

Pohnpei Biodiversity Strategy and Action Plan

The Federated States of Micronesia  
Pohnpei Biodiversity Strategy and Action Plan

2018–2023

Kaselehlieh,

On behalf of the People of Pohnpei, I would like to thank the FSM Department of Resources and Development and the Micronesia Conservation Trust for leading the nation in the Development of the revised State Biodiversity Strategy and Action Plan or for short, BSAP. We are very pleased to take part in this very important collaboration to plan together as a nation to cope with the impacts of the changes to our livelihoods.

Different sectors of the Pohnpei population took part in the many conferences that led to this final revised plan. We received support from government, traditional and ecclesial leaders. In our own different ways, we all know that we will fail in whatever we do if we do not put some thought into it at first. For this reason, we are always happy to take part in endeavors such as this.

Since the initial implementation of the Biodiversity Strategy and Action Plan for the Federated States of Micronesia, we have endured many changes. Against this backdrop, we have not been able to internalize the necessity to protect our livelihoods as a nation moving forward. Since 2002, the State of Pohnpei has supported many conservation efforts both at state and national levels. For these, we are very thankful.

This document is the product of collective efforts to plan together and put some common sense thought into what we are planning to accomplish together as one FSM. Besides fulfilling our commitment to the Convention on Biological Diversity (CBD), we were glad to part in this "planning ahead" exercise because we truly believe that this is important.

On behalf of the people of Pohnpei, we once again thank the FSM National Government for lead this important exercise. We thank as well the MCT for spearheading this effort. And we thank everyone for spending quality time to take part in all efforts that led to this revised plan.

On behalf of the people of Pohnpei, I endorse the Biodiversity Strategy and Action Plan 2018–2023 for the State of Pohnpei.

Ni wahu,



Marcelo K. Peterson  
Governor, State of Pohnpei

## Table of Contents

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FOREWORD	2
TABLE OF CONTENTS	3
ACKNOWLEDGEMENTS	4
INTRODUCTION	5
BIODIVERSITY IN POHNPEI	8
BACKGROUND TO THE REVISED POHNPEI BIODIVERSITY STRATEGY AND ACTION PLAN	10
Development Process for the Revised Pohnpei BSAP	10
THE POHNPEI BIODIVERSITY STRATEGY AND ACTION PLAN	11
Vision	11
Goal	11
Strategy and Action Plan	11
OBJECTIVE 1	12
OBJECTIVE 2	13
OBJECTIVE 3	15
OBJECTIVE 4	18
OBJECTIVE 5	20
OBJECTIVE 6	23
OBJECTIVE 7	25
OBJECTIVE 8	27
IMPLEMENTATION, MONITORING AND REPORTING	30
Implementation	30
Monitoring, Reporting and Reviewing	30
REFERENCES	31
APPENDIX 1: ANNUAL QUICK ASSESSMENT TEMPLATE	I

## Acknowledgements

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The Pohnpei State Biodiversity Strategy and Action Plan (BSAP) 2018–2023 would not have been possible without the great efforts of a large number of people from a number of government agencies, non-governmental organizations, community-based organizations and communities, who gave freely of their time, their experience and invaluable expertise. This has enabled this revised plan to reflect not only the priorities of Pohnpei today, but also the considerable ongoing efforts being made to conserve biodiversity and support sustainable development across the State.

The development of this plan was made possible through the generous financial support of the United Nations Development Programme.

The Pohnpei BSAP revision process was coordinated and facilitated by the Micronesia Conservation Trust, with many people from a great number of organizations, both governmental and non-governmental, and communities contributing to the consultation and validation workshops, and providing essential additional information. It is these people that have made the development of this Pohnpei BSAP possible:

Hinden Alexander, Jorg Anson, Patrick Blank, Stephen Boland, Marina Cantero, Aaron Daunny, Ilois David, Mavrick Dorres, Daniel Edgar, Lerihda Edmund, Galverson Elion, Alpi Eperiam, Eugene Eperiam, Chiara Franco, Tamara Greenstone Alefaio, Johnny Hadley, Iain Hall, Nelsin Iriarte, Eugene Joseph, William Kostka, Carlos Kusto, Kesdy-Ray Ladore, Shirley Ligoehr, Saimon Lihpai, Lorian Lohn, Adelino Lorens, Scotty Malakai, Roseo Marquez, Pelson Moses, Bejay Obispo, Francisca S. Obispo, Domenihka Panuelo, Sackett Peter, Eliaiser Rospel, Michaela Saimon, Herman Semes, Patterson Shed, Senolyn Sinek, Brad Soram, Henry Susaia, Liz Terk, Rihna Villazone, and John P. Wichep.

Those involved represented the following organizations:

Conservation Society Pohnpei, FSM Resources & Development, Micronesian Productions, Nett District Municipal Government, Nett Municipal Government, Office of Fisheries and Agriculture, Office of the Governor of Pohnpei, Pohnpei Chamber of Commerce, Pohnpei Environmental Protection Agency, Pohnpei Resource & Development, Pohnpei State Department of Health, Pohnpei State Division of Primary Health Care, Pohnpei State Forestry, Public Health & Hospital Emergency Program, The Nature Conservancy, and USAID Climate Ready.

The Pohnpei BSAP document was prepared by Iain Hall, with invaluable input from William Kostka, Tamara Greenstone Alefaio and many of those listed above.

## Introduction

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The State of Pohnpei is comprised of the island of Pohnpei and nine outlying atolls scattered over more than 100,000 sq. miles of water. The island of Pohnpei, sometimes referred to as the "Garden Island of Micronesia", is the largest in the FSM. It is where the nation's capital is located, and is hence the center of most economic activities in the FSM. Although the State may be the most potentially threatened in terms of biodiversity conservation, trends and developments in the past few years in the area of conservation show the promise of Pohnpei State heading in the right direction of sustainable development.

Pohnpei has a population of a little over 36,000, with a population density of 274 per sq. mile (FSM Office of Statistics, Budget, Overseas Development Assistance and Compact Management, n.d.). The state is divided into eleven municipalities: Madolenihm, U, Kitti, Sokehs, Nett, Mwoakilloa, Pingelap, Sapwuaifik, Nukuoro, Kapingamarangi and Kolonia Town. The main island is ringed by 25 smaller, widely scattered coral atolls, which lie on the barrier reef.

The average annual income from wages in Pohnpei is \$13,029, somewhat higher than the national average of \$11,386. Much of the population remains dependent on the land and sea for food, with approximately 82% of households engaging in at least one subsistence activity (agriculture and forestry, handicraft and home production, livestock and aquaculture, or fishing, hunting and gathering), slightly higher than the national average of 77% (FSM Office of Statistics, Budget, Overseas Development Assistance and Compact Management, 2014).

The FSM is a constitutional democracy, operating at national, state, municipal and traditional levels, with most power delegated to the four states by the national constitution. The State Government of Pohnpei is structurally similar to the FSM National Government with three separate branches of government: executive; legislative, and judicial. The Governor heads the Executive Branch with eight cabinet members heading the main government department and offices. There are also a number of semi-autonomous agencies in place, such as the Environmental Protection Agency, which are headed by Directors or Administrators under the guidance of Boards. The Department of Resource & Development and the Department of Environment, Climate Change and Emergency Management are both heavily involved in issues relating to biodiversity conservation. The state government holds jurisdiction over coastal waters up to 12 nautical miles from land. Beyond this, the National government has jurisdiction over the remainder of the EEZ, i.e. from 12 nautical miles to 200 nautical miles from land. Partnerships with traditional leaders and non-government agencies such as The Nature Conservancy and Conservation Society of Pohnpei have also been established to tackle conservation issues.

Systems of land ownership and tenure differ across the four states of the FSM. Land ownership in the FSM is limited to citizens of the FSM only, with land lease terms varying by state (US Department of State, 2013). The traditional culture of Pohnpei, which involves strong land and resource management components, is very much alive today and is still a strong influence on the lifestyles of Pohnpeians. The traditional system still exists within activities observed throughout the year. Despite Pohnpei being the melting pot of the FSM, where people of various races and from islands throughout the FSM reside, Pohnpeian culture remains practiced and respected by the island residents. Several languages are spoken in the FSM but three main languages are native to Pohnpei with three dialects.

Western influence is most evident in the capital city of Kolonia, where all aspects of western life exist. This influence is less striking in rural areas. Nevertheless, traditional conservation and land management practices are now being heavily challenged with the ever-increasing need for money, thus affecting the way people view and deal with land and natural resources.

The FSM experiences a tropical climate, with consistently warm weather driven by the north-east trade winds. The average annual temperature in Pohnpei in 2017 was 82.1°F (NOAA NCEI, 2018). There is little variation throughout the year, with the high islands such as Pohnpei being generally hot and humid. Rainfall across the FSM is generally plentiful, with Pohnpei receiving approximately 190 inches in 2017 (NOAA NCEI, 2018).

The FSM is strongly affected by the El Niño Southern Oscillation (ENSO), which has a particularly forceful influence on minimum air temperatures during the wet season (Australian Bureau of Meteorology and CSIRO, 2011). El Niño is also associated with reduced rainfall during the dry season. La Niña years are associated with extremely high tides in the FSM, which can lead to seawater inundation of crops and freshwater supplies (Fletcher & Richmond, 2010). The FSM is also vulnerable to extreme weather-related events, particularly typhoons, storm waves, flooding, landslides and drought.

Air and sea surface temperatures in the FSM are increasing, with waters around the FSM warming by approximately 0.11°C per decade in the eastern regions of the country and by 0.8°C per decade in the western regions since 1970 (Australian Bureau of Meteorology and CSIRO, 2011). Under a high emissions scenario, temperature increases greater than 2.5°C by 2090 are projected with high confidence for the FSM, with a similar temperature increase projected for the ocean surface (Australian Bureau of Meteorology and CSIRO, 2011).

## Pohnpei Biodiversity Strategy and Action Plan

Annual rainfall is also projected to increase, somewhere in the range of >5% and >15% by 2090 depending upon the model used and the specific location within the FSM (Australian Bureau of Meteorology and CSIRO, 2011). Increasingly intense rainfall events, particularly when following drought conditions, are increasing sedimentation run-off and coastal erosion, which in turn impacts essential marine ecosystems, such as seagrass meadows, and in turn marine productivity (Houk et al, 2013).

