PWWA NEWSLETTER

3rd Edition, 01st July – 30th September 2022

From the Head of Secretariat

Talofa lava to all our members!

Preparations for the 13th Annual Conference and Expo and the 6th Water Ministers meeting is in full swing this quarter! Many thanks to CEO of WAF, Mr Amit Chanan and his team for obtaining their Government's approval to get this conference hosted by Fiji! We were advised in early August of the Government of Fiji approval and have worked round the clock since with the WAF Organising Committee to make sure this conference gets off well. The theme for this year's conference is "Resilience and Water Security" Please visit our website www.pwwa.ws for updates on the conference and to obtain a registration form.

By the end of the quarter we have registered quite a number of members and we would encourage you to not leave this to the last minute as accommodation is getting scarce! It is exciting to be able to meet after a two-year hiatus because of Covid and that sentiment has been voiced by everyone who has registered and will be joining. A good number of Allied members have registered for the Expo as well as well as some providing sponsorship. The Water Ministers will also have their forum and we hope all political leaders of the water sector will attend and canvass the higher attention and advocacy for water resilience and climate action that we need of our political leaders.

The **Young Water Professionals** program which began online on 24 August online has had 6 of its 8 online sessions held weekly over the past couple of months. YWPs participants were to have attended at least 6 of the eight online session to be eligible to attend the face to face conference where other sessions on GEDSI and governance are scheduled, group presentations and attendance to the other meetings such as the Ministers meeting and a Q&A with CEOs!

Benchmarking 2021: There are still delays in getting the toolkits in from some of our utilities; we are banking on your support to get a higher response rate than before. Survey results will feature as a presentation to the Ministers Meeting and will also form the basis for the awards which will highlight the end of the 2022 Annual Conference in November!

IN THIS ISSUE

Board Strategic Planning Workshop in September:
The Board met in July and decided among other governance work on a date to meet face to face for the strategic plan workshop. For this activity, the Board met in Auckland in September for 3 days to review the existing strategic plan and brainstorm a strategic way forward for the next five years. A draft is now been finalised and be made available for the Council and members at the PWWA AGM to be held during the Annual Conference.

ADB WaSH Webinars: The series of webinars that we collaborate with ADB continued with only one webinar this time in August on "Pacific Utilities enabling WASH services in peri-urban areas. A couple of our member utilities presented at this webinar – SIWA and WAF.

Overall, the third quarter has been a very busy time for the Secretariat especially in getting the preparations and logistics of the conference going. We have also been active in furthering collaborative work with our current partners but also new ones such as with Australian Water Association (AWA) and ADB-UNESCO WWP. We hope these existing and new relationships augur well for PWWA over the coming years in building the capacity of our membership technically and professionally.

God bless and we look forward to seeing you all at the Annual Conference in November!

Lusia

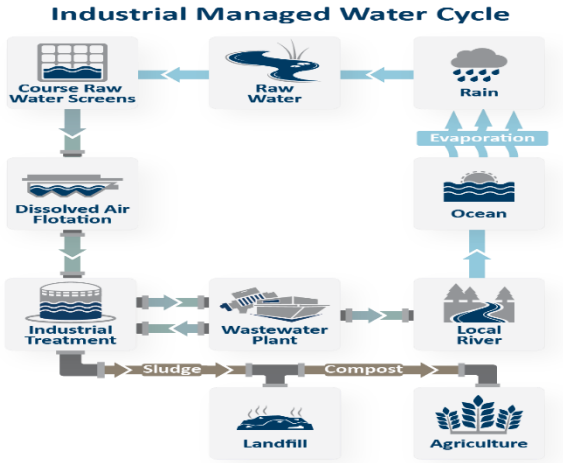
Board Strategic Plan Workshop held in New Zealand from September 21 – 23, 2022

(source HYDROFLUX)

Resilience and Water Security for the Blue Pacific Continent

A secure future for water in the Pacific is one where society has access to affordable water meeting the needs of sustenance, sanitation, health and well-being. To achieve a sustainable level of drinking water and human well-being necessitates society adopts a systems based approach to provide potable water and waste water solutions at every touch point of the managed water cycle from industry through to communities.

