



State and Private Forestry Fact Sheet

Marshall Islands 2023



Investment in State's Cooperative Programs

Program	FY 2022 Final
Community Forestry and Open Space	\$0
Cooperative Lands - Forest Health Management	\$0
Forest Legacy	\$0
Forest Stewardship	\$82,747
Landscape Scale Restoration	\$0
State Fire Assistance	\$0
Urban and Community Forestry	\$0
Volunteer Fire Assistance	\$0
Total	\$82,747

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

The Republic of the Marshall Islands (RMI) consists of 29 atolls, five solitary islands, and approximately 1,225 individual islands and islets. The network of islands contains 70 square miles of dry land situated about halfway between Hawaii and Australia. All the Marshall Islands are low in elevation; the average height of land above sea level being 7 feet. In July 2021, the population was estimated to be 78,831 people. More than two-thirds of the population lives on the atolls of Majuro and Ebeye.

The Marshall Islands contain five unique vegetation types: atoll forest, mangrove forest, coastal vegetation, saltwater aquatic vegetation (seagrass growing in coastal tidal flats), and cultivated vegetation (agroforests). Most of the interior, atoll forest was converted to agroforestry over the millennia since settlement by the Marshallese people. Marshallese agroforestry is a mix of trees, woody shrubs, and herbaceous species, managed for food and other forest products, notably breadfruit, coconut, pandanus, and bananas. Since Western contact, many areas have been managed as coconut plantations (70% of the landcover) and additional species have been introduced and integrated into the agroforest (especially fruit trees).

The Ministry of Natural Resources and Commerce (MNRC) consists of many Divisions and programs, including the Division of Agriculture, which is responsible for developing and implementing forestry programs. The RMI Forester works for the Division of Agriculture and collaborates with diverse partners, such as the College of Marshall Islands and the Coastal Management Advisory Group. The Coastal Management Advisory Group performs the duties of the Coordinating Committee and Urban and Community Forestry Council. The MNRC works together with various partners and stakeholders to increase efficiency in the implementation of forestry programs.

Program Goals

- **Protect Forest from Harm:** Prevent the introduction and further spread of injurious pests and diseases into and within the Marshall Islands. Assist communities in planning for and reducing forest health risks, such as diseases that impact crop trees.
- **Enhance Public Benefits from Trees and Forest to Increase Food Security:** Increase local food crop production through extending knowledge and skills in better agroforestry systems. Strengthen access to nutritious foods for vulnerable households and individuals through support of local food crop production.
- **Conserve Working Forest Landscapes:** Maintain and enhance the economic benefits of trees and forest by programs such as the sawmill program where senile coconut palms are utilized and replanted with healthy trees. Protect and enhance water quality through coastal reinforcement efforts.

Key Issues

- **Biodiversity:** Conservation of biodiversity in the Marshalls concerns terrestrial native species (especially endemic species and migratory birds) and traditional cultivars. Invasive species, including food crops and ornamentals, has led to a continued loss of biodiversity. The management of pests, insects, and disease is a critical concern. For example, the coconut rhinoceros beetle (CRB) has caused widespread loss of the coconut, which is an economically and culturally important species.
- **Food Security and Sustainable Livelihood:** The loss of traditional agroforestry practices and a lack of awareness of nutritional values are growing threats in the Marshall Islands. Agroforests are a source of subsistence goods and commercial products. Many Marshallese suffer from malnutrition and diabetes that could partially be addressed with increased agroforest production. Marshallese family incomes are low; agroforest production can reduce the need for purchases and bring in cash income.
- **Coastal reinforcement:** Coastal forests are those on the beach crest above high tide mark. Their root systems reinforce the beach "berm" or crest. Coastal forests have been thinned and removed in many urban and rural areas, so their restoration and maintenance in their natural state is a "no-regrets strategy" and a first line of defense against the effects of sea level rise.
- **Urbanization and a lack of urban planning:** Urbanization is a result of migration and the adoption of Western patterns of living. The increased clearing of forests in urban centers is a growing concern, especially in the capital city seeing the greatest loss of trees. The development of the airport resulted in more coastal loss. A large proportion of the population is now concentrated on a few urban islands, resulting in reduced forest cover and a loss of cultural benefits from the forest.
- **Climate Change:** The impacts of climate change are resulting in an increase of drought and a rise in sea-level, which has led to saltwater intrusion, subsequently impacting the ability to grow certain root crops, trees, and medicinal herbs.
- **Resource Management:** Threats include increased pollution and solid waste management, overuse of water for crops, and loss of soil due to excessive land clearing, mowing, and burning.

Forest Facts and Accomplishments

Selected Facts	Value	FY 2022 Accomplishments	Value
Population	41,665	Landowners Receiving Educational or Technical Assistance	225
Acres of Forest Land	34,835	Acres Covered by New or Revised Forest Stewardship Plans	0
Acres of Nonindustrial Private Forest Land	29,295	Acres in Important Forest Resource Areas Covered by New or Revised Stewardship Plans	0
Number of NIPF Landowners	1,000	Volunteer Fire Departments Assisted	0
Acres of Federal Land Under State Fire Protection	0	State Fire Communities Assisted	0
Acres of Private Land Under State Fire Protection	0	Coop Forest Health Acres Protected	0
Number of Rural Fire Departments	0	Forest Legacy Project Acquisitions	0
Cities and Towns	33	Communities Provided Urban Forestry Program Assistance	1
Forest Based Employment	0	Population Living in Communities Provided Urban Forestry Program Assistance	19,664
Economic Impact of Forestry (by rank)	0	Urban Forestry Volunteer Assistance	0
State Forestry Budget (All Sources)	0		

Program Highlights

Forest Health Protection

The Forest Health Protection Program focuses on the control of invasive plants, pests and diseases. Pests such as the mealybugs and whiteflies have been impacting a lot of forest and crop trees. The communities in RMI are very dependent on agroforestry for food, therefore these diseases have serious impacts on food security island-wide. When community members go to MNRC about a new pest impacting the development of crops, they will alert the Division of Quarantine. To prevent the introduction

and spread of pests and diseases, the Division of Quarantine carries out quarantine inspections according to legislation and regulations, performs eradication and control programs, increases awareness on bringing in pests and diseases from overseas, increases awareness on the spread of pests and disease between islands, and provides information on eradication and control procedures. They are responsible for monitoring and surveillance of fruit flies, mealy bug, coconut scale, and other threatening pests.

