SWA International Driller Fuku and worker at Auala Borehole drilling site

SWA staff taking measurements of water

Togitogiga Intake with SWA & OSM staff

For more information, contact

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- **Ludo Prins -** Programme Advisor - WSMU/PMS - 7785271 *ludo.prins@mof.gov.ws*
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UPCOMING EVENTS

International Events

1-2 October: Aquatech Amsterdam 08: Design and Operation of Membrane Plants for Water, Wastewater, Industrial Effluents, Amsterdam, the Netherlands

2-3 October: Aquatech Amsterdam 2008: Industrial Waters Treatment Systems, Amsterdam, the Netherlands

21-30 October: SOPAC Annual Session and STAR Water Working Group Meeting, Funafuti, Tuvalu www.sopac.org/Annual%20Session%202008-Tuvalu

27-29 October: An international conference to review the status of sanitation and water in East Asia and the Pacific region, to review best practice and key entry points and devise actions and approaches that can best provide large scale sustainable solutions with a view to achieving the MDGs. The conference will also provide a forum for AusAID to discuss its increased focus on water and sanitation.

18-20 November 2008: Sanitation Options in the Asia Pacific, Hanoi, Vietnam

17-21 November : Coastal Cities Summit 2008, St Petersburg, Florida, USA www.coastalcities.org/

19 November: World Toilet Day, International World Toilet Organization is a global non-profit organization committed to improve toilet and sanitation conditions worldwide http://www.worldtoilet.org/

International Events (continued):

3rd December: Advisory Committee meeting for WQM SOPAC. To discuss implementation of the WQM Programme over the last 2.5 years. To decide on work plan for remainder of programme. Key stakeholders present will be NZAID, WHO, IAS-USP and SOPAC

3-5 December: Third & Final Seminar on Water management in islands Coastal and Isolation areas, Hawaii. An International PECC Project jointly organized by FPTPECC, the East-West Center and the World Water Forum

4-5 December: 5th 5WWF Preparation meeting. Geneva, Switzerland, 2nd Preparatory Committee Meeting (PrepCom) of the Ministeral Process

National Events

6-10 October, WASSP, SUNGO management training of IWSA Executive

13-17 October, WASSP, EU Results Oriented Monitoring Mission, Roberto Canessa, Mary Hall

13-17 October, SPREP, Pacific Climate Change Conference

17-30 October, SSDP, PIAC, Christine Harris, Community Expert

24 October, Joint Water Sector Steering Committee meeting

National Events (continued)

28 October, First Joint Annual Water Sector Review

3-8 November, Environmental Week, Apia

7 November, National Environmental Week, Apia

3-7 November, SUNGO training of Village Managed Schemes in Solosolo

4-26 November, WASSP, PIA, Frank de Zanger, Water Resources Expert

10-14 November, WASSP-UNEP, Soild Characterization Training, Apia

17-21 November, WASSP, SUNGO training of Village Managed Schemes in Sataoa and Lotofaga

26 November-15 December, WASSP, GSSW, Michel van der Stricht, Hydro-geological Expert

19 October-1 November, SSDP, PIAC, John Wannack, O&M Expert

30 November-13 December, WASSP, PIA John Cox, Wastewater Treatment Expert

18 December, Cabinet Development Committee (Economic)

Please visit our website

www.waterforlife.org.ws

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Samoa Water News

Water News - Issue 4
July-September 08

Message from Joint Water Sector Steering Committee

Welcome to the fourth edition of our water sector newsletter! Through our quarterly newsletters we hope to keep you up to date on developments and issues in the water sector. The last three issues had focused on water supply and sanitation, drainage &wastewater and water resources, whereas the main theme of this edition is "**Water Use**."

Water use in Samoa comprises mainly of water supply, hydropower, irrigation and rainwater harvesting. As highlighted in the current SDS (2005-2007), the main objectives pertaining to Water Use are to increase access to safe and reliable water supplies and to maximize the benefits of other water uses (non water supply). The MDG goals also highlight that safe drinking water and basic sanitation helps to prevent water related diseases.

One third of the population served by SWA currently receives treated water and 15% of samples from these treated supplies fail quality tests. In rural areas, expect in NW Upolu and SE Savaii, borehole and surface water sources are untreated and many fall below the (draft) national drinking water standards, based on WHO guidelines. One of the main goals therefore of the sector is to increase the access of all communities to safe water supply.

EPC has been identified as the biggest user of water in the country. Hydropower contributes to about 45% of total power generation in Samoa. As such, further investigations into strategies that serve both water supply and hydropower needs are highlighted as a priority in the sector plan. Irrigation use is limited at present and it is not likely to compete with other water uses. Rainwater harvesting is used to secure a reasonable supply of water and it is foreseen that a more formalized policy and approach to water tank provision and storage should be integrated within an overall strategy for securing access to water.

Therefore, the key challenges for the first few years of the planning period will be to ensure community access to water of suitable quality and appropriate quantities as well as maximizing the alternative uses of water. We hope you enjoy this update of the Samoa water sector newsletter!

What's Inside

MWCSD - VIEWPOINT

Luagalau F.E. Shon is the CEO of the Ministry of Women, Community and Social Development. The Ministry works in collaboration through sponsorship and funding of water scheme supply for IWSA.

Why does Samoa need the Independent Water Schemes Association when there is already the Samoa Water Authority?

One of the strategies for the developments of Samoa's goal is to improve the quality of life. In fact that is the vision of the Government National Development Plan is to improve the quality of life for the people of Samoa including accessibility to water. For every Samoan to have access to good quality of water is basic sanitation, which is the basic requirement for healthy living. The Samoa Water Authority provides water services to 80 percent of our people. The other 20% manage their own water schemes because of the village councils choice to be independent. This is the importance of identifying the Independent Water Scheme Association (IWSA). The intention is to bring together IWS into one strong body to mobilize and formalize as an entity that can identify the need of the villages. This is an initiative of government when the Water Sector Support Programme (WaSSP) was launched. The first areas that was identified was the IWSA and how government could assist them in managing their schemes although water is managed independently hence, the inclusion of government in the scheme, through WSSP in partnership with MWCSD under Division for Internal Affairs (DIA).

Why and how does MWCSD support the work of the association?)

As part of the government agency, we are responsible for community development through the Ministry particularly through Internal Affairs Division. We became involved in that capacity for the community awareness and participation for IWSA would be best provided at our Division. Its programme provides through the division is primarily in the area of training and capacity building and it is done in collaboration with SUNGO. The Division for Internal Affairs through its Principal Officers primarily coordinates between the villages and the programme provided for IWSA and the WaSSP. SUNGO has always been identified to conduct preliminary research to identify their training needs of the IWSA before they are able to put together a training package. The Ministry is planning to provide an office space for IWSA. The Divisions of Internal Affairs under the MWCSD is working towards the betterment of Water Sector Support Programme.

How do you think the Association can secure its funding to sustain its work?

One of objectives of setting up an IWSA is to have a formalized body that is recognized for submission of applications or proposals to our development partners such as UN agencies or any other funding sources to assist implemented projects. The Society still has access and opportunity to apply to those funds for help. There is the micro-projects funded by the EU, and there is nothing stopping the society from submitting applications.

IWSA - VIEWPOINT

Afioga Faamausili. Leinafo. Tuimalealiifano is the President for the Independent Water Scheme Association (IWSA). The Association works on its own independently to look after its water schemes management without any interference from external sources.

What have been the reasons to establish the Independent Water Schemes Association ?

There have been reasons for the establishment of Independent Water Schemes Association (IWSA) It mainly helps to bring all its members together to work closely and set up an independent water scheme to cater for the needs of local communities and individuals with independent water scheme. In this way, we can strengthen ourselves to meet our common needs. Also, we share similar problems that needs to be addressed, in which it can make ourselves stronger as a group. Government has been trying to undertake all the schemes , but the villages want to hold on to their water supply. As an Independent Water Scheme Association, we enjoy our ownership, and we adopt our own way of serving people. We are on our own without the Government interference, but we are working in collaboration with MWCSD, through Water Support Sector Programme (WSSP) for sponsorship and funding of our implemented projects. As part of our capacity building, we are working with project officers from SUNGO to carry out our projects with our existing members from community based organizations and individuals.

Who can become a member of the Association and what can they expect from your organization?

We have twenty four existing members from 24 water schemes in Samoa with 19 in Upolu and 5 in Savaii. The schemes cater 16-17% of our population, which are approximately 40,000 people. The two types of water schemes are 1) **Village scheme** which is owned by one village and 2) **District scheme** is used by many villages. Our organization operates on a small scale with an effective operation. And its members should be well informed with trainings assigned by our association, particularly to teach them on how to conserve water and other important water issues. We consider those in village communities and individuals with independent water scheme to become members of the Association. We have founding pillars of working together for the betterment of our water schemes, especially there are lots of problems associated with these independent water schemes.

And what does the Association expect from its members?

IWSA was set up mid year last year. Building capacity process is one of the main aims that needs to be achieved by our members. We expect that through trainings, our members will be able to manage their schemes projects properly, gain technical knowledge, know how to plan its water resources and manage materials repairs when required for water schemes projects. On top of all is to conserve water for better supply and use of safer drinking water.

