



GEF PACIFIC IWRM PROJECT RESULTS NOTE

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RSC 4 2012

Sustainable Management of the Sarakata Watershed



Top 3 Project Results

- 1. Establishment of the Sarakata Basin Integrated Flood Management Plan** - Initial activities toward the Flood Management Plan saw the establishment of the Sarakata Basin Flood Hazard Map. The Flood Hazard Map will be the initial tool for the Development of the Sarakata Basin Flood Management Plan.
- 2. Increase in Community Engagement with National Government on Water Issues**
A key outcome of the community engagement is the increase of women and youths participating in the on ground activities of the project.
- 3. National Staff across institutions with IWRM knowledge and experience**
Capacity building and sharing of knowledge and skills with national staff is a vital part for the sustainability of the IWRM Project.

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1. PROJECT OBJECTIVE

The main objective of the project is to provide an operational network and mechanism to plan for and monitor all developments in the watershed that may affect the ecology and availability and quality of water and other natural resources. The main expected outcome will be great government and community awareness and governance, reduction in the negative water quality impacts, temporal and spatial availability of water for all users, and mitigation of flood associated adverse affects. It is anticipated that this will ensure the Sarakata Basin is managed sustainably from “*Ridge to Reef*” to meet the needs of the rural and urban populations it serves and providing and exemplary model nationally and regionally.

2. RESULTS: PROCESS

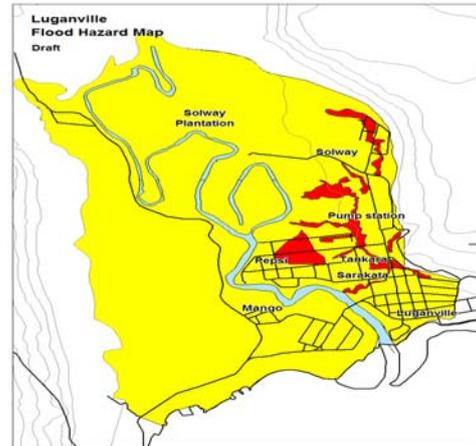
During the Project Inception phase in 2009 a IWRM Steering Committee was established from the non-functional Sanma Water Advisory Committee (SWAC). The original members were made up of the Sanma Water Advisory Committee and expanded to include other important stakeholders for the IWRM Project. This was done to ensure that the work that the SWAC started would be incorporated into the Project initiative and logframe. The IWRM Steering Committee expanded to include department such as Forestry, Fisheries, Agriculture and Livestock.



Re-establishment and expansion of this committee has been effective in: (1) opening up the communication lines between the provincial government and the national government for the better management of the Sarakata Basin; (2) influencing decision making leaders at the provincial and at the national level as to the importance of support for the Sarakata Basin; and (3) allowing the relevant government agencies and other important stakeholders dealing with water on a coordinated effort. This coordinated collaborative effort has allowed for a signing of MOU with all Directors of the relevant agencies as well as the different stakeholders for the sustainability of the activities currently implemented under the IWRM project.

2(a) INDICATOR#1: Establishment of the Sarakata Basin Integrated Flood Management Plan

The plan to incorporate early flood warning system to provide at least one hour warning and process for incorporating floodplains into planning regulations is well underway with feasibility studies and Flood Hazard Map mapped out for the Flood Phone areas.



The figure above shows the low lying water table, often surfaced and hence enhanced flood during extreme weather. Far right is a sample of the Sarakata Flood Hazard Map in three different colours. White is believed to be areas with low flooding impacts, Yellow is the areas with medium flooding impacts during flood events, and Red are the areas with high flooding impacts and are areas not safe for residential activities. It is envisaged that by the end of the project phase, a Sarakata Flood Management Plan would be endorsed by the Cabinet.

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

The target of the project was to establish 30% increase in active engagement activities. At the time of project start-up almost all community engaged was passive. Vanuatu IWRM has focused on different targeted community groups participating in clean-up campaigns, construction of composting toilets, forest replanting, establishment of agriculture demonstration plots. On World Water Day 2012, a river clean up event on the Sarakata River was a successful day with many community members and school children attending. It also identified some areas being used for dumping rubbish alongside and into the Sarakata River. On a separate occasion during a Mass Awareness Campaign of the IWRM Steering Committee members, a group of young people were identified to clean up and police the activities along the river mouth of the Sarakata River. The project has subsequently assisted the community by placing Notice boards and rubbish stands around the area for their rubbish.



Fig. Vanuatu IWRM Focal Point with Youth Cleaning Up the Sarakata River & Youth collecting rubbish in the Sarakata River



Figure. WWD 2012, school Children Collecting Rubbish along the Sarakata River & Kids as young as 7 are encouraged and posing with their collected garbage bags.

Mass Awareness Campaigns by the IWRM Steering Committee members in the communities within the catchment has proven successful with high numbers of community members attending to the awareness. Awareness was done to targeted members of the communities where individual meetings were held with women groups, with chiefs and elders of the communities. The next level to be reached is the National or Cabinet level.

2(c) INDICATOR#3: National Staff across institutions with IWRM knowledge and experience

The target is to show an increase in staff knowledge and experience, or by proxy through training and work roles. The Water Demand Management Programme for Luganville was an Ausaid funded programme, coordinated by the SOPAC office in Suva and working with the Department of Geology, Mines and Water Resources. The project ended last in 2010 with a lot of outstanding work yet to be done for the Luganville water supply system and hence IWRM stepped in to help complete the programme. With limited knowledge of WDM in the country, consultants were brought in from Federated States of Micronesia to help the Public Works Water Team to complete what was left. The activity did help build up capacity of the PWD Water Team. There were both theory and field trainings. The team did hands on training on installation of flow meters and readings of flow meters and installation of Pressure Reducing Valves.



Figure. Leerenson Airens showing the PWD Water Team the installation of PRVs on one of the Luganville System main outlets.

3. RESULTS: STRESS REDUCTION

The Sarakata IWRM Demonstration project is located in the growing town of Luganville on the Island of Espiritu Santo where demand is high for resources and hence putting stress on the environment's ecology and biodiversity. The Project has made substantial progress in both the watershed protection and restoration of the watershed ecosystem. The projects is being carried out directly with: (1) Community leaders and their people which are the custom/traditional land owner; (2) Vanuatu Government agencies and NGOs agencies, Sanma Provincial Government and Luganville Municipality which are playing an active part in their implementation. The major activities implemented by the project aim at finding practical solutions to reducing stress on water resources and other natural resources. These practical solutions were issuing fines and putting ban on quarrying activities, piggery farming, encouraging re-forestation, demonstrating best agricultural practices and these demonstrations will be use to form the overall Sarakata Watershed Management Plan.

3(a) INDICATOR#1: 40% Reduction of Sewage Pollution across the Sarakata Watershed

The target of this project is to reduce sewage pollution by 40%, so far piloted composting toilets are build on areas with shallow underground water. The pepsi area and solway areas within the Watershed are the most areas prone to sewage pollution due to open pit latrines in shallow ground level areas. Women are the most targeted group involve in this project as they are managers of the house and can change the mindset of their children and husbands on the benefits of composting toilets to the environment and the water quality.



Figure. Women discussing location of their composting toilets and a composting toilet in Solway

3(b) INDICATOR#2: Sustainable Forest and Land Management practices established and trialed with Land owners and Lease holders.

The target of the project was to increase the amount of land managed, rehabilitated and protected in the Sarakata Watershed. So far 62.5 hectares of land was compensated by the Government of Vanuatu for the Protection of water source and establishing Water Protection Zones. Also more than 1000 hectares of upland catchment areas have been proposed for Conservation and protected areas and more than 20 hectares have been identified as priority for reforest rehabilitation.

The Conservation or reserve areas have been agreed by land owners, there are three main conservation areas where Draft Management Plans has been established with the respected communities involved and is in the process of being declared by the cabinet. Nurseries have been established with a number of communities within the Watershed, these nursery seedlings will be distributed to other communities and schools for planting when they are ready for transplanting.

The nursery sites were identified and selected via an open discussion with the workshop participants



Figure. Potting Shed

The participants potted 1,102 planter bags and stacked the planter bags onto the Standout ground bed.



DEMONSTRATION PLOT

The demonstration site was identified and selected as per the nursery site but on a soil erosion landscape.



Pegging and mark spacing for planting

4. RESULTS: WATER RESOURCE AND ENVIRONMENTAL STATUS

In the first year of the project, baseline assessment through pollutant source surveys and water quality testing was carried out by the project, ongoing assessment is still continuing on a quarterly basis. The assessment indicated that there were pollutants sources discharging into the river. Both Coastal Water & Surface water qualities were monitored. Although none of the communities within the Sarakata Catchment tapped directly into the Sarakata River for Water Source, most of the communities do not have a proper formal system to their doorstep or into their houses. Water Quality monitoring in those communities using H₂S kits indicate a high contamination of coliform, hence the project has established rainwater catchments for a community and is in the process of supplying a small scale formal system into one of the worst water contaminated areas in Luganville.

4(a) INDICATOR#1: Population with access to safe water supply

The target of the project is to increase the percentage of the population that has access to safe drinking water. At the time of project start-up there was little if any work that concentrated at keeping the quality of water high. Routine monitoring of river water quality has been strengthened through the project to ensure safety baselines are met and to inform efforts to remediate pollutant source sites. In addition, increased outreach to areas that are more reliant on rainwater has allowed us to increase awareness of how to maintain rainwater catchment systems thereby providing a safe drinking water supply. The project has established a rainwater catchment system in one of the worst off areas to safe drinking water.



Figure. Construction of rainwater catchment at Butmas Community