Of particular importance to the FSM, owing to reliance on near-shore coastal fisheries and the low-lying nature of many of its islands, are ocean acidification and sea level rise. In the case of ocean acidification, this is projected to rise throughout the 21<sup>st</sup> century resulting in reductions in the available form of calcium carbonate necessary for coral growth (Australian Bureau of Meteorology and CSIRO, 2011). As regards sea level, models suggest a rise of approximately 2–6 inches by 2030, and of approximately 8–24 inches by 2090 under a high emissions scenario (Australian Bureau of Meteorology and CSIRO, 2011). More than 80% of communities in the FSM are vulnerable to sea-level rise and flooding, given that most villages and settlements are situated in either coastal areas or in areas around rivers and streams (FSM, 2018). A 2010 study using the Coastal Module of the integrated Climate Framework for Uncertainty, Negotiation and Distribution assessment model suggested that a 1 meter sea-level rise by 2100 would incur damage costs in excess of 5% of GDP in the FSM (Anthoff et al, 2010).

A number of sectors within the FSM economy are recognized as being vulnerable to climate change, including fisheries, agriculture and tourism (FSM Department of Finance and Administration, 2018). These three sectors are also the focus of private sector investment, being considered as offering the greatest opportunities for short and long-term economic growth in the FSM (FSM, 2004), with all three dependent upon a healthy environment and thriving biodiversity, which are themselves also considered highly vulnerable to climate change (FSM Department of Finance and Administration, 2018).

### Pohnpei State Vital Statistics

Geography	
Location	2–8° N, 159–163° E
Number of islands	10 (1 high island + 9 atolls)
Land area	
Forest (including agroforest)	127.6 sq. miles (81, 659 acres)
Non-forest vegetation	7.3 sq. miles (4,654 acres)
Cropland	0.05 sq. miles (29 acres)
Urban (including urban cultivated)	2.2 sq. miles (1,412 acres)
Other (including water)	0.7 sq. miles (424 acres)
Ocean area	> 100,000 sq. miles
Climate	
Annual average temperature (2017)	82.1°F
Rainfall (2017)	~190 inches
Demographics	
Population	36,196 (34,789 on Pohnpei Proper, 1,407 on outer islands)
% of total FSM population	35%
Population density	274 per sq. mile
Economics	
Average annual income (wages)	\$13,029
% households involved in subsistence activity	82%
% contribution to national total household income	50.6%



## Biodiversity in Pohnpei

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Biodiversity across the FSM is incredibly rich, with FSM recognized as part of the globally important Polynesia-Micronesia biodiversity hotspot (CEPF, 2007). There are two terrestrial ecoregions within the FSM, one of which is the Yap Islands State ecoregion, while the Islands of Yap, Chuuk, Pohnpei and Kosrae together form the other (WWF, 2018).

Pohnpei displays high levels of species endemism, being home to forty seven endemic plant species (Costion&Lorence, 2012). In addition, seven endemic bird species are resident in Pohnpei; the Pohnpei Kingfisher (*Todiramphus reichenbachii*), which is considered to be vulnerable), the Pohnpei Lorikeet (*Trichoglossus rubiginosus*, which is near threatened), the Pohnpei Fantail (*Rhipidurakubaryi*), the Pohnpei Flycatcher (*Myiagrapluto*), the long-billed white-eye (*Rukialongirostra*, which is near threatened), the Pohnpei white-eye (*Zosterops onapensis*) and the aforementioned Pohnpei starling (*Aplonis pelzelni*) (IUCN, 2018)

The waters of the FSM are home to 1,221 species of fish. Of these, 1,070 are associated with the extensive reef system (Froese & Pauly, 2018). In fact, the wider Micronesia region is estimated to contain 4% of the world's coral reefs, with reefs a defining feature of the FSM.

The basis of the reefs, the corals themselves, are incredibly diverse in the waters of the FSM, with both soft and hard/stony corals extensively represented. The International Union for Conservation of Nature (IUCN) Red List of Threatened Species lists 427 species of coral in the FSM's waters, 100 of which are considered to be vulnerable and three endangered (IUCN, 2018). Biological surveys of reefs across the FSM have assessed the percentage of reefs that can be considered to be above the 'effectively conserved' threshold in the context of the Micronesia Challenge, based upon a number of criteria contributing to an overall ecosystem condition score. In Pohnpei, 30% of outer reefs and 14% of inner reefs meet the threshold. The data from these surveys also demonstrated that fishing pressure was a primary determinant of reef condition.

Alongside reef habitats, seagrass beds help to stabilize the wider environment, providing support for other biological communities. They stabilize sediments and act as a nursery habitat for many marine fish and invertebrates, some of economic importance, and so support the health of local fisheries (Green & Short, 2003). A rapid ecological assessment of seagrass beds in the waters around Pohnpei and Ahnd Atoll mapped approximately 17 sq. miles/44 km<sup>2</sup> of seagrass meadows and identified three species of seagrass associated with Pohnpei and two associated with Ahnd (CSP, 2006).

The FSM also supports approximately 36.3 sq. miles of mangrove forest across the islands, approximately 21.8sq. miles of which are in Pohnpei (Donnegan et al, 2011). Indeed, much of the FSM is covered with forests, and Pohnpei is no exception with an estimated 127.6 sq. miles of the islands forested (Donnegan et al, 2011). Upland forest covers 75.5 sq. miles of Pohnpei, with palm forest covering 7.1 sq. miles, swamp forest covering 0.4 sq. miles and agroforest covering 22.8 sq. miles (Donnegan et al, 2011). Cropland accounts for only approximately 29 acres of land in Pohnpei, and areas classified as 'urban cultivated' account for 0.7 sq. miles (Donnegan et al, 2011).

It is recognized that a number of threats to the biodiversity of Pohnpei, and the entire FSM, exist. These threats, which have been identified at a national level and are also relevant to Pohnpei State, comprise:

- Environmental conversion and degradation
- Over-exploitation of resources
- Waste management and pollution
- Invasive and alien species
- Climate change
- Infrastructure development.

One of the most pressing issues in Pohnpei is sakau/kava planting in the upland forest, which has led to extensive conversion of forests to agricultural use. In light of this and other threats, since the development of the initial Pohnpei BSAP in 2004, significant developments toward comprehensive biodiversity conservation in Pohnpei and throughout the FSM have been undertaken. Over time a network of strong partnerships between the national and state governments, local governments and communities, partners such as the University of Guam who provide technical expertise, and various conservation organizations, such as The Nature Conservancy and the Micronesia Conservation Trust, amongst many others. Programs supported by the MCT focus on biodiversity conservation, climate change adaptation and sustainable development throughout the FSM and wider Micronesia region, with the MCT playing a vital role in conservation in Pohnpei.

Perhaps the most significant conservation initiative to come about since the initial Pohnpei BSAP was drafted is the establishment of the Micronesia Challenge in 2006. At that time, the FSM, along with the Republic of the Marshall Islands, the Republic of Palau, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI), developed and committed to the Micronesia Challenge,



which has the dual aims of conserving 30% of near-shore resources and at least 20% of forest resources across Micronesia by 2020 (Micronesia Challenge, n.d.).

The Micronesia Challenge has been a catalyst for creating a regional web of mutually reinforcing projects, programs, and peer-learning networks to improve the condition and management of essential ecosystems and natural resources. Reflecting the region's diverse resource tenure systems and traditional management practices, national and sub-national government agencies with policy, regulatory, and enforcement mandates are partnered with non-governmental organizations (NGOs) with conservation and community outreach and mobilization skills to work with communities and traditional leaders to manage resources, conserve biodiversity, and increase ecosystem and community resilience to climate change. International universities, institutes, and conservation organizations provide scientific knowledge and support, while regional peer-learning networks connect resource managers and NGOs from across the Micronesia Challenge, functioning as capacity building and knowledge sharing platforms.

In working to achieve the Micronesia Challenge marine and terrestrial targets, government and non-government partners across the FSM have championed the creation of new terrestrial and marine protected areas. The FSM National and State governments and their numerous partners are also working towards sustainable financing for protected areas. This includes the FSM's Micronesia Challenge Endowment Fund sub-account that was established as a result of the FSM's commitment to the Micronesia Challenge, and which is administered by the MCT to support protected area management through contributions and investments. As of October 2017, this Endowment was valued at just over \$5.7M.

An ecoregional planning approach to biodiversity conservation has been adopted in the FSM. This approach, which prioritizes areas of conservation need to build a portfolio of conservation targets, allows for the development of a conservation plan for a nation containing myriad species of national and global importance for which the development and implementation of individual conservation and management plans would be impossible (The Nature Conservancy, 2003). One hundred and thirty Areas of Biodiversity Significance (ABS) were identified across the FSM, thirty five of which are in Pohnpei. These comprise nine terrestrial sites totaling 49.53 sq. miles, five marine sites totaling 48.17 sq. miles, eighteen coastal marine sites totaling 292.17 sq. miles and three coastal freshwater sites totaling 20.39 sq. miles (The Nature Conservancy, 2003).

Various figures exist for the number of areas under protection in Pohnpei, however, a 2009 nationwide gap analysis of protected areas suggested that at that time 253.7 sq. miles of terrestrial and marine environments (predominantly marine) were under protection in the state (MCT, 2009). An additional 302.4 sq. miles are considered to be outside of protected areas but within ABS Action Sites, while a further 457.8 sq. miles are outside of both protected areas and ABS Action Sites but are within ABS Standard Sites, thus representing good conservation features (MCT, 2009).

Biological surveys of marine protected areas (MPAs) in Pohnpei Lagoon have been undertaken, demonstrating that fish biomass was significantly higher in two of the MPAs compared with their reference sites, though coral cover did not differ particularly by protection status (Koshiba et al, 2011).

