VANUATU CLIMATE CHANGE AND DISASTER RISK REDUCTION

LESSONS LEARNED AND BEST ADAPTATION PRACTICE PROFILE

NATIONAL ADVISORY BOARD on Climate Change and Disaster Risk Reduction
GOVERNMENT OF VANUATU

NUWAE LELEPA ISLAND / SHEFA PROVINCE

Water Security

improving water security

LIVE&LEARN Environmental Education
Vanuatu

Erakor House, Erakor Bridge/Korman Stadium

Namuan Thompson paddling from Lelepa Island to Efate to collect fresh water. Photo by Sam Obed
http://chiefroimatasdomain.com/?page_id=136 (accessed 3/07/13)







PROJECT BRIEF |

Difficulty accessing fresh water has been a long term challenge for families on Lelepa Island. While rainwater is an important source, only 20% of households have systems that are self-sufficient throughout the year. All other households rely on non-potable ground water and fresh water taken from the nearby main island of Efate. The project methodology combined participatory planning approaches with community education and skills development in order to strengthen community capacity for the sustainable management of water resources and infrastructure to build resilience to the potential future impacts of climate change on water resources.

PROJECT DURATION |

March 2011 – August 2012

LOCATION(S) COVERED |

Lelepa Island, Shefa Provinces.

FUNDING |

UNDP Global Environment Facility Small Grants Program administered through VANGO for USD50,000.

PARTNERS/COOPERATING ORGANIZATIONS |

UNDP Global Environment Facility Small Grants Program and Australian Volunteers for International Development (AVID) Program.
Live & Learn

OBJECTIVES & GOALS |

Overall Objective: People on Lelepa Island will have improved water security, providing increased ecosystems resilience to variable local rainfall patterns and increased intrusion of saltwater into the ground water as a result of climate change.

Objective One: Increased community awareness of the potential risks to livelihoods and ecosystems posed by climate change and the identification of strategies to increase community and ecosystems resilience to climate change impacts, particularly water security and water resources management.

Objective Two: Strengthened community leadership capacity for the sustainable management of local water resources and infrastructure.

Objective Three: Completion of a Community Water Security Plan for Lelepa Island that will incorporate strategies to improve water security and introduce sustainable management of groundwater and surface water resources.

Objective Four: Implementation of low cost measures to deliver immediate improvements to water security and/or reduce impacts of climate change.

Objective Five: Increased community awareness of the management and maintenance of household rainwater infrastructure, community wells and surface water sources.

STRATEGIES & PROCESSES/METHODS |

A central element of the project was the development of a Community Water Security Plan using participatory planning techniques. Activities undertaken to inform the plan were:

- A groundwater assessment,
- Household surveys on water usage,
- Climate change workshops,
- Assessment of current and future water demand, and
- Assessment of water supply and sanitation technology options.

The project sought to make multiple different water resources available to the community to build resilience to climate change incase one resource should fail. The project also sought to provide low-cost immediate solutions to the most vulnerable families.

RESULTS |

Many people on Lelepa Island view the groundwater assessment and establishment of a borehole as the most significant contribution the project has made for long term water security:

- ✓ 57% of households reported better access to water as a result of the project (target was 30%);
- ✓ 22 Families benefitted directly from improved access to community water tanks

which had a positive flow on effect for families with their own tanks as the pressure on their resource was reduced;

- ✓ The introduction of new tanks and restoration of community tanks resulted in an estimated 120,000 litres of useable rainwater storage (30% growth);
- ✓ 42% of women interviewed stated they had a reduced workload due to the project (the target was 30%);
- ✓ There was a reduction in water extraction from rivers on Efate in the first year of the project compared to the year before;
- ✓ 97% of households on the island participated in rainwater tank training program provided by local trainers trained through the project;
- ✓ An evaluation survey showed that 76% of households said they were using new skills and knowledge to improve their rainwater system management;
- ✓ Using the *Vulnerability reduction assessment* method the project found that participants still felt vulnerable to the impacts of climate change and hoped for further water augmentation in the future.

The Lelepa Water Committee continues to operate efficiently as a result of the project. Since the project's completion the committee has successfully obtained funding from NZAID for the purchase of equipment and materials to establish a community water supply system using the recently established borehole. Funding has also been established for the training of local plumbers.

The Lelepa Water Committee is now approaching Government to discuss opportunities for river-system protection on the island of Efate to protect these important sources of fresh water.

PLAN & SUSTAINABILITY |

The central role of the Lelepa Water Committee in developing the Water Security Plan was central to the ongoing ownership of water security issues by the committee on Lelepa.

BEST ADAPTATION PRACTICES |

Rather than the project delivering training on rainwater system maintenance, water quality testing and treatment, Live & Learn Vanuatu trained local trainers to deliver the education. The trainers then went informally from house to house to provide the training. This resulted in far more households accessing the training. Expertise is also now embedded in the community to provide on-going support.

Rather than providing something completely new, the project sought to build the resilience of the systems that were already in place.

LESSONS LEARNED |

Individual ownership of rainwater tanks was found to be a more sustainable model for Lelepa.

This project was short-term and the first of its kind on the island. It was important not to overstate what was achievable in a small amount of time with minimal resources. Importantly, this project focused on building a firm foundation from which the community could build tangible improvements in water security in the future.

The decision to provide sitting allowances for committee members did improve attendance in committee meetings despite the fact that the committee had initially decided that the work should be voluntary. Therefore, attendance at committee meetings meant foregoing other productive activities so the sitting allowance was seen as justified.

Transportation of materials to Lelepa was a significant challenge and required a great amount of money which severely delayed the project. There was an additional cost of USD5600 to access drilling equipment for the boreholes.

A lack of local expertise in hydrogeology made the groundwater assessment a challenge and required the assistance of an overseas expert (pro bono).

- Perceived ownership of community tanks attached to individual household roofs made it difficult to coordinate community mobilisation to fix them. Sustainable management of community tanks will be an on-going challenge.

WAY FORWARD |

The Nuwae Lelepa Water Security Committee continues its work and has received two further tranches of funding from NZAID to continue

building water security on the island. The committee is now looking to purchase a solar pump to run the bore.

Additional Information

Left-over funds of less than 400,000 Vatu from the project is being used to refurbish and strengthen the boreholes with the assumption that three solar-powered pumps would be secured for the three boreholes. However, the cost of the solar-powered pumps ranged from 150,000 to 350,000 Vatu. The pump's exorbitant cost meant that the pumps cannot be secured for the borehole refurbishment. Nevertheless, the priority now is to ensure the boreholes are urgently repaired with left over funds being diverted to securing more rainwater catchment tanks for other village members who missed out in the initial rainwater tanks' distribution. The Head of the Nuwae Lelepa Water Security Committee, Naomi William also suggested that the village members will use some of the remaining funds to repair any cracked concrete slabs which are holding their water tanks.

For more information

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