

NAURU

PACC Country Brief

Pacific Adaptation to Climate Change



Adapting water resource management to increase climate-resiliency and protect against future climate change risks

The Pacific Adaptation to Climate Change (PACC) project is supporting the integration of climate change risks into policy frameworks and the implementation of community-based adaptation measures in 14 countries throughout the Pacific. These actions are intended to increase resilience in three key development sectors: water resource management, coastal zone management, and food production and food security.

In Nauru—a small isolated island developing state situated in the Pacific region—the PACC project specifically aims to increase, diversify and better manage the island nation's water supply.

Issues

The total land area of Nauru is 22 sq km, surrounded by a coral reef. Nauru's climate is very dry; varied annual rainfall causes prolonged droughts. As with other small island states, Nauru's water supplies are also vulnerable to fluctuations in rainfall. With the Buada Lagoon as Nauru's only surface fresh water resource, most of the population relies on either desalination by the Nauru Utilities Authority or on rainwater harvesting for their water. Alternative sources of water are lacking and groundwater resources are threatened by many contaminants such as cadmium, leachate and sewage from rubbish dumps, and household waste water.



Composting toilets.
Photo: Gabor Vereczi

Significant changes in average rainfall and sea temperatures can also affect other development sectors in Nauru. Periods of drought can jeopardise agriculture and fishing sectors, and increase the likelihood of fires. Low availability of freshwater can also lead to challenges in the health sector, with an increased incidence of water-borne infectious diseases such as typhoid and diarrhoea.

Actions

In response, PACC Nauru is working to improve existing water structures to be able to better cope with climate related stresses. By improving access to alternative water resources and improving water harvesting infrastructure, PACC Nauru is establishing access to quality drinking water. The PACC Nauru pilot project will focus on extracting groundwater for residents who depend on rainfall for all water needs, including water for non potable uses. Through coordinated government involvement and community participation in water conservation, planning and management, PACC Nauru aims to develop a sustainable hybrid water system - including an alternative source of water supply that does not depend on Nauru's weather patterns.

Policy mainstreaming:

The first of the PACC outcomes is devoted to mainstreaming. The PACC approach to mainstreaming has a dual purpose: 1) to strengthen the ability of institutional frameworks, policies and plans to take climate change risks into consideration and 2) to improve the capacity of key national government and community decision-makers to integrate adaptation measures in key decisions.

On 8th February 2012, Nauru's National Water, Sanitation and Hygiene Policy came into immediate effect when it was passed by the National Cabinet. The policy, which is a significant achievement, is the result of a combined effort of the Integrated Water Resource Management (IWRM) project and PACC Nauru. Formulation of the policy was a collaborative effort between the Commerce, Industry and Environment (CIE) Division, Pacific Islands Applied Geosciences Commission (SOPAC), the Water Unit Technical Working Group, Project Steering Committee and other national stakeholders.

Under both PACC Nauru and IWRM it was important to develop the National Water Policy and set up a legal framework to mainstream it into national policies and legislation. PACC National Coordinator Ms. Mavis Depaune said, "It is a stepping stone for the PACC project as it will be able to further address climate change and water related issues. The policy will provide the people a more effective

