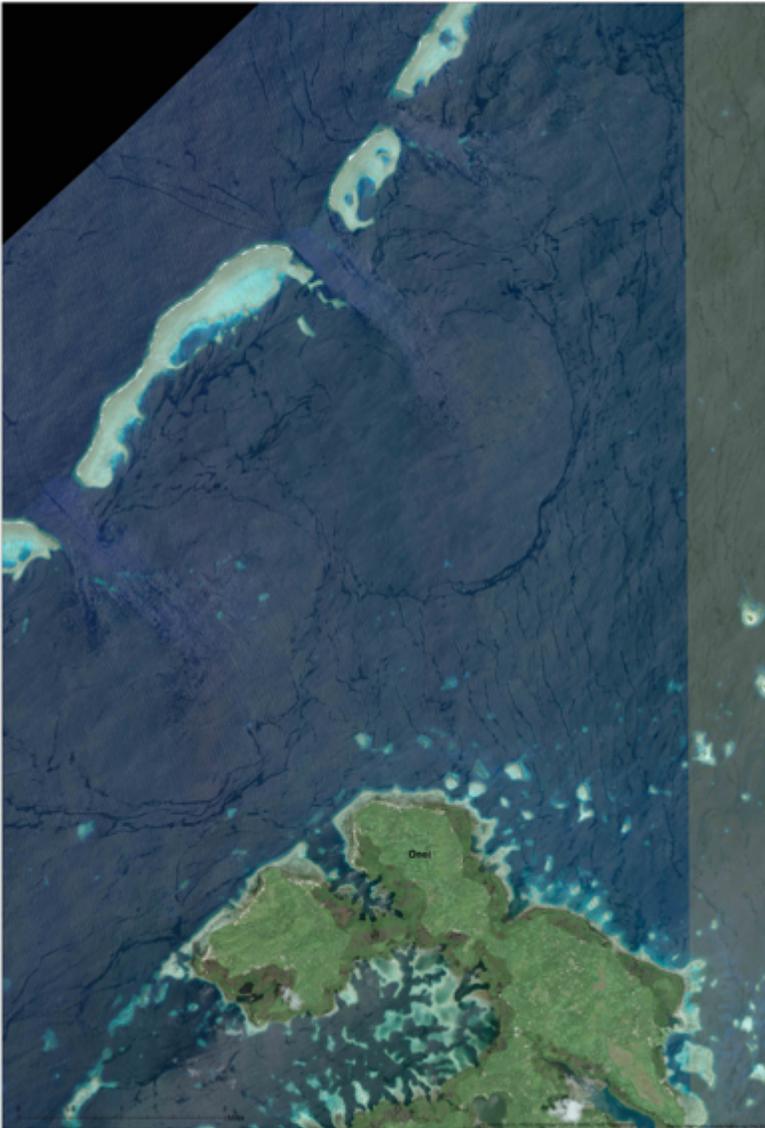


Figure 1.

1.1. Problem statement

Oneisomw marine ecosystems host a wealth of biological biodiversity and ecological complexity. From the nearshore unique reefs of Lemotol bay, to the remote reefs and passes along the barrier reef, these rich and extensive marine resources have played a central role in Oneisomw society for countless generations, while being sustainably exploited for subsistence and recreational purposes under customary ways.

Over the past few decades, however, the influence of a western monetary society, limited income alternatives, development of new fishing technologies, generalized governmental distribution of motorized boats in the 1980s and 1990s, and growing local and international fish markets have resulted in increasing levels of fishing pressure across Chuuk lagoon, leading to overtime decreases in fishing success and compromised resources [1–3]. Meanwhile, traditional management that once balanced the ecological roles of fish assemblages with societal harvesting needs continues to erode. Currently, fishing communities are struggling to address the challenges raised by the new fisheries paradigm, threatening community food security and socioeconomic resilience.

In Oneisomw, fishers remember with nostalgia the “good old days”, when the reefs of Oneisomw were full of large fish and other resources ready for the taking. Instead, fishers today find it increasingly difficult to fulfill their catch needs, spending more time traveling to isolated reefs, spearing fishing at night instead of daytime, and diving deeper. Changes in resources identified by the community include reductions of abundances and size of fishes, most notably on the reefs closer to their island, and nearly vanished populations of targeted invertebrates, including sea cucumbers, trochus spp., and giant clams. Confirming the community concerns, recent surveys conducted by Chuuk Marine Monitoring Team on several reefs around Oneisomw found some of the lowest abundances of fish and invertebrates anywhere in Chuuk [3].