This year 2023, the division of quarantine is submitting a grant proposal to USFS Forest Health Program to support the Ministry's strategies identified in the RM Forest Action Plan under food security and sustainable livelihood issues. Two strategies are "invasive species" and "forest/ agro-forest pest & disease-that are both identified in the (RMI Forest Action Plan (pg.31 & 34).

Forest Stewardship

RMI has been involved in coconut/copra production and the atolls in the Marshalls are widely planted with coconut trees. Coconut/copra is one of the important crops in the RMI providing sustainable livelihoods and economic viability to many farmers. Coconut is used for fuel (coconut oil), food, soap, handicrafts, and lumber in the RMI. This year the Forest Stewardship Program is collaborating with the Marshall Islands Conservation Society, the USDA Forest Service and the University of Hawaii on a project focused on coconuts resources. The project will provide data on coconut plantation resources that will be useful on the community-level and industry-wide, for coconut rehabilitation, replanting, and for the sawmill program. This will include developing techniques to use satellite imagery to detect coconut health and pest conditions at the landscape-level. With the data from the imagery analysis, management will include removing the senile coconut trees and replanting healthy trees. The lumber of these coconuts can then be utilized by the sawmills across 11 atolls to produce lumber for timber and craft, which help support the economy of RMI.

Pacific Island Forest Restoration Initiative Project

Marshall Island Conservation Society worked with the Micronesia Conservation Trust to get a USDA Forest Service Pacific Island Forest Restoration Initiative grant. The main objective of this project is to strengthen the shoreline through strand vegetation planting. This supports community subsistence livelihoods by increasing the production of critical food trees, while also helping to stabilize the coast. The project is currently working to collect fruit tree seedlings and provide them to communities in high conservation areas. Based on these goals, the tree species are typically traditional and exotic fruit trees and trees optimal for coastal reforestation. This year, a total 582 seedlings were distributed including 408 papaya seedlings, 35 breadfruit, 79 pandanus, and 60 others (Banana, Kasava, sweet taro, Dye Fig, Bell Apple). These were provided to five different community sectors in Ajeltake community. Good working relationships with landowners and community partners continues to make the project successful.

RMI Vegetation Monitoring Project

The Ministry of Natural Resources and Commerce, U.S. Geological Survey, U.S. Agency for International Development, and U.S. Natural Resources Conservation Service are collaborating to use satellites to monitor water and food security for 23 inhabited atolls and islands in the RMI. This one-year project developed monthly reports and maps describing precipitation and vegetation health. If additional funds could be obtained, the team could continue to deliver status reports to agricultural and natural disaster managers, and to expand community involvement and capacity building.

RMI- Ridge to Reef Project

On September 22nd to October 6th 2022, a team of two from the Ministry of Natural Resources and Commerce also visited Ebon Atoll for the purpose of implementing the R2R Food Security Project, training the community on propagation methods, following up on the sawmill program and distributing various seeds and seedlings. The team also conducted outfield work and collected root cuttings of various and rare breadfruit varieties. Seedlings were distributed and planted amongst the communities as well. This included 150 papaya, 1159 coconut, 454 pandanus, 69 breadfruits, 91 Lime, 347, Banana, and 1095 taro, total number of seedlings planted is 3,215.

From December 12th-19th, 2022, team of two from Agriculture and Forestry also visited AUR Atoll to

Conducted a community (women clubs) consultation in Aur, Aur and Tobal Aur;
Introduction of the R2R food security and sustainable livelihood project to Aur community;

Train community on propagation method and gardening;
Discussed Aur service contract and responsibilities; and
Provided various vegetable seeds to both women clubs and conducted a small training for interested households.

Urban and Community Forestry

As sea-levels continue to rise, the salinity affects the interior forest health, root crops in agroforestry systems, and coastal forest survival. One strategic action is coastal planting with salt tolerant trees along coast lines. The implementation of the Urban and Community Forestry (UCF) program focuses on education and outreach, coastal tree planting, agroforestry, and nursery development with the goal of supporting communities impacted by rising sea-levels. Last year, the UCF Program began working with the communities of Ajeltake to establish a nursery station to propagate indigenous trees for daily life and for coastal reforestation. The site has been acquired and the land has been cleared and prepared. The nursery is located near an elementary school; therefore, the students are easily able to visit and learn. A local community member was hired to manage and maintain the nursery. Thus far, approximately 1,500 seedlings have been produced for this project and they will be transferred to the nursery in Ajeltake once it is fully established. Community groups have already started to visit for educational events and to learn how to propagate seedlings to grow traditional crops. The project is already starting to fulfill the goal of promoting the importance of indigenous trees and forest management on the islands.

On December 21st 2022, The Ministry of Agriculture and Forestry launched Ajeltake Community Nursery with the support of USDA Forest Service. The nursery is open to the public and offers traditional local plants that will help prevent soil erosion and traditional medicinal plants, and food security.

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