Country Summary

Country:
The Republic of Nauru

Thematic Sector:
Water Resource Management

Project Funding Source:
GEF-Special Climate Change Fund

National budget allocation:
GEF-SCCF: \$750,000

Co-financing:
\$1,888,000

Programme Period:
2009-2013

Target area:
Denig and Aiwo Districts, Nauru

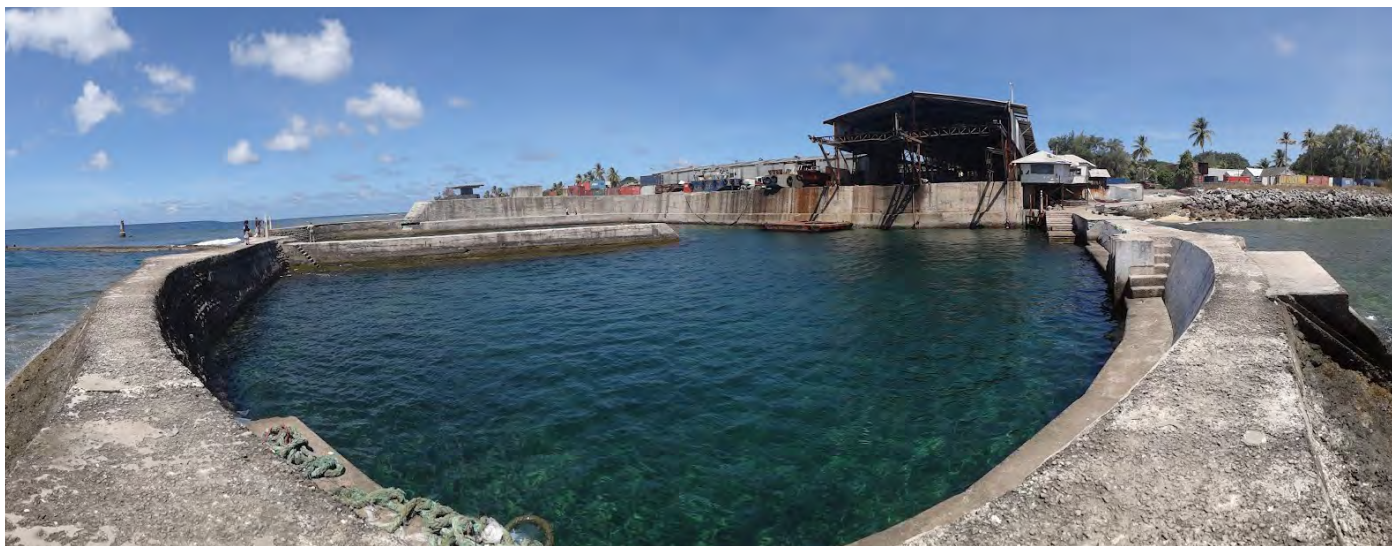
National Implementing Agent:
Department of Commerce, Industry & Environment, Government of Nauru

National Implementing Partners: Nauru Utilities Authority and Nauru Rehabilitation Corporation

Regional Implementing Partner: SPREP

Implementing Agency: UNDP





PACC Nauru will improve existing water structures to be able to better cope with climate related stresses.
Photo: PACC Nauru

and coordinated national water management and a framework for government to take the lead in an area of vital national concern.”

Community-based adaptation:

The second PACC outcome is to design and demonstrate innovative decision systems, approaches, technologies and practical measures to improve climate-resilience. Through a combination of measures, PACC Nauru is demonstrating the benefits of taking climate change into consideration in the water sector. PACC Nauru’s concrete installations include water purifiers (using solar heat) - connecting households that previously used brackish water pumps to now use potable water storage tanks. The installation of solar purifiers and the distribution of water tanks are part of PACC Nauru’s efforts to increase water storage and secure a continued supply of good quality drinking water in the future.

PACC Nauru covered costs for the construction of stands to maximize exposure to sunlight for water production and minimize vandalism to the solar purifiers. Three main saltwater tanks were revamped with a pump and pipelines to give alternative water for sanitary purposes in Denig district.

In addition, water technical assessments and adaptation design work has been carried out to determine the best adaptation options. These include assessing the issues of brackish underground water, houses without guttering, and the dust from mining at the “Top-Side Site” quarry. This design work is especially important in light of the major challenges to the health and water supply of the people at the pilot site Denig and Aiwo District, which is situated very close to the phosphate drying bin.

Water analysis work includes the installation of an automated rain gauge in the middle of the island so that water level and salinity sensors equipped with data loggers will be able to accurately assess recharge conditions. This research will also show the response time between rainfall and groundwater level increases, which will help to calibrate long-term climate resiliency.

In addition to technical assessments, PACC Nauru consultation workshops have been conducted to seek feedback from the community on the amount of water usage in households. To

complement the data gathered from the consultation workshops, PACC Nauru worked with the Nauru Bureau of Statistics to include water usage input in the national census. PACC Nauru consultation workshops were also a useful venue to promote information exchange and capacity building – key components of the project.

Impacts

The main goal of this project is to enhance the capacity of Nauru to adapt to climate change and variability in the water sector. The impact of these PACC Nauru efforts, and the increased availability and quality of freshwater, will improve public health, agricultural production, and industry, thereby preserving communities and livelihoods. On a broader level, PACC Nauru work will have a meaningful impact for its residents by strengthening the institutional framework, policies and plans, and the capacity of key national government and community decision makers to integrate climate change risks into sustainable development programmes. The results and lessons will be shared regionally and globally, and bring together new knowledge generated through the project as the basis for a strategic and regional approach to climate change adaptation.

Contact Information:

Mavis Depaune, PACC National Coordinator, Commerce Industry & Environment
mavis.depaune@naurugov.nr

Taito Nakalevu, PACC Regional Project Manager
taiton@sprep.org

Marta Moneo, UNDP Environment Programme Officer
marta.moneo@undp.org

Gabor Vereczi, UNDP Regional Technical Advisor
gabor.vereczi@undp.org

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