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Welcome to the sixteenth 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>

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US Environmental Protection Agency (U.S. EPA) program certifies Palau and Yap water quality labs

HONOLULU – The U.S. Freely Associated States Water Quality Laboratory Certification Program recently granted certification of water quality laboratories for the Palau Environmental Quality Protection Board and the Yap State Environmental Protection Agency.

Both labs were certified to analyze drinking water for bacterial contamination and the Palau lab was also certified to analyze bacteria in marine water.

The certification program is specifically designed for water quality laboratories of the U.S. Freely Associated States, including the Federated States of Micronesia, the Republic of Palau, and the Republic of the Marshall Islands. The program is modelled after the U.S. EPA's Laboratory Certification Program, which certifies labs in the States and Territories.

"Certification of laboratory facilities and personnel is necessary to ensure that a laboratory produces scientifically valid and legally defensible data," said John McCarroll, manger for the EPA Pacific Southwest region's Pacific Islands office. "This ensures that the data presented to the public is accurate, reliable, and protects people's health in these island nations."

The U.S. EPA and the American Samoa EPA, CNMI DEQ, and Guam EPA run the certification program. The program was designed to provide extensive hands-on training, including reviews of testing procedures, record keeping, equipment maintenance, as labs in the freely-associated states do not have the resources available to them that state and territorial labs have.

Labs and personnel receive certification when they meet or exceed specific criteria established under the program. These include adequate lab space and facilities, a complement of functional and properly maintained basic equipment, adequate lab supplies, and rigorous quality control procedures.

To maintain certification, lab facilities must pass an on-site evaluation at least every two years, and must have a certified analyst on staff. To receive certification, analysts must successfully pass a written exam as well as a hands-on practical application of methods and procedures.



The Palau and Yap labs are the first labs to be certified under the new program. Certification audits for the Marshall Islands and the other FSM states are planned for 2008.

For more information on the Water Quality Laboratory Certification Program please contact:

Dean Higuchi
Public Affairs Specialist
US Environmental Protection Agency
Email: higuchi.dean@epa.gov





Adapting to climate change - Water a priority for Nauru

Nauru is one of four Pacific countries that have prioritised water as a main focus under the Pacific Adaptation to Climate Change (PACC) project. Niue, Tonga and Tuvalu also identified water as a priority under the project.

Coordinated by the Secretariat of the Pacific Regional Environment Programme (SPREP), PACC will work with key partners to integrate adaptation to climate change priorities into national policies and programmes. PACC is working to build the capacity of Pacific islanders to adapt to climate change across three sectors; water resource management, food production and food security and coastal management. PACC is funded by the Global Environment Facility (GEF) and implemented through United Nations Development Programme (UNDP).

The PACC project will be the first project in the Pacific region to focus specifically on adaptation initiatives in 13 Pacific island countries: Cook Islands, Federated States of Micronesia, Fiji, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

Nauru currently sources its water from desalination plants or reverse osmosis that are not entirely effective due to maintenance and fuel issues. The island's inhabitants also obtain their water through rainwater harvesting. It is unclear at present what affect climate change will have on rainfall in Nauru in the future.

Tapping into underground water sources is one possibility that the PACC project will consider. The PACC project will finance the water component of a resources rehabilitation programme currently being undertaken by the Nauru Rehabilitation Corporation and funded by Ausaid and the Nauru Government. The rehabilitation programme has two main components; rehabilitating the wastelands and investigating alternative water sources. The development work is already being undertaken for programme, and it is anticipated that the PACC component will begin in mid-2008.



For more information, please contact:

Taito Nakalevu
Climate Change Adaptation Officer
Email: taiton@sprep.org
Website: www.sprep.org





Water Quality Monitoring Programme Marshall Islands Mission, 3rd to 7th December 2007

Mission purpose:

1. To assist in the re-organisation of the RMI EPA water quality laboratory
2. To assist in preparing the laboratory towards the certification program for US freely associated states.

Background:

RMI is among one of the pilot countries selected under the Pacific Water Quality Monitoring Capacity Building Programme (WQM) being implemented by SOPAC, WHO and IAS-USP. The basic aim of the WQM Programme is to build sustainable national capacity towards improved water quality testing and data management in the selected pilots.