## Background to the Revised Pohnpei Biodiversity Strategy and Action Plan

### Development Process for the Revised Pohnpei BSAP

The first Pohnpei Biodiversity Strategy and Action Plan (BSAP) was introduced in 2004. Oversight of the revision process was provided by the Micronesia Conservation Trust, and a process of research, consultation and validation was followed. The objectives and actions as defined in the initial Pohnpei BSAP were taken out to consultation, and a multi-stakeholder group was engaged in a two-day workshop to review the BSAP for ongoing relevance, identifying what progress had been made, where additional efforts were needed under current objectives and actions, and where new actions were required. The group comprised government officials, regional, state and community NGO representatives, technical experts, scientists, researchers and educators involved in environmental education. The Micronesia Conservation Trust was accompanied by Ricky Carl of The Nature Conservancy.

In addition to these consultations, a specific women's focus group was held to ensure that the different interactions with and observations of biodiversity experienced by women in Pohnpei were understood and incorporated into the revised BSAP.

Following this process, a revised document was developed, which was then circulated to a select group from the original consultations, who then convened for a further two-day validation workshop.

This process was part of a wider set of consultations undertaken as part of the revision of the National Biodiversity Strategy and Action Plan (NBSAP). The revision of the NBSAP took account of each of the states' revised BSAPs, as well as being consulted upon separately. By following this process, it is intended that the NBSAP and individual state BSAPs are mutually supportive and reflect each other.

## The Pohnpei Biodiversity Strategy and Action Plan

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### Vision

Pohnpei State will have more extensive, diverse, and higher quality marine, freshwater, and terrestrial ecosystems, providing sustainable resources and benefits to Pohnpei's residents.

### Goal

The people of Pohnpei are actively protecting their natural and cultural resources and engaging in livelihoods based on traditional knowledge and modern-day sustainable development practices.

### Strategy and Action Plan

The initial Pohnpei BSAP focused on seven objectives:

- Develop a 20 Year Vision for the State of Pohnpei, and complete the community visioning process in at least two municipalities
- Establish and implement a Comprehensive Pohnpei Lagoon Conservation Area Plan, including the development of a Marine Protected Areas Network and more effective management/enforcement of existing and new marine laws
- Establish effective management of Pohnpei's Watershed Forest Reserve and at least two mangrove reserves, with supporting local and state policies and day-to-day maintenance by local communities
- Address the invasive species problem in Pohnpei state by strengthening the quarantine program and controlling and/or eradicating at least five selected species
- Increase awareness on proper (organic and inorganic) waste disposal and recycling, pollution control, fuel and energy reduction/alternatives, including the adoption of at least one model of effective "best practices" management in each of the areas
- Revive, maintain and utilize relevant Traditional Knowledge, which supports biodiversity conservation and improves community leadership and participation in conservation and development plans and initiatives
- Increase conservation funding by mainstreaming biodiversity conservation in government budgets as well as by establishing local/state conservation finance mechanisms and links with MCT and other donor agencies

These key objectives remain largely relevant and so this revised Pohnpei BSAP utilizes them as the basis for its areas of focus under which revised and updated actions are described.

## Objective 1

### Develop a 20 Year Vision for the State of Pohnpei, and complete the community visioning process in at least two municipalities

The actions included in the initial Pohnpei BSAP were as follows:

- Gain State and Municipal Government buy-in to the visioning process through a high-level workshop involving external consultants by 2005
- Develop Community Visioning Steering Committee and conduct Community Visioning in all municipalities, followed by a state-wide program and pilot long-term vision and sustainable development plans for at least 2 municipalities in Pohnpei state by 2008

#### Progress to date

Various activities have progressed related to this objective. A municipal vision for UMunicipality was completed. This was a highly complex and resource-intensive process. In addition, a holistic municipal plan has been initiated by The Nature Conservancy, with the intention that all sectors will mainstream biodiversity into their municipal plans.

The Pohnpei Sustainable Development Plan has been adopted. This is linked to the FSM Strategic Development Plan and the Sustainable Development Goals.

Many community-based plans are in place across Pohnpei, including community management plans, mangrove plans, and plans developed utilizing the Local Early Action Planning (LEAP) tool.

#### Updated actions:

1. Develop and align at least five municipal resource management plans, including one outer island each year, with the Pohnpei Strategic Development Plan
2. Initiate re-establishment of the Pohnpei Resource Management Committee (PRMC) through executive order from the Governor, and ensure it has appropriate level of authority with the Lieutenant Governor Chairman by end of 2018
3. Ensure the re-established PRMC works closely with Executive Budget Review Committee (EBRC)

#### Indicators

The main indicators under this objective will be the development of new community resource management plans across eleven municipalities, with all of these plans aligning with the Pohnpei State Strategic Development Plan, and the executive order being adopted by the Governor.

#### Constraints

The main constraint under this objective will be the political will to re-establish the Pohnpei Resource Management Committee. Further constraints will largely relate to the capacity to undertake reviews of community resource management plans and how they link to the Pohnpei Strategic Development Plan and other national and international plans such as the Micronesia Challenge, the Pacific Island Forum Priorities, and relevant UN Sustainable Development Goals. The fact that some of the current State priorities are not aligned with the Pohnpei Strategic Development Plan may also be a constraining factor.

## Objective 2

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Establish and implement a Comprehensive Pohnpei Lagoon Conservation Area Plan, including the development of a Marine Protected Areas Network and more effective management/enforcement of existing and new marine laws

The actions included in the initial Pohnpei BSAP were as follows:

- Build awareness of biodiversity conservation and fisheries management and disseminate relevant information to the public by 2005
- Conduct a rapid ecological assessment and necessary research to improve biological information on Pohnpei's marine biodiversity by 2005
- Expand the MPA Network by establishing at least one community led MPA per municipality by 2005
- Develop and conduct a standardized biological and socio-economic monitoring program to evaluate/cage effectiveness/impact of MPAs on adjacent communities by 2005
- Reef resilience to climate change-caused coral bleaching will be integrated into the MPA network design process in Pohnpei by 2009
- Establish temporary bans on the Live Reef Fish Trade (LRFT) and export of reef fish/marine products, and conduct research to determine sustainable export levels (if any) of fish and marine products by 2005
- Prohibit the import of monofilament gill nets with gaps less than three inches (3") in width by 2006
- Prohibit fishing with SCUBA by 2005
- Prohibit night spear fishing with flashlights by 2008
- Conduct research/resource assessment and develop a sustainable fish management plan by 2008
- Identify no more than two dredging sites for the state of Pohnpei and close all other existing sites and impose a moratorium banning all new dredging sites by 2005
- Establish and utilize alternative land-based sources of fill material to replace coral by 2006
- Improve permitting and management of terrestrially based agricultural and development activities that impact the marine environment by 2005
- Develop a Coastal Management Plan for Pohnpei State by 2008
- Establish at least one environmentally sustainable pilot mariculture/aquaculture venture (i.e. sponge farms, pearl farms, etc.) as an alternative source of income to marine resource extraction/exploitation by 2007

### Progress to date

A good amount of progress has been made under this objective. In terms of awareness building, while the pre-existing Pohnpei Resource Management Committee was vital for this at the highest levels, a great deal of activity has been undertaken by other agencies and organizations. Community Conservation Officers representing each conservation site come together on an annual basis for cross-site visits and information exchange. The Locally-Managed Marine Area (LMMA) network increases awareness at implementation and practical levels, while the Pohnpei Fisheries Council (Menin Katengensed) brings in the voice of fishermen and market owners. The Conservation Society Pohnpei delivers awareness programs, and environmental science is being integrated into school curricula.

Rapid ecological assessments were undertaken in 2005 and 2006 to help government, NGOs and communities determine where marine protected areas should be established, with subsequent sampling of coral atolls performed across the FSM. In terms of establishing marine protected areas, there is at least one in each municipality, and the focus now should be on ensuring they are as effective as possible. A science-to-management loop, led by data analysed by the University of Guam Marine Lab (which is responsible for managing the Micronesia Challenge biophysical monitoring database), The Nature Conservancy and other technical partners, is supported to ensure marine protected areas are managed appropriately.

Resilience to climate change is incorporated into marine protected area plans. The Nature Conservancy, the Micronesia Conservation Trust, the Conservation Society of Pohnpei, along with partners such as the Pacific Islands Managed and Protected Area Community (PIMPAC) and Micronesians in Island Conservation (MIC) have supported the development of a toolkit for resilient, locally managed marine areas.

The commercial export of various marine resources, such as seacucumbers, trochus, coconut crab and mangrove crab is prohibited under state law, and fishing with scuba gear is banned, with necessary regulations in place. Legislation prohibits the use of nets with a mesh size greater than 4 inches. While attempts to introduce legislation regarding spear fishing at night have been unsuccessful, coastal management plans and protected areas are, to some extent, limiting this issue.

## Pohnpei Biodiversity Strategy and Action Plan

Mariculture activities are growing, with coral, sponge and seaweed farming operations in place. The Marine and Environment Research Institute of Pohnpei is providing technical support with the mariculture projects of approximately 50 fishing/farming families in Pohnpei. This is providing significant support to the livelihoods of those families.

Improvement management of terrestrial developments and activities that impact the marine environment have been less successful, with more focus needed on strengthening permitting and regular monitoring of development activities to ensure they comply with their permits. Large amounts of sakau cultivation continues, and coral dredging, road building and erosion are known to have caused sedimentation, which effects Pohnpei's mangroves, seabed grasses and coral reefs.

### Updated actions:

1. Recruit a Protected Area Network coordinator by December 2018
2. Continue to implement the Ai Mour Ai Pwukoa campaign in at least 100 communities in Pohnpei, and ensure that the Ai Mour Ai Pwukoah campaign aligns with other awareness activities by other parties
3. Continue to survey and monitor Pohnpei's marine biodiversity to enhance a comprehensive information base established under the framework of the Micronesia Challenge (MC)
4. Complete the MPAME tool exercise in all existing protected area network sites, to expand and increase management effectiveness
5. Continue to implement Micronesia Challenge Socio Economic Measures by using SEMPASIFICA socio-economic monitoring programs to evaluate and monitor the impact of PAs on adjacent communities
6. Continue to integrate climate change resilience into the PA network design process by preparing annual summaries of the activities conducted by internal and external researchers
7. Establish a ban on the Live Reef Fish Trade (LRFT) by the end of 2019
8. Establish a temporary ban on the export of reef fish/marine products by the end of 2019
9. Require research and assessment to confirm the sustainable export level of certain species of marine resources
10. Enact legislation prohibiting the import of monofilament gill nets with gaps less than three inches (3") by December 2019
11. Enact legislation regarding night time spear fishing by December 2019
12. Revisit the Pacific Islands Applied Geoscience Commission (SOPAC) assessment relating to areas for dredging to assess the continued relevance of these recommendations for the use of land-based aggregate by March 2019
13. Continue to conduct annual research and resource assessments to help inform municipal and state development of sustainable fisheries management plans
14. Using SOPAC, report recommendations to support legislation to identify no more than two dredging sites for the state of Pohnpei and close all other existing sites and impose a moratorium banning all new dredge sites by December 2019
15. Develop a Pohnpei State Coastal Management Plan by December 2021
16. Work with MERIP to double the 2018 level of mariculture and aquaculture production by 2023

### Indicators

Major indicators will include, but not be limited to, a growing number of marine protected areas and an expanding information base, as well as new regulations and legislation to control and/or prevent unsustainable fishing practices.