In addition to these local threats, Oneisomw’s reef ecosystems will be exposed to several climate hazards including increased sea surface temperature, increased storm intensity, ocean acidification and sea level rise. Reefs in Oneisomw have not experienced dramatic coral bleaching from increasing sea surface temperatures due to climate change recently. However, they have suffered typhoon/storm and crown-of-thorn (COT) outbreak damage. Impacts from storms include removal of the reef framework, dislodgement of massive corals, coral breakage, and coral scarring by debris. Additionally, fragile branching species (responsible for most structural complexity on reefs) are likely to decline more rapidly than the massive corals, resulting in low structural complexity on impacted reefs [4]. Generalized COT coral mortality (and cascading ecosystem) effects has been observed across Chuuk lagoon reefs since the mid-2000s, including sites within Oneisomw [3,5,6]. Severe low tide events, from the recent El Niño in 2016, lead to corals exposed and therefore, subject to increased UV radiation/salinity change (from rainfall) which can damage corals. Finally, overgrowth in algae can lead to destruction of corals because algae may out-compete corals for settlement space. Algal overgrowth may be stimulated by warming seas due to climate change and climate variability, such as El Nino phases or due to human impacts, such as pollution in coastal waters from poor sanitation. Coral mortality due to different causes can lead to phase shifts in systems where herbivory has been compromised due to overharvesting, with the consequent loss of hard-coral ecosystems to algae-dominated ecosystems [7].

Following community consultations, the community has identified key local factors driving these undesirable changes in Oneisomw marine resources, including 1) destructive fishing practices (i.e. dynamite fishing), 2) commercial harvesting, 3) habitat loss (i.e. typhoon damage), 4) land pollution and run-off, and 5) lack of enforcement of existing state fishing regulations.

1.2. Policy context

Currently, the cultural mechen, a complete temporal ban of all activities on a reef, is still very much respected and honored throughout the municipality. This is evident in the way people obey the periodic closures when the mechen is in effect, which is usually for three to six months. After the closures are no longer in effect, no other management actions are practiced. Reefs are fished out almost as soon as the mechens are lifted. While there are indeed some benefits of the traditional mechen practice for the marine ecosystem, they are not very effective in ensuring healthy reef ecosystem as they tend to be short-lived, small scale, and lack clear enforceable objectives [8,9]. Other than the traditional mechen, there are no stated policy or otherwise management activities being enforced. There are no Municipal rules/ordinance that regulate coastline fishing or any fishery related activity. Even the Chuuk State law banning dynamite fishing, or the seasonal closures on turtle harvesting, are not seen as enforceable in these communities. The Municipal Governments lacks the capacity to fully enforce the law, and there were a few fatal incidences when individuals took the enforcement of the law into their own hands at the local level.

The Federated States of Micronesia Constitution states that each of its four state governments has jurisdiction over its coastal water. In the Chuuk State Constitution, Article IV, Section 4 entitled “Traditional Rights” it states that:

“Traditional rights over all reefs, tidelands, and other submerged lands, including their water columns, and successors rights thereto, are recognized. The Legislature may regulate their reasonable use.”

The Governor signed Chuuk State Law No. 14-17-05, known as the Chuuk State Protected Areas Network (“PAN”) law, on October 17, 2017. This law allows protected areas that meet certain criteria to be legally declared under state law. There is a provision in the PAN law that recognizes Traditional Rights and states in part, “The ownership of the resources and their contents shall not be affected by the inclusion of those resources and their contents shall not be affected by the inclusion of those resources with the PAN.” The PAN Act requires traditional owners, municipal governments, Directors of Marine Resource/Agriculture, Governor, and the Legislature to create the areas designated within the PAN. The Chuuk State Coastal Fisheries Protection Act empowers Director of the Department of Marine Resource with the power—based on scientific, statistic, conservation, management, and sustainable management measures—to limit by regulation the taking of any fish or marine resource, during any time period, in any area.

