

SOPAC NEWS

SPC Applied Geoscience and Technology Division (SOPAC)



The winning GIS team (standing) with the executives of SPC and DigitalGlobe (sitting)

GIS/REMOTE SENSING UNIT RECEIVES TWO AWARDS FOR SATELLITE IMAGING

The geographic information systems (GIS) and remote sensing team has received two awards from the world's leading supplier of satellite imagery, DigitalGlobe Inc., based in Colorado, USA.

They received a Partner Excellence Award 2014 for increased sales volume and meeting business growth expectations. SPC is the only authorised reseller of DigitalGlobe products in the Pacific Island region.

SPC members currently receive the highest-resolution satellite image data commercially available at some of the lowest prices on the planet. SPC was also recognised with a DigitalGlobe Innovation Award 2014.

Speaking at the awards ceremony held at SPC's Suva Regional Office on Thursday 10 July, 2014 Wolf Forstreuter, GIS and Remote Sensing Specialist, explained emerging fields in the application of satellite imagery data.

'Emily Artack, our Maritime Boundaries Technical Officer, used satellite image data for determination of maritime boundaries between Kiribati and Marshall Islands. This is a new application for satellite image data. And it is the first time that the International Seabed Authority has recognised satellite imagery as a legal tool to determine boundaries.'

Successive technical innovations have put SPC's GIS and remote sensing team at the forefront of international application of satellite image data and cemented its place in a value-adding service chain that benefits people right across the region. 'We are applying very sophisticated data to real development needs,' says Pettersson.

A large number of staff turned out to watch as Fekitamoela 'Utoikamanu, SPC Deputy Director-General, received the awards from Peter Kinne, Regional Director for DigitalGlobe.

A statement from Takayuki Odawara, DigitalGlobe's Vice President of Asia-Pacific Commercial Sales, emphasised that 'the achievements of such a small group have been world class.' The statement went on to say, 'These awards recognise the excellence of the work performed and the efforts of the GIS and remote sensing team.'

Satellite imaging technology has a variety of applications in the Pacific, including forestry, land use planning, agriculture, geology, fisheries, port operations, disaster management, infrastructure and urban planning, maritime boundaries, biodiversity conservation, climate change adaptation, and education. It also permits Pacific Island countries to replace long-outdated aerial maps and cartographic data.

FINANCE WORKSHOP FOR DEEP SEA MINERALS: MAKING SURE THE PACIFIC ISLANDS ARE NOT LEFT SHORT-CHANGED



Participants at the Financial Workshop

Deep sea minerals have the potential to be a game changer for the Pacific, but whether that will be a change for the good or the bad will depend on many factors including financial management by Governments. If revenue is managed transparently and prudently, deep sea minerals could greatly improve the economies and livelihoods of the Pacific Island countries.

Though deep sea mining is yet to commence, Pacific Islands are well positioned to put essential policies, laws and procedures in place now before mining begins. To assist this, the SPC-EU DSM Project held the 5th Training Workshop in their technical training series themed: 'Financial Aspects of the deep sea minerals industry' in the Cook Islands from the 13 – 16 May 2014.

The workshop focused on promoting good governance of revenue management and looked back at past experiences around the world with the aim to improve management. The workshop focused on the Norway Sovereign Wealth Fund, a managed national savings fund that invests in the country's oil and gas income into property, stocks and bonds to generate revenue for the benefit of present and future generations. Although this is a positive example, the workshop also discussed mismanagement of revenue from extractive industries, emphasising the potential pitfalls associated with improper management of mineral resource wealth.

The event was co-hosted with the Pacific Financial Technical Assistance Centre (PFTAC) – a subsidiary of the International Monetary Fund (IMF) – that brought together world-leading financial experts and regional

experts to discuss the implications of this potential new source of wealth for Pacific Island countries.

The Assistant Attorney General of the Republic of the Marshall Islands, Jonathan Kawakami stated that, "the trip to the Cook Islands was most educational indeed. The financial aspect of Deep Sea Mining is one of the core areas that need minds to scrutinize and examine the best possible financial regime for the Country. During the Conference, vast group of professionals brought into the discussion the various thoughts on what may be the best possible financial regime there may be. It is important that the subject of Financial Management and implementation of best possible mechanism for trust and security purposes should always be aimed for" Jonathan Kawakami, Assistant Attorney General, Marshall Islands.

The workshop attracted a wide range of stakeholders from South Sudan to Norway, Mauritius to Washington D.C who were willing to share their experiences and professional expertise portraying the

promising possibility of turning the minerals on the deep ocean floor to visualised economic opportunity for the benefit of all.

The workshop was also the first step to producing a 'Pacific Regional DSM Financial Framework', a template/guideline document that the Pacific Islands can use as a point of reference when drafting their financial fiscal regimes.

The Deep Sea Minerals industry has the potential to make a positive impact on the lives of Pacific people, but at the same time there are issues, risks and uncertainties that need to be addressed. The DSM Project stresses the importance of engagement and participation among a wide variety of stakeholders, from local communities all the way to regional non-governmental organisations, to enable Pacific countries to make well informed decisions for their economy, their people, and their country.