### Constraints

Major constraints will include the capacity to undertake ongoing programs of research, community consultations for municipality-based planning and workshops to assess and review legislation and research outputs. In addition, political will may be a constraint in terms of pushing forward legislation and regulations relating to fishing practices, export and resource extraction. A major potential constraint will be the Pohnpei leadership's agreement to halt coral dredging and switch to land-based aggregate for road and other infrastructure developments.

## Objective 3

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### Establish effective management of Pohnpei's Watershed Forest Reserve and at least two mangrove reserves, with supporting local and state policies and day-to-day maintenance by local communities

The actions included in the initial Pohnpei BSAP were as follows:

- Delineate boundary and enforce the Watershed Forest Reserve (WFR) by 2005
- Expand and continue the Grow Low Campaign by 2005
- Continue monitoring of sakau (agriculture) forest clearings and provide findings/results to state leaders, enforcement agencies, Municipal Governments and traditional leaders for action by 2005
- Establish and implement a municipal forest surveillance network by 2006
- Continue and expand public awareness on the importance and long-term benefits of the WFR by 2005
- Provide and/or promote ideas for alternate sources of income and feasible compatible development with at least one pilot project in each of the following areas (i.e. fallen trees for handicraft, local cinnamon) by 2006
- Clear road and development plan & construction through community consultations/hearings by 2005
- Establish a Watershed Management Fund from public water systems revenues by 2006
- Establish limited access into WFR and within 50 meters around village water systems/catchments by 2007
- Conduct aerial and/or satellite photography to update state vegetation map(s) every five (5) years by 2008
- Undertake new forest bird and fruit bat surveys on a five-year rotation by 2008
- Begin reforestation in at least 50% of the state's degraded watershed areas by 2009
- Identify appropriate strategies to control the export of sakau grown in the uplands and implement the most feasible by 2009
- Monitor at least one river/stream for water levels/health and silt now to show impacts of terrestrial based activities/development on the river and its adjoining habitats (i.e. estuary, mangrove areas, sea grass beds and coral reefs) by 2005
- Develop land-use and zoning plan for the state of Pohnpei by 2008
- Establish and competently staff a GIS Center with nodes in key government agencies by 2007
- Update and digitize all key natural resource information (digital elevation model (DEM), soils, vegetation, rivers, wildlife populations, etc.) for the state by 2010
- Update and implement a mangrove management plan by 2005
- Establish at least one pilot community-based mangrove reserve by 2006

### Progress to date

Some good progress has been made towards the achievement of the initial actions under this objective. The Watershed Forest Reserve has been partially delineated, with this activity completed in U, Sokehs and Madolenihmw, with delineation in Nett and Kitti still pending. The Grow Low campaign was completed, though assessment of its success needs to be undertaken to inform a new strategy.

In U, Madolenihmw, Kitti, and Nett, forest rangers monitor sakau forest clearings and report on their findings, while a municipal forest surveillance network has also been established.

Awareness activities around the importance of the Watershed Forest Reserve have been ongoing, with maps and posters being produced, radio announcements broadcast and community outreach programs organized. This is recognized as important work that should be continued on an ongoing basis. The promotion of alternative income sources was undertaken successfully in Kitti, and this activity should now be replicated across other municipalities. In U Municipality, the community of Awak has designated an area to be added to the Watershed Forest Reserve area. While the bill has not been passed, the community itself has opted to tell all its members to refrain from carrying out sakau/kava planting in the area.

A Pohnpei island-wide mangrove vulnerability assessment is currently underway to build local capacity to identify and implement viable management options for increasing mangrove resilience. Through this project, scientific research including mapping, sediment analysis and an island-wide mangrove climate scenario model will help communities to establish plans that will feed into the overall state plans. Mangrove reserves have been established in Pwudoi, Senpehn and Enipein. In terms of a geographic information system (GIS), this is in place but sharing of data is limited. Inventorying of key natural resource data is being undertaken at a national level, with The Nature Conservancy planning to host a Pacific Regional Environment Programme (SPREP)-supported database of information related to the future State of the Environment report. In 2016, in collaboration with the United States Forest Service (USFS) regular Forest Inventory Analysis (FIA) program, an additional 93 intensified FIA plots within protected area network sites

## Pohnpei Biodiversity Strategy and Action Plan

and other priority landscape areas were established. Ultimately, this program will improve the effectiveness of the Micronesia Challenge and enable the development of comprehensive data sets that will be essential to ongoing monitoring and adaptive management strategies.

Other activities have been achieved to some degree, such as the establishment of the Nett Water Fund, which needs assessing and next steps of implementation decided upon. Additional plans for implementation across Pohnpei are also needed. Similarly, while a bird survey was undertaken in 2011, 5-yearly bird and fruit-bat surveys have not yet been established. Monitoring of rivers and streams is ongoing but further research is needed.

### Updated actions:

1. Delineate the Watershed Forest Reserve (WFR) boundary in Kitti and Nett by 2020
2. Assess impact of the Grow Low campaign to inform future activity (complete the assessment of the Grow Low Campaign to determine its effectiveness by December 2019)
3. Continue quarterly monitoring of sakau (agriculture) forest clearings and provide findings/results to state leaders, enforcement agencies, Municipal Governments and traditional leaders for action
4. Work with the AG to enforce the watershed law to prevent sakau growing in the Watershed Forest Reserve
5. Continue and expand public awareness on the importance and long-term benefits of the Watershed Forest Reserve by using the Ai Mour Ai Pwukoa campaign
6. Encourage use of fallen trees in handicraft production as an alternative to cutting live trees
7. Assess Nett WaterFund, identifying next steps for implementation and replication across other municipalities
8. Work with the AG to enforce Watershed Forest Reserve regulations regarding access
9. Conduct awareness activities around the soil map, the Pohnpei Soil Map and the Landslide Hazard Map developed for the US National Resources Conservation Service (NRCS) (Using the soil map and landslide hazard map in the Ai Mour Ai Pwukoahcampaign)
10. Work with the US Forest Service to update the Pohnpei vegetation map by 2023
11. Undertake new forest bird and fruit bat surveys by 2023
12. Develop recommendations on the reforestation of important watershed areas based upon watershed legislation and work with forestry experts to conduct monitoring on clearing sites, to determine natural reforestation and removal of invasive
13. Revisit and refresh land-use and zoning plan for the state of Pohnpei
14. Establish a designated geographic information system (GIS) as part of the Pohnpei State resource department of R&D including a digital repository of key natural resources for protected area management, by December 2019
15. Continue the mangrove assessments funded by US federal agencies to help develop a comprehensive Pohnpei mangrove management plan, which will include identification of additional mangrove reserves by December 2021
16. Strengthen permitting and management of terrestrial based agricultural and development activities that impact the marine environment

### Indicators

Completing the delineation of the Watershed Forest Reserve will be a key indicator here, as will be an increase in the number of water funds, alternative income projects and mangrove reserves. The ongoing generation of research data from monitoring and surveys will also serve as an indicator against various actions under this objective.



### Constraints

Funding and human capacity will be key constraints for the expansion of many of the activities identified under this objective, such as continued research activations, replication of successful projects and the enforcement of regulations. Political will is also an important factor here, as is community participation.

## Objective 4

### Address the invasive species problem in Pohnpei state by strengthening the quarantine program and controlling and/or eradicating priority invasive species

The actions included in the initial Pohnpei BSAP were as follows:

- Strengthen quarantine & prevention of introduced invasive species by 2005
- Formally establish and fund inter-agency Invasive Species Task Forces to deal with priority invasive species by 2005
- Establish and hire at least 2 permanent positions focusing on quarantine, invasive species control and eradication by Pohnpei State Government by 2005
- Establish training on control and identification of invasive plants for quarantine officers and relevant agency staff by 2005
- Conduct education and awareness on invasive species by 2005
- Establish an invasive species monitoring and reporting program by 2005
- Establish a law requiring all items originating from and/or passing through Guam to be subject to inspection prior to shipping to Pohnpei (FSM) by 2005
- Develop an Emergency Response Plan for invasives (i.e. brown tree snake, snails, etc.) by 2005
- Eradicate and/or control five (5) selected invasive species by 2008
- Update invasive plant and animal database and widely disseminated to all State resource management agencies, Municipal Governments and the private sector by 2007
- Conduct a survey and identify all invasive species in Pohnpei State by 2008

#### Progress to date

Progress has been mixed under this objective. Whilst a strengthening of quarantine and prevention measures has not been adequately achieved, the Invasive Species Taskforce of Pohnpei (iSTOP), with a newly endorsed strategic action plan (2018–2022), has been established and existing quarantine officers have been trained to identify invasive species. In addition, new quarantine officers travel to the University of Guam for basic training in brown snake and coconut rhino beetle identification and control.

Awareness-generating activities include posters and flyers, alongside school and community visits being conducted the Conservation Society of Pohnpei. Emergency plans for brown tree snake and coconut rhino beetle occurrences are in place.

The establishment of a law relating to items from or passing through Guam cannot be implemented without a national invasive species act being developed and enacted.

The octopus tree, ivy gourd, chain of love and false sakau have all been eradicated in known sites of occurrence, while eradication of minah birds has occurred and efforts are underway to eradicate tree sparrows. There are plans in place to conduct a survey of all invasive species in Pohnpei in 2019/2020.