The diagram below is the Hydroflux interpretation of the managed water cycle with solutions available for every stage of the process, accessible by all key stakeholders along the water security pathway. The entire managed water cycle needs to be considered from catchment, to initial use and treatment for reuse, with a vigilant eye on environmental discharge.



Providing solutions for the managed water cycle is just one part to a two part approach because solutions need to be resilient in order they provide resilience to stake holders for true water security to be achieved. That is why Hydroflux provides a cradle to grave support approach to water assets.

The Hydroflux Group addresses water security and resilience by designing turnkey solutions for each client and by providing solutions that:

- Are regionally supported for the life cycle of the system from Suva, Fiji
- Use as much local content and engagement as possible
- Provide for industrial consumption and trade waste treatment
- Provide for municipal and decentralised anthropocentric use in potable water and sewage
- Provide for ongoing sustainable consultation and support to assist clients with continuous improvement strategies and policies across all UN Sustainability Development Goals of which water is number 6 of 17.

An example of water security in action can be found in the Hydroflux Industrial project at the Crest Chickens Abattoir near Suva, Fiji. In this instance a Hydroflux HySmart® treatment plant was designed to treat liquid waste from the facility prior to environmental discharge of effluent.

In this instance Hydroflux designed the treatment process based on client supplied data then constructed and installed the plant using local sub-contractors from the Fijian industrial landscape. In line with our standard client commitment, Hydroflux then commissioned the plant, trained the site staff to operate the facility and continue to provide aftermarket support in the supply of chemicals, spare parts and operational guidance. The Hydroflux approach is one that considers a circular economic response to a water solution as the most appropriate means to increase water security for its client's and their stake-holders.

Globally the future of water is uncertain, and the resilience of communities is deeply seated in the availability of water by optimising its use and reducing the negative impacts of its abuse in an effort to greatly improve availability.

Without water for industry, society stops. Without maximising water reuse and reducing the external impact of trade waste from industry, water for society and the environment becomes polluted and depleted. A polluted and depleted environment diminishes the resilience of Pacific communities, reduces availability of natural resources, diminishes food stock and reduces tourism. A prosperous economic future for the Blue Pacific Continent is severely restricted without a bountiful marine environment and prosperous communities protected by appropriate solutions.

(source Mascara)

Mascara is a new registered Allied Member.

Organisation Bio:

It is a French Company having developed and industrialized the unique autonomous 100% battery free solar desalination technology OSMOSUN. We are working in sustainable water access project for remote communities in Africa, South-East Asia and Pacific (Vanuatu, French Polynesia, New Caledonia..). With track record of around 50 units in operation in 15 countries, Mascara is the world expert in manufacturing and integration of solar reverse osmosis equipment. After the execution of our water access program in Vanuatu funded by French Government, we are scaling up the solution for the Pacific Islands through the creation of the Mascara Foundation and the Pacific Odyssey.

Securing sustainable water access in the Pacific outer islands

The OSMOSUN battery free solar desalination program in Vanuatu

With the combined pressure of global warming and increasing population, the world is facing a water crisis. Displayed through different symptoms in every region, remote and vulnerable communities are affected on various level: hygiene, agriculture, social and economic development, climate migrations.

A large number of Pacific Islands are suffering from the lack of fresh water as pollution, sea level rise, salt intrusion in the aquifer and growing uncertainty in rainfall patterns, all linked to climate change, have dramatically reduced the availability of the resource.

Vanuatu benefits from a sufficient water resource from a nationwide perspective, but the resources are poorly distributed locally and many remote islands lack fresh water.

