

Pacific Partnership Initiative on Sustainable Water Management



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Issue: XIV, July 2007

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Welcome to the fourteenth official mail-out of the Pacific Partnership Initiative on Sustainable Water Management. This Quarterly Newsletter provides Water and Sanitation information to Pacific member governments, professionals, NGOs, CBOs, researchers, private sector and counterparts in the donor community who are interested in water sector issues and initiatives.

We would appreciate your assistance in forwarding the newsletter to other colleagues who may be interested in this initiative so that it reaches the widest possible audience.

If you wish to print this newsletter, a PDF version is also available on the SOPAC website:

<http://www.sopac.org/Community+Lifelines+Programme+Water+and+Sanitation>

Highlights

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Cook Islands hosted Annual Meteorological Services Directors' Meeting

The weather affects much more than how we decide to dress each day, it affects livelihoods, the way that we live in our homes and how our families survive. Its power is deeply respected in the Cook Islands where the nation faced the trial of 5 cyclones in just over a month in 2005. The extreme importance of disaster risk management was understood 'loud and clear' after that memorable cyclone season. Armed with this understanding, the Cook Islands hosted the twelfth Regional Meteorological Services Directors (12RMSD) meeting during the first week of July. A major topic for discussion is the role of the Met Services when it comes to disasters of any kind, including tsunamis.

Present at the meeting was the Director from your national Meteorological Service to discuss the current issues of flood forecasting, seasonal climate outlooks with regards to rainfall or drought as well as disaster risk management. Yet one major theme throughout the meeting was to encourage Pacific citizens to view their own Met Service as more than just an office you turn to when you want to know if it is going to rain or not.



The annual meetings of Directors' began in 1993; since then the role of Meteorological Services has grown and with it the responsibility it has to our people. New scientific possibilities mean the Meteorological Services are able to forecast whole seasons to give people an indication of rainfall or drought patterns. Following the tsunami in April in the Solomon Islands, Pacific nations have grown to understand that tsunamis in the Pacific are a reality and their Meteorological Service has an important role in providing people with an early warning.

As the climate patterns change throughout the region, Met Services come to be more appreciated. The 12RMSD will look at ways to lift their profile within each island nation as a better understanding of their role also means stronger policy and human and fiscal resources.

The US Global Climate Observing System, US National Oceanic and Atmospheric Administration, National Weather Service, the World Meteorological Organization, the Australian Bureau of Meteorology and AusAID support the meeting, which is organised by the Secretariat of the Pacific Regional Environment Programme. It was held at the Edgewater Resort Hotel in Rarotonga from 2-6 July 2007 and minutes will be available soon from SPREP office.

For more information on the Meeting please contact:

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Earthquake and Tsunami hit Solomon Islands

One of the largest disasters to hit the Pacific in a long time occurred on the morning of the 2nd April in the Western Provinces of the Solomon Islands. Over 50 people were killed and thousands fled to higher ground as an earthquake triggered a tsunami that caused wide spread destruction. Not only houses and lives were lost but also livelihoods, with fishing boats and reefs destroyed. The financial and material support from sister National Societies in the Pacific was unprecedented and the efforts by Solomon Islands Red Cross were incredible – a big congratulations to all!



A global appeal was launched by the Federation and 1.1 Million CHF was raised. About half of this money was used in the emergency relief stage and the other half will involve assisting people to rebuild their homes. Assistance was provided by delegates in country during the emergency. These delegates were from New Zealand, Australia, Tonga and Japan as well as Douglas Clarke from the Disaster Management Unit in Kuala Lumpur who supervised them. In addition to this the French Red Cross are currently assisting 500+ families in Choiseul. Currently The Federation has one Head of Delegation and an Australian Red Cross shelter delegate in Honiara until December. This operates as support for Solomon Islands Red Cross.

Source:
Red Cross Disaster Management in the Pacific
Newsletter: June 2007
Email: bec.mcnaught@ifrc.org



Water Demand Management in Niue

Based upon needs identified through a scoping mission in November 2006, the Water Loss Management, Sectorisation, Metering and Logging programme was implemented from 25 May – 7 June 2007.

The SOPAC Adviser in Water Use Efficiency, Mathias H. Kleppen, and his colleague from Wide Bay Water Corporation, Pankaj Mistry, in partnership with Manager Andre Siohane from Niue Water Division, increased the capacity for water loss management in Niue to 'state of the art'.



In broad terms the programme included:

- Commence installation of water meters on all supply points in Niue
- Installation of and training in flow and pressure loggers
- Training in leakage detection, sectorisation and pressure management
- Training in minimum night flow determination, leakage estimates and system loss management plan development



- Training in pipe location technology
- Meeting with Government Officials to present the programme and initial available results
- Meeting with Ministry of Education to revitalize water related awareness campaigns
- Interview and broadcasting on Niue National News to present the programme and initial available results for the general public

Twenty-one bulk flow meters with attached flow/pressure loggers were supplied, together with leak detection equipment like listening sticks, ground microphones, metal detectors and pipe locating tools. In addition a laptop with software to analyse data from the loggers and produce System Loss Management Plans were provided to Niue's Water Division.

Water Demand Management Planning, needs good data, and the loggers provided immediate information, giving the Water Division a good indication on what systems work satisfactorily and where they have to solve problems. Priorities are easily set just by looking at the graphs that the logger software creates. The next steps for this programme in Niue are to produce awareness materials in cooperation with Ministry of Education and look into the cost/benefits of improved pressure management.

The Water Demand Management Programme for Pacific Islands Countries are funded by New Zealand's International Aid & Development Agency (NZaid) and implemented through SOPAC in partnership with Wide Bay Water Corporation and the Pacific Water Association.

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Water Quality Laboratory Training Course, Guam



The training course for the northern Pacific island countries was held from the 16 - 20 July 2007 at the Tasa Conference Room, Pacific Islands Club, and Guam. The countries represented at the training were from the Federated States of Micronesia (all four states), Guam, Marshall Islands and Palau.

The training included a series of interactive sessions, presentations, field sampling exercises, a field trip, practical hands-on training for certain physical (pH, EC, turbidity), chemical (nitrates/nitrites, phosphates, chlorine and lead) and microbiological (total coliform and E-coli using the Colilert and Enterolert methods) parameters, writing of standard operating procedures (SOPs), use of the Patho Screen (hydrogen sulphide) test kit, sanitary inspection forms and data interpretation and management.



Facilitators and trainers for the training course were from: Guam EPA, WHO, Water and Research Institute (WERI) of the University of Guam, IDEXX Laboratories Australia, American Samoa Protection Agency (AS EPA) and SOPAC.

The training was very successful and the participants gained valuable knowledge which will build their capacity towards performing high quality analytical testing back in their countries.

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Climate and Kiribati

Kiribati Red Cross undertook a National workshop on climate change recently with assistance from the Kiribati World Bank Climate Change Adaptation project, the Kiribati Meteorological Office and the Environment Ministry. Kiribati Red Cross staff, board members and volunteers gathered together to learn more about the problem and look at solutions for trying to adapt to changes.