1.3. Fisheries management program

In response to the above mentioned threats, the community of Oneisomw has created a Resources Management Committee, and has decided to develop a comprehensive fisheries management plan (the first of its kind in Chuuk) that would address these concerns, and provide for a sustainable exploitation of Oneisomw marine resources that would ensure food security, ecosystem functionality, and socioeconomic resilience into the future.

These efforts have materialized on the current document, which is the Oneisomw Municipal Fisheries Management Plan, developed by the Oneisomw’s Resources Management Committee in collaboration with local (Chuuk

Conservation Society and Chuuk Department of Marine Resources) and regional partners (The Nature Conservancy and University of Guam Marine Laboratory).

Under this plan, the Oneisomw Resource Management Committee (ORMC) will act as the management body. The Committee will consist of representatives from municipality of Oneisomw. The ORMC is in the processing of developing rules and procedures for operating. Once these are finalized the management plan will be updated.

1.4 Fisheries management planning

The Oneisomw Municipal Fisheries Management Plan (FMP) encompasses the fishery management goals for the municipality of Oneisomw, the current understanding of the status of the fisheries, the management measures the municipality aims to implement, how those management measures will be enforced and monitored, and how an adaptive management framework will be used to improve management overtime.

To help support the capacity of the community of Oneisomw to plan for and respond to climate change and other local stressors, The Nature Conservancy (TNC) was invited to Oneisomw in 2012. TNC and the Chuuk Conservation Society (CCS) conducted a vulnerability assessment and developed a local early action plan by working with the community to identify priority social and ecological targets and threats. Based on the prioritization of targets and treats identified during this process a follow up meeting was held in 2015, bringing in coastal engineering, climate change, and water management expertise. A key output was beginning the development of a management plan for the community focused on water security and increased community resilience to coastal hazards.

The third priority target identified was coral reef fisheries. A 5-day workshop was held in Oneisomw in 2016 focused on reefs and fisheries. The team, with expertise in coral reef fisheries and protected area design, spent considerable time specifically reviewing the vulnerabilities of coral reefs and associated fisheries and developing actions for designing a resilient locally managed area with the goal of fisheries management to improve food security. To do this, the team used the *Designing Effective Locally Managed Areas in Tropical Marine Environments* tool. The tool includes the following:

- Outreach to understand key ecological and social factors that contribute to healthy and abundant resources, and the latest science-based recommendations for managing resources so they are healthy, abundant, and resilient; and
- Planning steps to develop zones and rules for locally managed areas (LMAs) that will help to build long-term healthy, abundant, and resilient coastal and marine resources.

During this workshop, a natural resource committee was developed to complete follow up meetings to decide specific actions to improve resilience of these systems. The natural resource committee is composed of fishermen, reef owners, women, community leaders, youth and other stakeholders. TNC and CCS provided technical support to the natural resource committee in prioritizing and formulating the regulations and drafting the fisheries management plan.

1.5. Goals and objectives of the Oneisomw Fisheries Management Plan (FMP)

Vision:

We the people of Oneisomw know and understand that the earth is the giver of life and that the ocean is what sustains us, therefore it is our responsibility to protect and care for our nature resources for the health, safety, and economic prosperity of our people today, tomorrow, and into the future.

Kiich aramasen Oneisomw sia weweiti pwe ach manaw me feioch ra feito seni fonu me mataw. lei popun, wisach sipwe eteneki me tumunu manawach kei faniten tumunun fonuach me tuufichin tapin aramas ikenai, neesor, me pekinoon

Goals:

- 1) Rebuild populations of key targeted species/groups and improve ecosystem health to support long-term sustainable use of the resources
- 2) Ensure that the people of Oneisomw have access to the resources they need and benefit from their long term management

Objectives:

- 1) Build capacity for implementation of management plan
- 2) Sustain awareness and support from the communities for management
- 3) Provide data to inform adaptive management
- 4) Allow for sustainable access to fisheries to support communities needs and livelihoods

2. FISHERIES MANAGEMENT MEASURES

Two main types of fishery management measures were adopted by Oneisomw to develop their FMP.

- 1) *Spatial management measures*: a comprehensive zoning scheme that includes fully-protected no-take zones, limited use areas, and multi-use areas to promote rebuilding of fish stocks and ecosystem protection, as well as to limit the impacts of human activities to certain areas.
- 2) *Non-spatial management measures*: such as bans on certain species, minimum size limits, seasonal/temporal closures to promote rebuilding of depleted stocks

2.1. Spatial management measures

Spatial management measures protect important ecosystems that support all species, rebuild fish populations, protect spawning areas and other sensitive sites, and limit or prevent activities that have adverse impacts on ecosystem and fishery resources. Spatial management measures can consist of different zones that allow for different activities and will provide different benefits for fisheries and ecosystem conservation goals.