In collaboration with US EPA Certification Officers, the WQM Programme is aiming to have the RMI EPA water quality laboratory certified under the US freely associated states voluntary laboratory certification program.

The mission by Tasleem Hasan was an initial step en route for achieving this goal. During the mission, the lab was re-organised (see pictures below), sample recording sheets and Standard Operating Procedures were drafted, QC aspects were strengthened and hands-on practical training was provided to the laboratory staff on proper sampling and analysis techniques for microbiological testing.



Before lab re-organisation (3rd December)



After organisation (5th December)

For further in information on Water Safety Plans please contact:

Mitesh Mudaliar
Project Assistant
World Health Organisation
Email: mudaliarm@sp.wpro.who.int

Tasleem Hasan
Programme Officer
SOPAC Secretariat
Email: tasleem@sopac.org

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New Website: Pacific Water Use Efficiency



A brand new website has been constructed with the objective of promoting water demand management throughout the Pacific region and beyond. The website conveys a wide array of information and resources related to water resource management in general, and water demand management in particular.

It builds upon world's best practice as set out by the International Water Association's water loss task force, and also makes use of their methodology and philosophy. This is further emphasized with practical examples from what has been achieved so far, through the NZAID funded 'Water Demand Management Program for Pacific Island Countries' that is currently being implemented by SOPAC.

The website is designed to be informative, attractive, and functional in areas with low bandwidth. It is hoped that this will make it user friendly enough to spur some interest about this most effective way of improving water supply services.

Welcome to: www.pacificwaterefficiency.com

This website is constructed as part of the Water Demand Management Programme for Pacific Islands Countries, and is solely funded by New Zealand's International Aid & Development Agency and implemented through SOPAC in partnership with Wide Bay Water Corporation and the Pacific Water Association.

For further information on Water Demand Management please contact:

Mathias Kleppen
Water Demand Management Officer
SOPAC Secretariat
Email: mathias@sopac.org

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nzaid



Sustainable Water Management Hand washing campaign

Live & Learn Environmental Education is again working with SOPAC to develop education material for World Water Day (WWD). As this is the International Year of Sanitation, the theme for WWD 2008 is sanitation.



Activities and events are planned both inside and outside the UN system surrounding Sanitation and Hygiene Week (15-21 March) and World Water Day (22 March). One such significant event is UN-Water's observance of World Water Day (this year to be celebrated as World Sanitation Day) taking place in Geneva on 14 March and co-organized by UNICEF, WHO, and the Water Supply and Sanitation Collaborative Council (WSSCC).

WWD in Fiji will also be celebrated on Friday 14 March rather than on 22 Easter Saturday. Negotiations are in place with the Fiji School of Medicine to use the Sanitation Park as the venue to celebrate the day.

Millennium Development Goal (MDG) 7 is to "halve, by 2015, the proportion of people without sustainable access to safe drinking water and sanitation". Though diarrhoea can be both prevented and cured by the simplest means, this disease is likely to account for the deaths annually of over 2 million children under age 5; its control will be a determining factor in MDG strategies.

One strategy is the promotion of proper hand-washing, which can reduce the incidence of diarrheal disease by over 40%. To this end Live & Learn are producing Pacific Island educational materials suitable for schools and communities to encourage good hand-washing practices.

This includes toilet block / wash room stickers to remind people to wash their hands and a related entertaining poster detailing the steps for getting rid of hand germs. Other materials are a sanitation fact sheet, and details on how to make a Tippy Tap, a simple and cheap hand washing station, and ideas for school celebrations of WWD. An intensive media campaign will include newspaper, magazine, website, radio and television coverage. There is also possibility of a hand washing commercial being developed in conjunction with the National Centre for Health Promotion (NCHP).

So keep in mind Friday 14 March for sanitation and WWD and remember **"wash your hands"**.

For more information on the Sustainable Water Management Hand Washing campaign please contact:

Sharon Marks
Technical Advisor Communication and Education
Live & Learn Environmental Education
Email: sharon@livelearn.org.fj

Kamal Khatri
Water, Sanitation and Hygiene Officer
SOPAC Secretariat
Email: kamal@sopac.org



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Integrated Water Resources Management in Pacific Island Countries

Fourteen Pacific Island Countries have successfully submitted the Project Identification Form (PIF) to the Global Environment Facility for the Sustainable Integrated Water Resources Management (IWRM) project.