Participants being attentive at one of the workshop presentations



NEW CHIEF GEOSCIENTIST APPOINTED FOR THE SOPAC DIVISION

The SOPAC Division is happy to announce the appointment of its new Chief Geoscientist, Mr Kifle Kahsai. Originally from Eritrea in North East Africa, Kifle is also a naturalised New Zealander. He received his B.Sc., Post-Graduate Diploma and PhD. degrees in Geology, Geothermal Energy Technology and Geochemistry from Addis Ababa University in Ethiopia, University of Auckland in New Zealand and Victoria University of Wellington in New Zealand respectively.

Kifle has over 30 years of successful and comprehensive career in geothermal exploration and development fields and in academia in many parts of the world.

He has worked and lived in a number of countries in East Africa, SE Asia, South Pacific and the Americas within the geothermal industry with consulting companies, investors, developers and

governments and also in academia in tertiary and research institutions. His work focuses on geoscientific studies of geothermal reservoirs, geothermal resource assessment and management of geothermal development projects.

He has a broad knowledge and extensive practical expertise which is an asset to an interdisciplinary approach in the development of strategies and policies aiming to achieve sustainable development. He has tertiary teaching experience in geoscience areas including geothermal, environmental and earth sciences, hydrology and integrated water resources management areas. He has been actively involved in designing, conducting and monitoring geothermal exploration and development programs, including analysing and interpreting geological and structural mapping, hydrothermal alteration analysis, geochemical and hydrological

characteristics and geophysical surveys. This allowed him to develop an integrated conceptual geological modellings of high enthalpy geothermal systems in a variety of tectonic settings. He is committed to the transfer knowledge, gained through work experience and research activities, to both technical and non-technical professionals.



SECRETARIAT OF THE PACIFIC COMMUNITY BRINGS DRONE TECHNOLOGY TO SOLOMON ISLANDS

Staff of SPC's Solomon Islands Country Office were saddened to witness tragedy in the April flash floods that burst the Matanikau and Lungga river banks, killing at least six people and leaving some 10,000 homeless.

Country Office Manager, Mia Rimon, contacted SPC Director-General, Colin Tukuitonga and the Director of SPC's Applied Geoscience and Technology Division (SOPAC), Michael Petterson with a request for assistance. A request came also from the Solomon Islands Ministry of Lands, Housing and Survey (MLHS) to provide a geohazards assessment.

In response to these, the SOPAC Director arrived in Honiara with his team and met with the permanent secretaries of the Ministry of Foreign Affairs and External Trade, MLHS and the Ministry of Energy, Mines and Rural Electrification (MEMRE). They presented unmanned aerial vehicle (UAV, or drone) technology to the government to obtain precise imagery of the flooded areas.

A UAV is an electrically driven, remotely piloted vertical take-off aircraft equipped with a standard camera. Using this high level technology, SPC trained over 20 officers of MEMRE and MLHS and then they took to the field over the Easter weekend to obtain valuable imagery of the Matanikau, Lungga and other rivers and parts of the Guadalcanal plains. The drone use was facilitated by SPC through the voluntary services of Teja Kattenborn of Germany, who was in Fiji doing work with SPC using the drone when news of the floods broke.

SPC lost no time in asking Mr Kattenborn if the drone could be used to assist the Solomon Islands government, which has relied on the technical and scientific know-how, training and assistance of SPC Geoscience for decades. Mr Kattenborn was happy to help. He is working with remote sensing expert Wolf Forstreuter of SPC, who has trained dozens of Solomon Island government officers in GIS and remote sensing.

As a unique multi-ministry collaboration, Mr Forstreuter and the team of ministry officials worked on the drone data, and presented their analysis to the Permanent Secretaries of the three ministries and the Director of the National Disaster Office yesterday afternoon.

'Using this technology, we have produced high resolution images and digital terrain models to document the recent flooding,' said Mr Forstreuter. 'We have clearly mapped the spacial extent of the flooding and the damage. Using this information, we have worked with our counterparts to give the government high quality scientific data that can be used to ensure that people do not move back into high risk areas that we know will flood again.'

SPC's Country Office in Honiara oversees the work of the organisation in over twenty government ministries.



Drone in action



Mr Kattenborn explains the use of the drone camera to Solomon Island government officials

WATER IN KIRITIMATI: ONE STEP FORWARD WITH EU SUPPORT

Mr. Andris Piebalgs European Commissioner for Development, Mr. Tererei Aruee, Officer in Charge, Ministry of Line and Phoenix Islands Development, Government of Kiribati, and Mr. George Beck, representing the Secretariat of the Pacific Community (SPC), inaugurated the office for the EUR 4.8 million ‘Improving Drinking Water Supply in Kiritimati Island’ project in the month of April.

The European Commissioner for Development, Mr Piebalgs stated that “the European Union and Kiribati have forged a fruitful friendship over almost four decades. This initiative is a concrete example of our strong partnership and continued commitment to support the government of Kiribati and its people in their efforts towards attainment of the Millennium Development Goals”.

The representative from the Government of Kiribati, Mr. Tererei Aruee stated that “water

is an important priority of the Government, and the rehabilitation of the reticulated water supply through this project will benefit the majority of residents on Kiritimati Island. The Government appreciates the assistance of the European Union through this project and is committed to working closely with SPC in improving the reticulated water supply system.”

Mr. George Beck further added that “the focus will be to have a good understanding of the status of the groundwater, building new infrastructure to improve supply to the Ronton community particularly the hospital and build capacity within the Ministry to monitor and maintain the water supply system.”

The EUR 4.8 million ‘Improving Drinking Water Supply in Kiritimati’ project is funded by the 10th European Development Fund (EDF) bilateral envelope for Kiribati. It aims

to provide 85% of the island’s households with improved water sources and 75% of households, schools and hospitals in the two villages, London and Tennessee with continuous water supply.

The project will also help the people of Kiritimati build resilience against the global threat of climate change which may cause salt water intrusion into groundwater reserves and increase the incidence and/or severity of extreme weather events, including droughts.

The Secretariat of the Pacific Community is the project implementing partner.

EUROPEAN UNION SUPPORTS ACHIEVEMENTS IN NATIONAL RESILIENCE PLANNING

The Cook Islands, Palau and Federated States of Micronesia (FSM) have achieved key national governance and resilience planning milestones. This achievement affords these countries a strategic perspective on priorities to address disaster-related risks under the European Union-funded project EDF10 ACP EU: Building Safety and Resilience in the Pacific.

‘Cook Islands, Palau and FSM are the first Pacific Island countries to achieve agreement on their country priorities for Year 1. This is important for improving safety and resilience of their communities on the ground. We envisage that the other Pacific ACP States supported by the project will complete this step by August 2014,’ stated Taito Nakalevu, SPC Project Manager for the EDF10 ACP EU project.

Cook Islands, Palau and FSM have finalised their National Steering Committees and key documents that set a framework for coordinated national resilience action, including endorsed Country Implementation Plans and Year 1 Work Plans.

Maylene Joshua of the National Emergency Management Office under the Office of the Vice President in the Republic of Palau explained the benefits of the project in Palau. ‘With the funding provided under this project, the Palau National Emergency Management Office can now continue with its mandated responsibilities,’ she says, ‘ensuring that those communities that were affected by the last two super typhoons will be prepared and have the proper resources and skills on-hand in case of future events of natural disasters.’



The Country Implementation Plans outline strategic direction and activities to reduce vulnerability of Pacific Island countries, as well as social, economic, and environmental costs of disasters. Activities outlined in the plans include actions, such as strengthening early warning systems, strengthening the inter-operability of emergency service agencies, and development of minimum building standards. The actions to achieve these activities are detailed in the Year 1 Work Plan.

SPC officers, Noa Tokavou and Anthony Blake, are providing advice and support to Cook Islands, Palau and FSM for the resilience planning processes.

The implementation phase will now commence for all three countries, which will involve ‘key agencies and resources to undertake each action of the Year 1 Work Plan,’ said Noa Tokavou.

SPC’s Applied Geoscience and Technology Division manages the EDF10 ACP EU: Building Safety and Resilience in the Pacific project and partners with the Governments of 15 ACP States, as well as civil society organisations, utility providers, the private sector and the community to reduce vulnerability and social, economic and environmental costs of disasters.

SPC RAISES WATER AND ENERGY AWARENESS IN PACIFIC ISLAND SCHOOLS

The Secretariat of the Pacific Community's Economic Development Division (EDD) and Applied Geoscience and Technology Division (SOPAC) recently collaborated to coordinate a regional poster competition as a way to raise awareness about water and energy.

The theme of the competition was 'Save Water, Save Energy for the Pacific', and invitations were sent out to all water and energy focal points in the Pacific region.

An overwhelming 200 entries were received, with Sipili Samisoni from Jai Narayan College, Fiji winning the first prize of USD 500. The second prize (USD 300) went to Kelera Yabakivou and John Sito of Lautoka Primary School, Fiji, and the third prize (USD 250) was awarded to Flornie Romblon Malinao from Niue High School.

An ecstatic Sipili, who did not expect to win, said he was encouraged to take part by his mother, someone he says has been his source of inspiration and strength.

The 15 year-old Suva student said, 'Water is something that is very important, we save water, we save energy. I think all

Pacific Islanders should start thinking about conserving water since it's a valuable resource.'

The competition was organised as one of many activities to commemorate World Water Day, 22 March. This year's theme was 'Water and Energy'. Aside from the competition, SOPAC's Water and Sanitation Programme also developed posters and stickers that were sent out to all Pacific Island countries and territories. National events were celebrated in some countries, including Fiji, Marshall Islands, Samoa, Niue and Cook Islands.

