



GEF PACIFIC IWRM PROJECT RESULTS NOTE

<http://www.pacific-iwrn.org/results>

RSC 4 2012

Enhancing water security for Nauru through better water management and reduced groundwater contamination



Top 3 Project Results

1. Establishment of a cross-sectoral APEX body with broad CSO, commerce, community and government membership, supported by divisional leader meetings. Both of these were national firsts, and these committees are now being used by multiple sectors for national coordination
2. Upgrading sanitation at 40 domestic locations and several schools to provide safe access to improved, environmentally sustainable sanitation
3. Establishment of a national water and sanitation policy with core national budget support, mainstreaming IWRM and water and sanitation solutions demonstrated through this project

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1. PROJECT OBJECTIVE

Sustainable Integrated Water and Wastewater Management in Nauru

2. RESULTS: PROCESS

Prior to the project commencement there was no policy or governance framework within Nauru for water resource management. Communities were not engaged in water governance or management, and there was minimal commitment or coordination across government on water and sanitation management. In partnership with the Nauru GEF PACC project, the GEF IWRM project has initiated a national water APEX body, and a supporting community leader forum. These mechanisms have been so successful that the waste and energy sector are now using the same bodies to coordinate nationally. The body has been formalized by Cabinet and the National Water and Sanitation Policy was endorsed by Cabinet in February 2012.

Communities have been directly engaged in awareness campaigns, with ongoing direct support. Communities and CSOs are represented on the APEX body and have an increasingly direct say in how Nauruan water resources and sanitation are managed.

2(a) INDICATOR#1: NATIONAL IWRM STRATEGY IN PLACE BY MID 2012

Target: National Policy in place by 2012

Discrete budget line in place for IWRM by mid-2013

20% increase in national budget allocated to IWRM and WUE

At the commencement of the project, there was no national water policy and no ongoing budget commitment to water resource management. As a result of project work and partnerships, the Republic of Nauru National Water, Sanitation and Hygiene Policy was endorsed by Cabinet on the 7th of February 2012. This policy and the accompanying implementation plan identify ongoing financial needs and a government commitment to core funding. The Policy further identified the need to establish a Water Unit within the Department of CIE with two permanent staff.



Figure 1 Development of the National Water, Sanitation and Hygiene Policy: Prof Ian White Consulting the Project Steering Committee (Health, Education, Finance, PAD, NCBO, Private Business, RonPhos & CIE Projects) CIE Environment Office 20/04/2011.

2(b) INDICATOR#2: MULTI-SECTOR APEX BODY ESTABLISHED

Target: APEX body endorsed by Cabinet

In the absence of national coordination mechanisms, this project facilitated the development of an interim national APEX body, with broad CSO, commerce, community and government membership. As part of the community engagement process, community leaders were brought together for the first time nationally for both formal and informal discussions. The success of this process has seen the waste and energy sectors tap into the same committees and endorsement of the National Water, Energy and Waste APEX Body by Cabinet.



Figure 2 Development of the National Water, Sanitation & Hygiene Policy (Final Draft): Prof Ian White & Jnr Professional (Louis Bouchet) Consultation with Water Technical Committee, PAD (Finance), CIE Staff and international Observers from Regional PACC Coordinators, SPREP and GIZ. Chief Secretary's Conference Room, 08/11/2011

2(c) INDICATOR#3: PROPORTION OF COMMUNITY ENGAGED IN WATER RELATED ISSUES

Target: 30% increases in attendance at awareness raising activities and
30% increase in active engagement activities

Prior to the IWRM project inception workshop, there had been very limited community consultation or engagement on water and sanitation issues, despite widespread general public concern over the availability and quality of the water supply. One of the challenges was the lack of a clear government mechanism for engaging communities in planning, conservation, protection and management.

To increase the understanding and acceptance of the project objectives at community level, the PMU, in partnership with the GEF PACC project team, instigated the formation of the Nauru Community Based Organization (NCBO) and facilitated the integration of four NCBO representatives into the Project Steering Committee as members. Community engagement activities are coordinated through NCBO as Community leaders. The project has established an ongoing Community Outreach Program (visiting every community) on awareness raising activities relating to Climate Change, Water and Sanitation issues in partnership with Nauru SNC and the GEF PACC Projects. This has included celebrating international events (e.g. World Water Day and World Food Day) and using them as a medium to raise awareness and bringing together government and non-government communities to work together. This initiative provides direct community access to government water & sanitation services and expertise.