Kiribati Red Cross then came up with a fantastic competition for school children that have been conducted during World Environment Week in June.

The school program first involved a workshop for teachers similar to the one that Kiribati Red Cross had just experienced. The teachers then ran classes with their students utilising the new material and students were then asked to interpret this into a creative medium such as poetry or drama. These performances are now taking place in front of the school children's communities.



Great work Kiribati Red Cross!

Source:
Red Cross Disaster Management in the Pacific
Newsletter: June 2007
Email: bec.mcnaught@ifrc.org



Reducing vulnerability of water services in the Pacific

The Global Research Alliance (GRA) and the CSIRO (Australia's national science agency) are bringing together Local stakeholders, Funding agencies and Experts to address the issue of vulnerability of water services in the Pacific.

This is done in a stepwise process with the main components being a Delphi consultation, which will be followed by a workshop. The Delphi consultation, which is email based, engages about 45 participants from around the world, including a number of major funding agencies, as well as representatives from countries such as Kiribati, Samoa, Tonga, Cook Islands, Papua New Guinea and Tuvalu. Via an iterative process, different panels have identified the following as most important issues:



1. **Experts:** Appropriate technology: innovation, selection and uptake
2. **Local stakeholders:** Adjusting services to local contexts
3. **Funding agencies:** Ownership issues
4. **GRA:** Community participation

It has also been acknowledged that solutions depend on the context and that there is no one single solution for all nations, but rather there is a large range of inter-related issues that need to be addressed, within a particular context. This is a re-enforcement of the need for Integrated Water Resource Management.



As an output of this project, solutions to meet the needs of individual nations or groups of nations are anticipated. To this end, subsequent to the Delphi consultation, a workshop is planned where participants will aim at taking the issues developed in the Delphi consultation forward as full funded projects.

For more information on Reducing vulnerability of water services in the Pacific please contact:

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Rain to Harvest – Fiji

Several rural communities are harvesting the current rainfall with 10,000 litre tanks supplied to them by Live & Learn Environmental Education and funded through Australian Aid.

Many of the communities involved in the Live & Learn Governing Water project that has been running for three years identified a real need for additional water. Often their small current supply is of poor quality that can be made worse by poor sanitation.

The project Advancing Water Governance is just wrapping up and has provided assistance to 16 communities with installation of rainwater harvesting systems and training to improve and monitor water quality.

Simione Koto, Live & Learn Community Programs Coordinator, said the communities are greatly appreciative of these resources and training as they do not have to wait for piped water. The tanks provide a much needed back-up supply to the various water sources.

“The simple, basic training and increased awareness means water committees have timetables for the maintenance of supply systems and better water quality” said Mr Koto.





The villages involved are Veinuqa, Nakorovou in Tailevu province; Vatusekiya-sawa, Vatu-kacevaceva, Vitawa, and Naivuvuni in Ra province; Nawaqarua in Ba; Nakini and Navatuvula in Tailevu province; Nukubolu in Cakaudrove; Namama, Sasa and Naduri in Macuata; Nagadoa, Driti and Tavulumo in Bua province.

For further information on Live & Learn Projects please contact:

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Pacific Water Safety Plans Programme

In the second quarter of 2007 the Pacific Water safety Plans programme focused mainly on the completion of the Water Safety Plans for the each of the four countries namely Tonga, Vanuatu, Cook Islands and Palau. Most of the Water safety Plans have been completed and work was also done on the completion of improvements schedules and the cost analysis.

In each of the four countries the programme also promotes public education and awareness and as such the NGOs having the expertise in this area have been identified and contracted by SOPAC to carry out this objective of the programme. The contracted agencies are Tonga Community Development Trust in Tonga, Live and Learn in Vanuatu, National Environment Service in Cook Islands and Palau Conservation Society in Palau.

The programme so far is on target as per the work plan and the countries are fully committed to achieve the intended objectives. Some of the future activities will involve the continuation of public awareness in the target population and the training workshops at community level. The countries will be assisted with experts and resource materials where required.

In June an evaluation was also carried out by the AusAID evaluation team from Canberra of the WSP programme and it is envisaged that the second phase of the programme to be continued with funding approval.

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The Island Climate Update – Project Review Survey 2007

The Island Climate Update (ICU) continues in its 7th year as a multi-national and multi-organisational monthly climate bulletin with a primary goal of assisting Pacific Island Countries (PICs) in making informed planning and management decisions relating to climate sensitive sectors through the provision of timely and accurate seasonal climate forecasts. It is published monthly both in print and online by the National Institute of Water and Atmospheric Research (NIWA) in New Zealand and is funded by the New Zealand Agency for International Development (NZAID).

Much of the project's success to date has depended on the multi-national collaboration by all participating partners especially concerning access to historical and real time climate data and expert advice from Pacific National Meteorological Services (NMS) and climate research institutions in the region.

In early 2006, the first review of the ICU was carried out. Three key recommendations emerged:

2. continue production of a regional climate forecasting bulletin;
3. continue strengthening collaborations with end users and strengthen ties to cover users;
4. strengthen and expand critical partnerships with regional partners and programmes.

A follow-up review will be conducted by the 3 coordinating agencies (SOPAC, SPREP and NIWA) from July through to September 2007. Some of information we hope to find out through this survey include:

- changes (if any) in audience
- readers' response to ICU products and services
- readers' response to improvements made since the first review
- change in relationship/interaction between primary and secondary users



The ICU project is one of the regional initiatives in support of the Pacific Hydrological Cycle Observing System (HYCOS) project by providing climate forecasting information for its drought and flood forecasting components.

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Hydrological Training Programme for Pacific Island Countries

The New Zealand Agency for International Development (NZ AID) funded Hydrological Training Programme for Pacific Island Countries (PIC) which ran for 3 years from 2004 to 2006, has concluded with success. The programme was established and coordinated by SOPAC in collaboration with the World Meteorological Organization (WMO), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the National Institute of Water and Atmospheric Research (NIWA).

Funding of NZD 720,000 under this programme and saw 4 training workshops carried out over 3 years that benefited 39 hydrological technicians from 13 Pacific island countries and 1 from the Maldives.



The programme had an overall goal of sustainable management of water resources in Pacific Island Countries. The immediate objective was to increase capacity in water resources assessment and monitoring.

There were 3 outcomes under the objective. The overall success of the training programme was assessed by the coordinators, trainers and the heads of participating National Hydrological Services (NHS) through the evaluation of these outcomes.

Outcome 1: Basic competencies – Trainees have acquired the basic competencies needed to provide water resources information in support of national development and resource management.

Outcome 2: Common standards – By consistently engaging the same trainers and data management software throughout the programme, participating countries have been able to achieve common standards of practise and data management.

Outcome 3: PIC NHS interaction – This programme gathered regional hydrological technicians to share ideas and experiences and to learn from one another. An online peer e-network has been set to encourage continued interaction after the conclusion of the programme.