To secure sustainable water access when surface or underground fresh water and rainfall is not sufficient, a solution exist: using the available resource of the sea.

The reverse osmosis desalination technology, currently used in 99% of the desalination projects worldwide, consists of filtering with high pressure seawater through ultra-thin membrane.

This process providing clean drinking water has two disadvantages: the high energy consumption and the production of brine.

To deal with these two problematics, the French company Mascara New Technology, specialized in water treatment powered by renewable, has developed and industrialized the first eco-friendly battery free solar desalination solution OSMOSUN®.
The use of the solar energy, available everywhere, not only guarantee the absence of CO_2 emission but also a constant supply in low-cost energy compared to diesel generator and complex fuel supply in remote islands.

To deal with the brine, the solution consists in smaller and decentralized system, closer to the consumption point, as well as a process producing less salty brine that are diluted and softly spread back to the sea.

OSMOSUN unit, United Arab Emirates

This OSMOSUN® solutions already installed in Africa and Asia have been operated for some time already in French Polynesia and New Caledonia.

OSMOSUN® unit New Caledonia

OSMOSUN @ unit French Polynesia

Today the department of water resource of Vanuatu and Mascara NT are honored to launch the first OSMOSUN® program for sustainable water access in Vanuatu.

The program funded by the French government will allow 4 villages to get the turnkey OSMOSUN® solution to secure their water access.

The program also includes training to the local operator and awareness campaign as well solar mobile desalination units to support the Department of Water Resources in emergency situation.

Mascara Renewable water

This pilot program in Vanuatu will be scaled up next year in several Pacific countries to support water utilities, governments, and villages in securing their water access supply.

The Solution is here, sustainable and affordable, everywhere for everyone.

Mascara Renewable water

PUC POHNPEI UTILITIES CORPORATION

(source Pohnpei) August 2022

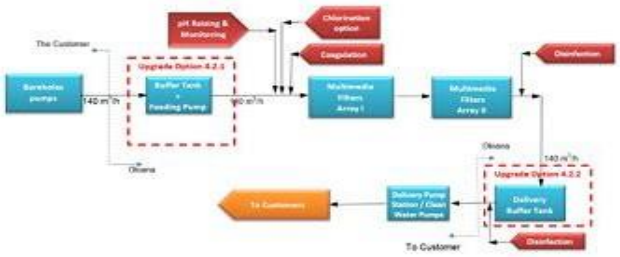
POHNPEI IRON REMOVAL PLANT

Pohnpei Utilities Corporation (PUC) entered a contract with KEDEM Crushing 1991 Ltd. Company out of Israel to design and construction of the Iron Removal Plant with an amount of 1.8M.

The existing Iron Removal Plant adjacent to the Pohnpei State hospital constructed in the early 1980's. It sole purpose is to filter the iron in the incoming water from the existing six (6) boreholes. Since the substandard of the plant have resulted with color and odor water at the nearby residences/comminutes.

The project includes the replacement of existing treatment to improve quality and quantity of water to the communities.
The system uses physico-chemical water treatment and sand filtration process. Project consist of 12 filtration tanks whichare divided between 2 arrays (6 tanks for each array), which

will treat the water one after the other. In addition to the filtration tanks, high standard filter elements will be utilizedto reduce operational cost. It is also equipment with a new Back-up generator to ensure supply of water during emergency needs.



Project Contractors:

- KEDEM Crushing 1991 Ltd.

Local Contractors:

- DELCO Company
- Pohnpei White Sand/ VCS
- Pohnpei Utilities Corporation

Ribbon Cutting: His Royal Highness Iso-Nahnken of Nett Municipality : US Embassy Deputy Chief of Mission; Governor of Pohnpei State: David Kalush CEO KEDEM Crushing 1991 Ltd.

