

Name:	18. KIMBE BAY: SCIENTIFIC DESIGN OF A RESILIENT NETWORK OF MARINE PROTECTED AREAS		
Region	Oceania	Country	Papua New Guinea
Ecosystem	Marine and coastal		
Nature of approach	Assessment of vulnerability; Improvement in capacity, design and policy measures (raising awareness, promoting policy change, incorporation into relevant strategies); Implementation of EBA measures (natural resource management, protected areas)		
Description of approach	<p>Objective/Expected outcomes Kimbe Bay is part of the global center of marine diversity called the Coral Triangle, which supports 76 percent of the world's coral species. It also supports thousands of people who rely on its coral reefs for their food and livelihoods. The objective was to address local marine resource management needs by designing a Marine Protected Area (MPA) network at Kimbe Bay that incorporated both human needs and principles of coral reef resilience to ensure the continued delivery of ecosystem services in the face of the adverse effects of climate change, including coral bleaching associated with rising sea temperature.</p> <p>Actions Research over a number of years enabled the identification of priority areas that could be designated within the network of MPAs, making sure that there was enough key ecosystem elements protected to ensure the continued provision of ecosystem services, including areas critical for fish spawning. Consultation with local communities over the proposals ensured that their needs were understood and incorporated. By protecting resilient coral reefs and linking MPAs through ocean currents, the network was designed to support coral reefs by enabling coral larvae from healthy reefs to replenish those affected by bleaching. The approach also included protection of critical coastal habitats, such mangroves that protect against the increasingly violent storms associated with climate change.</p> <p>Results achieved Collaborating with experts and partners in Kimbe Bay enabled development of strategies that ensure fisheries are managed sustainably and destructive fishing practices are minimized. The local government was supported to draft and implement legislation that allows local communities to enforce the protection of their marine areas.</p> <p>Indirect pressures to the MPA were also addressed by working with partners and governments to implement land-use practices that will maintain healthy marine ecosystems, by reducing threats from run off and sedimentation caused by commercial crops, small-scale forestry and other land-use practices.</p> <p>Local communities manage their own protected areas in the network so that they can best protect their fisheries and benefit from additional livelihood opportunities such as eco-tourism and sport fishing.</p> <p>The interventions undertaken in Kimbe Bay illustrate how healthy and interconnected ecosystems that can adjust to changing environmental conditions can help biodiversity and people to adapt to climate change.</p> <p>Lessons learned</p> <ul style="list-style-type: none"> • Importance of community involvement (because local people, not the government, own land and water resources, and will be the ones responsible for managing it). • Building awareness. One major challenge was helping people understand how fragile their resources are and the importance of creating a plan to protect them. • Measuring the success of climate adaptation strategies is an ongoing process. The Nature Conservancy is working with leaders in the reef research community to fine-tune the implementation of resiliency principles. 		

	<ul style="list-style-type: none"> Lessons learned from Kimbe Bay are already being reapplied throughout the Coral Triangle, in areas such as the Solomon Islands and Indonesia 		
Type of organisation	NGO	Name of organisation:	The Nature Conservancy
Further information and contact details	http://www.reefresilience.org/pdf/Kimbe_Exec_Summary.pdf http://www.nature.org/ourinitiatives/regions/asiaandthepacific/papuanewguinea/placesweprotect/kimbe-bay.xml http://www.nature.org/ourinitiatives/urgentissues/climatechange/placesweprotect/protecting-the-worlds-center-of-marine-biodiversity.xml Colls, A., Ash, N. and Ikkala, N (2009). Ecosystem-based Adaptation: a natural response to climate change. Gland, Switzerland: IUCN		