Types of Spatial Management Zones:

- Fully-protected no-take zones (NTZ): Similar to a traditional practice of Mechen in Chuuk these zones prohibit all extractive and destructive activities that provide the most protection to a broad range of habitats and species. If designed properly and effectively managed, no-take zones provide the most benefits toward rebuilding fish populations and protecting ecosystems and a broad range of species.
- Limited-take zone: zones that protect some species, but allow harvesting of other species.

- Limited-use or Multiple-use zones: zones that allow or limit activities, can help limit impacts on less sustainable fishing practices (e.g. nighttime spearfishing) and allow for recovery of more impacted or vital resources (e.g. nearshore habitats used for subsistence harvesting).

2.1.1 Spatial Planning Process

To identify which reefs would be included in the spatial management zones facilitators from The Nature Conservancy, University of Guam, Chuuk Department of Marine Resources and Chuuk Conservation Society lead stakeholders from the municipality of Oneisomw through the planning sessions outlined in *Designing Effective Locally Managed Areas in Tropical Marine Environments (Gombos et al. 2013)*

- **Session One:** Defining the Benefits the Community Wants From the LMA – This session helps the community define specific benefits they want to receive from its LMA. This will help to determine the best options for developing rules and zones.
- **Session Two:** Mapping the LMA – This session will provide a visual tool for the community to use when deciding what rules and zones to apply to the LMA. The exercise creates a base map that shows the various marine resources, their condition, and features that are important for developing zones and rules for an effective LMA.
- **Session Three:** Characterizing and Mapping Natural Resource and Social Targets – This session guides the community to collect specific information needed to develop the best rules and zones to support healthy, abundant, and resilient natural resources that benefit the community.
- **Session Four:** Developing Zones and Rules for the LMA to Provide the Greatest Community Benefits – This session provides guidance for working with the community to develop rules and zones that provide the benefits community members desire. An effective LMA utilizes rules and zones that will increase the ability of target resources, ecosystems, and communities to cope with, adjust to, and recover from external stresses and disturbances caused by climate change and other threats.
- **Session Five:** Ensuring That the LMA Uses the Nine Essential Zoning and Rule Recommendations – This session reviews the LMA's proposed zones and rules relative to the Nine Essential Zoning and Rule Recommendations to determine if the team needs to modify anything to improve the chances of reaching the desired benefits.
- **Session Six:** Incorporating the LMA Zones and Rules Into the Management Planning Process – This session helps the planning team integrate the new rules and zones into existing management plans or other community plans.

2.1.2 Comprehensive Spatial Management Zoning Scheme

The planning team used local knowledge, habitat mapping and spatial design principles to design a series of zones to protect important ecosystems, rebuild fish stocks and zone activities. This series of zones will be referred to as the Oneisomw Protected Area Network.

The proposed areas that compose the network are as follows:

Management Areas	Area name	Area (km ²)	Perimeter (km ²)	Rules
1	Munpuna	0.5	3.0	No take area
2	Nomus	0.3	2.2	No take area
3	Pienisin	0.5	3.2	No take area
4	Tosich & Fouruu	0.3	2.4	No take area
5	Onokkachun/Nemeres to Fanananei ¹	40.5	27.8	No take area
6	Subsistence Fishing Zone	16.2	30.3	No Commercial fishing No night time spear fishing

