

Secretariat of the Pacific Community

Global Climate Change Alliance: Pacific Small Island States Project

Project Concept Note

Augmentation of Rainwater Harvesting in Niue

Name of Country : Niue Island

Name of Person/Agency : Sauni Tongatule, Director, Niue Department of Environment

General Information:

Project Title: Augmentation of Rainwater Harvesting in Niue

Project Site(s): Villages of Alofi South, Alofi North and Tuapa.

Project Partners:

- GEF and AusAID (International)
- Water Division, PWD
- Department of Environment
- Department of Health
- Niue Chamber of Commerce
- Villages of Alofi South, Alofi North and Tuapa.

Total Project Cost: €500,000

Project Duration: 2 years

Project Description:

The project will provide 5,000 litre rainwater tanks to each of 214 households which have been identified in three villages, namely Tuapa, Alofi North and Alofi South. Each of the 214 households already has a new corrugated iron roof provided as part of the post-Cyclone Heta recovery programme, with the last 17 households re-roofed as recently as December 2012. The project will also provide downpipes where necessary in partnership with support already provided by the Global Environment Facility (GEF) through the Pacific Adaptation to Climate Change (PACC) project and the Australian Government through AusAID. The contributions of each of the projects for downpipes will be elaborated in the project design document. A communications and awareness campaign will be conducted to advise each household that it is their responsibility to provide guttering, and additional fixtures where necessary e.g. fascia boards for the guttering. This will assist with building ownership of the project and ensuring maintenance and care of the rainwater harvesting systems by the individual householders.

The GCCA: PSIS project will complement and upscale the existing Rainwater Harvesting Project funded by GEF and AusAID and will ensure coverage of the whole island, a total of 477 households in 14 villages. This will assist Niue by securing a reliable supply of potable water especially during extreme events such as tropical cyclones.

Background

Rainwater harvesting was the primary source of potable water supply in the past but now there are only a very small number of households that are totally dependent on rainwater harvesting.

At the present time the water supply is sourced primarily from the underground aquifer. The extraction, storage and distribution of underground water supplies to households are highly dependent on the use of fossil fuels. The underground water source is also vulnerable to land based pollution and contamination.

Rainwater harvesting is economically viable and culturally acceptable in Niue. Following Cyclone Heta in 2004, the asbestos removal and reroofing project has provided households with clean, safe roof catchments for the collection of potable water for use during cyclones when electricity supplies are disrupted and as a supplementary source during prolonged dry periods as experienced during June-November 2012. The addition of rainwater harvesting will provide a more secure supply of potable water for individual households in the respective communities during extreme weather events.

The National Integrated Strategic Plan (NISP 2009-2013) and the Joint National Action Plan on Climate Change Adaptation and Disaster Risk Reduction (JNAP) for Niue have identified the need to increase the amount of potable water available to households. A cost benefit analysis carried out recently under the PACC project supports recommends the supply of 5,000 litres of rainwater storage to individual households.

Project Cost and Budget

The cost of the project will be approximately EUR500,000 and the budget for various activities will be detailed when the project is fully developed.

General Criteria for Identification of Projects

Criteria	How does the proposed project adhere to the criterion?
1. <i>Feasibility</i> : Is the proposed project feasible taking into account: Time frame of GCCA: PSIS, Available budget, National human resources, Previous track record with project implementation.	The project falls entirely within the GCCA: PSIS project time frame and the provision of EUR500,000 will enable a supplemental supply of potable water to approx 214 homes (44% of estimated population in 2011). This project will complement the Niue PACC project funded by the GEF and AusAID to provide rainwater tanks to households.
2. <i>Cost</i> : Does the project require minimal resources	Yes: The project will require minimal resources as other components are being supported by other donors: GEF and AusAID.
3. <i>Consistency</i> : Does the project support the country's climate change adaptation policy and planning	Yes: The project is consistent with the NISP 2009-2013, Niue's Climate Change Policy and the Niue Joint National Action Plan on Climate Change and Disaster Risk Reduction (JNAP) as well as Corporate and Agency plans where water sector improvement is identified as the highest priority.
4. <i>Urgency</i> : Is the project urgent or could it be delayed 10 years with minimal impact	Yes: Further delay of the project would make people in Niue more vulnerable especially during extreme events.

5. <i>Scientifically valid</i> : Is the project based on scientifically valid climate change projections ¹	Yes: Year-to-year variability in rainfall is a real challenge for Niue and the project helps address this climate variability. Severe droughts with dry season rainfall less than 400 mm have occurred in 1983, 1991 and 1998; and more recently in 2012. Rainfall varies from 810-3,300 mm a year due to the influence of the El Niño Southern Oscillation. However, projections for 2030 and beyond show a general increase in dry season rainfall and an increase in wet season rainfall over the course of the 21 st century and more very hot days and extreme rainfall days, and less frequent but more intense tropical cyclones.
6. <i>Equity</i> : Does the project involve all sectors of society (especially community participation and gender considerations)	Yes: This project is centred on the full participation of the selected communities, government, non-government and community-based organisations and provides opportunities for entry of gender considerations in the design and implementation of the project.
7. <i>Replication</i> : Can the project be replicated in the country or elsewhere	Yes: This project is focused on 3 of the 14 village communities on Niue and could easily be replicated and up-scaled to other communities in Niue and elsewhere. (The remaining 263 households in 11 villages are being covered in projects supported by GEF and AusAID).
8. <i>Measurability</i> : Can the benefits of the project be measured and quantified	Yes: An M&E framework will be designed for this project and used to measure the benefits. A log frame will also be developed at the start of the project so timelines, budget and activities are carefully planned and can be monitored.
9. <i>Scope of project</i> : Does the project activity focus on one sector and include a blend of visible (on-the-ground) activities and intangible support activities (e.g. policy development, capacity building)	Yes: The project is focused on the water sector with strong linkages to health, hygiene and livelihoods. Project activities are in line with the JNAP, National Water Safety Plan, Health Strategic Plan 2011-2021, Sanitation and the proposed Drought Policy. Oversight of the GCCA-SPC project will be provided by the existing Niue Water Steering Committee (NWSC) established for the Integrated Water Resources Management & PACC Projects; this will avoid the need for multiple similar committees. Support activities include community outreach and education (Communication strategy) programmes, policy development, capacity building including hands-on training on maintenance and operation of household rainwater tanks.
Other comments	N/A
Date of assessment	8 February 2013

¹ Australian Bureau of Meteorology and CSIRO, 2011; Climate change in the Pacific: Scientific Assessment and New Research Volume 1: Regional Overview. Volume 2: Country Reports.