The Global Environmental Facility (GEF) through the United Nations Development Programme (UNDP) signed an agreement with SOPAC to develop an innovative programme on Sustainable Integrated Water Resources Management (IWRM) in the Pacific. The project has been developed by Pacific Island Countries, UNDP, United Nations Environment Programme (UNEP) and SOPAC through the Pacific Water Partnership.

Countries are currently coming to the end of the Project Development Facility (PDF-B) phase of the process which has lasted almost two years. Final consultations with countries on the design of their national Demonstration Projects, and completion of Regional Components is ongoing and project management documents for UNDP and UNEP are being prepared. The project will consist of 5 components:

Component 1: Demonstration, Capture and Transfer of Best Practices in IWRM and Water Use Efficiency (WUE)

Component 2: IWRM and WUE Indicators Framework

Component 3: Policy, Legislative and Institutional Reform for IWRM and WUE

Component 4: Regional and National Capacity Building and Sustainability Programme for IWRM and WUE

Component 5: South-South inter-regional Small Island Developing States Knowledge Exchange & Learning & Replication

A new output from the project design phase is now available. The Synopsis Report summarises the Country Diagnostic Reports on water and environmental status and discusses possible solutions for implementing IWRM approaches in the Pacific.

Further information on this project will follow as we wait to hear from GEF on the funding of this US\$12 million project which will start full implementation later this year and run for five years.





What is Water Use Efficiency?

Water efficiency is simply a term to express the use of water in the least wasteful way; in other words, maximising water's potential:

- * Technical efficiency refers to the use of water in an area or sub-sector while minimising waste. Technically, this requires demand management interventions.
- * Allocative efficiency refers mainly to economics, allocating water to the highest value water users. This naturally assumes that both environmental and social needs are met prior to restructuring allocations on the basis of economy alone.

For more information see:

<http://www.pacificwaterefficiency.com/>

For further information on the GEF Pacific IWRM Project please logon to:

<http://www.sopac.org/tiki/tiki-index.php?page=Integrated+Water+Resource+Management>

or contact:

Rhonda Bower
Adviser
Integrated Water Resource Management
SOPAC Secretariat
Email: bower@sopac.org

James Dalton
Adviser
Integrated Water Resource Management
SOPAC Secretariat
Email: jamesd@sopac.org



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EU Integrated Water Resources Management Planning Programme

Complementing the GEF IWRM project (see above article) is an EU Water Facility funded project which will support the Pacific Region in the development of national IWRM and Water Use Efficiency plans through establishing a regional IWRM Resource Centre and support in-country national consultations to improve Pacific Island water governance.

Speaking at the official signing ceremony with the EU, the SOPAC Director highlighted the need for Pacific Island countries to better manage their water and natural resources:

"Clearly we cannot over-emphasise the opportunities that an integrated and coordinated approach to developing and managing our water, land and related resources offers us and it is critical if we are to achieve sustainable economic development, allow our people to live in a certain quality of life, address some of the education and health challenges that confront us, as well as achieve the commitments that we have made in respect of the MDG targets that have been set for 2015



in relation to access to safe drinking and basic sanitation”.

Support for improved water management was clearly expressed by the regional Heads of State at the first Asia Pacific Water Summit in Beppu, Japan in early December.

<http://www.apwf.org/>

Pacific Island leaders made the point that solutions were urgently required with the deteriorating conditions of the region’s freshwater resources due to impacts of global warming on fragile island eco-systems.



President Tommy Esang Remengesau of Palau reiterated that no matter how large or small a country is its existence and livelihood depend on the availability of freshwater. “We simply cannot count on freshwater literally falling from the sky and solving our water management problems,” he said:

“Most of our water comes from groundwater because most of our people don’t have the roofing to catch rainwater. So they cannot store the rainwater,”

Nauru’s concerns were reported by its President Ludwig Scotty. His country is a frequent host to water shortages due to droughts. While initiatives and strategies to improve water resources management and protection of groundwater are going on, a lot more has to be done, particularly in the area of adaptation to climate change. The leaders of Tuvalu and Palau used the opportunity to urge the international community to act with a sense of urgency to assist Pacific Island countries find solutions to their pressing environmental problems.