Water and energy are closely interlinked, energy generation and transmission requires utilisation of water resources. Energy is needed to pump, treat and distribute water to Pacific households; water is also an important energy source in several Pacific Island countries, where the energy of rivers and streams is harnessed by hydro-electric facilities at the municipal, village and even household scale.

The prizes were sponsored by EDD's Energy Programme through funding from the Australian Government.



Competition winner Sipili Samisoni with the Director of the SOPAC Division, SPC, Michael Petterson

AUSTRALIA AND SPC SUPPORT PACIFIC CLIMATE AND OCEANS AWARENESS



Participants at the COSPPac Planning and Steering Committee Meeting, May 2014

Many Pacific Islands have excellent weather records that can be used to understand and predict events that affect our communities such as droughts, El Niño, La Niña, and sea level changes. Making this information more available and user-friendly is the critical next step that countries face.

Representatives from 11 Pacific Island meteorology services and land survey departments met in Nadi from 19 to 21 May to discuss this issue. The countries represented were all the participants in the Australian-funded Climate and Oceans Support Program in the Pacific (COSPPac).

According to Programme Manager Janita Pahalad of the Australian Bureau of Meteorology, 'COSPPac aims to support Pacific Islands' ability to understand and apply scientific research on climate variability to national development plans.'

COSPPac's implementing partners, the Australian Bureau of Meteorology, Geoscience Australia and the Secretariat of the Pacific Community through its Applied Geoscience and Technology Division (SOPAC), have been providing products, training, and services to assist government agencies to apply climate and ocean

research to national planning and decision-making.

Attention to climate is particularly relevant this year, as regional meteorology services have forecasted that El Niño conditions are likely to develop in the next few months. The changes in sea level, ocean and air temperature, and the frequency and intensity of storms associated with El Niño can have a big impact on Pacific agriculture, health, fisheries, and tourism, among other sectors.

The participants reflected on their progress to date and laid down plans for the next two years.

'I've really appreciated the flexibility of the COSPPac project,' said Tonga's Director of Meteorology, 'Ofa Fa'anunu. 'How we do things in Tonga or Niue or Samoa is totally different. One of the biggest successes of COSPPac is the way the capacity building has been done. The project team has been able to come to us and sit with us to understand our priorities.'

COSPPac will continue to support Pacific national met services and other sectors with climate and oceans services and capacity development through 2016.

PACIFIC PLATFORM FOR DISASTER RISK MANAGEMENT MEETS TO DISCUSS THE NEW STRATEGY



Mosese Sikivou, Deputy Director Disaster Reduction Programme presenting to delegations

The 6th Session of the Pacific Platform for Disaster Risk Management and the 20th Regional Disaster Managers Meeting were held in Lami, Fiji on the 2nd to 6th of June. Both meetings were hailed as a success resulting in outcomes progressing regional processes.

The 6th Pacific Platform for Disaster Risk Management was co-convened by the SPC and the United Nations Office for Disaster Risk Reduction (UNISDR) and focused on regional and global policy initiatives. The meeting provided the region with a pivotal opportunity to shape disaster risk and climate change efforts for at least the next 20 years.

In his opening address, Lieutenant Colonel Inia Seruiratu said that Fiji fully supports the proposed Strategy for Climate and Disaster Resilient Development in the Pacific (SRDP) as a successor to the DRM Regional Framework for Action 2005-2015 (RFA) and Pacific Islands Framework for Action on Climate Change 2006-2015 (PIFACC).

'I believe that the new Strategy or SRDP is a "world first" and, collectively, you should be proud of your contributions and achievements. For those of us in the region, the climate and disaster instruments are integrated and inseparable, unique to our island nature and the SRDP is the right

approach to take us into the future.'

'For Fiji, a good example of this integrated approach is the Vunidogoloa village disaster risk and climate change mitigation project, where the Government and the community work together, relocating the whole community to higher ground to reduce disaster risk and climate change effect and where sustainable growths and developments are promoted, unhindered. More than 40 communities in Fiji, also identified, will undergo the same programme. It is time to "walk the talk" and make things possible,' he said.

The meeting achieved the objectives of gaining feedback and support for the draft SRDP and the development of the Post-2015 Framework on Disaster Risk Reduction which is to be endorsed at the 3rd World Conference on Disaster Reduction (3WCDRR) in Sendai, Japan in March 2015. Key Pacific regional imperatives for effective disaster risk management and climate change adaptation were also identified for the post 2015 development agenda.

The 20th Regional Disaster Managers Meeting, co-convened by SPC and the United Nations Office for Coordination of Humanitarian Affairs (UNOCHA), provided National Disaster Management Offices the opportunity to consider recent developments and to articulate specific

capacity building priorities in 'disaster management' (disaster preparedness and response) for the medium term.

Support was gained for the Regional Steering Committee for the ACP-EU/SPC Building Safety and Resilience in the Pacific (BSRP) project to ensure co-ordinated implementation at regional, national and community levels. The meeting outcomes also included intention to strengthen collaboration and coordination for disaster preparedness and response. Endorsement was obtained for the draft DRM Competency Framework with request for SPC to continue to work together with partners and to assist countries in adapting the draft DRM Competency Framework to suit the national context. The Competency Framework, being developed by SPC, will assist to more clearly define the skills, qualifications and attributes necessary to produce competent emergency management practitioners.

A 2-minute video summarising key stakeholder views on the success of the Platform can be accessed through the following link:

<http://www.sopac.org/index.php/media-releases/1-latest-news/569-what-is-the-pacific-platform-for-disaster-risk-management>



Participating delegations in group discussions

CROP AGENCIES AND INTERNATIONAL STAKEHOLDERS HIGHLIGHT THE SIGNIFICANCE OF SPATIAL DATA FOR THE PACIFIC

A broad range of geospatial data experts, managers and stakeholders from the Council of Regional Organisations in the Pacific (CROP), as well as partner agencies convened for the 2nd CROP Spatial Data Infrastructure meeting. The session was held at the Secretariat of the Pacific Community (SPC) in Suva on June 17th to 18th 2014.

The meeting was opened by Prof Michael Petterson, Director of SPC's Applied GeoScience and Technology Division (SOPAC), where he highlighted the various challenges facing effective geospatial data management in the Pacific. Such challenges cited were under-skilled staff, limited understanding by responsible personnel of available datasets, and obsolete formats of residing data. He encouraged the meeting

to bring about some positive outcomes to address these and the many other challenges.

Participants reviewed current spatial data systems within CROP agencies to find ways to harmonize current efforts and to identify opportunities for future collaboration. SPC's PacGeo, Open Access Data Repository for the Pacific, was showcased, along with



the Secretariat of the Pacific Regional Environment Programme (SPREP) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) ongoing efforts to develop ESIS.sprep.org, an Open Access Repository for Pacific Environmental data.

The meeting also addressed ways to promote and strengthen avenues for standardised, cost-effective data sharing across agencies and Pacific Island countries, in order to reduce duplication of

data collection and management efforts.

In-depth discussions around achieving the Pacific Oceanscape Framework Strategic Priorities was also held, in particular building the political will to invest in spatial data infrastructures in order to achieve some of the priorities.

One key result of the meeting was the decision to standardise global data standards across sister agencies, and enable secure data access within agencies,

inter-agencies and externally.

Around 20 participants attended the two day meeting from SPC's SOPAC Division, SPC's Fisheries, Aquaculture and Marine Ecosystems (FAME) Division, University of Sydney, GRID Arendal, GeoScience Australia, GIZ, SPREP, Pacific Islands Forum Secretariat and CSIRO. This consultation is part of a broader technical collaboration between the agencies involved across a broad range of disciplines.

CLIMATE AND DISASTER RESILIENCE PLANS FOR NATIONAL BROADCASTERS IN THE PACIFIC

National broadcast stations of eight Pacific Island countries will have Climate and Disaster Resilience Plans developed by April 2015.

The project is to help broadcast stations strengthen their ability to provide quality and timely information without fail. This timely communication will enable communities to prepare and respond to natural disasters, and to ensure that stations are well prepared and equipped to continue broadcast coverage during times of emergencies, while ensuring that staff remains safe.

The "National Broadcasting Climate and Disaster Resilience Plan" Project is an initiative funded by the Pacific Media Assistance Scheme (PACMAS) and implemented by the Secretariat of the Pacific Regional Environment Programme (SPREP) in partnership with the Secretariat of the Pacific Community (SPC).

"We have had requests from national broadcasters for support in this area and

are pleased to announce that the wheels are in motion for this," said Mr. Francis Herman, Programme Manager of PACMAS.

"Since 2012, national broadcasters of the region have agreed upon the need for an emergency system and for further information on climate change and how they link. We are looking forward to the outcomes of this project."

Selected by PACMAS, eight national broadcasters from the Cook Islands, Palau and Marshall Islands, Kiribati, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu are to be part of this project and will see climate and disaster resilience plans developed. They will receive training on the plan and Standard Operating Procedures will be developed between the broadcaster and national disaster management office, as well as training for their news teams on disaster management and climate change.

Dr. Netatua Pelesikoti, Director of Climate Change at SPREP stated, "Our Pacific broadcasters' play a crucial role in times of

emergencies and this partnership between us all will help strengthen that role. The Climate and Disaster Resilience Plan for broadcasters is addressing two key issues in one plan, it is pioneering for our region and follows on from the regional joint Climate Change and Disaster Risk Management Framework now in development. We are very excited by this project."

Mosese Sikivou, Deputy Director, Disaster Reduction Programme at SPC agrees. "This project provides a great opportunity to strengthen the role of national broadcasters in an emergency, while consolidating their relationship with their National Disaster Management Office. SPC are delighted to be working in close partnership with SPREP on this project which brings together the respective strengths of both organisations to contribute to increased resilience in the Pacific."

If successful, it is hoped that these activities can be extended to reach other Pacific Island countries as well.

FINDING CREATIVE SOLUTIONS FOR THE INTRODUCTION OF ALTERNATIVE SANITATION TECHNOLOGIES

Tuvalu is facing a critical sanitation problem. Old flush and septic systems are causing problems for the environment and public health. The IWRM Project approached the situation by suggesting the alternative of using compost toilets to tackle both sanitation and water use issues. A baseline survey conducted in 2009 highlighted concerns people had about the introduction of compost toilets. It became clear that the public held a lot of negative impressions about them. Through a prolonged community engagement campaign we managed to turn people's negative perceptions about the sanitation alternative to one of overwhelming acceptance. This is how we did it.

Through preliminary community research we discovered that amongst the community there was a perceived understanding that compost toilets were a downgrade in toilet design and thought of as no more than a pit toilet. Because of previous projects, people



The 2010 Falevatei Roadshow was instrumental in changing negative perceptions about compost toilets

felt uncomfortable with the term 'compost toilet' and had many misunderstandings about its function.

We formed a Communications Committee made up of local communications specialists to investigate the cause of people's concern and find innovative ways to address them. They determined that there were two main issues. The first that the name 'compost toilet' generates unease and should be changed and secondly; that people want more education about what a compost toilet is and how it works before they are willing to have one in their home.

To address the first issue the committee organised a competition to come up with an appropriate Tuvaluan word that sums up the compost toilet. The winning submission came from Mr Maimoaga Uatea, the Deputy Director of PWD. His submission is the word "Falevatie" and is an abbreviation of "Falefoliki se fakaoga vai mo tino mote environment" which means "A toilet which is good for you and the environment". The slogan for the Falevatie is "Kote ola lei tena o kaiga mote enevalomene" and translates simply as "A sustainable toilet".

With the new branding we organised a 'Falevatie Roadshow' to take the toilet to the people and show how it works and what the new designs would look like. People were concerned they were going to get the same design from previous projects and needed to approve of the new one. As with any new product it is important that people know what they are 'buying' and are happy with how it looks and works. After all, it is a structure that will sit in their backyards and be used daily.

With the help of local volunteers and PWD staff we built a portable Falevatie, put it on the back of a truck and drove it around all the communities of Funafuti. Dedicated local volunteers walked alongside the Falevatie Roadshow, presenting the display toilet, explaining how it works and differs from old designs, and addressing the questions and concerns raised by community members.

Through these two activities and related community consultations we hoped to increase technical understanding in the community of how the system works and the many benefits it can provide their family and the environment, as well as

communicating the Tuvaluan ownership of the project and toilet design.

Through the seemingly simple idea of changing the name, falevatie are now viewed by the public as part of a sustainable future for Tuvalu, and are even enshrined in the 2012 Water and Sanitation Policy. The Falevatie Roadshow was so well received by the community that many people afterwards put their name forward to construct one, so many that there is now a 200+ waiting list. Owners of falevatie have themselves organised an Owners Group where they share their experiences on use, maintenance and benefits of falevatie with each other and the wider community, generating a truly unique Tuvaluan experience of compost toilets.

Project Managers in similar situations need to have their "ear to the ground" and be open to engaging with the community so that seemingly small issues can be picked up and dealt with at the beginning of a project, ensuring that community involvement and ownership will secure the sustainability of its goals.

COMMUNITY TO CABINET AT WORK: PALAU'S 1ST NATIONAL WATER SUMMIT



President Toribiong giving his keynote address

The IWRM Project Coordinating Unit (PCU) in collaboration with the Ministry of Natural Resources and Environmental and Tourism (MNRET) prepared for and ran the 1st Palau National Water Summit. The Summit was organised as the first step in the development of a National Water Policy and was an opportunity to bring together various stakeholders from community to government, providing the space to openly discuss important water issues in Palau. Through the Summit it was anticipated that we would engage a wide section of the community and receive feedback from the community about what they saw as their vision for Palau's Water Policy.

The PCU along with the MNRET put a lot

of effort into promoting and advertising the Summit to ensure that it was well attended by as wide a range of people as possible. We were able to provide an incentive for community members to attend by offering a free t-shirt to the first 100 people that registered for the summit. This proved to be an excellent way of getting a lot of the general public to come along who may otherwise not have. The PCU visited with different stakeholder groups such as the Governors Association and the Council of Chiefs and gave small presentations about the summit and what we were hoping to achieve in the form of the Water Policy.

We advertised for a month prior to the Summit to provide people with ample time to prepare their schedules. Advertising included a TV show on OTV with members of the wider IWRM team and a Radio Talk show discussing the Water Summit and the outcomes that we were looking forward to. Newspaper ads and flyers inviting all members of the community to the Summit were also distributed.

We realised that achieving good attendance at a high level event would require plenty of advance advertising, briefing different stakeholder groups to spark their interest and ensuring they are involved in the process. Because of these preparatory measures we were able to achieve a high turnout at the Summit and generate a lot of interest in what the IWRM project was doing.

In his opening address, President Toribiong urged participants to work together as the creation of

the Water Policy was only the first step in ensuring the conservation and protection of Palau's water resources in the years to come stating, "Only together can we ensure water forever". In order to create this space for community engagement we understood the importance of reaching the community and getting feedback on what information they required. As a team we incorporated information that community members wanted to know into the summit proceedings, thus tailoring the meeting to the actual needs of the community, ensuring their genuine participation in its outcomes. During the meeting we facilitated a question and answers session and group discussions where people could raise opinions and concerns. Mr. Jinx Brikul a water operator said "I am happy I came to the Water Summit because, as my shirt says 'Community Choice', and the summit provided me with an opportunity to raise concerns about my needs as a water operator in Palau".

I was proud that we successfully provided Palau's first water summit. I learned the importance of planning ahead and on proper advertisements that ensure people are well informed about the event ahead of time. We were equally pleased when people continued to attend subsequent Policy meetings. Mr. Joe Aitaro, the Protected Areas Network Coordinator, said, "These

are important events in a small island like Palau where the emerging impacts of climate change are even more of a reason to manage the water we have today, in order to secure our children's future."

Seeing community members involved in the development of their own Water Policy showed a commitment to the future and made the policy development a truly participatory process. Before this event I wasn't sure of people's willingness to be involved in high level meetings and policy

development; however during the Summit I realised that with enough appropriate information they do. As a result of attending the National Water Summit people became more aware of the issues facing water resources in Palau, the need for a National Water Policy and how it can alleviate problems with water and sanitation, and gave them a chance to participate in its development.

Because of so many people attending the summit, the Palau Water Policy can

now say it is representative of the visions of the people of Palau. The meeting was a catalyst to subsequent meetings that led to the finalization of a National Water Policy and its endorsement by His Excellency President Johnson Toribiong in April 2011. It was a great achievement for IWRM because not only did it encourage people to find out more about water resources in Palau, it allowed us to tailor the Water Policy according to the actual needs of the Palauan people.



STAFF PROFILES

Litia Gaunavou GIS/RS Project Assistant

Litia Gaunavou joined SOPAC in 2007 as an intern, first with the Geoscience Development Programme (formerly Ocean and Islands Programme) before moving onto and setting a professional foundation within the GIS unit. Litia patiently worked her way up from an intern

to a GIS/RS Project Assistant focusing on purchasing and pre-processing of satellite imagery data. Born and bred in Suva, Litia obtained her BSc in Marine Science from the University of the South Pacific. She is currently enrolled as a Post graduate student majoring in Environmental Sciences and hopes to pursue a Masters in Environmental Science concentrating on GIS and Remote Sensing. Litia, through the GIS unit within the SOPAC Division of SPC, is the focal point in liaising the purchasing, pre-processing and packaging of satellite images between DigitalGlobe and the African, Caribbean and the Pacific region. Outside of work, Litia enjoys quality family time.

Where are you from and what was it like growing there?

My parents both hail from the Lau Islands so you could say that I am a pure Lauan; though I have never step foot on it. I grew up here in Suva and I am also now married to a Lauan man. My education life was also spent in Suva to the point of obtaining my BSc in Marine Science at the University of the South Pacific.

What's your first memory of joining SOPAC?

My first memory, was when our GIS unit manager, Mr Wolf Forstreuter gave me an access database of all the satellites in and out of orbit. I just started without any idea of the details until two years later when I learnt that without knowing the satellites specs, you wouldn't know which satellite to use for which GIS application and so forth.

How has your work at SOPAC evolved over the years?

I initially joined as an intern at the Geoscience for Development Programme (formerly known as the Ocean and Islands Programme) but found that my interest was in GIS. So I joined the GIS unit as an intern assisting in image archiving, cataloguing every data we had in a simple access database. I had to learn on the job as the software used was different from what was taught at tertiary level and I would like to thank the GIS staff then, Ms Joy Papao and Ms Elizabeth Lomani for their moral support and encouragement. I then moved to the position where I purchased and pre-processed image data; liaising with the different satellite vendors and clients from all over the Pacific on the suitable satellite image for their respective applications. I have observed the transition from the expensive process of purchasing ready-made pan-sharpened imagery to developing

our very own pan-sharpened images, which is much more cost-effective.

What do you wish other people knew about your work or project(s)?

Liaising between vendors and clients on satellite images is not as easy as going to a shop and buying something. The work is a combination of business transactions and technicalities with respect to the GIS aspect. One has to be knowledgeable and experienced in the use of applications in processing raw satellite imagery data. There is never enough stress on the attention to detail, particularly with the legal binding agreements such as copyright issues. A slight mistake can be very costly liable to me, the liaison person.

Congratulations to your team on winning the Partner Excellence Award and the Innovation Award. Could you please explain why these awards are significant milestones?