The Hydrological Training Programme has enabled Pacific hydrological technicians to be better skilled in assisting the NHS directors in the implementation of the Pacific Hydrological Cycle Observing System (HYCOS) project.

For further information on Hydrological Training Programme please contact:

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Integrated Water Resource Management Programme at the University of the South Pacific

Integrated Water Resource Management became a new theme at University of the South Pacific with the signing of a Memorandum of Understanding between USP and the United Nations University based in Canada in May 2005, and the simultaneous establishment of the Water Virtual Learning Centre on the lower campus. USP was chosen by the UNU to be the regional coordination centre for the IWRM diploma program in the Pacific islands. This was due to the fact that not only could USP provide distance and flexible learning support services but also academic expertise in the interdisciplinary areas important for IWRM training.

Two years on from the MoU and the course has officially started. The course coordinators Dr Kifle Kahsai (Division of Earth Science) and Dr James Terry (School of Geography) with the help of the advisory committee selected eighteen students from Fiji and around the region for the initial pilot program. These students were mostly professionals directly involved in the management, conservation and decision making in the water, environment or health sectors.

Having the relevant educational qualifications as well as the work experience made them the ideal candidates for this pilot program. Selection of students was followed by the hiring of a project assistant personnel to administer the programme. The first of the core programme of 10 courses has been distributed to the students in May 2007.

Phase two of the IWRM training involved bringing academic staff from across many disciplines at USP to 'customise' the core content on the course.

Essentially, customisation is the inclusion of relevant examples, research and case studies to 'regionalise' the course. The core material designed by UNU for the course is appropriate for a general audience but for a specific target group



such as the Pacific Islands, the course content needs to be customised to suit our region. As part of the assessments for each course (there are 10 courses comprising the diploma), students will be required to complete exercises, assignments and short exams designed by the academic staff during their continuous assessment.

Continuous liaison with the students has become the key in offering the programme by distance learning. Programme coordinators met with students at the WVLC at USP in April 2007, where the IWRM programme was officially launched. This initiative will be followed by another face-to-face session in June to monitor the students commitment and progress with course one.

Integrated Water Resource Management is a concept that is catching on fast in the Pacific region. In the forefront is the aim to provide capacity building in the region for sustainable development in the water sector. Individuals that finish the IWRM training will be awarded a UNU Diploma, but more importantly will be capable of applying their knowledge in various fields across government departments and in NGOs.

For further information on IWRM Course please contact:

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Pacific HYCOS Meeting Outcomes

In Brisbane during April 2007 the Pacific Hydrological Cycle Observing System (HYCOS) Project was launched. Pacific HYCOS, a 3 year World Meteorological Organisation structured project, and funded through the European Union (EU) Water Facility, will strengthen the human and technical capacity of the participating countries to collect, use and disseminate water related information necessary for effective water resources management.

Representatives from the participating countries; Cook Islands, Federated States of Micronesia, Fiji Islands, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu met jointly with meteorological representatives from the region to participate in workshops, and to form a Project Steering Committee (PSC) to assist in the implementation of the project.

The meeting organised in partnership with SOPAC, Australian Bureau of Meteorology and World Meteorology Organisation, had expert lead workshops to present information and generate discussions on flood forecasting, groundwater assessment and management, climate information, drought forecasting, and data storage and sharing, with participating countries providing regional and relevant case study examples.

Mr Ben Parakoti of Cook Islands was elected as the Chair for the Pacific HYCOS PSC and a communication strategy with regular reporting updates via email was agreed to. Project Steering meetings and regional training initiatives were proposed over the life of the project and will be further developed.

A key outcome identified by the participants, to help assist in the project implementation, was the need for the Pacific HYCOS team to undertake scoping missions to the remaining participating countries and develop in country implementation plans and an overall project plan for review by the PSC. The proposal is for the PSC to provide comments and guidance to the Pacific HYCOS team on the overall project and implementation plans

The joint HYCOS and WMO meeting provided an opportunity for participating countries and key people from hydrological and meteorological services to focus on what their requirements for water resource management are now and in the future. Data and monitoring needs for effective resource management were discussed, and as importantly the promotion of its use, analysis, and dissemination, and appropriate products. The meeting provided participants and the HYCOS team with the opportunity to discuss how the Pacific HYCOS Project can facilitate this.



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First regional members meeting for Oceania of International Union for the Conservation of Nature

The Regional Office for Oceania of IUCN (ROFO) has organized its first regional members meeting which was hosted at the WWF New Zealand Headquarters in Wellington (New Zealand) on 20-22 July. The meeting, chaired by Senator Milne, one of IUCN Council's vice-presidents, included several highlights with in particular the introduction of the new Regional Office Director, Taholo Kami, and his staff to the participants who had come in numbers (about 60 people attended) from Australia, the Pacific Islands (Fiji, Tonga, Samoa, New Caledonia) and New Zealand. The Director of the Global Programme, Dr Bill Jackson, presented the new proposed Global Programme 2009-2012 of IUCN to the audience and Taholo Kami introduced an outline of the draft Oceania Regional Programme. IUCN Councillor and Vice-President Puri Canals also reported on the organization of the IUCN's 4th World Nature Congress that is to be held in Barcelona (Spain) in October 2008 (5-14th) and invited the participants to use the Congress as an important opportunity to promote the conservation work carried out in Oceania. Kate Brown from SPREP also encouraged participants to attend the forthcoming Pacific Islands conference on Nature Conservation and Protected Areas to be held in Papua New Guinea in from 22-26 October 2007. Several break-outs sessions provided the participants with many opportunities to network and exchange information on themes such as sustainable use of natural resources, marine issues, Antarctica, climate change, invasive species, and protected areas. The small groups also shared their views on how to best use IUCN's unique strengths to the service of Pacific Island nations and these will be integrated in the Oceania Programme of Work.

On the water front, the webpage of the IUCN Water Programme's has recently benefited from a "facelift", please visit www.iucn.org/water. As well as redesigning the website, the team included some new links such as highlighting the water initiatives and members, including multimedia and photo library (in progress), water team ID photos and staff biographies and more is to come in the next coming months especially the work in the regions and the learning & knowledge component.



The ROFO has been busy ensuring that Oceania will feature in the phase 2 of its Water and Nature Initiative. The Head of the Water Programme, Dr Ger Bergkamp, will visit Oceania during the last two weeks of August in order to link up with key stakeholders and consult on the development of potential concept proposals with those partners interested. A presentation on the Water and Nature Initiative will be made and an announcement to the Oceania networks will be made as soon as a date and venue can be confirmed.

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IUCN
The World Conservation Union



Strategic Planning Workshop: Mainstreaming Gender in Water Management for Southeast Asia, East Asia and the Pacific

A workshop covering the sub-regions of Southeast Asia, East Asia and the Pacific was held at the Asian Institute of Technology (AIT) in Rangsit, Thailand. The workshop aimed to bring together key individuals and organisations in the region who are willing to facilitate, plan and lead gender mainstreaming in water policy, practice and institutions through knowledge sharing, capacity building and networking. The workshop included presentations from country representatives from the focused regions as well as making countries aware on the role and strategic plan of the Gender and Water Alliance for the coming years.