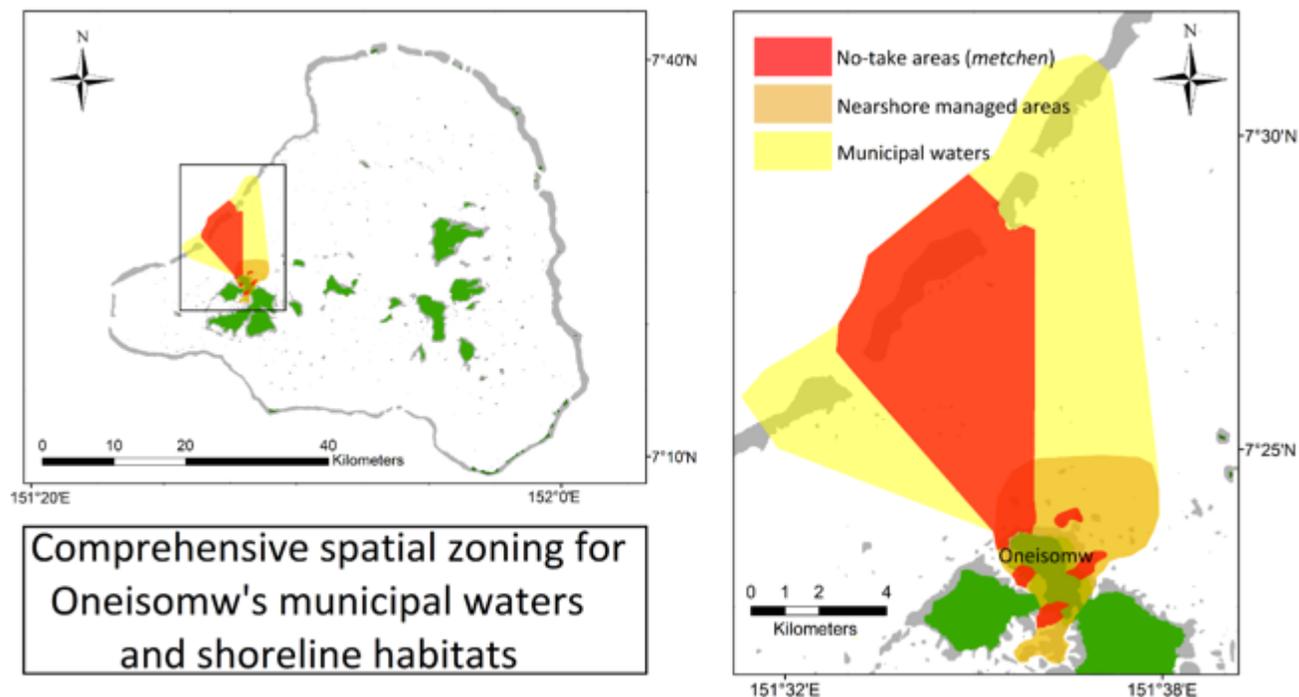


Figure 2. Map of spatial management zoning of Oneisomw's waters

2.1.3 Implementation of the Protected Area Network

This Protected Area Network puts all of Oneisomw's nearshore reefs under management with clear intentions

¹ This zone is not finalized and will be added to the PAN at a later date.

about the types of activities that are allowed in each area. This network will only work if there is community acceptance and mechanisms to enforce the underlying regulations. To increase the likelihood of implementing this network there needs to be

- Development and distribution of zoning with clear regulations
- Awareness campaign to ensure that people residing within the municipality and those who fish in Oneisomw’s waters understand and comply with the protected area network regulations
- Effective compliance and enforcement program

2.2. Non-Spatial management measures

A set of proposed non-spatial management measures to control harvest and prevent destructive fishing methods, in addition to existing state fisher regulations.

2.2.1 Existing Non-Spatial Management Measures

The government of Chuuk put in place several state rules and regulations in order to better management Chuuk state’s fisheries.

2.2.2 Non-Spatial Management Measures

Non-spatial management measures are proposed for the reefs on Oneisomw, including minimum size limits, species moratoria and gear bans and restrictions.

Net size limits	Minimum mesh size of 3 inches. Maximum dimensions of 100 ft x 8 ft
Commercial fishing ban	Commercial harvesting of marine resources within Oneisomw waters will be strictly forbidden for non-residents
Destructive fishing practices	In accordance with state and national laws, the use of explosives and chemical products will be strictly forbidden
Grouper seasonal ban	In accordance with state laws, the harvesting or possession of grouper species from January 1st to May 1st will be strictly forbidden
Species ban	The harvesting of <i>Bolbometopon muricatum</i> (bumphead parrotfish) Ukucho, <i>Chlorurus microrhinos</i> (Steephead parrotfish) Chamwechuk, and <i>Cheilinus undulatus</i> (napoleon wrasse) Merer / Maam will be strictly forbidden
Fish size limits	Harvesting of fish under established minimum sizes will be strictly forbidden
Net size limits	

Size Limits: The ORMC, on behalf of the municipality of Oneisomw, has agreed to adopt the size limits put into place by the State under the Chuuk State Coastal Fisheries Protection Act. These regulations will be adopted as they are rolled out by the state. Size limits are based on recommendations from the University of Guam (Appendix 2).

