

WATER & SANITATION



European Union



NEWSLETTER

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**Greetings
from the
Water and
Sanitation
Sector
Co-Chairman**

Talofa and welcome to all our Implementing Agencies, members, stakeholders and partners of the Water and Sanitation Sector. It is with great privilege that I present this issue of the Sector's Newsletter, emphasizing some of the main activities that the sector has been involved in during the months of October to December, 2019.

The key events enclosed in this issue are;

- ★ *Renewable Energy Division new Biogas sites and monitoring site visits*
- ★ *IWSA carried out works and participation in Post School Education and Training*
- ★ *DEC—CHWMS maintenance and monitoring*
- ★ *LTA emergency works*
- ★ *International Trainings on Climate Change*



Ulu Bismarck Crawley

Water & Sanitation Sector Co-Chairman

I would also like to acknowledge the hard work of our implementing agencies and our stakeholders for your incessant support in all the ongoing and new developments executed in this period. Malo le faatoatoa ma le onosai. Your assistance and support have brought us this far. Great progress has been made by all implementing Agencies in achieving their targeted goals for this financial year but it was without a doubt, problematic, but was done with grate fortitude and hard work. I have faith that our Sector will continue to strive forward with refreshed and high spirits to trail planned works and overcome new challenges that may bring by 2020.

In moving forward, our newsletter team would sincerely welcome the support of all our Implementing Agencies and stakeholders in providing articles, news items, events, advertisements that we can broadcast in our upcoming newsletter editions.

For more information please contact Lealofisa Soe Lia Taufaatua on email lealofisa.taufaatua@mnre.gov.ws or telephone 67200 ext 322.

Thank you and God Bless

Ulu Bismarck Crawley

Co-Chairman

**Renewable
Energy
Division**

♦ **Biogas
Systems**

Biogas Project:

Biogas technology is the process of harnessing methane gas produced by the fermentation or decomposition of organic matter. The existing site at Afiamalu is under the control of Ms Lufi Rasmussen, she showed interest in the system given that she has an organic herbal farm at their backyard. So far, 80% of the system has been completed with few fittings left to be done. Monthly visits are still ongoing for all sites



There were five new sites that were proposed and approved and will be installed soon . Tanumalala Biogas System will be the first site to start with instead of Saasaai as planned. Other new sites that included in this project will be located at the following areas;

New Sites Locations:

*Tanumalala

*Manono Uta

*Vaisala

*Saasaai



The Independent Water Scheme upgrade works for water quality reached Solosolo Village. And they installed new Polyethylene (PE) pipelines. Polyethylene (PE) has revolutionized low pressure pipe system design on a global basis, which have driven the replacement of traditional pipe engineering materials during the last 60 years. PE pipelines offers the pipe industry an array of advantages inclusive of:

- ◆ Economical, high volume manufacture
- ◆ Low material cost
- ◆ Design flexibility – easily shaped
- ◆ Light-weight design – ease of transport and handling
- ◆ Leak-free fusion jointing - low maintenance costs
- ◆ Relative ease of jointing (compared to metallic pipe systems)
- ◆ Flexibility – ease of transport and handling, use in conjunction with trenchless technologies and resistance to seismic activity
- ◆ Biologically inert capabilities

This job was successfully done across the village by Contractors: KLSS & Kew Consult Ltd