Palau Public Utilities Corporation

Public Relations Office
Oldiais Building, Medalaii Koror
P.O. Box 1372
Republic of Palau 96940
Tel: (680)488-3870 Ext. 2065
Fax: (680)488-3878

PRESS RELEASE

July 18, 2022

First Joint Coordination Committee Meeting for the Project for StrengtheningCapacity in Non-Revenue Water Reduction in Palau

On July 5, 2022, the Palau Public Utilities Corporation (PPUC) held its first Joint Coordination Committee (JCC) meeting for the Project for Strengthening Capacity in Non-Revenue Water Reduction in Palau. Stakeholders including PPUC, Koror State Government and Environmental Quality Protection Board (EQPB) attended the meeting which included progress reports delivered by JICA experts as well as PPUC counterparts.

Representatives from the Embassy of Japan and JICA Palau Office were also in attendance. Technical experts in Japan were also able to join virtually.

Since March 2022, JICA and PPUC have made significant progress including pipeline location through PALARIS database workshop, night flow monitoring with installation of trail cameras on flow meters, and selection of pilot area for pipe renewal.

The project has 3 outputs namely 1) Implementation capacity of pipe renewal is improved through preparation of pipelines renewal basic plan for Koror-Airai water distribution system; 2) Capacity of leak detection and replacement/switch-over of pipes is improved; and 3) Capacity of commercial loss reduction, water use monitoring, public awareness on water savings is improved.

In his opening remarks, CEO Frank Kyota expressed PPUC's appreciation to JICA and the Japan Government for their continued support throughout the years including financial and technical assistance. He mentioned about a recent project also funded by Japan Government through JICA, the "Grant Aid Project for Improvement of Water Supply System" that included installation of new water distribution and transmission lines in Koror and Airai as well as a new water storage tank in Malakal. CEO Kyota also recognized and congratulated JICA for their 25th year anniversary in Palau.

Vision: PPUC will be the most professional utility corporation in providing reliable, economical, sustainable and quality services for its customers
Mission: To provide essential utility services to foster growth, economic development and improved quality of life for the people

Public Utilities Board

(source UN & RNZ News) 05th September 2022

Kiribati Drought

Fears of malnutrition and other illnesses are mounting in Kiribati as the country grapples with an ongoing drought.

The Kiribati government in June declared a state of disaster after the discovery of high salinity levels in monitoring wells and very low rainfall.

Head of UNICEF in Kiribati, Nick Rice Chudeau, said the drought can lead to poor health and hygiene practices from the lack of clean water.

He said the forecast is worst for the southern islands, which is home to 94,000 people or almost 80 percent of the population.

"During a drought when water becomes scarce, people forfeit hygiene practices like handwashing with soap or bathing and this has a direct impact on children's health, their nutrition and that can lead to increasing cases of diarrhoea, skin infection or malnutrition."

Rice Chudeau also said that this impacts women the most.

"We know that women and girls are typically more impacted than other members," he said.

Supplies arrive in Kiribati to support on-going drought response

"Women and girls are often more responsible for bathing children, changing babies, cleaning the house, cooking and preparing meals, and other domestic responsibilities.

"So the lack of access to safe water will directly impact them and their health which makes them more vulnerable during a drought emergency."

Drought on coconut palms in Eita, Tarawa

"It is not just affected households. The Ministry of Education said schools have been affected, especially those that rely on shallow wells that have become too brackish. Children are unable to learn if they are dehydrated and the lack of access to water in schools has a direct impact on children's education, their health and their wellbeing."

Rice Chudeau said UNICEF is working with the Kiribati government to ensure that children and their families affected by the drought have access to safe drinking water as well as adequate hygiene services to protect them against waterborne diseases.

UNICEF is providing essential emergency supplies including first-response household water and sanitation hygiene and dignity kits to about 25,000 people.