Thanks! Not many people know that we (SOPAC) have a partnership with DigitalGlobe, the world's leading provider of satellite imagery based in Colorado, USA. Every year, DigitalGlobe holds a Partner Summit in the different regions and there are awards presented to resellers according to the different regions that they sell the data to. We (GIS Unit of SOPAC, SPC) took two awards this year – the Innovation Award and the Partner Excellence Award for the ACP region. Achieving these awards against other countries such as Australia and New Zealand is a great achievement.

How does your work at the GIS section in SOPAC relate to these awards?

Companies, organizations or countries within the Pacific region that want to purchase satellite data must go through the SOPAC Division if they want a generous discount. My work is to provide these companies, organisations and member countries with technical advice on the type of satellite data to purchase and the procedures to follow. I then liaise with DigitalGlobe in purchasing the satellite data, pre-process this data to something usable before passing it on to the interested party.

What are some of the things you do when you are not working at SOPAC?

My power source is my family so when I am not working, I can be found relaxing with my husband and daughters.

Any advice to our younger readers?

Just follow your interest and something that you are most passionate about.



STAFF PROFILES

Amit Singh

Water Resources Monitoring and Assessment Technical Officer

Amit Singh joined SOPAC as a Water Resources Monitoring and Assessment Officer at the Water Resources Programme since August 2011. Prior to this, Amit was a lecturer for three at the Fiji National University (FNU) teaching Environmental Science and Chemistry. Amit is a graduate of the University of the

South Pacific holding a Bachelor of Science in Environmental Science, a Postgraduate Diploma in Polymer Chemistry and a Post-graduate Diploma in Tertiary Teaching. Amit also attended groundwater training at the Australian Groundwater School in 2012 and hopes to further his studies in groundwater assessment and geo-physics whilst continuing to provide groundwater assessments and monitoring services to Pacific Island countries.

Where you from and what was it like growing up there?

I was born in Labasa and raised in the province of Bua. I completed my primary and secondary school there and moved to Suva for my tertiary education. Being brought up in a rural setting has its challenges but I am happy that I stayed focussed and excelled.

What is your first memory of joining SOPAC?

Well it was a switch from tertiary teaching at FNU to SOPAC. I initially spent most of my time reading reports on small island hydrology, journal articles and equipment operations.

Further to this, my position required extensive travelling so I had to overcome one of my worst fears, flying. I am proud to say that I have conquered this fear, however, regardless of the numerous times I have travelled; I never miss to listen and especially read the safety instructions prior to and during every flight.

How has your work at SOPAC evolved over the years?

I joined SOPAC in 2011, with average knowledge of groundwater resources monitoring and assessments techniques, over the years and with guidance of our friendly staff at Water and Sanitation Programme, I have acquired necessary skills to deliver what's required of my position.

Recently I have been involved in groundwater projects in Tongan and Kiribati. Anticipate more groundwater projects to come our way and we keep doing what we do best. We have moved on from predominantly assessment and monitoring to modelling water resources and it's very exciting to be part of the robust team.

Apart from these I'm glad I was given an opportunity to be attached at University of Leicester, and write a paper on water resources assessments in remote atoll environment, it has been accepted and

will be published in CWEEE journal. Recently, I under took Post tropical cyclone Ian Water Resources Assessment in Lifuka, Ha'apai, Kingdom of Tonga. So yes our work ranges from normal project deliverables to emergency response, whether it is post cyclone or drought.

Something I wish we could venture in future is like Deep Sea Minerals project – to develop/review policies, providing assistance in terms of assessments to member countries on groundwater “mining” especially for bottling and generating revenue – Groundwater for Economic Development.

What do you wish other people knew about your work or project(s)?

Access to clean and safe drinking water is a challenge in small island states. My position focus to provide technical support in the projects, through field data acquisition, analysis, capacity building with country counterparts and ensuring our equipment are in perfect condition.

We at Water Resource Assessment aim to provide access to clean and safe drinking water in our member countries. We strive to provide options for safe drinking water whether it be through rainwater harvesting or exploring options to develop groundwater. Our work is demanding and requires us to travel to remote areas, live with the community and experience firsthand the challenges they face in everyday life.

Through our field surveys we try to understand the dynamics and development of freshwater lens in small atoll island environments, its vulnerability to rising population, mounting pressure to extract these resources and salt water intrusion. We also look at options to safe drinking water, where there is no or very little potential for groundwater, these may be assessing roofs for rainwater harvesting, economics for running a desalination plant etc.

My position requires office work as well as fieldwork, I prefer fieldwork. However, fieldwork doesn't provide all luxury, often drinking water, food is problem especially when you are out in islets.

What are some of the things you do when you are not working at SOPAC?

Normally, during the weekends, I go out for swimming and I just love watching Discovery, Geographic channels and international news such as BBC, CNN, Al Jazeera.

Any advice to our younger readers?

Well, I would like to advise my aged readers is to be confident in yourself and always accept challenges, stay focussed and strive for excellence.

Special article contributions from the IWRM National Project Managers:
Pisi Selagniu (Tuvalu) and Governor Victoria Kanai (Palau)



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