



State and Private Forestry Fact Sheet Federated States of Micronesia 2019



Investment in State's Cooperative Programs

| Program | FY 2018 Final |
|--|------------------|
| Community Forestry and Open Space | \$0 |
| Cooperative Lands - Forest Health Management | \$67,855 |
| Forest Legacy | \$0 |
| Forest Stewardship | \$79,840 |
| Landscape Scale Restoration | \$199,995 |
| State Fire Assistance | \$34,000 |
| Urban and Community Forestry | \$74,500 |
| Volunteer Fire Assistance | \$0 |
| Total | \$456,190 |

NOTE: This funding is for all entities within the state, not just the State Forester's office.

The Federated States of Micronesia (FSM) comprise a vast region of over 600 islands spanning 1,678 miles. It is located in the western Pacific in the Caroline Islands, north of the equator, east of Palau and west of the Marshall Islands. The FSM is an independent nation that includes four States: Yap, Chuuk, Pohnpei and Kosrae. The FSM maintains strong ties with the United States, with which it has a compact of free Association. Of the country's population, 50% live on Chuuk, 33% on Pohnpei, 10% in Yap and 7% in Kosrae. The States have a significant level of autonomy with ownership of land and aquatic areas varying between states. In Kosrae and Pohnpei, land is both privately and state owned, with aquatic areas being managed by the States and public trusts. In Chuuk, most land and aquatic areas are privately owned and acquired through inheritance, gift, or more recently, by purchase. In Yap almost all land and aquatic areas are owned or managed by individual estates and usage is subject to traditional control. These land and aquatic tenure systems have critical bearing on the strategic actions required to sustainably manage and protect the natural resources of these islands. Responsibility for environmental issues is shared between the national and state governments. Invasive species affect all aspects of society, including the protection and use of natural resources, and they are a significant threat. This report concerns the ongoing USFS Federal programs (Urban & Community Forestry, Forest Stewardship, Forest Health and Forest Legacy programs), to enhance program awareness with committee members and island communities. The report highlights the goals and objectives of each program to be implemented with partners and agencies of each island state and national government, providing a synopsis of the deliverables required of the programs. At this time all the federal program grants are awarded directly to the states' implementing agencies for program activities.

Program Goals

- Goals in the Forest Action Plan are derived from the overarching FSM National Strategic Development Plan's Agriculture Sectoral Strategic Goals (1st to 4th) and Environment Sectoral Strategic Goals (5th to 7th and 9th). These provide guidance to the FSM and four State Forestry agencies in partnership with local, national and regional partners to collaborate on achieving the FSM Forestry Program goals:
- Sustainable Resource Management
- Environmental awareness and education
- Biosecurity
- Capacity building

Key Issues

Forest Facts and Accomplishments

| Selected Facts | Value | FY 2018 Accomplishments | Value |
|---|---------|--|--------|
| Population | 106,836 | Landowners Receiving Educational or Technical Assistance | 3,630 |
| Acres of Forest Land | 135,668 | Acres Covered by New or Revised Forest Stewardship Plans | 0 |
| Acres of Nonindustrial Private Forest Land | 69,500 | Acres in Important Forest Resource Areas Covered by New or Revised Stewardship Plans | 0 |
| Number of NIPF Landowners | 0 | Volunteer Fire Departments Assisted | 0 |
| Acres of Federal Land Under State Fire Protection | 0 | State Fire Communities Assisted | 25 |
| Acres of Private Land Under State Fire Protection | 29,312 | Coop Forest Health Acres Protected | 12 |
| Number of Rural Fire Departments | 4 | Forest Legacy Project Acquisitions | 0 |
| Cities and Towns | 39 | Communities Provided Urban Forestry Program Assistance | 4 |
| Forest Based Employment | 0 | Population Living in Communities Provided Urban Forestry Program Assistance | 12,574 |
| Economic Impact of Forestry (by rank) | 0 | Urban Forestry Volunteer Assistance | 1,260 |
| State Forestry Budget (All Sources) | 0 | | |