The core component of the workshop was countries rather regions planning on actions that they would like to initiate in the area of capacity building, knowledge development and dissemination and policy advocacy. The key outcomes of the workshop included identification of individuals as well as institutions that are willing to coordinate and monitor regional activities to take gender initiatives forward. GWA will also provide inputs based on this workshop to the 3rd South-East Asia Water Forum to be held in Malaysia from 22-26 October 2007 and the 1st Asia-Pacific Water Forum in Japan in early December 2007.

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Mr. Filipino Taulima - a friend and a colleague

Mr. Filipino Taulima had been Tuvalu's Director of Public Works for more than 10 years. He was a member of Tuvalu's Water and Sanitation Committee and the National Development Coordinating Committee as well.

There are no words to express our shock and sorrow on hearing the sad news about the sudden death of a friend and colleague, Mr Filipino Taulima, Director, Public Works Department, Tuvalu. Not only was Filipino a dedicated champion for managing water resources for Tuvalu, he was also a strong regional advocate for this cause as well acting as a focal point for several regional initiatives including the Pacific Hydrological Cycle Observing System (HYCOS) and the Sustainable Integrated Water Resources Management Project in Pacific Island Countries (IWRM Project) projects to name a few. We remember fondly our last moments with Filipino at the launch of the Pacific-HYCOS project in Brisbane and also at the 2nd Steering Committee Meeting of the IWRM Project in Nadi in April 2007 where he once again showed his strength of character and understanding of the needs for Tuvalu and the region.



He will be dearly missed by his friends and colleagues in the region. May he rest in peace and may his family and friends find the strength to cope with his sudden passing.



Background on Water in Small Island Countries

The global water community acknowledged the special vulnerability and particular needs of small islands by the inclusion of "Water in Small Islands Countries" as a special theme at the 3rd World Water Forum that was held in Kyoto, Japan from 16-23 March 2003. SOPAC and the Asian Development Bank (ADB) jointly led this Water in Small Island Countries session as well as its preparation through a regional consultation in the Pacific (Sigatoka, Fiji Islands, 2002).

A major outcome of the Pacific regional consultation was the Pacific Regional Action Plan on Sustainable Water Management (Pacific RAP), which details priority actions of the water sector in the region. This action plan, endorsed by 18 island countries, 14 at ministerial level, (and 16 countries at Head of State level including Australia and New Zealand) has been incorporated into the Type II Water Partnership Initiative and was submitted by the Pacific Island Countries to the UN Commission for Sustainable Development (CSD) in Johannesburg during the World Summit for Sustainable Development (WSSD) in August 2002.

The objective of this Partnership Initiative is to implement the Pacific Regional Action Plan on Sustainable Water Management, inclusive of its sister strategies, the Pacific Wastewater Policy Statement and the Pacific Wastewater Framework for Action, as effectively as possible.

Over 200 participants were involved in the national and regional consultations and the Water in Small Islands Countries session and they form the core of the Partnership. Now, over 750 individuals have joined this network. Hardcopies of the Regional Action Plan have been distributed to all attendees of Sigatoka and Kyoto and are available from the SOPAC Secretariat. In addition you can obtain more information through the following website:

http://list.sopac.org.fj/Secretariat/Programmes/H2O/3rd_world_water_forum/index.html

Arrangements of the Pacific Type II Partnership Initiative on Sustainable Water Management

The overall aim of the Partnership Initiatives is to ensure coordination and increased partnerships in meeting the WSSD goals through its Plan of Implementation.

The Pacific Partnership Initiative on Sustainable Water Management is coordinated and facilitated by the intergovernmental organisation SOPAC (South Pacific Applied Geoscience Commission), which has the regional mandate to support the Pacific Island Countries in water & sanitation. SOPAC is assisted in this task by a deputy facilitator, the University of the South Pacific (USP).

The Partnership has a Facilitator (based at SOPAC) who is responsible for implementing the core functions of the partnership: liaising between the regional stakeholder groups and their sub-networks; researching and receiving stakeholder information on on-going and planned water activities; tracking donor and development agency programmes; identifying areas requiring implementation; and coordinating proposal submissions and project implementation. The Facilitator is also responsible for high-level advocacy of the strategic approach.

Monitoring and evaluation are carried out using a matrix inventory of previous, existing, planned and proposed activities, including details of the stakeholders involved, the intervention objectives, implementation duration and status, and anticipated impact.

The Facilitator enables countries and development agencies to: identify successful previous activities and therefore improve the sustainability of subsequent interventions; reduce and prevent duplication of activities; link country requirements to development programmes (and vice versa); and augment existing and proposed activities nationally and regionally.

A working group of CROP agencies (Council of Regional Organizations of the Pacific) and NGO representatives has been set up to act as the overall coordinating body of the Pacific Type II Initiatives. Facilitators are asked to report to this Sustainable Development Working Group on a regular basis.

If you have comments on this Initiative or would like to make contributions and be further involved please do not hesitate to contact Marc Overmars marc@sopac.org



Publication



[Mobilising People towards Integrated Water Resource Management A Guide to Community Action - Draft Version](#)

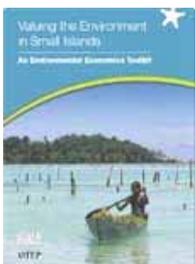
Active participation from people is key to the success of Integrated Water Resources Management (IWRM). The purpose of these guidelines is to support government departments and organisations in mobilising people towards IWRM.

The overall goal of these guidelines is to make the goals of IWRM an attainable ideal. More specifically they aim to: 1. Give an enhanced profile to the central role of community mobilisation in the pursuit of IWRM; 2. Provide a tool that has the capacity to mobilise communities and that facilitates links and networking, exchange and interaction among IWRM stakeholders; 3. Provide a space and opportunity for refining and promoting the vision of, and transition to IWRM – at community level; 4. Foster increased quality of IWRM facilitation among government and public utilities.

The guidelines were inspired through joint endeavours between the Pacific Islands Applied Geoscience Commission (SOPAC), the Global Environment Facility (GEF), the United Nations Development Programme (UNDP) and the United Nations Environmental Programme (UNEP) to develop an innovative project on Sustainable Integrated Water Resources and Wastewater Management in Pacific Island Countries.

The guidelines are founded on stakeholder consultations, three research investigations and a series of case studies.

Comments on the draft Guidelines are still welcome to Live & Learn Environmental Education, PO Box 844, Kimbe, West New Britain Province, Papua New Guinea. Tel/Fax: 983 4237 Website: www.livelearn.org



[Resource Guide - Mainstreaming Gender in Water Management](#)

Although a large number of guides already exist on aspects of environmental valuation, none of these references specifically focus on the issues and needs of small islands. This toolkit was developed to address this gap. Its core aim is to provide a practical resource to meet the pressing needs of a group of pioneering stakeholders in Bermuda, the Cayman Islands and Montserrat who will lead valuation studies, but have no, or only limited, knowledge of environmental economics. In addition, the toolkit is designed to be of use to a wider audience of stakeholders in small islands around the world who wish to learn about

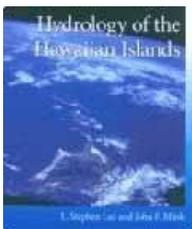
practical aspects of environmental valuation, but struggle to find a reference adapted to small island contexts.

The development of this toolkit was jointly funded by OTEP and the Joint Nature Conservation Committee (JNCC). OTEP is a joint programme of the UK Government Foreign and Commonwealth Office and the Department for International Development to support the implementation of the Environment Charters and environmental management more generally in the UK Overseas Territories. JNCC is the statutory adviser to the UK Government on UK and international nature conservation, including in the UK Overseas Territories.

For more details on the UK Overseas Territories valuation projects please visit the following website: <http://www.ukotcf.org/OTEP/docs/OTEP2007PROJECTS.pdf>

For more details on the UK Overseas Territories Environment Charters please visit:

http://www.ukotcf.org/OTEP/docs/general_brochure.pdf



[Hydrology of the Hawaiian Islands](#)

Why is groundwater the predominant drinking water source in Hawaii? Why are groundwater sources susceptible to pesticide contamination? How long does it take for water in the mountains to journey by land and underground passages to reach the coast? Answers to questions such as these are essential to understanding the principles of hydrology—the science of the movement, distribution, and quality of water—in Hawaii. Due to the humid tropical climate, surrounding ocean, volcanic earth, and high mountains, many hydrologic processes in the Islands are profoundly different from those of large continents and other climatic zones. Management of water, land, and environment must be informed by appropriate analyses, or communities and ecosystems face great uncertainty and may be at risk. The protection of groundwater, coastal waters, and streams from pollution and the management of flood hazards are also significant. This volume presents applications of hydrology to these critical issues.

The authors begin by outlining fundamental hydrologic theories and the current general knowledge then expand into a formal discussion specific to Hawaii and the distinctive elements and their interrelations under natural and human-influenced conditions. They include chapters on rainfall and climate, evaporation, groundwater, and surface runoff. Details on the quantification of hydrologic processes are available to those with more technical knowledge, but general readers with an interest in the topic—one of singular importance for the Hawaiian Islands—will find much in the volume that is timely and accessible.

For further information on Hydrology of the Hawaiian Islands please visit the following link:

www.uhpress.hawaii.edu/cart/shopcore/?db_name=uhpress&page=shop/flypage&product_id=4226

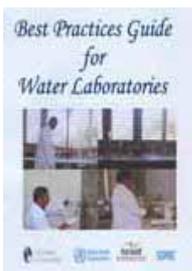


[Resource Guide - Mainstreaming Gender in Water Management](#)

This is the second edition of the Resource Guide on Mainstreaming Gender in Water Management of August 2006, which was first published by the United Nations Development Programme (UNDP) in 2003. The Guide is a reference document to assist water and gender practitioners and professionals as well as persons responsible for gender mainstreaming, and anybody else who is interested in the water sector. It is a compilation of newer resources – documents, papers, books, case studies, tools and toolkits - on gender mainstreaming in Integrated Water Resource Management (IWRM). It is meant to support action and further reading and research.

For the regular updating of the website version of the Resource Guide please visit the following website:
www.genderandwater.org/

[Best Practices Guide for Water Laboratories](#)



The guide is prepared as part of the NZAID-funded Pacific Water Quality Monitoring Capacity Building Programme that is being implemented by SOPAC, WHO and IAS-USP. It is intended to be a resource guide for small PIC water laboratories on best practices that can be employed in water laboratories.

The Guide is comprises two parts:

Part 1 - outlines the 10 keys features that an ideal water quality monitoring laboratory is recommended to have in order to successfully conduct its role.

Part 2 - outlines other aspects that are to be addressed in supporting the development of a water monitoring laboratory.

For more information on the guide or to obtain copies, please contact SOPAC Secretariat (tasleem@sopac.org).



[Hydrology for the Environment, Life & Policy](#)

HELP (Hydrology for the Environment, Life & Policy) is a joint initiative of the United Nations Educational Scientific Organization (UNESCO) and the World Meteorological Organization (WMO). HELP is led and coordinated by UNESCO's International Hydrological Programme (IHP). In the Pacific, the IHP is administered by the UNESCO Office for the Pacific States in Apia, Samoa, through a memorandum of understanding with the South Pacific Applied Geoscience Commission (SOPAC).

Under the title "HELP in the context of the Pacific Regional Action Plan for Sustainable Water Management: A Framework for Action", the proceedings of the Pacific HELP Symposium were prepared in response to the recommendations by the Pacific Island country participants and supports the implementation of catchment management actions envisioned in the overarching Pacific Regional Action Plan on Sustainable Water Management.

This document consists of the Framework for Action itself, as well as a CD-Rom containing electronic editions of all presentations and papers delivered at the HELP Symposium.

Participating Pacific Island Countries in the HELP Symposium: - Cook Islands, Fiji, Papua New Guinea, Samoa, Solomon Islands and Vanuatu.



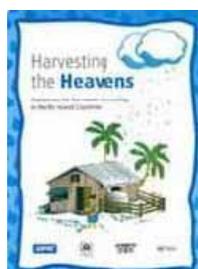
[Participatory Training in rainwater Harvesting](#)

This manual of Participatory Training in rainwater Harvesting was developed as part of the United Nations Environment Programme (UNEP) project titled "Pilot Project on Empowering Women in Rainwater Harvesting in the Pacific Atoll Islands" with funding from the Government of Sweden.

The manual is targeted for use by Non-Government Organisations (NGOs), Community-Based Organisations (CBOs) or people involved in rainwater harvesting, and contains a number of participatory techniques, tools and activities based on best practices from a variety of sources.

Copies of this Manual can be obtained from the SOPAC Secretariat (arieta@sopac.org) or you can download the document via the following website:

<http://www.sopac.org/CLP+Rainwater+Harvesting>



[Harvesting the Heavens: Guidelines for the Rainwater Harvesting in the Pacific Island Countries](#)

The "Harvesting the Heavens: Guidelines for the Rainwater Harvesting in the Pacific Island Countries" were developed as part of the United Nations Environment Programme (UNEP) demonstrating projects on "Empowering Women in Rainwater Harvesting" funded by the Government of Sweden through their development agency SIDA and carried out in Africa (Kenya) and the Pacific (Tonga).

The guidelines capture the lessons learned during the preparation and the implementation of the demonstration project executed by the South Pacific Applied Geoscience Commission (SOPAC) and carried out in the Island group of Vava'u of the Kingdom of Tonga through the Village Women's Development Programme (VWDP) of the Tonga community Development Trust (TCDT).

Copies of this Guideline can be obtained from the SOPAC Secretariat (arieta@sopac.org) or you can download the document via the following website:

<http://www.sopac.org/CLP+Rainwater+Harvesting>



[Pacific Regional Action Plan](#)

The national consultations as well as a regional meeting held in Sigatoka, Fiji from 29 July – 3 August 2002 provided a platform through which participants translated ideas into decisions and policy changes resulting in the Pacific Regional Action Plan on Sustainable Water Management (Pacific RAP).

The outcomes of the consultation were carried forward and presented during the 3rd World Water Forum in Kyoto as part of the theme "Water in Small Island Countries".

Copies of the Pacific Regional Action Plan can be obtained from the SOPAC Secretariat (mathias@sopac.org) or you can download the document via the following website:

<http://www.sopac.org/CLP+Publications>

[ICU bulletin](#)

The ICU is a multi-disciplinary, multi-national project providing Pacific island countries with 3-month climate forecasts. It is published monthly both in print and online by the National Institute of Water and Atmospheric Research (NIWA) in New Zealand and is funded by NZAID. Every month, 1200 printed copies of the ICU are distributed free-of-charge by NIWA, the publisher, directly to subscribers.

Online versions of the ICU bulletin can be downloaded from the following NIWA ICU website:

<http://www.niwascience.co.nz/ncc/icu/archive>

[Safe Water guide for the Australian aid program 2005](#)

The Safe water guide provides an overview of the approach that AusAID has adopted for managing water quality in activities implemented under the Australian aid program. That approach is based on managing risks.

The guide outlines the steps that may need to be taken when designing, implementing, monitoring and evaluation water-related activities, particularly the provision of safe drinking water suppliers. It provides guidance on the procedures for identifying and managing existing and potential water quality problems.

Copies of the Safe Water guide for the Australian aid program 2005 can be obtained from AusAID. For further information visit their website:

www.ausaid.gov.au

[Overview of Integrated Water Resources Management in Pacific Island Countries: A National and Regional Assessment](#)

The report concentrates on regional and national progress and activities in the Pacific region on IWRM, and where relevant refers to national and sub-national level examples of "roll-out" of these developments.

Copies of the An Overview of Integrated Water Resources Management in Pacific Island Countries: A National and Regional Assessment is available on SOPAC website:

www.sopac.org/tiki/tiki-sopac_download.php?path=/data/virilib/MR/MR0554.pdf&file=MR0554.pdf&loc=MR



[Water Quality Monitoring in Pacific Island Countries](#)

The Water Quality Monitoring in the picture is the first of its kind guideline that has been developed by the Institute of Applied (IAS) of the University of the South Pacific (USP) and the South Pacific Applied Geoscience Commission (SOPAC). The publication is divided into sections on how to design a water quality monitoring programme; selection of drinking and recreational water sampling; solid and liquid waste management and general notes on sampling and laboratory procedures.

This handbook is aimed for those people working in the water and wastewater sectors in the Pacific region, with local examples to allow more understanding and adaptation.

Copies of the Water Quality Monitoring in Pacific Island Countries can be obtained from the SOPAC Secretariat (tasleem@sopac.org) or you can download the document via the following website:

www.sopac.org/tiki/tiki-sopac_download.php?path=/data/virlib/TR/TR0381.pdf&file=TR0381.pdf&loc=TR



[Directory of Environmentally Sound Technologies for the Integrated Management of Solid, Liquid and Hazardous Waste for Small Island Developing States \(SIDS\) in the Pacific Region](#)

The Directory of Environmentally Sound Technologies for the Integrated Management of Solid, Liquid and Hazardous Waste for Small Island Developing States (SIDS) in the Pacific Region represents the combined efforts and achievement of numerous people from UNEP, SOPAC and SPREP.

The directory provides an overview of solid, hazardous and wastewater technologies.

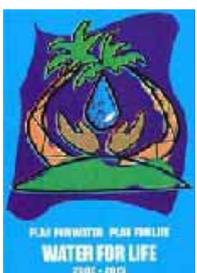
Solid waste technologies - discuss information on different municipal solid waste management (MSWM) technologies that are currently used in different regions of the world.

Hazardous Waste Technologies - addresses the proper management of various types of hazardous wastes, as they require special handling, treatment and disposal due to their hazardous potential.

Liquid waste or wastewater technologies - in SIDS wastewater disposal systems are just as important for public health as a water supply distribution system.

Copies of the Directory of Environmentally Sound Technologies for the Integrated Management of Solid, Liquid and Hazardous Waste for Small Island Developing States (SIDS) in the Pacific Region are available from the SOPAC Secretariat (kamal@sopac.org) or you can download the document via the following website:

www.sopac.org/tiki/tiki-sopac_download.php?path=/data/virlib/JC/JC0143.pdf&file=JC0143.pdf&loc=JC



[World Water Day Campaign](#)

The World Water Day "Water for Life 2005-2015" Activity Booklet has been produced for schools and communities to further consider water issues through participative activities. The Activity Booklet should be used with the Water for Life Cartoon Scenes on the posters or calendars as the activities are linked to each cartoon scene. Alternatively, it can be used on its own to address different components of the theme "Water for Life".

Copies of the World Water Day Campaign are available from the SOPAC Secretariat (kamal@sopac.org) or Live & Learn Environment Education (marie@livelearn.org.fj). You can also download the document via the following website:

<http://www.sopac.org/WWD+2007>



[Guidelines for Drinking - Water Quality](#)

Since the second edition of WHO's Guidelines for Drinking water Quality, there have been a number of events that have highlighted the importance and furthered understanding of various aspects of drinking-water quality and health. These are reflected in this 3rd edition of the Guidelines.

The Guidelines are addressed primarily to water and health regulators, policy-makers and their advisors, to assist in the development of national standards. The Guidelines and associated document are also used by many others as a source of information on water quality and health and on effective management approaches.

Copies of the Guidelines for Drinking - Water Quality are available from WHO's website: http://www.who.int/water_sanitation_health/dwg/gdwq3/en/ or from the WHO's Pacific Regional Office (IddingsS@sp.wpro.who.int).

[Hydrology and Water Resources of Small Islands: Practical Guide](#)

In most small islands water development projects have not achieved any goal. This is often because the technologies, design and materials were not suitable for either the environment or the cultural habits of the population, or because the operation and maintenance cost were excessive. Combined with geological and other physical complexities and the exposure to natural disasters, the hydrological and water resources problems, must be carefully considered. The situation is aggravated by lack of qualified personnel.

This guide has been prepared to assist technicians, hydrologists, engineers and managers in the identification, assessment, development, management and protection of water resources of islands. It is intended to be a guide to the selection of methods and practices appropriate to the special conditions of small islands.

Copies of the Hydrology and Water Resources of Small Islands: Practical Guide can be obtained from the SOPAC Secretariat (mathias@sopac.org) or from the UNESCO Apia Office (hans@unesco.org.ws).

[Tapping Water Connection](#)

Everyone uses water and everyone needs some kind of sanitation. The way water is used depends on the island where you live: the climate, the landforms, and the source of water. It also depends on the tradition and customs of the family and community, their income and the size of the population.

