



The PNG team in action. ©SOPAC

## Re-establishing Laloki River Gauging Stations

Port Moresby is booming! New buildings are going up and new 5 star hotels are being built. The resource boom, in particular the multi-billion dollar LNG project, is fueling the economy and Port Moresby is the entrance point. Projected growth is 10% per annum for at least the next 5 years. Just getting a hotel room in Port Moresby is now a challenge and proves the theory of supply and demand: high demand equals silly room prices.

So what has this to do with the heading? All this growth needs water! More drinking water and more electricity sourced primarily from the Sirinumu Dam which relies on the Laloki and Goldie catchments. There is little hydrological data, however, to determine whether these catchments can handle increased growth.

In the late 1950s and early 1960s hydrology stations were established to provide information to determine if a dam would provide reliable water and electricity for Port Moresby. The Sirinumu Dam was built in the late 1960's and by independence, in 1975, serviced a population of about 70,000. It now serves many more. The 2000 census recorded a population of about 260,000 and current estimates place the population at over 500,000. This places serious demands on services.

The impacts of rapid population growth can also be seen in the growth of squatter settlements in the Laloki catchment and in the increase in commercial and government activity. This development has not been constrained by land use restrictions that would support water quality or optimize river flows. Hydrology stations are of paramount importance in providing information on water availability in such a stressed system. However, the five stations established on the Laloki to provide this information were virtually abandoned by the mid 1990s.

Therefore, no data has been collected for 15 years in Port Moresby's primary catchment area. During this period the Bureau of Water Resources, which at one stage had 40 employees, was transferred to the Department of Environment and Conservation. Some staff were transferred into the Water Resources Management Branch but gradually human and operational resources were eroded and hydrology services all but abandoned.

A late 90's review of PNG's Hydrological Service needs recommended the five Laloki stations be reestablished and that PNG needed a minimum of 72 stations nationally. At the time there were none operational.



The old Stephens logger that has been in place for almost 50 years.



The new logger is installed.

The Pacific HYCOS program sought to reestablish priority stations in the Laloki and Ramu Rivers and procured equipment to do this in 2007. All four stations on the Laloki catchment were supposed to be reopened by mid 2008 and a new station was to be constructed on the Goldie River. A station was established on the Ramu in mid 2008 but is no longer operational.

The first Laloki Station, 'GS1', was reestablished in May 2009. This month Marc Wilson, Global Environment Fund (GEF) Pacific IWRM Regional Manager, visited PNG for the inception, and to review progress, of the GEF funded Laloki Catchment Management Project. He was able to visit the area with the project manager, Tony Kuman, to download the data of 'GS1' and to replace the old Stevens Logger at 'GS2' (which has been in place for about 50 years) with new equipment. Fortunately the old gauging structures and sheds are still in place as it would be impossible to build these now due to cost and land access issues.

They visited the area with some of the few remaining "water boys" (actually "water oldies"), who completed the installation. The trip was made possible due to the availability of a vehicle kindly donated by the EU funded B Envelope programme and Tony Kuman's ongoing commitment to the PNG hydrological service.

So of the five essential Laloki and Goldie River stations two are now installed and operational with only three to go. But the news is not all good because in late November last year the level tape was displaced from the recorder wheel at GS1 and no records have been obtained since because no one has been back to routinely check equipment.

The GEF Pacific IWRM Laloki Catchment Project will form a Catchment Committee comprised of government and non government stakeholders. It is hoped that this Committee will ensure the stations are reestablished, routinely monitored and maintained, as the data collected will form the basis of the project's catchment model, which is being developed to provide effective and risk averse catchment management.

In meetings with PNG Power and Eda Ranu it is evident that they are in desperate need for such information. Perhaps the wheel has turned and there is now a realization that managing the water resources of the catchment successfully, depends on the availability of basic hydrological data.



PNG's water 'oldies' and Marc Wilson, after a successful installation at Laloki.

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