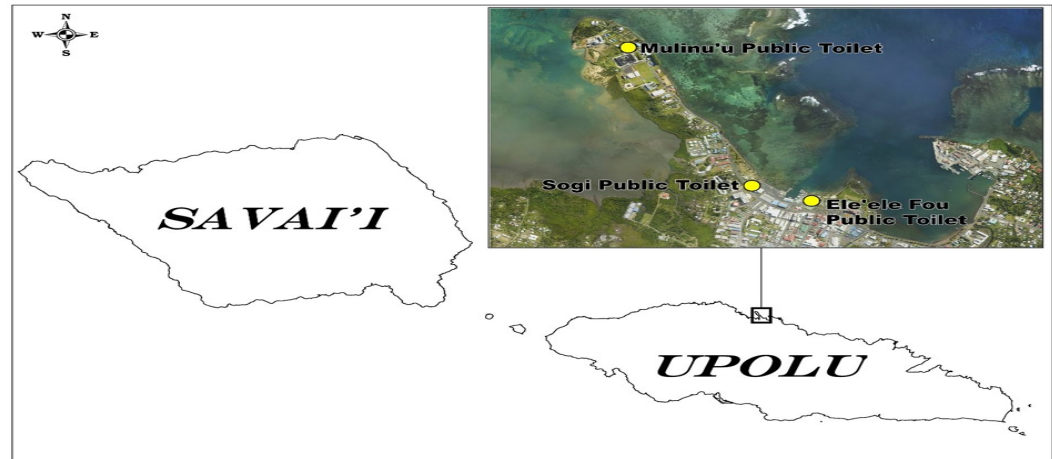
Independent Water Scheme

◆ Solosolo PE Installation

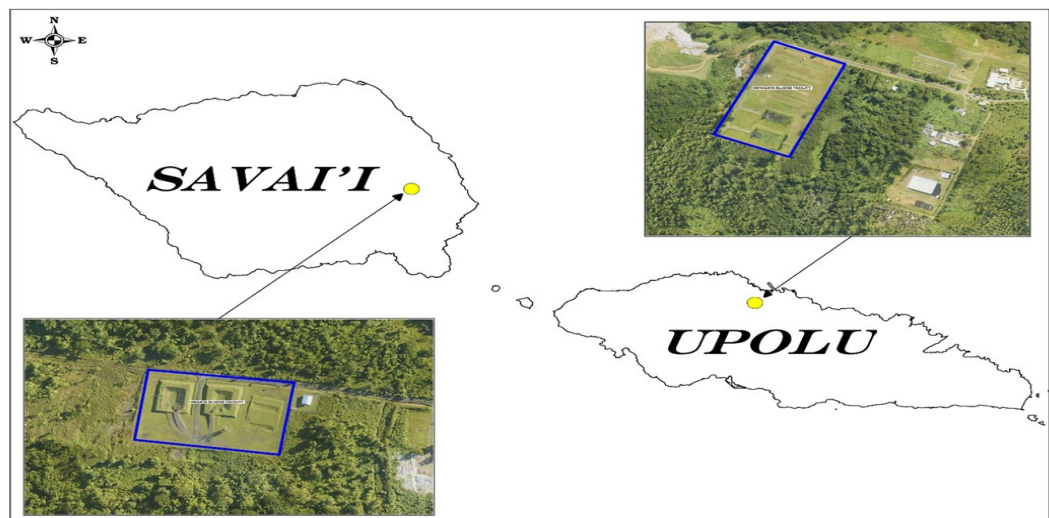


**Chemical &
Hazardous
Waste
Management
Section—
MNRE (DEC)**

The Chemical and Hazardous Waste Management Section is still have ongoing maintenance and monitoring programs for public toilets to make sure that these facilities are in good conditions for the community access. There are three lavatories all located within town area as shown in the photo below, catering for the public in the development zone. These are located at Mulinu'u opposite with Radio 2AP, Saleufi opposite with Nelson's Library and Sogi beside MWCSO building.



Despite the high level of solid waste generation, adequate waste management practices had been instituted. Landfills at [Tafaigata](#) and [Vaiaata](#) (Savaii) were set up using the Fukuoka method Sludge facilities were also constructed at the landfill sites to cater for solid waste disposal from the Apia Sewerage Treatment Plant.



FLOOD MITIGATION EMERGENCY WORKS

During the wet season our country experiences heavy rain and prone flooding. On top of this, the Pacific Region is experiencing cyclone season at the same time. During this period, the Land Transport Authority was on alert, patrolling our country to identify any hazards and issues that may cause flooding. As part of the flood mitigation section of the technical steering committee for the Ministry of Natural Resources and Natural Environment's Water sector, it is LTA's goal to reduce and eliminate any flooding issues pertaining to road infrastructure.



REMOVAL AND CLEARANCE OF DEBRIS AT CURRANT STREET, FUGALEI



Due to the debris and rubbish that has accumulated on the upstream side of the bridge, the inlet of the culverts had been reduced thus causing the upstream side of the bridge to flood. While patrolling critical sites that are prone to flooding, the Authority identified this issue and immediately contacted contractors that were employed under the Drainage Routine Maintenance (DRM) program. The contractor that engaged the emergency work was KLSS Landscaping Services. The DRM contractor hastily

dispatched a 12-tonne excavator to carry out the work to mitigate any flood risk to the surrounding properties. As seen in the provided photos, the debris that accumulated was mostly made up of garbage from people disposing rubbish into our rivers and streams. Due to the negligence of people, the ecosystem within natural water sources are destroyed by pollution and the risk of flooding increased.

TO REDEFINE OPEN EARTH DRAINS AT LETOGO

One of the critical sites that is prone to landslides is along side East Coast Road. In times of heavy rain, runoff from the cliff side weakens and erodes soil causing it to move down slope. The effects of landslides include loss of life, destruction of infrastructure, damage to land and loss of natural resources. The effect however that frequently occurs alongside East Coast Road are blockage rivers and increase the risk of floods. During the month of December, LTA was notified by residents in Letogo that due to the velocity at which runoff was flowing from the cliff, silt had built up within the LTA drains. This caused flooding not only on the road but also the families within the vicinity. The DRM contractor that is responsible for the zone had already assembled on site trying to aid families while awaiting the heavy duty machinery to remove the accumulated silt.