The handbook "Tapping Water Connection" can be used by field workers when working with communities to install and maintain water and sanitation systems. It can also be used to support health and hygiene programmes. The handbook raises seven Questions to think about. The Questions can be a checklist to identify important connections between people and their water and their land.

Copies of the Manual can be obtained from the SOPAC Secretariat (arieta@sopac.org) or you can download the document via the following website:

<http://www.sopac.org/data/virlib/MR/MR0577.pdf>

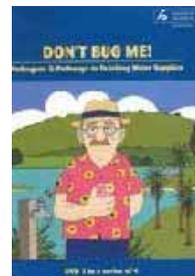


Multimedia

[Don't Bug Me? – Pathogens and Pathways in Drinking Water Supplies](#)

This is the DVD 1 of the four series produced by New Zealand Ministry of Health and can be used in the Water Safety Plans programme as public awareness material. This video informs on the access and presence of pathogens in the drinking water supplies. It is intended for the small drinking water supplies and can be used in the Pacific Island Countries.

Copies of this documentary are available from **New Zealand, Ministry of Health**.



[Making It Safe? - Principles and Methods of Treatment for Small Drinking Water Supplies](#)

This is the DVD 2 of the four series produced by New Zealand Ministry of Health and can be used in the Water Safety Plans Programme as public awareness material. This video informs on the principles and methods of treatment for small drinking water supplies. It can be used for educating the pacific island communities as well.

Copies of this documentary are available from **New Zealand Ministry of Health**.



[Cap-Net - IWRM Tutorial](#)

This DVD contains a brief introductory tutorial aimed at policy makers, water managers, trainers and educators who want a basic understanding of IWRM principle. It provides the case for IWRM and the argument against those who may oppose it on institutional or sectoral grounds.

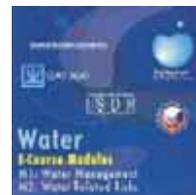
Copies of the **Cap-Net - IWRM Tutorial DVD** can be obtained from the **United Nations Development Programme**.



[Water E-Course Modules](#)

The content of this DVD includes an overview of the major concern related to water use and management. The workshop consisted of a series of lectures which included the status of global water crisis, measures being taken by the global community, issues related to water resource assessment, water sharing, floods and concerns related to dam construction.

Copies of the **Water E-Course Modules DVD** can be obtained from the **United Nations University**.



[Toolbox](#)

This DVD contains a brief introductory tutorial aimed at policy makers, water managers, trainers and educators who want a basic understanding of IWRM principle. It provides the case for IWRM and the argument against those who may oppose it on institutional or sectoral grounds.

Copies of the **Toolbox DVD** can be obtained from the **Global Water Partnership Secretariat**.



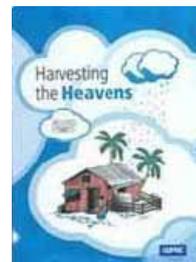


[Harvesting the Heavens](#)

A DVD documentary which follows the pilot project in Vava'u. The video highlights the important aspects of the project including community participation and ownership, encouraging women as well as men to participate in water management and promoting sustainable approaches. Harvesting the Heavens follows a rainwater harvesting demonstration project carried out in the villages of 'Utungake and Matamaka in the island group of Vava'u in Tonga. The project focused on the importance of community participation and ownership, encouraging women as well as men to participate in water management and promoting sustainable approaches.

Copies of the **Harvesting the Heavens** documentary can be obtained from the **SOPAC Secretariat** (mathias@sopac.org) or you can download the document via the following website:

<http://www.sopac.org/CLP+Rainwater+Harvesting>



[Cook Islands & Samoa Fresh Water Management](#)

A DVD documentary which follows the pilot project in **Cook Islands and Samoa fresh water management**. The International Water Project ensures that by establishing a good fresh water management plans our water quality would be safe for consumption.

Copies of this documentary can be obtained from the **SPREP Secretariat**.

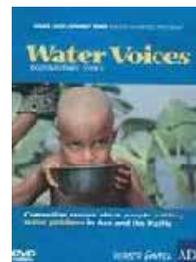


[Water Voices Documentary Series](#)

Water is essential to all life. And yet one in three Asians lacks access to safe drinking water, and half the people living in Asia and the Pacific do not have access to adequate sanitation. Conflicts over sharing of scarce water resources are increasing at an alarming rate.

A documentary series that recognizes the power of good examples and lessons learned to inspire 'home grown' solutions to water problems. The series recognizes the power of good examples and lessons learned to inspire 'home grown' solutions to water problems and looks specifically at communities in Fiji, Kiribati and Tonga.

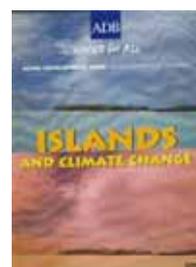
Copies of this documentary can be obtained from the **SOPAC Secretariat** (arieta@sopac.org) or the **Asian Development Bank** (http://www.adb.org/Water/CFWS/Water_Voices_Videos.asp).



[Islands and Climate Change](#)

Islands and Climate Change examines and reports on a unique initiative on Fiji's Coral Coast where coastal communities and the tourist industry try to protect water resources. The Water Awareness Program aims to increase public understanding about vital water issues in the Asia and Pacific region; promote water sector reform; improve delivery of water services, especially to the poor; and foster conservation and integrated management of water resources.

Copies of this documentary can be obtained from the **SOPAC Secretariat** (arieta@sopac.org) or the **Asian Development Bank** (http://www.adb.org/Water/CFWS/Water_Voices_Videos.asp).