#### Updated actions:

1. Strengthen quarantine and prevention of introduced invasive species through improved collaboration with national government, quarantine officers, including training and identification and control of invasive species by June 2019
2. Establish a state Invasive Species Act to institutionalize and fund the Invasive Species Taskforce of Pohnpei (iSTOP) by June 2019
3. Appoint a Pohnpei State Invasive Species Co-ordinator by June 2019
4. Include invasive species education into Ai Mour ai Pwukoa campaign by March 2019
5. Strengthen the invasive species monitoring and reporting program by December 2018
6. Complete the Emergency Response Plan for invasives as identified in iSTOP SAP 2018–2022 by June 2019
7. Continue to eradicate and/or control priority invasive species as identified in the iSTOP SAP by 2023
8. Expand invasive species database to include all terrestrial and marine invasive species and make available to all relevant agencies and organizations by December 2020

9. Conduct a survey and identify all invasive species in Pohnpei State by 2020

#### Indicators

The main indicator under this objective will be the eradication and/or control of those invasive species already present in Pohnpei, and the ongoing prevention of introduction of further invasive species in the future.

#### Constraints

Funding and technical capacity limitations will be key constraints under this objective. The political will to develop legislation may also act to constrain progress.

## Objective 5

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Increase awareness on proper (organic and inorganic) waste disposal and recycling, pollution control, fuel and energy reduction/alternatives, including the adoption of at least one model of effective "best practices" management in each of the areas

The actions included in the initial Pohnpei BSAP were as follows:

- Establish and implement education/awareness programs and improve dissemination of public information (i.e. water quality, restaurant grades, public/picnic areas to the local communities, etc.) by 2005
- Improve enforcement of current solid waste regulations by 2005
- Create an Emergency Response Plan for Hazardous Wastes (i.e. oil and chemical spills) by 2005
- Establish a collection area for all hazardous wastes (i.e. oil, battery, chemicals, etc.) and require all repair shops and the general public to utilize the area by 2006
- Establish and implement a Pohnpei State Organic, Inorganic and Hazardous Waste Master Plan and better enforce existing litter/waste disposal laws by 2007
- At least one local handicraft/industry within Pohnpei designing and developing shopping bags by 2006
- Ban import of Styrofoam products and plastic bags by 2006
- Improve recycling and establish taxes and or fees on at least one non-bio-degradable imports (i.e. plastic and aluminum products) by 2007
- 100% of government offices are recycling aluminum, glass and paper wastes by 2008
- Establish at least one working model of properly managed waste disposal site (separating hazardous wastes, plastic or other impervious liner, composting, covering with soil, etc.) in one of the state's outlying municipalities by 2009
- Establish a fund financed by disposal fees on all vehicle and heavy equipment imports by 2006
- Tax incentives created to encourage local or foreign entrepreneurs to crush vehicles and export them to Asia for the scrap metal market by 2007
- All abandoned vehicles in the state will be removed from public areas and safely disposed of by 2008
- Continue to seek membership on regional (Micronesia) recycling ventures by 2005 onwards
- Establish at least one appropriate pigpen and outhouse model in each °Cale municipalities by 2007
- Adopt these new models in state regulations and require all new and existing pigpens and outhouses to meet these standardized models by 2008
- Removal of all pigpens and outhouses from inappropriate areas (i.e. riverbanks, shorelines, etc.) by 2010
- 100% of new government facilities and infrastructure designed and constructed to be "climate-proof" from 2005 onwards
- At least one new public building will integrate at least one alternative energy source (solar, wind, hydro-electric) to generate 50% of its energy needs by 2009

### Progress to date

Progress under this objective has been somewhat limited. Successes include the Green Roadshow, a program visiting twenty six schools and disseminating information run by the Conservation Society of Pohnpei and the Environmental Protection Agency together. Community outreach has also been undertaken, involving discussions around waste management, as well as the Integrated Water Resource Management project, with water quality testing performed in a number of different areas. An aluminum can recycling program has seen substantial success, resulting in visibly cleaner roads, and some municipalities are initiating their own roadside and yard cleaning programs.

In 2018, the Pohnpei-based Awak Farmer's Association began producing plates out of betel nut palms as a substitute product for polystyrene and plastic plates for use in the FSM. Betel nut palm is an abundant natural resource and the plates are hypo-allergenic, food and human safe, and biodegradable after use. The development of this project not only contributes to the sustainable use of local biodiversity and provides an alternate income source for the villagers but should also help to slow the importation of foam and plastic plates.

A pigpen model has been developed in U municipality, that should now be replicated elsewhere. Regulations are in place relating to standardized pigpen models. Removal of pigpens from riverbanks has occurred in some places, with ongoing expansion of this activity required.

With regard to building programs, there is a national program to ensure new housing is climate efficient.

## Pohnpei Biodiversity Strategy and Action Plan

The remaining actions under this objective have either not been achieved, or early progress has subsequently stopped. This latter situation is, for example, the case with regard to incentivizing entrepreneurs to crush and export vehicles.

### Updated actions:

1. Include waste management, Water quality into Ai Mour Ai Pwukoa campaign by March 2019
2. Deputize Environmental Protection Agency staff, and other appropriate agencies, to enforce all waste regulations, including waste from fishing vessels, through on-site citations by March 2019
3. Create an Emergency Response Plan for Hazardous Wastes (i.e. oil and chemical spills) by June 2019
4. Replicate the Kosrae battery recycling program to enable collection of batteries from Pohnpei by December 2020
5. Establish and implement a Pohnpei State Organic, Inorganic and Hazardous Waste Master Plan and better enforce existing litter/waste disposal laws, including a collection area of all hazardous waste (oil, batteries, chemicals, etc) and require all commercial establishments and the general public to utilize this area by December 2020
6. Appoint a team of Youth Ambassadors, including groups such as Youth for Change to raise awareness on the negative impacts of illegal dumping by March 2020
7. Expand the plastic law to include Styrofoam, and develop supporting regulations to be implemented by the end of 2019
8. Pursue the establishment of at least one local handicraft/industry within Pohnpei designing and developing shopping bags by the end of 2019
9. Ban the importation of Styrofoam products and plastic bags, and expand the eco-plate project as an alternative for plastic foam plates, by 2020
10. Improve recycling and establish taxes and or fees on at least one non-bio-degradable import (e.g. plastic or aluminum products) by December 2020
11. Require recycling of aluminum, glass and paper wastes in all government offices by March 2019
12. Promote the awarding of a 5-year contract to Pohnpei Waste Management to allow better investment in the dump site and waste collection by end of June 2019
13. Improve the frequency and reliability of waste collection and transport to the central dump site by December 2019
14. Establish a specific green waste site for composting in an appropriate area by December 2020
15. Revisit environmental health regulations (with EPA) to prevent health impacts from waste and pollution by June 2019
16. Ensure centralisation of hospital waste management by June 2019
17. Establish a fee for funding the disposal all vehicle and heavy equipment imports by December 2019
18. Remove all abandoned vehicles from public areas and dispose of safely by December 2019
19. Continue to promote regional recycling with Micronesia ventures by December 2023
20. Replicate the dry litter piggery model in five new communities around Pohnpei, including establishment of a revolving fund by December 2023
21. Remove all piggens and outhouses from inappropriate areas (i.e. riverbanks, shorelines, etc.) by 2023
22. Require all new government facilities and infrastructure designed and constructed to be "climate-proof" by December 2020
23. Integrate at least one alternative energy source (solar, wind, hydro-electric) into at least one new public building, to generate 50% of its energy needs by 2020

### Indicators

Many specific indicators exist related to the actions under this objective. More generally, a reduction in illegal dumping, improved public safety and a cleaner environmental will be indicative of overall progress.

### Constraints

Political will may act to limit progress, while human and financial capacity will likely be constraints to expanding and replicating successful models and undertaking broad public awareness campaigns.

## Objective 6

### Revive, maintain and utilize relevant Traditional Knowledge, which supports biodiversity conservation and improves community leadership and participation in conservation and development plans and initiatives

The actions included in the initial Pohnpei BSAP were as follows:

- Establish and/or strengthen cultural education, with a strong focus on traditional conservation and resource management practices, in the primary and secondary schools by 2006
- Promote pride in traditional conservation and resource management knowledge/skills (i.e. Culture Day Celebrations, school fairs, recognitions and awards, etc.) by 2005
- Establish formal and informal programs that teach traditional conservation and resource management skills by 2007
- Continue the Pohnpei Ethnobotany Project (herbarium and database) and disseminate and/or utilize the information in education and outreach programs by 2005
- Establish and implement regular (quarterly) consultation process between local and state governments and Traditional Leadership Council by 2005
- Develop review processes with strong environmental criteria and community involvement in all municipalities by 2005
- Improve the U Municipality community resource management model and adopt lessons learned in other areas by 2005

#### Progress to date

Good progress has been made under this objective. With title II of the Pohnpei Constitution upholding traditional and cultural practices, traditional knowledge is an ongoing focus for activities throughout the state.

There is an ongoing radio program covering Pohnpeian historical events and activities, while the Catholic Church has an existing conservation and resource management program that is aired monthly and preached during Sunday mass. Pohnpei studies are due to be implemented in the public school curriculum and strengthened this year.

The Island Food Community of Pohnpei promotes biodiversity for culture, health, the economy, environment and food security. In addition, a situational analysis and proposed future action plan on the uses of traditional medicine in the health sector has been completed with technical expertise from the World Health Organization (WHO)"

A number of annual cultural events are held, including Women's Day, Pohnpei Culture Day and World Food Day. There are annual school cultural fairs, municipal cultural fairs and agricultural fairs, breadfruit and yam festivals, and a newly established local farmers' market. Ongoing projects target senior citizens, youth and women, teaching traditional knowledge and skills.

In terms of documenting traditional knowledge, Dr Lois Engelberger has documented the various yellow-flesh food crops of Pohnpei, while the College of Micronesia FSM runs an ongoing ethnobotany class.

The Traditional Leadership Council of Pohnpei meets regularly every year, though there is a recognized need to provide regular updates on conservation activities to the Council.