Program Highlights

Breadfruit Agroforestry in Yap

The Yap Division of Agriculture and Forestry, the USDA Forest Service (including Research, Forest Stewardship and Urban & Community Forestry), and the Pacific Resources for Education and Learning (PREL) are working together to promote breadfruit agroforestry and food security in Yap. A total of 1250 tissue cultured breadfruit trees (*Artocarpus altilis*) of four varieties shown to be productive and highly successful in the region (Ma'afala, Otea, Ulu Fiti, and Pua'a) were imported to Yap in 2017 and 2018 and were distributed to the remote islands of Ulithi Atoll, Fais, Woleai Atoll, and Ifalik as well as communities across Yap Proper. For many centuries, Yapese people and breadfruit have depended on each other for their existence, especially for the remote outer island residents. Most of the food, medicine, and materials that come from breadfruit are essential to the livelihood of the people of Yap. Because of the local importance of breadfruit, this work was initiated to increase the number of breadfruit trees planted, identify and encourage the plantings of the local breadfruit tree varieties, and import additional productive varieties from across the Pacific with variation in fruiting seasons. These actions will help to promote breadfruit availability year-round and will help improve overall food security in the islands.

Compost for tree seedlings from dry litter piggery demonstrations

Kosrae, FSM. The Kosrae Island Resource Management Authority (KIRMA) of the Kosrae State Government, FSM, through its Forest Stewardship and Urban and Community Forestry Programs has jointly worked with local partners and the FSM Ridge to Reef (R2R) Project, to conduct dry litter piggery demonstration and awareness outreach programs. The dry litter piggery project was conducted to promote their use in the communities to mitigate environmental impacts of water pollution. Piggeries are part of island community norms, and support individual households' subsistence but issues of water borne related diseases are impactful to communities. The use of dry litter piggery minimizes excess use of water for cleaning and increases the use of wood chipped materials, old leaves around the yard, and other biodegradable materials and compost, that also support tree production. With the joint efforts in this project by the Stewardship, Urban and Community Forestry and the FSM R2R Project, the use of compost is also supporting native, including fruit tree seedlings production for community tree planting projects. Currently with tree seedlings production by the programs using fertilizers that can be harmful to fragile island ecosystems, the programs are changing to using compost materials from the dry litter piggery method. The three programs are also conducting outreach programs in the communities on the importance of the dry litter piggery system and how byproducts from

the system such as the compost can effectively support tree planting and seedlings production.

Cooperative Fire Protection

Yap: The program continues to expand the establishment of low fuel zones and shaded fuel breaks to reduce the contiguous area of highly flammable vegetation to limit the size of areas burnt by wildfires; as well as a fire prevention and education program. This year one additional community established shaded fuel breaks by planting over 4,000 tree seedlings in fire prone savannah sites, along with establishing low fuel zones. Three communities continued to monitor and maintain 17,000 tree seedlings, covering approximately 47 acres, which were planted to establish shaded fuel breaks in previous years. Another community has been awarded this year's low fuel zone and shaded fuel breaks project. It is estimated that 3,600 seedlings will be planted, covering an area of approximately 5 acres.

In collaboration with the University of Hawaii, the wildfire program worked to establish fertilizer trial plots within the shaded fuel break project sites. We will be monitoring the effects of different fertilizing methods on tree growth rates over the next couple of years.

Forest Health Protection

Kosrae, FSM. The Forest Health Program with funding support from the USDA Forest Service has continuously support eradication and control measures on invasive species on the island. The program is continuing to apply these measures on significant invasive species in our terrestrial forest resources. One of the major recent activity is the setting up of traps to detect presence of the Fire Ants at our main seaport. Fire Ants are known to have caused impacts on forest ecosystems as well as on animals. To date, detection is continuing and has yet to detect any presence.

Forest Legacy

Kosrae, FSM. The Kosrae Island Resource Management Authority (KIRMA) of the Kosrae State Government, Federated States of Micronesia (FSM), with supportive partners of The Nature Conservancy, the US Forest Service, and the Micronesia Conservation Trust has; after closing the first Conservation Easement project with the Alik family tract in the Yela Watershed Forest, entered into another phase of the Conservation Easement project of the Forest Legacy Program. The Yela Watershed Forest is owned by three Kosraean families, namely Alik, Noda and Wesley. The Noda and Wesley tracts are currently being pursued and for consideration for conserving their tracts under a conservation easement, that has worked for the Alik family. One of the major activity with funding from the USDA Forest Service to KIRMA in 2018 is the completion of an appraisal on their tracts, to support acquisition for perpetual conservation. The Forest Legacy Program support under the USDA Forest Service has helped local entities with international partners such as The Nature Conservancy to conserve and protect such area of biological significance, for island generations to come. The Yela Watershed Forest, is the only remaining place in the world that has the only intact stands of *Terminalia carolinensis* trees, locally called in Kosraean as "Ka". The watershed forest supports downstream resources such as healthy mangrove forests and coral reef ecosystems that the natives depend on for subsistence. The first Conservation Easement placed on a tract in the Yela Watershed Forest was the first after Hawaii, USA in this Pacific region.

