KIRIBATI

RESTORING BIODIVERSITY, ONE ISLAND AT A TIME

2010 is the International Year of Biodiversity but evidence from the United Nations shows biodiversity is in a perilous state of decline. Nadine Koszler looks at how Kiribati is taking steps in the right direction to conserve the Pacific island nation's unique environment.

Biodiversity supports the ecosystems that we rely on for food and freshwater, health and recreation, and protection from natural disasters. However, globally we continue to lose biodiversity at a rate never witnessed before. Habitat changes, pollution, over exploitation of natural resources, invasive species, and climate change – the five fundamental pressures directly driving biodiversity loss – remain either constant or are increasing in intensity.

Although it is a global issue, often it is the poor who most directly depend on these ecosystems for their lives and livelihoods. Current trends in biodiversity loss put development gains of recent years, such as a reduction in poverty levels and healthier populations, at risk.

Convention on Biological Diversity

The international community has made a commitment to maintaining biodiversity as a part of sustainable development. The UN Convention on Biological Diversity is a multi-national treaty with three main goals: conservation of biodiversity; sustainable use of biodiversity; and fair and equitable sharing of the benefits that arise from the use of genetic resources (genetic material of plants, animals or micro-organisms that are a valuable resource for future generations).

The convention came in to force on 29 December 1993, and New Zealand is one of 193 countries to have ratified it. In April 2002, the parties to the convention committed themselves to achieve by 2010 a significant reduction of the current rate of biodiversity loss at a global, regional, and national level to help alleviate poverty and for the benefit of all life on Earth.

A new biodiversity report, the third edition of Global Biodiversity Outlook, was released by the lead UN environmental agencies in May this year. The report concludes that we have fallen short of the 2010 target and unless swift action is taken to conserve biodiversity, the natural systems that support our daily lives and operations are at risk of failure.

More positively the report commends the rise in the number of protected areas and the efforts made to tackle some of the direct causes of ecosystem damage, such as invasive species. Kiribati is one country moving in this direction. The Pacific nation has recently become a global conservation leader by establishing the world's largest marine protected area – an area similar to the size of California.

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Moving in the right direction

Kiribati's Phoenix Islands Protected Area (PIPA) consists of eight coral atolls and two underwater reefs, and is home to unique marine and seabird species. Protecting the Phoenix Islands means restricting commercial fishing in the area, resulting in a loss of revenue that the Government of Kiribati would normally gain from issuing commercial fishing licenses. PIPA partners, the New England Aquarium and Conservation International, have helped Kiribati design a funding system that will cover the core management costs of PIPA and compensate the Kiribati Government for loss of license revenues.

The Phoenix Islands provide a remote refuge for nesting seabirds, but rats and rabbits have had detrimental impact on seabirds and plant life. An extensive bird monitoring survey completed in 2006 showed that several populations had either declined or virtually died out over the past 40 years.

The Government of Kiribati and the PIPA Administration Office recognised the urgent need to conserve the biodiversity on the islands but lacked the capacity to do so. They sought the support of Conservation International and partner organisation Pacific Invasives Initiative, and New Zealand's Department of Conservation (DOC). Funding from the NZAID programme's State Sector Development Partnerships Fund helped establish the Phoenix Islands Restoration Project, which has seen pests eradicated from select islands within the PIPA and Kiribati Government staff trained in effective invasive species management.

1 Waste from a nearby village collects on the shores of a Timor-Leste river which then spills into the sea. UN Photo – Martine Perret

New Zealand individuals and organisations have extensive experience in pest management due to the measures taken to protect New Zealand's own distinct biodiversity. Sharing that knowledge with the international community reflects New Zealand's commitment, by ratifying the convention, to help cease the loss of biodiversity worldwide.

Restoring the Phoenix Islands

Including both marine and land elements in the PIPA is unusual. DOC's Keith Broome, the Project Manager for the Phoenix Islands Restoration Project, believes the Kiribati Government's holistic approach to the PIPA is far more sensible from a biological point of view. "The land and marine components of the protected area are inextricably linked. What happens on one affects the other."

Expeditions in 2008 to two islands in the PIPA saw the eradication of rabbits from the Rawaki atoll and Asian rats from the McKean atoll. Kiribati is a small country spread over a vast ocean, and pre-expedition planning, coordination and communication between stakeholders were challenging aspects of the project. Keith puts the distance in perspective, "I figured out the Phoenix Islands are about 4,000 kilometres from my desk in Hamilton – that's twice the distance from North Cape to Bluff. But if you travel from one side of Kiribati to the other you cover a similar distance – 3,200 kilometres."