Species Bans:

Bolbometopon muricatum (bumphead parrotfish) Ukucho: 10-year moratorium on fishing.

Chlorurus microrhinos (Steephead parrotfish), Chamwechuk

Cheilinus undulatus (napoleon wrasse) Merer / Maam

3. COMPLIANCE AND ENFORCEMENT

A compliance and enforcement program will be developed to support implementation of the Oneisomw Fisheries Management Plan. Community awareness of management measures, rules, and regulations will be important to sustain community support for management. Transparency in enforcement (i.e. application of rules to everyone equally) will be important to ensure trust from fishers and community members on enforcement process.

3.1 Compliance and Enforcement Program

Compliance and enforcement will be a joint effort by the Chuuk Department of Marine Resources, Municipal Government and reef owners. The Oneisomw Resource Management Committee will work with consultants to establish an appropriate enforcement structure and protocol that aligns with state law. The Enforcement Program will be in place by the end of 2018. Once developed the fisheries management plan will be updated to reflect this.

Long term success of enforcement will be supported by an increase in compliance by fishermen. Focused education and awareness trainings on management rules, regulations, protected area boundaries and benefits will be conducted and continue to be provided to ensure support from the fishermen and community. The Oneisomw Resource Management Committee with support from the Chuuk Conservation Society will lead awareness and outreach efforts.

3.2 Fines and penalties

All violations will be considered equal under the law.

Fines and penalties will be developed as part of the enforcement plan.

4. ADAPTIVE MANAGEMENT

Adaptive management is a systematic approach to making management decisions. It focuses on learning and adapting, through partnerships of scientists, managers and other stakeholders who work together to sustainably manage resources like fisheries. Marine fisheries are complex systems of which we often have limited knowledge leading to a level of uncertainty. Therefore, it is important to reevaluate management actions over time as new information becomes available.

We recognize that the management decisions made in this management plan were based on information that will

become more refined over time. For each management action adopted in the plan, a review process is encouraged at a specific time interval, in order to evaluate the success or lack thereof from a particular action and decide on how to move forward. With technical assistance from TNC, UOG and Chuuk Department of Marine Resources a monitoring protocol will be developed to assess management actions. Once finalized the Adaptive Management section will be updated. Until then the plan should be reviewed six-month intervals during the first two years after approval and annually thereafter. The review should focus on the municipalities commitment to implemented activities and the performance of the ORMC.

4.1. Data and monitoring

A revised monitoring protocol will be developed by September 2025. Once finalized the fisheries management plan will be revised to include this monitoring protocol

4.2. Review and Decision-making process

On agreed upon time intervals a review panel consisting of The Nature Conservancy, Chuuk Conservation Society, University of Guam, Chuuk Department of Marine Resources and representatives from ORMC will meet to compile existing data, monitoring trends, analyses and other pertinent information. This information will be documented in a written report that summarizes key updates to the data and monitoring program and recommended changes to any management measures or compliance and enforcement methods. Ultimately, as the management body, the ORMC has final say on whether to adopt these recommendations.

5. CONCLUSION

The undertakings outlined in this management plan will assist the municipality of Oneisomw to achieve its aspiration for sustainable management of its marine environment for now and future generations. With technical assistance from relevant state agencies, Chuuk Conservation Society, The Nature Conservancy and its partners, the municipality of Oneisomw will manage its fisheries resources. The municipality of Oneisomw recognizes that development and implementation of this management plan is only one component of an effort to better manage their resources from ridge to reef that must be undertaken in order for tangible, long term benefits to be gained by future generations.