#### Updated actions:

1. Continue to strengthen cultural education, with a strong focus on traditional conservation and resource management practices, in primary and secondary schools as part of Ai Mour Ai Pwukoah campaign by December 2019
2. Expand the Pacific Resources for Education and Learning (PREL) Geoliteracy in Micronesia (GEM) project, including formal and informal programs that teach traditional conservation and resource management skills, by December 2019
3. Strengthen biodiversity messages in traditional knowledge radio programming by March 2019
4. Continue to promote pride in traditional conservation and resource management knowledge/skills, and strengthen integration of biodiversity conservation into celebration days and cultural events as part of Ai Mour Ai Pwukoah campaign by December 2018
5. Promote the cultivation and consumption of our diverse traditional food crops by May 2019
6. Use the information from the Pohnpei Ethnobotany Project (herbarium and database) and disseminate and/or utilize the

information in education and outreach programs by June 2019

7. Appropriate parties to continue to regular updates on conservation activities at the regular Mwoalen Wahuileile en Pohnpei (Traditional Leadership Council) meetings by December 2019
8. Establish an annual conference that highlights biodiversity conservation initiatives to Traditional Leaders, Church leaders, Village Chiefs and Mayors
9. Develop review processes with strong environmental criteria and community involvement in all municipalities by 2020
10. Replicate the U Municipality community resource management model in other areas by December 2019
11. Expand the Community Resource Management (CRM) model across municipalities by December 2019
12. Establish a facility for the sustainable cultivation of traditional medicinal plants by December 2020
13. Establish a facility to provide public education on Pohnpei's biodiversity, including documents and archives of Pohnpei's traditional knowledge of biodiversity, by 2022

### Indicators

The number of materials and publications produced around traditional knowledge will be useful indicators, along with increased integration of traditional medicinal practices into primary care. More widely, the implementation of traditional knowledge and practices into biodiversity conservation will also indicate progress under this objective.

### Constraints

The political will to preserve traditional knowledge may be a limiting factor to success. Human capacity and the need for the involvement of a 'champion' for this objective may also be constraints. The cultural reluctance to share traditional knowledge that is apparent in all states of the FSM will also be a constraining factor under this objective.



## Objective 7

### Increase conservation funding by mainstreaming biodiversity conservation in government budgets as well as by establishing local/state conservation finance mechanisms and links with MCT and other donor agencies

The actions included in the initial Pohnpei BSAP were as follows:

- Continue work to establish the \$20 million Micronesia Conservation Trust (MCT) by 2005 onwards
- Establish an MCT sub-account of at least one (1) million dollars for Pohnpei State through fisheries violation fees and dredging royalty fees by 2009
- Continue to mainstream biodiversity conservation in government budgets by using the Compact Environment Sector fund at \$2million/yr by 2005
- Continue to work and share information with foreign aid, private funds and other regional donors to increase conservation funding opportunities by 2005
- Research and pilot at least one local user/resource fee to finance a conservation fund by 2006
- Launch a fund financed by a tax or fee on vehicle importers to finance the cost of removing abandoned vehicles by 2006
- Watershed Management Fund from public water system revenues established by 2006
- Tax incentive created to encourage local and foreign businesses to collect and export vehicles and other heavy equipment to Asia markets by 2008
- Tax incentives for disposal of all non-biodegradable items established by 2007
- Establish taxes or fees on certain allowable hunting and fishing equipment (i.e. air-guns, shot guns, spear guns, etc.) to support resource management by 2007
- Licensing fee established to support resource management for hunting and fishing seasons by 2007
- Impose environmental impact fees on all development by 2005
- Increase and collect penalties on certain illegal resource exploitation and unlawful importation of foreign (agricultural and marine) products and species by 2005

#### Progress to date

There has been limited progress under this objective, with no activity to date on a number of the actions.

In terms of establishing a trust fund for conservation, the goal is actually to raise a \$29M dollar endowment. The FSM government has contributed \$50,000 to this annually, with the approved budget for fiscal year 2019 doubling this contribution to \$100,000. As of October 2017, this Endowment was valued at just over \$5.7M.

While Pohnpei State has been making good efforts to mainstream biodiversity conservation into state funded actions/projects, a current challenge has arisen with the recent decision by US Joint Economic Management Committee (JEMCO) to cease all funds for recurrent costs for the Environment Sector.

The Micronesia Conservation Trust, The Nature Conservancy, the Conservation Society of Pohnpei, the Marine and Environmental Research Institute of Pohnpei, as well as other organizations, have been able to secure significant funds to support biodiversity conservation, with approximately \$1M per year secured to support civil society organizations and local government conservation efforts. The Pohnpei State Government also has been able to secure funds for biodiversity conservation through the Ridge to Reef program under the fifth replenishment of the Global Environment Facility endowment.

The Nett District Government has enacted a law to create a WaterFund, but this has not been implemented yet. This will require a new/additional fee to be added to the water costs from the Pohnpei Utilities Corporation.

Both municipal charters of both Nett and U have been formally re-organized to include Natural Resources Management Coordinators, with budgets provided to support their work. This approach is a model that should be replicated by other municipal governments.

#### Updated actions:

1. Continue working to reach the goal of a \$29 million conservation endowment fund
2. Pohnpei State Government to encourage the FSM Government to support the current endowment of \$29 million into the current endowment fund and to implement the FSM National Protected Area Network Policy Framework, which will allow for the disbursement of funds to the state

3. Pohnpei State Government will encourage the FSM Government to increase its annual contributions to the current endowment and to adopt the FSM National Protected Area Network Policy Framework, which will allow for the disbursement of endowment funds to the states
4. Pohnpei State Government will encourage the FSM Government to continue providing financial support to the major NGOs operating within Pohnpei State
5. Pohnpei state to contribute to fisheries and dredging royalty fees to support conservation initiatives
6. Continue to mainstream biodiversity conservation in government projects by using available compact environment sector funds by December 2019
7. Continue to share information with foreign aid, private funds and other regional donors to increase conservation funding opportunities by December 2019
8. Research and pilot at least one local user/resource fee to finance a conservation fund
9. Launch a fund financed by a tax or fee on vehicle importers to finance the cost of removing abandoned vehicles
10. Expand the Watershed Management Fund, as initiated through the Nett Water Fund by 2023
11. Impose environmental impact fees on all major infrastructure developments December 2020
12. Establish appropriate penalties and enforce all illegal resource exploitation and unlawful importation of foreign (agricultural and marine) products and species by December 2019

#### Indicators

The Pohnpei State annual budgets and reports, grant contracts and reports and annual endowment reports will all be important indicators of progress under this objective, along with the replication of activities such as the Nett Water Fund across the state. Levels of national and state government contributions to the endowment and to the main conservation NGOs will also be useful indicators.

#### Constraints

Funding constraints, prioritization of available funds across competing needs within the state, and political will are all major limiting factors under this objective.

## Objective 8

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Increase biodiversity conservation/environmental awareness and enhance the conservation and organizational practices of Pohnpeian organizations working in priority marine, coastal and terrestrial areas, including the development of highly skilled resource managers and scientists

The actions included in the initial Pohnpei BSAP were as follows:

- A national environmental curriculum featuring Pohnpei State and the FSM's unique environment and biodiversity will be developed and implemented in schools by 2010
- Continue improving and expanding ongoing environmental education programs (i.e. Youth-to-Youth, Green Road Show, Environmental Club, etc.) in Pohnpei by 2005
- Continue to organize environmental events (i.e. Earth Day, Environment Day, community clean-ups, etc.) by 2005
- Produce annual "state of the environment" report and present to the Traditional Leaders Councils, Municipal Governments and the general public from 2008 onwards
- Provide at least two graduate degree scholarships/year (M.Sc. or higher) in resource management/environment to deserving Pohnpei students from 2005 onwards
- Initiate a program to track and hire at least one Pohnpeian resource management/ environment graduate by 2007
- Offer 2-4 in-country resource management/environment internships per year to Pohnpei students at the College of Micronesia or studying abroad from 2005 onwards
- Conduct institutional assessments on resource management agencies to determine areas of need/improvement and provide training from 2005 onwards
- Utilize the existing Micronesians in Island Conservation Program and similar programs to develop the resource management capacity of individuals and institution from 2005 onwards
- Provide at least one training (i.e. monitoring skills, conservation enforcement, etc.) per year to all resource managers from 2005 onwards
- Increase by 25% State and Municipal Government resource management personnel by 2008
- Train 50% of all government and NGO conservation area managers in conservation area planning methodology adopted and applied for their specific sites by 2008
- Establish appropriate voluntary community management or consultative groups such as local level Conservation Corps to address or bring attention to the issues of their respective community by 2005
- Establish and implement MOUs between the State Government and the Municipal Governments that clearly delineate management roles of the municipal governments on appropriate conservation laws by 2005
- Expand the state conservation unit and house in an enforcement branch (DPS or AG's Office) of the Pohnpei State Government by 2005
- Train and deputize municipal police and community conservation officers (CCOs) to collaborate with state police and conservation officers on conservation enforcement by 2005

### Progress to date

Progress has been made in relation to various areas under this objective. In terms of education, units have been developed on climate change and biodiversity with training of teachers ongoing, however, these have not yet been implemented in schools. The Association for Promotion of International Cooperation, Bill Raynor and Sophia University scholarship program is in place, though this has a national focus rather than being Pohnpei-specific. However, recipients of the scholarships will one day return to Pohnpei to work and contribute to the state's conservation efforts. Under the Micronesia Challenge Young Champions (MCYC) Internship Program, interns have been recruited across the FSM (and the region) and mentored by resource management agencies across the region. Leadership skills development relevant to environmental management for potential conservation leaders facilitated through the MCYC Internship Program influences the choice of field of study and future career paths of the interns. The US Forest Service Professional Internships in Pacific [Terrestrial] Island Ecosystem Management (PIPTIEM) program is also available, with natural resources managers able to either attend school or targeted technical trainings while working in their states.

The FSM environmental summit takes place every two years, though formal reporting to Traditional Leaders and municipal government needs to be instigated. Activities such as the Green Roadshow are ongoing, as are environmental clubs in high schools and colleges. There is, however, a recognized need to improve coordination of environmental events.

