



Using Integrated Land Use, Water Supply and Wastewater Management as a Protection Model for the Alofi Groundwater Supply and Nearshore Reef Fisheries

Niue

Progress Snapshot

Project Objective

Utilize specific and tangible Stress Reduction measures to improve water resources management and protection, and link these to water quality outcomes and support improvements in integrated governance arrangements of policy and planning

Process

✓ Revise legislation for protecting water

The enactment of the Niue Water Act 2012 has provided the framework for regulations to address concerns relating to water use efficiency, allocation and protection of drinking water resources.

Additionally, it provides for the development of a national Water Resource Management Plan and integration of water and sanitation management across government and other stakeholders, administering the Act in an integrated approach across three separate agencies.

✓ Implement village water management plans for Alofi North and Alofi South communities

Under the project, Village Water Management Plans were developed to engage communities in water management, to strengthen communications on key water issues and to foster a sense of ownership.

These plans in Alofi South and Alofi North have provided a mechanism for the community to communicate with its national partners including the Cabinet Ministers, as well as different groups within village communities.

Important developments as part of this process have included gender mainstreaming and the increased capacity of communities to support the implementation of drinking water safety plans. This in turn has contributed to a measured reduction in household water use.

✓ Implement National communication strategy

Developing and implementing a National Communication Strategy has increased the awareness of people on the importance of Niue's water resource and in particular, conservation measures that are important to ensure that water is safe for consumption and for future generations.

Annual World Water Day Events have become important at a national level to focus on water resource awareness and education, with participation rates as high as 50% of the national population.

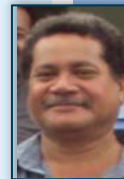


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Launching the Alofi South Water Management Plan



World Water Day 2012 celebration

Niue IWRM Demonstration
 Project Video
<http://www.pacific-iwrm.org/Niue-video.html>

Stress Reduction

✓ Reduction in drinking water resources pollution

Niue relies heavily on groundwater for water supply. The national groundwater reserves are significant. However poor water use efficiency (WUE), in particular system losses and inadequate storages threaten national supplies.

In the longer-term, maintaining groundwater quality is the key challenge for sustainable water resource management. The key threats to groundwater quality include pollution from agriculture (including piggeries and chemical use), disposal of medical wastes, septic tanks and waste oils.

An inventory at the start of the GEF Pacific IWRM Project identified approximately 25kL of waste oil stored in leaking drums and seeping into the ground and potentially into the groundwater.

The project has established a national collection and disposal mechanism, and 56% of national waste oil has been collected and stored in safe containers and shipped to New Zealand for recycling and/or safe disposal. A guideline of these mechanisms has been drafted for NWSC endorsement before submission to Cabinet in order to maintain this activity into the future.

✓ Water conservation and demand management measures

Prior to the GEF Pacific IWRM Project, Alofi's supply relied on a heavily leaking 325kL tank, providing only about two days water supply storage for the Alofi community, meaning that the community was particularly vulnerable to groundwater pollution or pump failure.

The project has seen the replacement of the existing tank with two new 240kL storages, increasing storage by over 45% and significantly increasing supply security by eliminating storage leakage losses.



Waste oil containers ready for transfer to New Zealand



New 240kL water storage tanks

Water Resource and Environmental Status

✓ Increase population with access to safe drinking water supply

The water supply in Niue is groundwater based and un-chlorinated. Risks to the Alofi town water supplies include seepage of residential sewage from septic tanks, seepage of waste from piggeries, agricultural chemicals, industrial wastes, seepage from rubbish dumpsites and contamination of the storage and distribution systems.

The establishment and implementation of the National Drinking Water Safety Plan and the Village Drinking Water Safety Plans through the GEF IWRM Program provides confidence that these risks are being managed and that the 450 people of Alofi are receiving safe drinking water.

Further, the development of Village Water Safety Plans strengthens the communities' knowledge about managing the water resources and managing water use efficiently.



Implementation of Village Drinking Water Safety Plan



Demonstration with Village communities: How to fix household water leaks