6. REFERENCES

1. Cuetos-Bueno J, Hernandez-Ortiz D, Graham C, Houk P. Drivers of catch, effort, and species composition in a large coral-reef fishery. PlosONE. 2018
2. Cuetos-Bueno J, Houk P. Disentangling economic, social, and environmental drivers of coral-reef fish trade in Micronesia. Fish Res. 2017; doi:10.1016/j.fishres.2017.10.010
3. Houk P, Deblieck J, Benavente D, Maxin S, Yalon A, Mclean M, et al. Status and management of coral reefs and fisheries resources in Chuuk Lagoon and Kuop Atoll , Federated States of Micronesia. Technical report prepared for The Nature Conservancy and the US Department of Interior. 2016.
4. McLean M, Cuetos-Bueno J, Nedlic O, Luckymiss M, Houk P. Local Stressors, Resilience, and Shifting

- Baselines on Coral Reefs. PLoS One. Public Library of Science; 2016;11: e0166319.
5. Kronen M, Friedman K, Boblin P, Chapman L, Vunisea A, Lassi F, et al. Federated States of Micronesia country report: profiles and results from survey work at Yyin and Riiken (YAP) and Piis-Panewu and Romanum (Chuuk)(April–May 2006). Pacific Reg Ocean Coast Fish Dev Program (PROC-Fish/C/CoFish)/Secretariat Pacific Community, Noumea. 2009;
 6. Cuetos-Bueno J. Advancing the Micronesia Challenge through community-based management of marine resources in Piis-Paneu, Chuuk. [Internet]. Technical Report for Pacific Marine Resources Institute. 2012. Available: http://www.pacmares.com/home/wp-content/uploads/2013/04/Main-Report_e2.pdf
 7. Hughes TP. Catastrophes, phase shifts, and large-scale degradation of a Caribbean coral reef. Sci Pap Ed. New York, NY:[sn] 1880-; 1994;265: 1547–1551.
 8. Williams ID, Walsh WJ, Miyasaka A, Friedlander AM. Effects of rotational closure on coral reef fishes in Waikiki-Diamond Head Fishery Management Area, Oahu, Hawaii. Mar Ecol Prog Ser. 2006;310: 139–149. doi:10.3354/meps310139
 9. Jupiter SD, Weeks R, Jenkins AP, Egli DP, Cakacaka A. Effects of a single intensive harvest event on fish populations inside a customary marine closure. Coral Reefs. 2012;31: 321–334. doi:10.1007/s00338-012-0888-x

Appendix 1: Work Plan

Objective	Activities	Responsible Agencies	Expected Timeframe
1. Develop Oneisomw Municipal Fisheries Management plan	<ol style="list-style-type: none"> 1. Final management plan reviewed by partners 2. Management plan translated 3. Management plan endorsed 	TNC, CCS, DMR, ORMC	6 Months
2, Legally Establish Oneisomw PAN Network	<ol style="list-style-type: none"> 1. Traditional owners/Mayor submit initial proposal to director 2. Director consults and educates community and complete proposal 3. 30 days comment period 4. Transmittal to Governor with Recommendation 5. Governor Reviews 30 days 6. Legislative action to create State PAN 7. FSM National PAN consideration 	ORMC, CCS, DMR, TNC	6 months
4. Establish municipal ordinances in line with state	<ol style="list-style-type: none"> 1. Conduct review of relevant state and national laws 2. Develop municipal ordinances 3. Pass ordinances 	CCS, DMR, Mayor, TNC	12 months

laws for fisheries regulations			
4. Develop enforcement and surveillance program	<ol style="list-style-type: none"> 1. Identify appropriate enforcement protocol and develop plan 2. Develop collaborative enforcement plan and SOP 3. Develop a community conservation offer program to encourage compliance and enforcement of zones and rules 4. Provide enforcement training 	Wayne Andrew (PIMPAC), CCS, DMR	6 months
5. Develop and implement awareness campaign to gain support and compliance for fisheries management	<ol style="list-style-type: none"> 1. Work with Rare to identify key messages to include in outreach sessions 2. Develop up awareness plan 3. Implement awareness plan 	Rare, CCS, PIMPAC, ORMC	ongoing
6. Develop and implement biophysical monitoring program	<ol style="list-style-type: none"> 1. Develop monitoring protocol 2. Collect scientific baseline data 3. Provide training to CCOs in coral reef monitoring 4. CCOs with technical support implement annual monitoring protocol 	UOG, TNC, DMR	Ongoing
7. Build capacity of Oneisomw Resource Management Committee	<ol style="list-style-type: none"> 1. Develop bylaws for ORMC 2. Assess capacity of ORMC 3. Identify capacity building opportunities and develop capacity building plan 	CCS, PIMPAC, MCT, TNC	Ongoing