

# **CALL TO ACTION:**

## **IMPROVING THE RESILIENCE OF AGRICULTURE TO CLIMATE CHANGE FOR POHNPEI**

This Call to Action is rooted in the shared vision for a thriving and resilient agricultural sector on Pohnpei and its neighboring atolls (Oroluk, Pakin, And, Ngatik, Nukuoro, Kapingamarangi, Mokil and Pingelap) that supports environmental protection and sustainable livelihoods in the face of climate change. This vision recognizes the long-term sustainability, diversity, and cultural value of ancestral food systems as well as the opportunities that new crops and technologies present for increasing food security and the wellbeing of the people of Pohnpei who are at the frontline of climate change impacts.

This call is authored by participants at the Pohnpei Climate Forum, facilitated by the College of Micronesia and the University of Hawaii Cooperative Extension on January 23-24, 2020. The Climate Forum was designed to engage farmers, natural resource managers, environmental and agricultural agencies in a critical dialogue on culturally relevant solutions to maintain and enhance agricultural production and livelihoods under a changing climate.

### **CLIMATE-RELATED CONCERNS & VULNERABILITIES**

Key threats to agriculture in Pohnpei include increasing heavy rains and heat that damage crops, erode the soil resource, cause flooding, and increase pests and disease. While excessive rainfall is common, the lack of irrigation infrastructure in Pohnpei makes them vulnerable to the increased likelihood of drought events in a changing climate. Coastal areas and low-lying atolls are vulnerable to crop damage from storms, tidal flooding, erosion, and salt-water intrusion.

### **CLIMATE ACTIONS**

Participants in the Pohnpei Climate Forum identify and advocate the following priorities as part of a locally grounded response to climate change:

**Improve local capacity for research and extension on plant pests and disease.** Build capacity for local biocontrol development through investments in laboratory and rearing facilities and skilled research entomologist who can train the next generation of Pohnpeian scientists.

**Improve crop diversity, resilience, and availability of planting materials.** Develop varieties adapted to local conditions by building a crop breeding program and tissue culture lab to increase access to sterile planting material. Facilitate the exchange of crop varieties between farmers to enhance diversity on farms. Determine local demand for both traditional and alternative crops using market surveys.

**Manage waste products to improve/maintain soil fertility.** Provide centralized (village-level) green-waste facilities and ban the burning of vegetation/leaf piles to increase the availability of compost for soil amendments. Provide resources and infrastructure to

properly collect, manage, process pig waste (eg. dry litter technology, deep litter) and biogas effluent for use as agricultural compost

**Promote and empower women as decision-makers and household managers.** Women are key providers of food and medicines. Women are critical for developing local markets for agricultural products, maintaining and passing on knowledge of local food and medicine preparation, and ensuring the nutritional needs of children are met.

**Promote the importance of traditional agroforestry and organic agriculture.** Current farming practices on Pohnpei are resilient to climate change. Ancestral farming practices, like breadfruit agroforests, require relatively low labor and virtually no chemical inputs. Similarly, vegetable farmers on Pohnpei use very little chemical fertilizers and herbicides/pesticides. However, there is a need to develop integrated soil fertility and soil health programs that build soil organic matter.

**Incorporate research on traditional knowledge into climate adaptation strategies.** Local knowledge, practice, and experience in responding to historical climate events like drought, tropical storms, and flood events can inform future actions.

**Strengthen collaborations and partnerships between agencies.** Maintaining communication and knowledge of climate-related projects across agencies avoids duplicating efforts and creates learning opportunities. These partnerships can also facilitate and streamline interactions/support with groups outside Pohnpei to ensure local needs are met.

**Improve the availability of local data and climate change science.** Make environmental/agricultural data collected by local and outside agencies more available. Improve the reporting of seasonal outlooks and predictions from climate models.

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