Forest Stewardship

Improved production of forest tree seedlings on Yap, FSM

Yap Forestry manages a tree nursery to produce seedlings for community forestry projects and fire breaks. The University of Hawaii and the USDA Forest Service Regeneration, Nurseries, and Genetic Resources program conducted an on-site training in nursery management in 2014 with follow-up visits to Yap in 2015 and 2018. The training program covered use of forestry containers instead of poly bags, use of potting mixes instead of soil, improved pest and disease management, and outplanting in degraded sites among other topics. Yap Forestry implemented several changes after the workshops, including use of forestry dibble tubes for seedlings. Community members reported that the new dibble tube stock made transport to field sites and planting much easier. Yap Forestry staff are now working with UH to implement trials of liming and mulch on degraded acid soils to improve growth of seedlings planted for fire breaks.

Landscape Scale Restoration

The Micronesia Challenge (MC) is a commitment by the Federated States of Micronesia (FSM), the Republic of the Marshall Islands (RMI), the Republic of Palau, Guam, and the Commonwealth of the

Northern Mariana (CNMI) Islands to preserve the natural resources that are crucial to the survival of Micronesian traditions, cultures and livelihoods. "The MC goal is to effectively conserve at least 30% of the near-shore marine resources and 20% of the terrestrial resources across Micronesia by 2020". The Terrestrial component of the Challenge looks at many indicators including native forest cover, species diversity, abundance, forest structure, human disturbance, bird diversity, and invasive species to detect changes in biodiversity over time. The main method utilized is the USFS Forest Inventory & Analysis (FIA) program. The FIA is used as a protocol to collect forest data in the region for the countries and territories to better understand the forest changes overtime. It is also used as a tool to evaluate the effectiveness of the regions forest resources management endeavors. In early 2018, two Micronesian foresters were supported to complete through FIA training in Alaska. MCT formulated the RMI FIA working group and conducted an FIA field training with the RMI Forester and staff. In preparation for the FIA program in the RMI and to continue to enhance regional partnerships, 4 trained Micronesian FIA specialists were invited to join the USFS and the RMI Foresters as team members for the trip that began in January of 2018. Knowledge of the benefits of forest ecosystems was improved by increased awareness of forest conditions and values. This was accomplished by engagement at the community, organizational, government and regional level through news letter articles, public radio programs and face to face meetings. A data analysis training is scheduled to happen in March 2019 to kick off the RMI FIA data analysis.

Urban and Community Forestry

Pohnpei:

The Urban and community Forestry program has become very productive in supporting the natural resource management office commodities in the communities of Pohnpei. It helped facilitate major component of our forest action plan; we implemented four project in 2018 that dashed on food security, coastal stabilization and climate change. There are four projects implemented, two on the Pingelap and Sapwafik (outer Islands of Pohnpei) and two on the proper island of Pohnpei (Peidie and Enipein communities). These two outer Islands are both interested in replanting new coconut seedlings replacing old coconut trees. As part of the FSM Petro-Corp. coconut project, these two islands focus to provide sustainable production for the coconut project, food security and coastal stabilization. As part of the projects, the two islands have cut down senile coconut trunks for lumbering. For the two projects in Peidie and Enipein communities, they are interested in improving their agro-forestry systems. This project is envisaged to provide communities to mitigate impacts of climate change and improve community resilience.

Yap:

The Urban Community Forestry program continues to upkeep and enhance existing community forest in Yap. The U&CF Program is needed at this time when Yap community are experiencing the impacts of climate change. The Urban community Forestry Program assisting six local communities with two (2) savannah development Projects and four fruit tree projects, which will help the local communities with a sustainable food-producing landscape and Agroforest expansion and also developed this barren area in collection of traditional fruit trees and timber. All projects are now in first phase that involves replanting of an area by 150 x 150 sq.ft to reforest the area.

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