IWSA - Independent Water Schemes Association

(source IWSA)

12 July

Site investigation conducted today at a community's water catchment with the Water Resources Division (WRD) of the Ministry of Natural Resources and Environment Samoa
Through the development of this community's drinking water safety plan (DWSP), we were made aware of developments upstream of their water source, causing grave concern to the community utilizing the source. This was one of the priority issues highlighted in their DWSP that the IWSA and MNRE are now assisting the community to resolve.

27 July

Official launching of the WASH Communications Strategy and Comic Book. IWSA is a proud key implementing agency of the Water Sanitation and Hygiene Sector under the Ministry of Natural Resources and Environment Samoa
Thank you to the WaSH sector coordination unit for showcasing our work on the WaSH sector banners.

18 August

For the past two weeks we have been in the immediate water catchment areas of 4 Independent Water Schemes (namely Saoluafata IWS, Falevao IWS, Leusoalii IWS & Aufaga IWS) planting trees with the communities and the Ministry of Natural Resources and Environment Samoa.
So far, altogether, the communities have planted more than 3,000 plants. Our target is 5,000.

7 September

IWSA office was part of a hydrogeological survey led by the Hydrogeologist Reynar Rollan and the Samoa Water Authority assessing Samoa's springs and wells for water supply. Field observations on geology, terrain, water level measurements and water quality measurements were undertaken.

Moerk Water Treatment System on Uripiv Island Turns 4!

"We are celebrating 4th Birthday of our water project" Bob Delwin (Head Nurse, Uripiv)

In 2018, Moerk Water installed a solar powered seawater desalination system to provide a renewable and reliable source of drinking water for the 800 residents of Uripiv island in Vanuatu. Prior to 2018, the residents relied on rainwater as their main source of drinking water. During the dry season when they ran out of drinking water, the residents were forced to either use contaminated wells on the island or to cart water from the mainland. For the past four years the water system has continued to operate reliably, even in the aftermath of Cyclone Harold in 2020. Since the introduction of the Moerk Water treatment system the island's water supply (and that of nearby islands) has been secured and the health of the residents has improved. In 2022, the residents of Uripiv Island held a celebration to mark four years since the water treatment system had been installed.

"When we have this water system we no longer see diseases such as diarrhoea, red eyes and other skin diseases. As a nurse my fear is that if we consumer other contaminated water, we might have an outbreak of waterborne diseases in our community" **- Bob Delwin (Head Nurse, Uripiv)**

The ongoing success of the Moerk Water unit in Uripiv can be attributed to the community buy-in as well as the attention that Moerk Water placed on design and training at the beginning of the project and the ongoing support that Moerk Water provides to the community. The community is confident operating the water treatment system and looks forward to a bright future. This project can be an example to other Pacific Island communities facing water stress. Contact Moerk Water if this project is of interest to you.

Moerk Water trains Tongan Ministry of Health staff to roll out disaster response units

In 2022, the Tongan volcano Hunga-Tonga-Hunga-Ha'apai erupted causing widespread devastation to communities and the disruption of essential services including water supplies. Soon after the disaster, Moerk Water were contracted by UNICEF to supply not only water treatment units to people impacted by the disaster but also to train members of the Tongan Ministry of Health on the installation and maintenance of these vital treatment systems. By building up the local capacity in Tonga in this important technology, response times to disasters will improve and more people will have access to improved water supplies.

The training, which included both water treatment technologies and renewable energy systems, was held online and run across 3 days. The training included theory sessions and practical demonstrations with a water treatment unit and was attended by 16 staff members of the Tongan Ministry of Health. Upon successful completion of the training, staff were awarded with certificates from Moerk Water and UNICEF. In the coming weeks, Tongan Ministry of Health staff will use their training to install renewable energy powered water treatment systems to communities still recovering from the eruption.

PACIFIC WATER AND WASTEWATER ASSOCIATION SECRETARIAT

P.O. Box 868
L4 FMFMII Building
Eleele-fou, Apia
SAMOA

PH: +685 30326

E-mail: info@pwwa.ws
Website: www.pwwa.ws