Figure 3 Students, Teachers and friends from Anetan Infant School commemorating WWD 2011 supporting the National IWRM Demonstration Project.



Figure 4 H.E. Acting President Hon Valdon Dowyogo M.P. and the Minister for CIE, Hon Rykers Solomon M.P. with other VIPs enjoying the School Dramas during the World Water Day 2012 Celebration, NCC Centennial Hall

Direct engagement has extended to the works contractor engaged in the IWRM project (as their policy and by mutual agreement), who recruited extra workers from the two demonstration communities as a capacity building scheme to embed people with the knowledge of the systems within the community.

3. RESULTS: STRESS REDUCTION

Nauru is dependent largely upon household septic tanks and cesspits for sanitation. As a result of no central management responsibility and no ongoing investment, a combination of failing septic tanks and cesspits and wastewater discharge have heavily contaminated the shallow groundwater and coastal waters. This project seeks to provide alternatives to the current systems that provide little in the way of treatment and use significant scarce water resources for flushing. Upgrading 40 household systems and providing secondary treatment processes and irrigation systems is dramatically reducing groundwater and coastal water pollution and increasing access to safe, improved sanitation for two communities.

The reliance on pumped groundwater, supplemented by rainwater and expensive desalinated water to flush toilets in schools meant that schools were unable to provide sanitation during droughts and power outages. Additionally, as schools are located on the coastal strip, septic tank discharges rapidly polluted the coastal lagoon. Installing composting toilets has ensured year-round sustainable sanitation available to schoolchildren, whilst reducing a significant use of limited water resources.

3(a) INDICATOR#1: REDUCTION IN SEWAGE POLLUTION IN EWA AND ANETAN COMMUNITIES

Target: 35% reduction in nutrients and organic loads from communities (20 ha)

Failing sanitation systems have been upgraded in 40 households across Ewa and Anetan and secondary treatment systems (sand filters and baffled reactors) installed to improve effluent prior to irrigation. This approach has dramatically reduced the pollution associated with household wastewater disposal to groundwater and ultimately to coastal waters. Currently studies are underway to confirm the actual pollution reduction.



Figure 5 Contractor positioning the conventional Septic Tank mould at the demonstration community in Ewa. 22/02/2011.

3(b) INDICATOR#2: REDUCTION IN USE OF FRESHWATER FOR SANITATION PURPOSES DUE TO COMPOSTING TOILET INSTALLATION

Target: 30% reduction in school water use

The initial target of this indicator has been modified given a pressing need identified in Nauru schools for sustainable sanitation, which functioned during drought periods following severe droughts in 2011. Composting toilets have been installed in two schools, dramatically reducing school water use as well as providing sustainable sanitation to schoolchildren, previously not available during drought periods. Studies are currently ongoing to identify the reduction in water use.



Figure 6 Prototype #3: Composting Toilets introduced to Schools at Kayser College and Anetan Infant School. The looks, Odorless, low maintenance, water saving and environment friendly are Communities key concerns.

4. RESULTS: WATER RESOURCE AND ENVIRONMENTAL STATUS

Communities in Nauru are generally reliant on sanitation systems installed 30-40 years ago, many of which are now failing. Additionally, these systems were often discharging immediately adjacent to shallow, open groundwater wells providing washing, cooking and even drinking water. This project has provided 280 people with access to improved sanitation through the installation of household sanitation systems and cluster systems serving several houses from an extended family, as well as protecting precious groundwater resources.

Further, the installation of composting toilets in two schools (Kayser College & Anetan Infant School) means that children have year-round access to improved sanitation in their schools, where previously schools had to operate in unsanitary conditions or close. In a small island developing state, the developmental value of providing safe sustainable sanitation in schools will have long-term benefits beyond the short-term sanitation and health gains.