Land Transport Authority

- ◆ Flood Mitigation Emergency Works
- ◆ Removal debris at Fugalei Streets
- ◆ Redefine open earth drains at Letogo

The Australia Pacific Technical College in Collaborations with the Water and Sanitation Sector is conducting a Post School Training for several members from its Implementing Agencies. The purpose of this training is to facilitate local plumbers with skills and knowledge as well as upgrading their understanding in the particular area. There are two members from Samoa Water Authority that will soon graduate with Certificate III in Plumbing and other four new members from Plumbers Association of Samoa (PAS) and Independent Water Scheme who attended the orientation for new local plumbers funded by the Sector.



SWA members for the Post School Training accompanying by Clarissa Laudala—Program Manager TWS



Members from PAS during the orientation accompanying by Elena from PAS, Joe from SWA and Perise Kerslake from Water Coordination Division—MWRE

APTC Post School Training for Sector Implementing Agencies

Overseas Trainings

- ◆ Climate Change and Green & Low Carbon Development

The Department of the Climate Change of the Ministry of Ecology and Environment (MEE) of the People's Republic of China and the Foreign Environment Cooperation Center (FECO) hosted a training course program on Climate Change and Green & Low Carbon Development from October 29th to November 11th, 2019 in Beijing . The purpose of the training was to

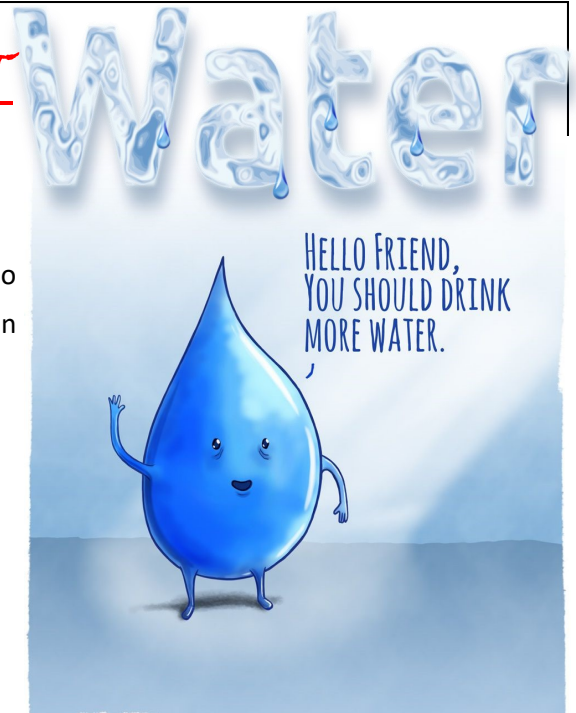
- ◆ share China's experiences and practices for addressing climate change
- ◆ understand more comprehensively and accurately the concept of Chinese ecological civilization construction, also
- ◆ the measures taken and achievements made by China in response to climate change and green & low-carbon development.

Samoan participants were, *Olioliilealieaunoo Faletese, Ueligitone Enosa and Lealofisa Soe Lia Taufa'atua*, other participants were from Indonesia, Sri Lanka, Saudi Arabia , Iran, Ethiopia, Rwanda, Dominican Republic, Argentina, Mexico, Egypt and Peru. Great lessons were learnt from this training such as better understanding about GCF process as well as initiatives to deal with climate change and ways to slow down impacts of climate change.



FUN FACTS ABOUT

- Water is made up of two elements, hydrogen and oxygen. Its formula is H_2O .
- Each molecule of water is made up of two hydrogen atoms bonded to a single oxygen atom.
- The existence of water is essential for life on Earth
- Water has three different states, liquid, solid and gas
- Water covers around 70% of the Earth's surface
- Pure water has no smell and no taste, it also has a pH level around 7



Water Fun Facts & Cartoons

	Birth to 6 months	6 months to 1 year	1 to 12 years
Infants and children	average: 74% range: 64%–84%	average: 60% range: 57%–64%	average: 60% range: 49%–75%
Adults	Ages 12 to 18	Ages 19 to 50	Ages 51 and older
Male	average: 59% range: 52%–66%	average: 59% range: 43%–73%	average: 56% range: 47%–67%
Female	average: 56% range: 49%–63%	average: 50% range: 41%–60%	average: 47% range: 39%–57%



Body part	Water percentage
brain and heart	73%
lungs	83%
skin	64%
muscles and kidneys	79%
bones	31%