Independent Water Scheme consultations at Salailua, Savaii.

Under WaSSP assistance has been provided via MWCSD in assisting the newly established Independent Water Village Schemes Association in building capacity of their members in order to manage their systems

Water Source at Maasina, Fagaloa.

RECENT EVENTS

22 Jun - 19 Jul, SSDP-PIAC Vince Keogh, Asset Management Expert

23 Jun - 8 Jul, WASSP training of teachers on Environmental Resources Kit

23 Jun – 8 Jul, HYCOS, SOPAC mission of Lloyd Smith, Project Coordinator, and David Turner Hydrologist

25 Jun-1 Jul, WASSP-UNEP, GIS training, Apia

30 Jun-4 Jul, WASSP, SUNGO training of Village Managed Schemes in Matautu

24 Jul, Cabinet Development Committee meeting (Economic)

25 Jul-12 Aug, EU mission on Mid Term Review of WASSP and Final Evaluation of Rural Water Supply Consolidation Project by Peter Devillez, Marita Konstanczak, Nicholas Schumacher, Gunther Rudolf

WATER USE PROGRAMMES IN SAMOA

There are a number of national and regional water use programmes which are currently being implemented or about to be launched, with various agencies including the Samoa Water Authority, Electric Power Cooperation, Ministry of Women, Community & Social Development and Independent Water Village Schemes,

Water Supply: Water Sector Support Programme (WaSSP)

The Water Sector Support Programme is an EU funded programme which aims at improving the quality of public health via improved water services and the sustainable management of water resources. There is 78% of the total population serviced by Samoa Water Authority as such three of the six (6) components of WaSSP therefore aims to improve services of Samoa Water Authority. The main outputs envisaged are (1) increased access to safe water supply, (2) adequate coverage and levels of services provided, (3) increased system efficiencies and (4) improved financial viability of the company. For more information on these components, please contact:

Philip Kerslake: Philip@swa.gov.ws

On the other hand, around 17% of the population relies on services from independent or village/community managed water supply schemes: there being 19 schemes in Upolu and 5 in Savaii. The other remaining 5% supplied their own water. The quality of the water supplied by small independent schemes is variable and are not treated. Most of the schemes are coming to the end of their useful life. Under WaSSP assistance has been provided via MWCSD in assisting the newly established Independent Water Village Schemes Association in building capacity of their members in order to manage their systems effectively. For more information on this component, please contact:

Maulolo T. Amosa: maulolo@lesamoa.net

Water and power: ADB Hydro Project

EPC is the biggest user of water in the country. Hydropower generation contributes approximately 45% of total power generation in Samoa, through the following five hydro power stations:

Alaoa,Fale Ole Fee,Samasoni,Lalomauga,Taelefaga.

There is further potential to increase hydropower generation and this could help offset escalating costs of diesel production. This capital cost for hydropower is very high, but the operational costs are very low as compared to diesel production. This can maximize the need for hydro power production. Under the proposed Asian Development Bank programme, ten potential sites have been identified with 7 on Upolu and 3 on Savaii. Activities such as data collection, pre-feasibility studies, land compensation negotiations, full feasibility studies and project proposals are therefore planned for all these potential sites. Proposals to develop hydropower in the Sili Basin have been studied and whilst there is significant potential. Also there is community objection to some proposals.

Shared sources for hydropower and water supply can lead to conflicts over allocation during times of scarcity. Formal mechanisms to allocate water do not exist and goodwill is the main means to manage conflicting demands. Conjunctive use of water to serve both water supply and hydropower deserves investigation for all future water uses. For more information on this upcoming project, please contact **Taulealeausumai Aumalaga Tiotio:** tiotiot@epc.ws

Water and Other uses:

Irrigation: FAO Project

Irrigation is limited at present. Notwithstanding a recent FAO-funded study for an irrigation strategy in Samoa, it is not likely that irrigation will effectively compete with other water uses nor that it will increase the stress on available water resources.

Irrigation is not the only link between agriculture and water. Most plantations are located in remote inland areas beyond the extent of any piped water supply networks. Access to water is therefore limited but without some provision farmers may become unwilling to work in such areas. For more information please contact **Laisene Samuelu-Mariner:** lsamuelu@lesamoa.net

Rainwater Harvesting: Micro- projects, JICA, Red Cross

Rainwater harvesting is used to secure a reasonable supply of water. It is either for consumption or supplementary irrigation. It is therefore an important consideration for strategies to enhance farming output and productivity. In some areas, water tanks have been installed on permanent plantation homes through donor programmes. It is highly unlikely for similar actions to be approved on temporary residencies.