Pacific Water Agenda 2007

DATE	EVENT	LOCATION	DETAILS
July 16 th - 20 th	Water Quality Monitoring Workshop	Guam	The training included a series of interactive sessions, presentations, field sampling exercises, a field trip, practical hands-on training for certain physical (pH, EC, turbidity), chemical (nitrates/nitrites, phosphates, chlorine and lead) and microbiological (total coliform and E-coli using the Colilert and Enterolert methods) parameters, writing of standard operating procedures (SOPs), use of the Patho Screen (hydrogen sulphide) test kit, sanitary inspection forms and data interpretation and management.
July 31 st - August 3 rd	International Water Conference	Cape Town, South Africa	The purpose of the conference is to share experiences and innovative practices among GEF's global International Waters portfolio (nearly \$4 billion), promote learning and capacity building, develop strategies to enhance stakeholder collaboration, and encourage GEF International Waters projects to apply evolving GEF policies and procedures during implementation. www.getf.org/ewebeditpro/items/O38F11453.pdf
August 14 th - 17 th	2007 American Rainwater Catchment Systems Association Conference	Kilauea Military Camp Hawaii	This conference will present information valuable to users, public health officials, academics, designers, installers, architects, builders, product vendors, students, planners, and water utility staff. http://www.arcsa07.com/
August 20 th - 22 nd	2 nd International Conference on Water Resources Management of the International Association of Science and Technology for Development (IASTED)	Honolulu, Hawaii, United States	The purpose of this conference is to act as an interdisciplinary forum for decision-makers, academics, and professionals interested in the development and application of technology to ensure the sustainable use and management of water resources. The forum will cover both hard and soft technology and will serve to promote the use of appropriate technologies. The conference topics include: water supply and sustainable use; wastewater and stormwater management; integrated watershed management; pollution prevention and reduction in industry; issues in implementing environmentally sound technologies. www.iasted.org/conferences/home-578.html
August 21 st - 23 rd	13 th International Rainwater Catchment Systems Conference 5 th International Water Sensitive Urban Design Conference 3 rd International Water Association Rainwater Harvesting and Management Workshop	Sydney, Australia	Water is essential for life. This conference will provide opportunities for exchange of ideas, experiences and innovation with international delegates on the use of rainwater catchment systems and water sensitive urban design methods to supplement the water resources available and protect the earth's ecosystems. www.rainwater2007.com
September 3 rd - 6 th	Third International Conference on Climate and Water	Helsinki, Finland	Finland has arranged two conferences on Climate and Water, the first one in 1989, the second one in 1998. The conference web-site: www.environment.fi/syke/cw3
September 3 rd - 6 th	10 th International Riversymposium & Environmental Flows Conference	Brisbane Australia	The symposium will feature presentations on innovative practices and case studies from all over the world and a wide range of perspectives on managing river flows for people and ecosystem health. www.riversymposium.com/index.php?page=Home
September 17 th - 21 st	Workshop organised by NGO and Ministry of Health on Water Safety Plans Programme	Nukualofa, Tonga	Training and Community workshop to be organised by NGO –Tonga Trust and Ministry of Health with assistance from SOPAC/WHO
October 22 nd - 26 th	Workshop organised by NGO –Live and Learn on Water Safety Plans Programme	Luganville, Santos	Training and Community workshop to be organised by NGO- Live and Learn with assistance from SOPAC/WHO
November 4 th - 9 th	UNESCO IHP-HELP Southern Symposium	Emperors Palace, Johannesburg, South Africa	This Symposium is aimed at bridging the gap between science and policy and moving towards sustainable development at local, national and the international levels. The UNESCO HELP initiative has identified 67 catchments from 56 countries as HELP Basins-Symposium is a tremendous knowledge sharing opportunity on how to put HELP into action



<p>November 19th - 23rd</p>	<p>International Conference on Hydrology and Water Resources Management for Hazard Reduction and Sustainable</p> <p>15th Regional Steering Committee Meeting for UNESCO-IHP Southeast Asia and the Pacific</p>	<p>Metro Manila, Philippines</p>	<p>The general conference themes of Hazard Reduction and Sustainable Development, are selected in order to attract from the region a broad range of papers and presentations devoted to several focal areas of IHP-VI such as:</p> <ul style="list-style-type: none"> • Global distribution of water quantity and quality (e.g., as affected by the El Niño/Southern Oscillation or ENSO), • extreme events in land and water resources management (droughts, tropical cyclones, floods, landslides, tsunami, and water-related events of tectonic and volcanic origin) which are evidently common and significant in the SEAP region (associated with typhoons and monsoons), • integrated river basin management (IRBM) and integrated water resources management (IWRM), including environmental management of watersheds, rivers, lakes and aquifers, • hydrology of various land habitats (dry-lands, wetlands, mountains, small islands, coastal zones, urban and rural settlements) present in the region, • social and economic values of water, water conflicts and other global water societal issues, and • public awareness and water education (such as the use of information technology and teaching materials). <p>http://www.unesco.or.id/activities/science/water_sci/events/215.php</p>
<p>December 3rd - 4th</p>	<p>1st Asia-Pacific Water Summit</p>	<p>B-con plaza (Beppu Convention Centre), Oita Prefecture, Japan</p>	<p>Open Summit is a series of events which will be organized by the host local government (s)/regional offices of the Japanese Governments, CSOs in cooperation with the Summit SC in Oita Prefecture as well as in any other places in Japan on the occasion of the 1st Summit. The events will include: public symposium, seminars and workshops, exhibitions, and technical visits and excursions.</p> <p>http://www.apwf.org/news/index.html</p>

Selected Water Websites

<p>ADB Water in Small Island Countries www.adb.org/Water/theme3.asp</p>	<p>Pacific ENSO Update http://lumahai.soest.hawaii.edu/Enso/subdir/update.dir/update.html</p>
<p>AOSIS Alliance of Small Island States www.sidsnet.org/aosis</p>	<p>Pacific Water Association www.pwa.org.fj</p>
<p>AUSAID www.usaid.gov.au</p>	<p>SIDSNET www.sidsnet.org</p>
<p>Australian Water Portal www.developmentgateway.com.au/water/index.html</p>	<p>UNEP http://freshwater.unep.net/</p>
<p>Barbados + 10 www.sidsnet.org/Mauritius2004/</p>	<p>UNESCAP www.unescap.org</p>
<p>CSD12 www.un.org/esa/sustdev/csd/csd12/csd12.htm</p>	<p>UNESCO www.unesco.org/water</p>
<p>CSD13 http://www.un.org/esa/sustdev/partnerships/csd13_partnership_fair.htm</p>	<p>UNU www.inweh.unu.edu/inweh</p>
<p>Co-operative Programme on Water and Climate www.waterandclimate.org</p>	<p>WHO www.who.int/water_sanitation_health/en/</p>
<p>East-West Centre www.EastWestCenter.org/climate</p>	<p>WMO www.wmo.ch/web/homs/index.html</p>
<p>ESCAP www.unescap.org/esd/water/activities</p>	<p>World Bank www.worldbank.org/html/fpd/water</p>
<p>European Union www.europa.eu.int/comm/development/publicat/water/en/frontpage_en.htm www.euwi.net</p>	<p>SOPAC Water www.sopac.org/Community+Lifelines+Programme+Water+and+Sanitation</p>
<p>Gender and Water Alliance www.genderandwateralliance.org</p>	<p>World Water Council www.worldwatercouncil.org</p>



Global Water Partnership www.gwpforum.org	USP www.usp.ac.fj
GWP Australia www.gwpaustralia.org	WSSCC http://www.wsscc.org/
Island Climate Update www.niwa.cri.nz/NCC/ICU	NIWA www.niwa.co.nz
NZAID www.nzaid.govt.nz	SPC www.spc.int
USGS http://hi.water.usgs.gov	Japan Water Forum http://www.waterforum.jp/eng/index.html
Water Virtual Learning Centre (WVLC), University of the South Pacific www.earth.fst.usp.ac.fj/index.php?id=4043	UN-Water http://www.un.org/waterforlifedecade/
World Summit on Sustainable Development www.johannesburgsummit.org	World Wide Fund for Nature www.wwfpacific.org.fj

--- Please let us know if you think other websites are worth mentioning here! ---

Frequency of issuing this newsletter is quarterly so you can be kept updated on the latest developments. As mentioned in earlier mail outs we would appreciate it if you could forward this to colleagues who may be interested in this initiative so that it reaches the widest possible audience.

To subscribe please send an email to sanjeshni@sopac.org to add your contact to our mailing list.

and

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