

### Overview

From 2006, the Kiribati Adaptation Program, Phase II (KAP II) has helped identify and pilot adaptation measures to improve coastal protection, freshwater supply, and sustainability for the Pacific island nation of Kiribati, one of the most isolated countries in the world, and one of the most vulnerable to climate change and sea level rise. Climate risk considerations have been integrated in key Ministry plans, and the project has helped develop and apply best practices in water resource management and coastal protection. Approximately 0.5 km of sea walls have been built along the main road, over 37,000 mangrove seedlings have been planted and several water management improvements have been carried out, all helping to increase resilience to the effects of climate change for Kiribati's 98,000 residents.

# Challenge

Kiribati is one of the most isolated countries in the world and has one of the highest rates of poverty in the Pacific. Consisting of 33 low-lying islands spread over a vast area of ocean, Kiribati is extremely vulnerable to climate change and sea level rise. Most of the land is less than three meters above sea level, and tides have already flooded homes and devastated people's livelihoods. Sea level rise is also contaminating groundwater in Tarawa, making it unfit for people to drink; increasing the potential for epidemics; making it difficult to grow crops, and threatening critical marine ecosystems. Infant mortality from diarrheal diseases in Kiribati is the highest in the Pacific. Environmental pressure is compounded by population growth. At current rates, the population will increase by 55 percent by 2025. Nearly half of Kiribati's 98,000 inhabitants live in South Tarawa, an area that is more densely populated than Tokyo. In 2000, the World Bank regional economic report estimated that, by

2050, many of the island state's largest settlements could

### **MULTIMEDIA**

### MORE

Kiribati: pushing against the tide

More Results



people now have better fresh

# Approach

become inundated.

KAP II aimed to change the way Kiribati is able to manage risks from climate change and sea level rise. This approach required the integration of adaptation programs within relevant government policies and plans. Communities, island councils, civil society groups, nongovernmental organizations (NGOs), and churches were central in consultation and implementation. The main adaptation investments supported by KAP II not only provided immediate results in terms of reduced vulnerability, but also helped to demonstrate and promote climate risk awareness in planning and design. Following KAP II, these activities are being expanded as part of a continued adaptation program.

## Results

By 2011, the KAP II project had achieved visible on-theground impacts on coastal protection and freshwater supply and sustainability.

- Shoreline protection works were completed in the first quarter of 2011. These works included construction of approximately 500 meters of sea walls and the planting of over 37,000 mangroves, helping protect against coastal erosion and acting as a first line of defense against water contamination.
- Water works have been completed across Tarawa and the Outer Islands, including a
  freshwater infiltration galleryto improve water supply for over 500 people. Rainwater
  harvesting and storage facilities at four sites are benefitting over 700 people, 50 percent
  of which are women.
- Groundwater monitoring boreholes were installed in nine locations and rain gauges in the Outer Islands have increased capacity to gather crucial climate data.
- Public involvement and awareness grew significantly with the implementation of key activities, such as mangrove planting undertaken by local communities and youth groups, and community training in groundwaterwell and rainwater tank maintenance.
- The National Water Strategy was adopted in 2010 along with a National Water Strategy
  Master Plan. A Coastal Protection Guideline was developed to ensure key infrastructure
  investments could withstand extreme weather and sea level rise, as well as provide
  guidelines for rainwater harvesting and storage.
- Best practice regarding risk management and environmental assessment isnow applied systematically in the design ofmajor infrastructure projects.
- Important capacity building initiatives were undertaken with government departments, including trainings in climate risk diagnosis, assessment and planning. Among others, these programs have helped staff and partners monitor rainfall and drought, storm surges and sea-level rise projections on a regular basis.
- Oversight of adaptation measures were coordinated and integrated across government.
   A lead office (Office of Te Beretitenti/Office of the President) was established in the program's first year with responsibility to oversee adaptation. The National Adaptation Steering Committee meets every month, attended by key ministries.
- KAP II activities were included in all Ministry Operational Plans of the Government of Kiribati for all financial years between 2007 and 2010.

# 37,000

mangrove seedlings planted, helping protect against coastal erosion

#### MORE INFORMATION

- Kiribati Adaptation Program Phase II
- Country Website
- Country Assistance Strategy
- Data and Statistics
- Feature story: Kiribati: Pushing Against the Tide



44 Planting mangroves contributes to the building of coastlines and protects our shores against coastal erosion. Mangroves provide a range of benefits, including increasing habitats for coastal and marine species which are important to local livelihoods.

— Turang Favae, Acting Biodiversity and Conservation Officer at the Environment and Conservation Division

## **Bank Contribution**

The Bank supported the project with a grant from the Global Environment Facility (GEF) of US\$1.8 million within a total project cost of US\$7.7 million.

### **Partners**

The project was co-financed by the Australian Agency for International Development (AusAID) and the New Zealand Aid Programme (NZAP). AusAID provided US\$3.43 million, the New Zealand government US\$1.05. The Government of Kiribati provided US\$1.42 million.

The National Adaptation Steering Committee in Kiribati helped coordinate KAP II. Overall direction was provided from the Office of Te Beretitenti through the Strategic National Policy and Risk Assessment Unit (SNPRA).

### Toward the Future

Adaptation work started by KAP II, which closed in June 2011, is being continued by the KAP III Project. KAP III will build on its predecessor's successes to improve climate resilience by both strengthening the government's and communities' capacities to manage climate change effects. KAP III will also focus on increasing fresh water quality and storage capacity at the local level. The US\$10.8 million KAP III project is being financed by the Global Environment Facility Least Developed Countries Fund, the Japan Policy and Human Resources Development Fund, the Global Facility for Disaster Reduction and Recovery, and the Government of Kiribati.