A considerable number of rainwater storage tanks have been constructed throughout Samoa with support from the EU Micro projects Programme, JICA, Red Cross and others, as well as many constructed privately. Since 1995, for example, the EU Micro projects Programme has installed over 1200 tanks with an average capacity of 1700 gallons per tank.

Continued page 3

For more information on these particular programs please contact Ane Moananu on email: ane@eu-mpp.org

From previous

Most are located in areas where piped water supply is not available, to provide basic level access to water such as Falealupo in Savaii. Others have been constructed in areas where existing service levels are extremely poor with the tanks serving as a buffer against intermittent supplies and seasonal shortages. Maintenance is an essential component to ensure proper functioning of systems and to minimize the risks of water quality contamination yet this is often be neglected after construction. A more formalized policy and approach to water tank provision and storage should be integrated within an overall

Picture from EPC: Afulilo Dam

Figure 1: Facts & Figures Water Supply

From Water Supply and Sanitation Collaborative Council (WSSCC), WASH Campaign (www.wsscc.org)

- **1.1 billion** people in the world do not have access to safe water, roughly **one-sixth** of the world's population.
- **2.2 million** people in developing countries, most of them children, die every year from diseases associated with lack of access to safe drinking water, inadequate sanitation and poor hygiene.
- **Some 6,000** children die every day from diseases associated with lack of access to safe drinking water, inadequate sanitation and poor hygiene – equivalent to 20 jumbo jets crashing every day.
- The average person in the developing world uses **10 litres** of water a day, whereas the average person in the United Kingdom uses 135 **litres** of water every day.
- **An estimated 25%** of people in developing country cities use water vendors to purchasing water at significantly higher prices than piped water.
- Predictions for 2025 indicate that the number of people living in water-stressed countries will increase to **3 billion** – a six-fold increase. Today, **470 million** people live in regions where severe shortages exist.

Smart Solutions for the Water Sector

The Millennium Development Goal 7 aims to halve the proportion of people without sustainable access to safe drinking water and improved sanitation by 2015. What may be new is that the Netherlands Water Partnership (www.nwp.nl), in an effort to contribute to this MDG 7, has issued three interesting booklets with examples of innovative, small-scale, and low-cost technologies for water, sanitation and water harvesting:

Smart water solutions, for wells, pumps, storage, irrigation and water treatment

Smart sanitation solutions, for toilets, collection, transportation, treatment and use of sanitation products

- The booklets give examples of households and community based water and sanitation solutions that have proven effective and affordable.

Smart water harvesting solutions, for rain, fog, runoff water and groundwater

- Smart water harvesting solutions even show practical efforts to "create water", even where there "seems to be no water", i.e. in drought prone areas. The series illustrate a range of innovative technologies that have already helped thousands of poor families to improve their standard of living and maximize annual income.

These small scale solutions have proven to be cost effective, and implemented in large numbers. For they can boost health, improve agricultural production and generate local businesses. These solutions can be used by local communities, civil engineers, NGOs, research institutes, donors and governments as an effective source of inspiration.

Free copies are available at the Water Sector Management Unit in the Ministry of Finance (For more information, Please contact **Ludo Prins:** ludo.prins@mof.gov.ws

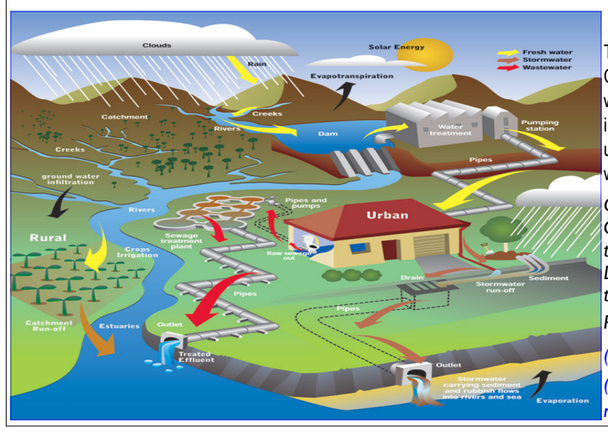

Figure 2: The Water Cycle

The figure visualizes the Water Cycle centered on human uses which include; storage facilities, irrigation, domestic and industrial use, treatment and return to waterways.

Credit, text source: U.S. Geological Survey, Department of the Interior/USGS
Diagram reproduced courtesy of the SEQ Healthy Waterways Partnership
(http:www.healthwaterways.org)
(http:www.pacificwaterefficiency.com/)

"The series illustrate a range of innovative technologies that have already helped thousands of poor families to improve their standard of living and maximize annual income"

OPEN FORUM

Readers and stakeholders involved in the Water Sector can contribute to our newsletter via:

infowassp@mof.gov.ws