

Kosrae Shoreline Management Plan



Client: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) & Kosrae State Government

Location: Kosrae, Federated States of Micronesia

Duration: 2013 - 2014

Services: Community & stakeholder consultation, coastal hazard assessment, development risk assessment, risk mitigation and adaptation planning

Much community and infrastructure development on Kosrae over the last 60 years has occurred within the coastal margins. Most of the coastline on Kosrae, where this development has occurred, is prone to coastal hazards such as long-term shoreline change and episodic coastal inundation (particularly during times of high (king) tides, large swell and very occasionally due to typhoon events).

Over the next one to two generations, and beyond, climate change will progressively increase the frequency and impacts of coastal hazards such as erosion, wave overwash and flooding damage to existing property, infrastructure and the five village communities on Kosrae. Increasingly it will make the situation too difficult for those communities currently located in exposed areas to live there.

NIWA, with support from the Secretariat of the Pacific Community and the Kosrae Island Resource Management Authority, worked to set out an adaptation plan for the next two generations. The plan developed from a solid knowledge of Kosrae's natural coastal environment, the coastal processes operating and the likely impacts of climate change and sea-level rise over the next few generations on these process and hazards. The team worked with the communities in each village, key government departments and infrastructure providers to

identify key strategies that would increase community and associated infrastructure resilience over this timeframe. Underpinning these strategies were five principles: (1) the continued careful management of Kosrae's natural resources was fundamental for effective and sustained protection from coastal hazards and long-term adaptation; (2) a primary focus on where future development is located, (3) a focus on ensuring future development is built to withstand hazard impacts, (4) a limited use of coastal defences only where there are no other options, and (5) effective adaptation needs to start now.

Central to the plan was a change in development pathway with the strategic relocation of core infrastructure back from the coast over the next two generations. This was seen as an enabling activity and guiding mechanism to assist the subsequent gradual location of people and communities currently living in areas high exposed to present day coastal hazards.

The plan is now being used to direct subsequent donor assistance to Kosrae in implementing the identified strategies and has provided the Kosrae leadership a clear direction to ensure adaptation support is effectively aligned.