

## Agricultural Activities in RMI



*Ailuk atoll*

### **Background**

Historically in the Marshall Islands, the northern atolls of the group are the most vulnerable to drought. They fall under RMI's drought zone 1 and these atolls are the furthest away from the capital Majuro - so getting emergency supplies to these atolls during periods of extended drought is extremely challenging because of the distances involved. Keeping this in mind and the fact that agricultural sector was the most severely impacted by the 2016 drought, the government of RMI choose food security as the focus of the project in these remote northern atolls. Ailuk, a rural environment, and Santo, a semi-urban environment, were selected.

In the past subsistence agriculture was an important activity in the outer atolls but has declined in recent years as a result of a general trend away from farming to other forms of employment and the availability of convenient imported processed food. Rice, canned beef, spam and noodles are all common food items and often eaten daily with very little fruit and vegetables.

To address this, the RENI project integrated atoll agriculture with health and wellness activities to help the community understand the connections between good nutrition, regular exercise and overall wellness.

### **Planning Phase**

During the planning phase at the beginning of 2018 it was recognised that agricultural training and capacity building were critical for the re-establishment of atoll agriculture in the outer atolls. The primary focus was on Ailuk, a rural atoll, while in Santo most of the residents have jobs at the near-by US base and so the focus was on establishing women's home gardening.

An agricultural assessment was conducted in Ailuk in April 2018 and in Santo in July 2018. Based on the assessments and the earlier consultations held in Majuro it was decided in Ailuk to focus on the following components:

- Training and capacity building in atoll agriculture including addressing crop pests with biocontrol agents and home gardening
- Rebuilding and equipping the nursery, which had fallen into disrepair
- Enhancing water storage with new rainwater harvesting systems

In Santo it was decided to focus mainly on women's home gardens. However, because of uncertain interest, this plan was abandoned, and replaced with the construction of a nursery at the school.

Recognising that the government had requested the project cover six northern atolls, a lessons learnt meeting for farmers from all six atolls was planned for April 2020 to showcase the activities, provide training and capacity building, and to share experiences.

### **Implementation Phase**

The implementation phase was delayed and interrupted by several factors:

- Between August and December 2019, there was a dengue fever outbreak in Majuro and Ebeye and this resulted in a travel ban to the outer islands, including Ailuk.
- Starting in March 2020 there was a ban on all non-Marshallese incoming travellers due to the COVID-19 pandemic.
- The two travel bans, which together have lasted for more than 12 months, significantly impacted the delivery of the planned RENI project activities, e.g. the Farmers lessons learnt meeting in April 2020 had to be cancelled and replaced with an alternative activity.
- Other factors resulting in delays and interruptions were the unreliability of Air Marshall Islands, which frequently impacted planned travel schedules, and the unreliability of shipping schedules to the northern atolls. As a result, three separate ship charters had to be arranged to transport equipment and materials to Ailuk and Santo.

#### ***Training and capacity building***

The project supported the salaries for agricultural extension agents, employed by the Ministry of Natural Resources and Commerce and based in Ailuk and Santo. There were two positions in Ailuk, a male and a female, and one position in Santo, a female. These agents helped to coordinate the community's involvement in the agricultural activities and took part in all the training and capacity building. They will provide continuity when the project finishes.

Training and capacity building was provided by (i) the Ministry of Natural Resources and Commerce; (ii) SPC's Land and Resources Division; (iii) an agricultural consultant based in FSM; (iv) Taiwan Technical Mission; (v) Marshall Islands Organic Farmers Association (MIOFA); and (vi) Women United Together Marshall Islands (WUTMI).

Between April 2018 and June 2020, a total of eight visits were made to Ailuk, and between July 2018 and July 2020 a total of seven visits were made to Santo for training and capacity building. Further training visits had been planned but had to be cancelled due to the travel restrictions.

