

# ADDRESSING DISASTER AND CLIMATE RISK IN FSM



## The European Union – North Pacific – Readiness for El Niño (RENI) project in Federated States of Micronesia

### Securing water resources ahead of drought in FSM



#### Project amount



€ 4.5 million (for Palau, FSM and RMI)  
funded by the European Union

#### Project timeframe



6 July 2017 - 31 October 2020

#### Implementing agencies



Department of Resources & Development,  
Yap State  
Environmental Protection Agency, Yap State  
Kapingamarangi Municipality, Pohnpei State  
Department of Environment, Climate  
Change and Emergency Management, FSM

#### Beneficiaries



Direct benefit: **2,916 persons** (Yap)  
**450 persons** (Kapingamarangi)  
Indirect benefit: **7,371 persons** (Yap)  
**450 persons** (Kapingamarangi)

*FSM is vulnerable to the adverse effects of disaster and climate change. Together with Palau and RMI, it is part of the RENI project.*

#### About the RENI project

The European Union (EU) – North Pacific – Readiness for El Niño (RENI) project is about communities working to secure food and water resources ahead of drought. The three-year (2017 - 2020) project is funded with € 4.5 million from the European Union and is implemented by the Pacific Community (SPC) in collaboration with the governments and peoples of Federated States of Micronesia (FSM), Marshall Islands and Palau.

The overall objective of the EU – North Pacific – Readiness for El Niño (RENI) project is to enhance the resilience of the people of the FSM, Marshall Islands and Palau to the shocks and insecurities resulting from extreme El Niño events.

#### Drought in FSM

Yap State is drier than the other states of FSM, and is highly susceptible to drought. While Yap Proper possess adequate groundwater sources, during prolonged droughts such as the 1997/1998 El Niño, these water sources have been known to dry up. Starting in October 2015, rainfall amounts in Yap Proper were well below normal and these conditions continued into the first half of 2016. Faced with this information, the Yap State Department of Resources and Development conducted a survey of available water resources across the State in December 2015. Following this survey, extensive efforts were expended in 2016 to ship potable water to the outer islands of Yap State, and water rationing was started in some areas of Yap Proper. An El Niño Mitigation Plan was prepared to guide the emergency response.

In 2017, a Yap State Disaster Preparedness Plan was produced, and this, together with the El Niño Mitigation Plan of 2016 informed the design of the RENI project in FSM.

In Kapingamarangi the drought had the greatest impact later in the year - September to November 2016 - when emergency water supplies had to be delivered by ship from Pohnpei as the atoll's drinking water supply was depleted.



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## RENI project in FSM

The RENI project in FSM focuses on water security. The selection of activities was informed by the lessons learnt in the 2015-2016 drought and the scope of past and ongoing water security projects in Yap State. Recognising there are significant water security needs throughout Yap State, and limited by the short timeframe available to deliver the RENI project, it was decided to focus on refurbishing abandoned community water systems in Yap Proper. These refurbished community wells and community rainwater catchment systems can then provide “point water sources” or “hotspots” during drought for nearby and distant households in Yap Proper. Maintenance of these point sources will be a particular focus as it is critical to the project’s success.

A hydrogeological assessment will be conducted of specific groundwater resources and in particular the Tamil-Gagil aquifer, one of the most productive sources of groundwater in Yap Proper. A Drought Response Plan will be prepared within the framework of the Yap State Disaster Preparedness Plan.

In Kapingamarangi, an atoll near the equator, activities will focus on expanding community rainwater catchment systems at the Church Hall and the Elementary School as well as modifying the tank at the hospital.

The project will adopt a participatory and community led approach throughout the design and implementation of activities in both locations, and there will be a particular emphasis on applying a gender-sensitive/rights-based approach throughout.

## Key Highlights

### Influencing community behaviours



- Community consultations will be conducted to ensure that local knowledge informs the detailed design of the water storage measures and plans for their maintenance.
- Awareness and educational activities to promote water conservation and drought readiness will be designed and implemented.
- An assessment will be conducted of past water security activities in Fais Island, Yap State, to better understand long term impacts and their sustainability; and a peer-to-peer exchange will be conducted between Fais Island and Kapingamarangi.

### Enhancing water security



- Community wells will be refurbished in two communities in Yap Proper with solar pumps, new water storage and treatment systems.
- Rainwater storage systems will be refurbished and expanded in community buildings in up to four communities in Yap Proper.
- Communities will be trained in the maintenance of the improved water security measures.
- Women’s groups will be invited, through a request for proposals, to design and implement parallel activities that support water security in Yap State.

### Research and planning to prepare for future droughts



- An hydro-geological assessment will be conducted of the Tamil-Gagil aquifer to guide extraction and use of this water source.
- A drought response plan will be prepared within the framework of the Yap State Disaster Preparedness Plan.
- A study into the feasibility of solar disinfection (SODIS) methods in Kapingamarangi will be conducted, and if the results are positive, SODIS will be introduced to improve the quality of drinking water.

### Activities meet the SDG’s:

