



GEF PACIFIC IWRM PROJECT RESULTS NOTE

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RSC 4 2012

Rehabilitation and Sustainable Management of the Apia Catchment



Top 3 Project Results

1. The taking of land from the Catholic Land subdivision for water resources protection. Government buy-in to a proposal to take lands that are considered priority for water resources conservation is a great achievement when considering that the proposed subdivision was valued at 50 million Tala.

2. Watershed Management Plans (WMP) have been finalized for 3 of the 4 catchments in the Apia Catchment. A key feature of the WMPs is the definition of Buffer zones and Natural reserves. The project has also legally defined buffer zones as 20m from the bank of the river or 20m from top of a steep slope where a river flows.

3. Watershed Conservation Policy. IWRM developed this policy to reserve the upland of the country for the specific purpose of water resources conservation. Up to 300m from sea level is encouraged to be developed; 300 – 600m will be classified as restricted developments; and 600m upward is classified as exclusion zone where no developments are allowed.

Sam Tuuamalii Semisi
sam.semisi@mnre.gov.ws

Ministry of Natural Resources and Environment

1. PROJECT OBJECTIVE

To rehabilitate and manage the Apia Catchment in a sustainable manner in order to improve the quality and quantity of the water resources for enhanced water supply and hydropower generation, social-economic advancement and reduced environmental adverse impacts. This is being achieved through a focus on identifying and rehabilitating vulnerable areas upstream of rivers and it is enforced by the endorsement of catchment Watershed Management Plans as directed by the Water Resources Act.

2. RESULTS: PROCESS

The IWRM Stakeholders (CCC) consultation process developed by the project is bringing great benefits for water resource and catchment management with continuous attendance from many stakeholders, each contributing feedback on and suggestions for the project activities. Participation of stakeholders in planning and monitoring has increased ownership over IWRM concepts and activities. An important result of this was agreement on the Watershed Safety plan for Fuluasou, and actions for dealing with the many issues around its intake and supply have been identified and prioritized for implementation. This is significant as Fuluasou Treatment Plan supplies 70,000 people and suffers from many problems such as overcapacity, shortage of chlorine, pump failure, and high NRW rates.

Watershed Management Plans (WWPs) for Loimata o Apaula, Gasegase, and Fuluasou catchments (3 of the 4 catchments in the Apia Catchment) are in final draft stage and ready for management approval. The WMPs gives authority to the Water Resources Division to enforce specified directives and prosecute any illegal activities. These efforts have been supported by awareness and education activities on World Water Day annually, and have been successful in raising the profile and visibility of GEF Pacific IWRM Samoa. The Watershed Conservation Policy lead by IWRM project where the top 600m of the country land will be excluded from any developments has brought some positive feedback from some sectors especially the Water Authority who are struggling to accommodate for the water demands of people living on the highland

2(A) INDICATOR#1: NATIONAL STRATEGY IN PLACE

At the time of project start-up there was no national strategy for IWRM or water resource management in Samoa. The target of the project was to have a sector wide strategy for water by mid 2012. This Sector Wide Approach Plan for Samoa is an IWRM focused plan being implemented under the Samoa Water Coordinating Unit and is widely known as our national water sector strategy. The water crisis of the 2011 drought has raised awareness of water issues at the highest political levels.



Figure 1 Samoa's Prime Minister lending his support to tree planting on World Water Day 2012

2(B) INDICATOR#2: APIA WATER SAFETY PLAN (URBAN)

The target for the project was to have a water safety plan for Apia urban area developed, endorsed by Cabinet, and under implementation. At the start of the project there was no plan and a lot of uncertainty of water safety issues, especially associated with the overloaded Fuluasou Treatment Plant. The Water Safety Plan has been developed through IWRM, endorsed by cabinet, and actions for the intake and supply side have been identified, costed and prioritized.



Figure 2 Aerial view of the Fuluasou Treatment Plant

2(C) INDICATOR#3: LEGISLATION FOR WATER RESOURCE MANAGEMENT

At the start of the project Samoa had legislation and regulations relating to surface water quality. The target of the project was to have legislation for water resource management enacted as part of Watershed Management Plans. In addition to endorsement of the Fuluasou Treatment Plant by Cabinet, legislative needs to implement the 3 Apia Watershed Management Plans have been identified. The Watershed Conservation Policy has been developed to provide guidance to drafting of legislation.



Figure 3 Community members participating in Watershed Management Plan consultations

2(D) INDICATOR#4: 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. IWRM has focused on community groups participation in clean-ups and forest rehabilitation. On World Water Day 2011, a river clean up event on the Fuluasou River was a successful day with many community members attending. It also identified some areas being used for dumping rubbish into the Fuluasou River. The project has subsequently assisted the community by placing rubbish stands around the area for their rubbish.



Figure 4 World Water Day 2011 river cleaning at the Fuluasou River

2(E) INDICATOR#5: LESSONS LEARNED INCORPORATED INTO OTHER PROJECT(S) AND/OR REGULATIONS

A target of the project was to demonstrate replication from one project to another by project end. In 2011 the Samoa IWRM team undertook a twinning exchange to the Cook Islands IWRM demonstration project. During that visit we observed the use of “No Car Washing Signage” on Rarotonga Island and have subsequently replicated these in the Apia catchment.



Figure 5 Stop car washing and littering sign on the river ford

3. RESULTS: STRESS REDUCTION

Protection of the land previously earmarked for the Catholic land subdivision is key achievement and the priority stress reduction measure for the water sector and Government of Samoa. Of the 1200 acres proposed by IWRM in 2011 for inclusion in the reserve, 32 acres have been purchased and 120 more acres surveyed to be taken on the top of the SWA treatment plant intake. More will be taken as the process reaches the other region of the land. It is hoped that declaring the top of the East Fuluasou River as a reserve and the subsequent purchase of the land from the Catholic Church will reduce the stress of urbanization of upland catchment areas on river water quality and tributary that supplies the Fuluasou Treatment Plant intake. There have been regular reports of increased turbidity of river tributaries since the Catholic subdivision started.

In addition to protection of the upland catchment, rehabilitation around the source and intake has been undertaken as well as agreement on and enforcement of buffer zones of 20m to reduce stresses on the water quality and quantity caused by unsustainable agriculture practices and human mismanagements of natural resources. Effort has also been made to raise awareness of the impacts of car washing. “*Stop Car Washing*” signs near rivers have seen a dramatic reduction of people washing cars next to rivers and has led to reduced contamination of water resources.

3(A) INDICATOR#1: INCREASE IN LAND PROTECTED AND/OR REHABILITATED OVER CATCHMENT

The target of the project was to increase the amount of land protected in Apia Catchment. So far around 1500 hectares of upland catchment areas have been proposed for protection, and 15 hectares of the catchment have been identified as priority for rehabilitation.



Figure 6 No access sign to 70 hectares of land protected above Fuluasou intake and tree planting work below it

4. RESULTS: WATER RESOURCE AND ENVIRONMENTAL STATUS

- Rehabilitation measures such as tree planting around the sources and water intakes to improve water quantity and quality are a major part of water resources management.
- Construction of rubbish stands and installing them on vulnerable areas reduces the dumping of rubbish in/on the river.
- Water Quality committee of Samoa meet to discuss issues with the quality of the water in the country and many of these discussions focus on Water Safety Plans (WSP) for the Water Supply Sector. There is now a demand around the committee for the Water Supply Section of the Water Sector to produce WSP for all its supply sides. There is a strong emphasis in producing safe drinking water for everyone in Samoa.
- The Waste Water Treatment Plant in Sogi is operational and is currently upgrading its capacity to include other new buildings around the urban area. There is also Sludge Facility at Tafaigata for the rest of the toilet waste disposal.
- Waste Water Treatment for Fulusou Treatment Plant finalized in cabinet. Water Abstraction & Licensing Scheme complete and implemented; 3 x Watershed Management Plans (WMP) finalized for the Apia Catchment; Water Conservation Policy drafted.