4(a) INDICATOR#1: POPULATION WITH ACCESS TO IMPROVED SANITATION

Target: 10% increase in access to sanitation systems in Ewa and Anetan (110 people)

Prior to the project commencement, the sanitation systems across the Ewa and Anetan districts were failing. In many cases, households had constructed rudimentary cesspits and many households were sharing facilities. The project has rehabilitated and upgraded sanitation in 40 households across Ewa and Anetan, including the provision of secondary treatment systems (sand filters and baffled reactors) to improve effluent prior to irrigation.

The provision of these systems to 40 houses (280 people) has provided sustainable improved sanitation to 30% of the Ewa and Anetan population.

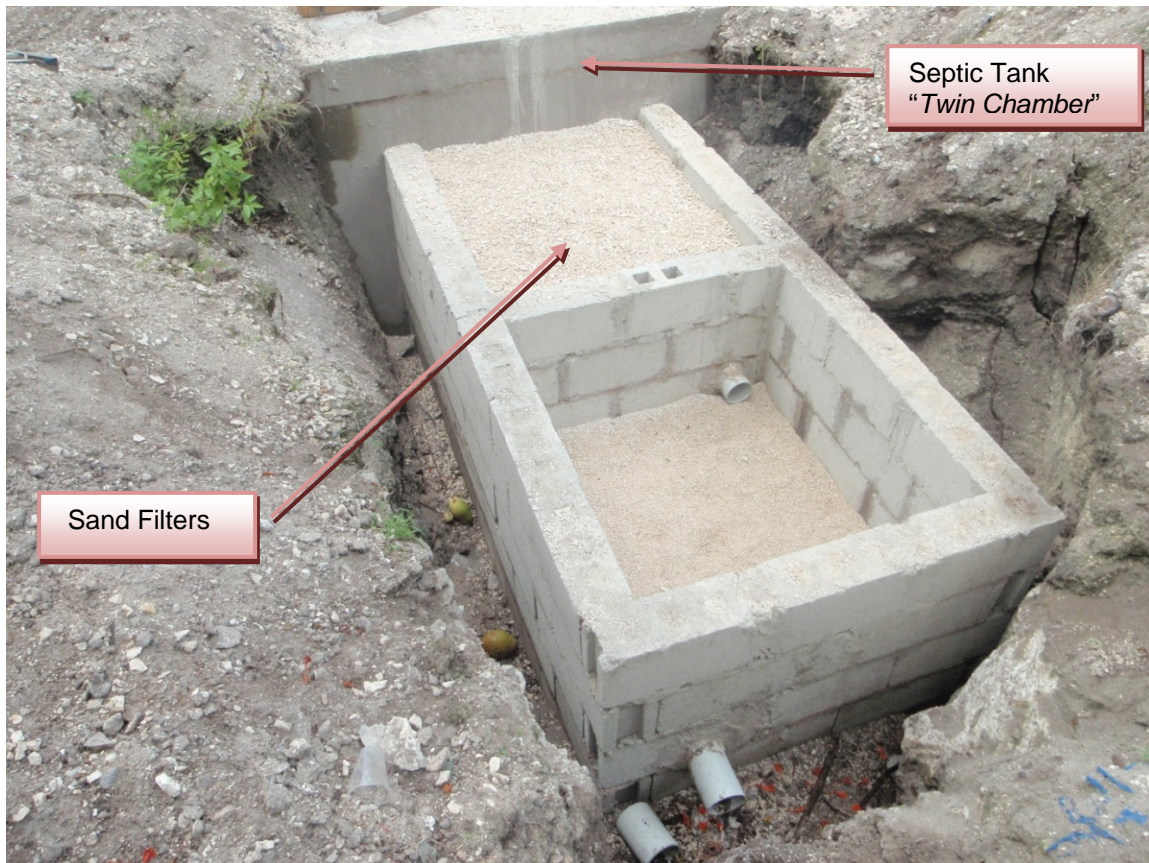


Figure 7 Prototype #1: A Conventional Septic Tank "Twin Chamber" added with two stages Sand Filters as Secondary Treatment to improve the waste water effluent prior being discharge via irrigation.



Figure 8 Prototype #2: Improved Septic Tank (Anaerobic Baffled Reactors) with Sand Filter as secondary treatment to improve the wastewater effluent prior Irrigation.