## Pohnpei Biodiversity Strategy and Action Plan

In terms of internships, there are opportunities for students from the College of Micronesia-FSM to work with non-governmental organizations and state agencies, with non-governmental organizations also recruiting volunteers. There have been a number of people hired with marine science degrees from the College of Micronesia, but few opportunities exist for graduates with higher degrees.

Staff at the Conservation Society of Pohnpei and in some state agencies are trained in conservation area planning, and future planning can be prioritized under the Ridge to Reef program. Training of Community Conservation Officers has been completed but the Officers have not yet been deputized for enforcement purposes, though municipal police officers have been.

### Updated actions:

1. Work with PREL to include climate change, biodiversity and wider environmental issues within the current school curriculum, ensuring these are contextualized for Pohnpei State and the FSM's unique environment
2. Continue improving and expanding ongoing environmental education programs as part of the Ai Mour Ai Pwukoa campaign by 2019
3. Develop an annual calendar of environmental public events, with the responsibility for specific events linked to specific state agencies by December 2019
4. Provide at least two degree scholarships per year for Pohnpeian students in resource management/environment undergraduate courses by 2019
5. Continue to track and hire at least one Pohnpeian resource management/environment graduate by 2019
6. Continue and offer 2–4 in-country resource management/environment internships per year to Pohnpeian students at the College of Micronesia in FSM or studying abroad by 2019
7. Continue to conduct assessments on resource management agencies to determine areas of need/improvement and provide training by 2019
8. Continue and utilize the existing Micronesians in Island Conservation Program and similar programs to develop the resource management capacity of individuals and institutions by 2019
9. Continue to provide at least one training course (e.g. monitoring skills, conservation enforcement) per year to all resource managers by 2019
10. Increase resource management personnel in at least 3 municipal governments by December 2020
11. Continue to carry out training to government and NGO conservation area managers in conservation area planning methodology one per year
12. Conduct five CAP workshops (one per year) for conservation area managers by 2023
13. Continue to support Community Conservation Officers (CCO) program
14. Establish and implement at least five memoranda of understanding (MOUs) between the State Government and Municipal Governments that clearly delineate management roles of the municipal governments on appropriate conservation laws, by 2020
15. Expand the Division of Fish & Wildlife and provide appropriate resources for conservation enforcement by 2020
16. Continue to train, and deputize, at least one municipal police and Community Conservation Officers (CCOs) to collaborate with state police in each of the municipalities by December 2020

### Indicators

Numbers of resource management personnel and the numbers of students able to take up higher education opportunities and then returning to Pohnpei will be key indicators of progress. The numbers and quality of public events will also be indicative of increasing awareness, as will the amount of environmental education included in school curricula.

### Constraints

Funding and human capacity will be key constraints to the achievement of the actions under this objective. Political will is also a potential limiting factor in relation to expanding environmental educational provisions and increasing resource management personnel within the government.

## Implementation, Monitoring and Reporting

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### Implementation

Implementation of this Pohnpei BSAP will require a broad network of government agencies, funding bodies, civil-society groups and communities. This will require co-ordination through the government to ensure necessary funds can be accessed and the appropriate groups collaborate as needed, and will also require strong involvement from the Protected Area Network Coordinator.

It is expected that, unless otherwise defined, that implementation across all actions will take place within the 5-year timeframe of this BSAP.

### Monitoring, Reporting and Reviewing

The Pohnpei BSAP is a 5-year plan and after 5 years the lead agencies and partners will have a meeting to review and discuss what activities have been successful or not, reasons why, how to improve such activities that have not been successful, and finally to continue work on those activities that have not been fully established

Monitoring the implementation of the Pohnpei BSAP will be undertaken in two ways. The lead agencies and parties will be requested to complete an annual quick assessment, using the assessment form provided in Appendix 1. This process will involve identifying which actions have been completed or achieved, which actions some progress has been made on, and which require initiating. This process will also enable the identification of necessary additional actions under each Objective. This quick assessment process will be led and managed by national and state government together, and facilitated by the Micronesia Conservation Trust.

A full review and revision of the Pohnpei BSAP will be undertaken after five years, in 2023. This will follow a similar process of consultations and validation that have been utilised in the current revision. This review will provide an opportunity for major progress, changes or developments to be recorded and considered for inclusion in the next revision of the Pohnpei BSAP, and will ensure that all Objectives and Actions remain relevant and reflect the challenges and unmet needs of Yap's biodiversity at that time. This will also provide an opportunity to ensure that Pohnpei BSAP supports the planned revision of the NBSAP and that both remain in line with any new strategies of initiatives under the Convention for Biological Diversity.

Reporting and disseminating information regarding the Pohnpei BSAP and its constituent programs is the responsibility of the state government.

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## Appendix 1: Annual Quick Assessment Template

The following templates will be completed on an annual basis as an overview assessment of progress on the Pohnpei BSAP.

### Objective 1:

Objective:	Degree of achievement			Still relevant?
	No progress	Some progress	Completed	
Develop a 20 Year Vision for the State of Pohnpei, and complete the community visioning process in at least two municipalities				
<b>Actions:</b>				
1. Develop and align at least five municipal resource management plans, including one outer island each year, with the Pohnpei Strategic Development Plan				
2. Initiate re-establishment of the Pohnpei Resource Management Committee (PRMC) through executive order from the Governor, and ensure it has appropriate level of authority with the Lieutenant Governor Chairman by end of 2018				
3. Ensure the re-established PRMC works closely with Executive Budget Review Committee (EBRC)				
<b>Additional actions and/or comments:</b>				

Annual Quick Assessment Template

Objective 2:

Objective:	Degree of achievement			Still relevant?
	No progress	Some progress	Completed	
Establish and implement a Comprehensive Pohnpei Lagoon Conservation Area Plan, including the development of a Marine Protected Areas Network and more effective management/enforcement of existing and new marine laws				
<b>Actions:</b>				
1. Recruit a Protected Area Network coordinator by December 2018				
2. Continue to implement the Ai Mour Ai Pwukoa campaign in at least 100 communities in Pohnpei, and ensure that the Ai Mour Ai Pwukoah campaign aligns with other awareness activities by other parties				
3. Continue to survey and monitor Pohnpei's marine biodiversity to enhance a comprehensive information base established under the framework of the Micronesia Challenge (MC)				
4. Complete the MPAME tool exercise in all existing protected area network sites, to expand and increase management effectiveness				
5. Continue to implement Micronesia Challenge Socio Economic Measures by using SEMPASIFICA socio-economic monitoring programs to evaluate and monitor the impact of PAs on adjacent communities				
6. Continue to integrate climate change resilience into the PA network design process by preparing annual summaries of the activities conducted by internal and external researchers				
7. Establish a ban on the Live Reef Fish Trade (LRFT) by the end of 2019				
8. Establish a temporary ban on the export of reef fish/marine products by the end of 2019				
9. Require research and assessment to confirm the sustainable export level of certain species of marine resources				
10. Enact legislation prohibiting the import of monofilament gill nets with gaps less than three inches (3") by December 2019				
11. Enact legislation regarding night time spear fishing by December 2019				
12. Revisit the Pacific Islands Applied Geoscience Commission (SOPAC) assessment relating to areas for dredging to assess the continued relevance of these recommendations for the use of land-based aggregate by March 2019				
13. Continue to conduct annual research and resource assessments to help inform municipal and state development of sustainable fisheries management plans				
14. Using SOPAC, report recommendations to support legislation to identify no more than two dredging sites for the state of Pohnpei and close all other existing sites and impose a moratorium banning all new dredge sites by December 2019				
15. Develop a Pohnpei State Coastal Management Plan by December 2021				

Annual Quick Assessment Template

16. Work with MERIP to double the 2018 level of mariculture and aquaculture production by 2023				
Additional actions and/or comments:				

## Objective 3:

Objective:	Degree of achievement			Still relevant?
	No progress	Some progress	Completed	
Establish effective management of Pohnpei's Watershed Forest Reserve and at least two mangrove reserves, with supporting local and state policies and day-to-day maintenance by local communities				
<b>Actions:</b>				
1. Delineate the Watershed Forest Reserve (WFR) boundary in Kitti and Nett by 2020				
2. Assess impact of the Grow Low campaign to inform future activity (complete the assessment of the Grow Low Campaign to determine its effectiveness by December 2019)				
3. Continue quarterly monitoring of sakau (agriculture) forest clearings and provide findings/results to state leaders, enforcement agencies, Municipal Governments and traditional leaders for action				
4. Work with the AG to enforce the watershed law to prevent sakau growing in the Watershed Forest Reserve				
5. Continue and expand public awareness on the importance and long-term benefits of the Watershed Forest Reserve by using the Ai Mour Ai Pwukoa campaign				
6. Encourage use of fallen trees in handicraft production as an alternative to cutting live trees				
7. Assess Nett WaterFund, identifying next steps for implementation and replication across other municipalities				
8. Work with the AG to enforce Watershed Forest Reserve regulations regarding access				
9. Conduct awareness activities around the soil map, the Pohnpei Soil Map and the Landslide Hazard Map developed for the US National Resources Conservation Service (NRCS) (Using the soil map and landslide hazard map in the Ai Mour Ai Pwukoahcampaign)				
10. Work with theUS Forest Service to update the Pohnpei vegetation map by 2023				
11. Undertake new forest bird and fruit bat surveys by 2023				
12. Develop recommendations on the reforestation of important watershed areas based upon watershed legislation and work with forestry experts to conduct monitoring on clearing sites, to determine natural reforestation and removal of invasive				
13. Revisit and refresh land-use and zoning plan for the state of Pohnpei				
14. Establish a designated geographic information system (GIS) as part of the Pohnpei State resource department of R&D including a digital repository of key natural resources for protected area management, by December 2019				

Annual Quick Assessment Template

15. Continue the mangrove assessments funded by US federal agencies to help develop a comprehensive Pohnpei mangrove management plan, which will include identification of additional mangrove reserves by December 2021				
16. Strengthen permitting and management of terrestrial based agricultural and development activities that impact the marine environment				
Additional actions and/or comments:				

Objective 4:

Objective:	Degree of achievement			Still relevant?
	No progress	Some progress	Completed	
Address the invasive species problem in Pohnpei state by strengthening the quarantine program and controlling and/or eradicating priority invasive species				
<b>Actions:</b>				
1. Strengthen quarantine and prevention of introduced invasive species through improved collaboration with national government, quarantine officers, including training and identification and control of invasive species by June 2019				
2. Establish a state Invasive Species Act to institutionalize and fund the Invasive Species Taskforce of Pohnpei (iSTOP) by June 2019				
3. Appoint a Pohnpei State Invasive Species Co-ordinator by June 2019				
4. Include invasive species education into Ai Mour ai Pwukoa campaign by March 2019				
5. Strengthen the invasive species monitoring and reporting program by December 2018				
6. Complete the Emergency Response Plan for invasives as identified in iSTOP SAP 2018–2022 by June 2019				
7. Continue to eradicate and/or control priority invasive species as identified in the iSTOP SAP by 2023				
8. Expand invasive species database to include all terrestrial and marine invasive species and make available to all relevant agencies and organizations by December 2020				
9. Conduct a survey and identify all invasive species in Pohnpei State by 2020				
<b>Additional actions and/or comments:</b>				

## Objective 5:

Objective:	Degree of achievement			Still relevant?
	No progress	Some progress	Completed	
Increase awareness on proper (organic and inorganic) waste disposal and recycling, pollution control, fuel and energy reduction/alternatives, including the adoption of at least one model of effective "best practices" management in each of the areas				
<b>Actions:</b>				
1. Include waste management, Water quality into Ai Mour Ai Pwukoa campaign by March 2019				
2. Deputize Environmental Protection Agency staff, and other appropriate agencies, to enforce all waste regulations, including waste from fishing vessels, through on-site citations by March 2019				
3. Create an Emergency Response Plan for Hazardous Wastes (i.e. oil and chemical spills) by June 2019				
4. Replicate the Kosrae battery recycling program to enable collection of batteries from Pohnpei by December 2020				
5. Establish and implement a Pohnpei State Organic, Inorganic and Hazardous Waste Master Plan and better enforce existing litter/waste disposal laws, including a collection area of all hazardous waste (oil, batteries, chemicals, etc) and require all commercial establishments and the general public to utilize this area by December 2020				
6. Appoint a team of Youth Ambassadors, including groups such as Youth for Change to raise awareness on the negative impacts of illegal dumping by March 2020				
7. Expand the plastic law to include Styrofoam, and develop supporting regulations to be implemented by the end of 2019				
8. Pursue the establishment of at least one local handicraft/industry within Pohnpei designing and developing shopping bags by the end of 2019				
9. Ban the importation of Styrofoam products and plastic bags, and expand the eco-plate project as an alternative for plastic foam plates, by 2020				
10. Improve recycling and establish taxes and or fees on at least one non-bio-degradable import (e.g. plastic or aluminum products) by December 2020				
11. Require recycling of aluminum, glass and paper wastes in all government offices by March 2019				
12. Promote the awarding of a 5-year contract to Pohnpei Waste Management to allow better investment in the dump site and waste collection by end of June 2019				
13. Improve the frequency and reliability of waste collection and transport to the central dump site by December 2019				
14. Establish a specific green waste site for composting in an appropriate area by December 2020				

### Annual Quick Assessment Template

15. Revisit environmental health regulations (with EPA) to prevent health impacts from waste and pollution by June 2019				
16. Ensure centralisation of hospital waste management by June 2019				
17. Establish a fee for funding the disposal all vehicle and heavy equipment imports by December 2019				
18. Remove all abandoned vehicles from public areas and dispose of safely by December 2019				
19. Continue to promote regional recycling with Micronesia ventures by December 2023				
20. Replicate the dry litter piggery model in five new communities around Pohnpei, including establishment of a revolving fund by December 2023				
21. Remove all pigpens and outhouses from inappropriate areas (i.e. riverbanks, shorelines, etc.) by 2023				
22. Require all new government facilities and infrastructure designed and constructed to be "climate-proof" by December 2020				
23. Integrate at least one alternative energy source (solar, wind, hydro-electric) into at least one new public building, to generate 50% of its energy needs by 2020				
Additional actions and/or comments:				



## Objective 6:

Objective:	Degree of achievement			Still relevant?
	No progress	Some progress	Completed	
Revive, maintain and utilize relevant Traditional Knowledge, which supports biodiversity conservation and improves community leadership and participation in conservation and development plans and initiatives				
<b>Actions:</b>				
1. Continue to strengthen cultural education, with a strong focus on traditional conservation and resource management practices, in primary and secondary schools as part of Ai Mour Ai Pwukoah campaign by December 2019				
2. Expand the Pacific Resources for Education and Learning (PREL) Geoliteracy in Micronesia (GEM) project, including formal and informal programs that teach traditional conservation and resource management skills, by December 2019				
3. Strengthen biodiversity messages in traditional knowledge radio programming by March 2019				
4. Continue to promote pride in traditional conservation and resource management knowledge/skills, and strengthen integration of biodiversity conservation into celebration days and cultural events as part of Ai Mour Ai Pwukoa campaign by December 2018				
5. Promote the cultivation and consumption of our diverse traditional food crops by May 2019				
6. Use the information from the Pohnpei Ethnobotany Project (herbarium and database) and disseminate and/or utilize the information in education and outreach programs by June 2019				
7. Appropriate parties to continue to regular updates on conservation activities at the regular Mwoalen Wahuileile en Pohnpei (Traditional Leadership Council) meetings by December 2019				
8. Establish an annual conference that highlights biodiversity conservation initiatives to Traditional Leaders, Church leaders, Village Chiefs and Mayors				
9. Develop review processes with strong environmental criteria and community involvement in all municipalities by 2020				
10. Replicate the U Municipality community resource management model in other areas by December 2019				
11. Expand the Community Resource Management (CRM) model across municipalities by December 2019				
12. Establish a facility for the sustainable cultivation of traditional medicinal plants by December 2020				
13. Establish a facility to provide public education on Pohnpei's biodiversity, including documents and archives of Pohnpei's traditional knowledge of biodiversity, by 2022				

Annual Quick Assessment Template

Additional actions and/or comments:

## Objective 7:

Objective:	Degree of achievement			Still relevant?
	No progress	Some progress	Completed	
Increase conservation funding by mainstreaming biodiversity conservation in government budgets as well as by establishing local/state conservation finance mechanisms and links with MCT and other donor agencies				
<b>Actions:</b>				
1. Continue working to reach the goal of a \$29 million conservation endowment fund				
2. Pohnpei State Government to encourage the FSM Government to support the current endowment of \$29 million into the current endowment fund and to implement the FSM National Protected Area Network Policy Framework, which will allow for the disbursement of funds to the state				
3. Pohnpei State Government will encourage the FSM Government to increase its annual contributions to the current endowment and to adopt the FSM National Protected Area Network Policy Framework, which will allow for the disbursement of endowment funds to the states				
4. Pohnpei State Government will encourage the FSM Government to continue providing financial support to the major NGOs operating within Pohnpei State				
5. Pohnpei state to contribute to fisheries and dredging royalty fees to support conservation initiatives				
6. Continue to mainstream biodiversity conservation in government projects by using available compact environment sector funds by December 2019				
7. Continue to share information with foreign aid, private funds and other regional donors to increase conservation funding opportunities by December 2019				
8. Research and pilot at least one local user/resource fee to finance a conservation fund				
9. Launch a fund financed by a tax or fee on vehicle importers to finance the cost of removing abandoned vehicles				
10. Expand the Watershed Management Fund, as initiated through the Nett Water Fund by 2023				
11. Impose environmental impact fees on all major infrastructure developments December 2020				
12. Establish appropriate penalties and enforce all illegal resource exploitation and unlawful importation of foreign (agricultural and marine) products and species by December 2019				
<b>Additional actions and/or comments:</b>				



## Objective 8:

Objective:	Degree of achievement			Still relevant?
	No progress	Some progress	Completed	
Increase biodiversity conservation/environmental awareness and enhance the conservation and organizational practices of Pohnpeian organizations working in priority marine, coastal and terrestrial areas, including the development of highly skilled resource managers and scientists				
<b>Actions:</b>				
1. Work with PREL to include climate change, biodiversity and wider environmental issues within the current school curriculum, ensuring these are contextualized for Pohnpei State and the FSM's unique environment				
2. Continue improving and expanding ongoing environmental education programs as part of the Ai Mour Ai Pwukoa campaign by 2019				
3. Develop an annual calendar of environmental public events, with the responsibility for specific events linked to specific state agencies by December 2019				
4. Provide at least two degree scholarships per year for Pohnpeian students in resource management/environment undergraduate courses by 2019				
5. Continue to track and hire at least one Pohnpeian resource management/environment graduate by 2019				
6. Continue and offer 2–4 in-country resource management/environment internships per year to Pohnpeian students at the College of Micronesia in FSM or studying abroad by 2019				
7. Continue to conduct assessments on resource management agencies to determine areas of need/improvement and provide training by 2019				
8. Continue and utilize the existing Micronesians in Island Conservation Program and similar programs to develop the resource management capacity of individuals and institutions by 2019				
9. Continue to provide at least one training course (e.g. monitoring skills, conservation enforcement) per year to all resource managers by 2019				
10. Increase resource management personnel in at least 3 municipal governments by December 2020				
11. Continue to carry out training to government and NGO conservation area managers in conservation area planning methodology one per year				
12. Conduct five CAP workshops (one per year) for conservation area managers by 2023				
13. Continue to support Community Conservation Officers (CCO) program				
14. Establish and implement at least five memoranda of understanding (MOUs) between the State Government and Municipal Governments that clearly delineate management roles of the municipal governments on appropriate conservation laws, by 2020				

### Annual Quick Assessment Template

15. Expand the Division of Fish & Wildlife and provide appropriate resources for conservation enforcement by 2020				
16. Continue to train, and deputize, at least one municipal police and Community Conservation Officers (CCOs) to collaborate with state police in each of the municipalities by December 2020				
17. Work with PREL to include climate change, biodiversity and wider environmental issues within the current school curriculum, ensuring these are contextualized for Pohnpei State and the FSM's unique environment				
Additional actions and/or comments:				