The training in Ailuk focused on:

- Soil improvement measures especially composting
- Fruit tree pruning

- Seed selection, planting and care of new seedlings, container farming, vegetable planting and production
- Youth incentives including a pumpkin growing competition
- Pest identification and release of biocontrol agents for papaya mealy bug and scale insects.



*Agricultural agents planting seeds (left), youth winner of the pumpkin competition (right)*

More than 20 women's home gardens were established in Ailuk and training provided in care and maintenance, as well as small equipment.



*Produce from the home gardens*

Booklets were prepared, printed and distributed to guide the atoll farmers. Two of the booklets were also published in Marshallese:

- "Growing Vegetables in the Republic of Marshall Islands" English and Marshallese.
- "Homemade remedies for pest control and identification of major pests and diseases in RMI" English.
- "Cooking vegetables in RMI" English and Marshallese

In Santo, the transportation difficulties, and the employment of the residents at the nearby US base, cause a change in direction of the project from women's home gardening to the construction of a nursery at the school.

#### ***Establishing nurseries in Ailuk and Santo***

An existing nursery in Ailuk had fallen into disrepair, this was rebuilt as part of the RENI project. A new nursery was constructed at the school in Santo. Both of these nurseries required the chartering of vessels to transport the equipment, materials and tool to Ailuk and to Santo. The nursery in Ailuk was

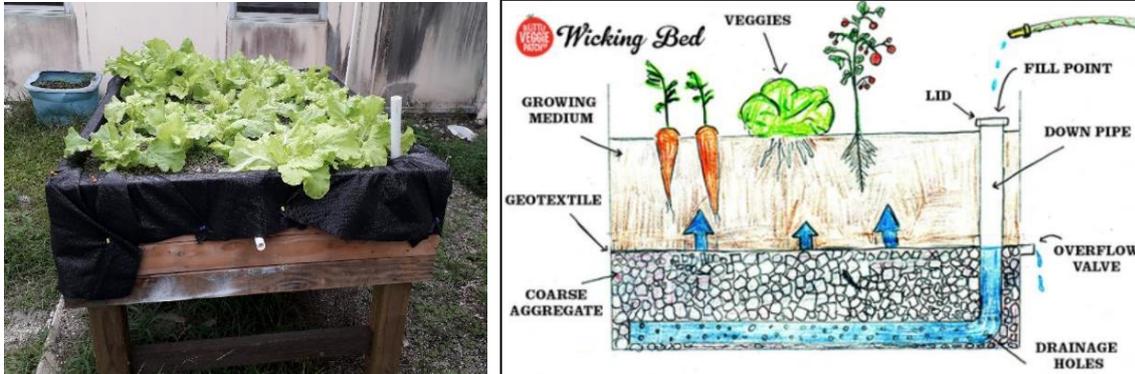
completed early in 2019 and has provided the focus for agricultural activities on the atoll. The nursery in Santo was only completed in July 2020 and has just been handed over to the government.



*Ailuk nursery under construction, 2018 (left); crops growing in Ailuk nursery (2020)*

Local labourers from the community assisted with construction of the nurseries in Ailuk and Santo.

An alternative activity was supported to replace the planned Farmers Lessons Learnt Meeting in Ailuk. A training session on the wicking irrigation system was conducted in Majuro in March 2020 for farmers, NGOs and other interested persons. The wicking irrigation stem is an alternative to drip irrigation. It relies on the suction plant systems and their roots create in drawing water from the soil. Following this and other training sessions, materials for 20 wicking systems were purchased and delivered to the Ministry of Natural Resources and Commerce who will take responsibility for their distribution to interested farmers.



*Wicking system at Majuro Hospital garden in 2020 (left), schematic representation of a wicking system (right)*

### ***New rainwater harvesting systems***

To provide additional water to support the agricultural activities, new rainwater harvesting systems were purchased and installed in Ailuk in 2020. A total of 42,400 litres of additional storage was installed at the nursery and nearby community buildings: hospital, airport and two churches. As with the materials for the nursery, it was necessary to charter a vessel to transport the materials to Ailuk. Local labourers from the community assisted with the installation.