Integral to the sustainability of the project was developing the skills of Kiribati officials to effectively manage the islands and others like them in the future. The project team ran training workshops with staff from key Kiribati government agencies involved in managing the islands (Wildlife Conservation Unit, Quarantine, Customs, Police, and Phoenix Island Administration). Capacity building exercises were a cross government, non-government and community organisation effort to ensure Kiribati officials were taught international best practice. The workshops have led to the agencies working collaboratively to develop Kiribati's biosecurity system.

Training workshops had a 'learn by doing' approach, which had unplanned benefits. On Kiritimati (Christmas Island, the location of the

administration base for the PIPA), for example, eradication training exercises cleared pests from 23 small islands in the lagoon, more than doubling the area of pest-free land in the island's lagoon, and greatly enhanced the status of many threatened seabirds on the island including petrels and shearwaters.

Two Kiribati officials also joined the 2008 expeditions to McKean and Rawaki where they had one-on-one training in key eradication tasks including expedition preparation, laying out bait grids, establishing vegetation monitoring points, and seabird and land crab monitoring.

When members of the project team made a follow-up visit to Kiritimati in 2009 they found the dynamic had changed. Instead of Kiribati officials assisting DOC staff, it was the other way around. "The Kiribati officials were essentially setting the priorities, they were doing the planning, and we were giving some guidance along the way where they needed it. That really showed they were able to shift along that continuum towards self-sufficiency," says Keith.

Since the initial stages, the project team has also been working at a community level and with the wider Kiribati Government to raise awareness about the importance of biosecurity and the ecosystems on the islands. With every expedition to the islands a visit was made to Kanton, the only inhabited island in the PIPA, to discuss the project with the local village. Keith says there is still plenty to be done, but the Government understands the risks posed by invasive species and is beginning to make changes to ensure the PIPA is more secure, including restricting access to the islands – only people with a legitimate reason will be able to land on the islands.

Monitoring in late 2009 confirmed that pests had successfully been removed from both islands with striking results. Keith says the most dramatic difference has been the response in vegetation.

On McKean many of the threatened seabirds have expanded their nesting area over the island's improved habitat, while on Rawaki the increasing number of juvenile birds indicates nesting success.

1 The 'desert' of Rawaki atoll in 2008. Vegetation has been devastated by grazing rabbits. Photo - DOC

2 Wildlife Conservation Unit Officer Katareti Taabu in the same area in 2009 after pest eradication activities. Photo - DOC

1 DOC Ranger Mike Thorsen helps survey crew ashore on Rawaki Pacific Expeditions MV Bounty Bay in background. Photo - DOC

2 Agriculture Division Officer Nautonga Anterea and Wildlife Conservation Unit Officer Uriam Anterea erect poison warning sign on Rawaki. Photo - DOC

3 Expedition Leader Dr Ray Pierce and Wildlife Conservation Unit Officer Uriam Anterea monitor seabirds on Rawaki. Photo - DOC

Continuing support

The NZAID programme has granted DOC further funding for the next three years to maintain connections and further enhance capacity. The next stage can be characterised as a 'behind the scenes' project, with DOC project staff providing a mentoring and support role to Kiribati officials with biosecurity responsibilities. Keith explains the reason for the next phase, "It keeps them involved in a broader network – a place to turn to for assistance and we can respond."

Keith believes the success of the programme to date stems from the supportive, collaborative environment that was created during the project. "It's more than the sum of the parts. When you look at the project, you couldn't just pick it up and replicate it somewhere else without that supportive environment and expect the same thing to happen."

PACIFIC INVASIVES INITIATIVE (PII)

Launched in 2004, following initial funding from the NZAID programme, the goal of the PII is to reduce the spread and impact of invasive species in the Pacific in order to conserve biodiversity and ensure the sustainability of people's livelihoods.

The PII provides long-term capacity building support to government agencies, non-government or community based organisations who are working on invasive species management projects in the Pacific. Support includes project planning assistance, technical advice, peer review services and training workshops.

The NZAID programme has provided funding of up to $1.2 million over three years to the PII (2007-2010).