The programme has already started working with the Governments of Fiji and Niue to assist them in improving water resources policies and legislation and is starting to engage with other countries based on their identified needs.

For further information on the EU IWRM National Planning Programme logon to:

<http://www.sopac.org/tiki/tiki-index.php?page=Integrated+Water+Resource+Management>

or contact:

**Rhonda Bower, James Dalton, Ulrika Gunnartz
Advisers**

**Integrated Water Resource Management
SOPAC Secretariat**

Emails: bower@sopac.org, jamesd@sopac.org, ulrika@sopac.org



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ACP-EU Water facility





Region's fragile freshwater resources threatened by Climate Change

Water problems in the Asia Pacific region are severe, with one out of five people in the region not having access to safe drinking water, and half of the population without access to adequate sanitation. In addition, the region has increasingly suffered from water-related disasters.

Unless something is done soon, the severe water problems across the Asia-Pacific region will considerably worsen under the influence of climate change. This was the message from several Heads of State attending the first day of the 1st Asia-Pacific Water Summit.



Climate variability and change is already affecting water resources and their management in many parts of the region, as notably illustrated by the large-scale retreat of Himalayan glaciers and the growing threat of sea level rise to small island countries and low-lying areas.

Prime Minister of the Royal Government of Bhutan, His Excellency Lyonpo Dr. Kinzang Dorji, raised the effects of climate change faced by his country and brought about by global warming. "Our glaciers are rapidly receding thereby posing grave threats to human settlements in the downstream valleys caused by events such as the glacial lake outbursts and flash floods", he explained.

The specific vulnerability to climate change for small islands was highlighted by the President Federated States of Micronesia, His Excellency Mr. Emanuel Mori. In his speech he emphasized: "While we are blessed, with our natural surroundings, we are also faced today with daunting challenges that have now come to characterize how we, as small islands developing states, interact in the global arena. Climate change is the new buzz word around the globe, and it has now taken its rightful place at the forefront of the global agenda. There is no longer doubt in anyone's mind that the adverse impacts of climate change are real and already happening".

Representing another small island country, the President of the Republic of Palau, His Excellency Mr. Tommy Esang Remengesau, illustrated "how every country, no matter how large or small, depends for its very existence and livelihood on the availability of fresh water. Just as we must carefully manage our marine resources, we must carefully protect and manage our freshwater sources" he said, adding that "while it seems to rain a lot in Palau, we simply cannot count on freshwater literally falling from the sky and solving our water management problems."

For detailed information on the Summit please visit:

<http://www.apwf.org/press/>

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International Year of Sanitation and World Water Day 2008

More than two and a half billion people lack access to safe sanitation and 5,000 children under age of five die every day globally. Under the banner of 2008 International Year of Sanitation (IYS), the Pacific (Water Sanitation and Hygiene – WASH) partners will be engaging on a series of activities planned over the year. Partners in the Coalition include the Foundation of the Peoples of the South Pacific International (FSPI), Fiji School of Medicine (FSMed), Live and Learn Environmental Education (LLEE), World Health Organisation (WHO), United Nations Children's Fund (UNICEF) and International Federation of Red Cross (IFRC). Through the Pacific WASH Coalition, facilitated through SOPAC funding support has been secured to carry out WASH campaigns from the Water Supply Sanitation Collaborative Council (WSSCC) for Tonga and Tuvalu for 2008. Activities in Tonga will focus on training of trainers workshops on water quality, rainwater harvesting, sanitation and hygiene together with media campaigns. Likewise, in Tuvalu a series of school workshops on water, sanitation and hygiene will be conducted, together with translation and dissemination of rainwater harvesting manual.

In terms of IYS and World Water Day campaign SOPAC will be working with Live and Learn in the Pacific, activities will include raising public education and awareness on water and sanitation,



development of educational materials (special emphasis on hand washing), incorporate water education into school/community programmes. The Pacific regional theme is Sanitation for Healthy Pacific Communities. Globally the UN Water group organises the World Water Day on 22 March since declared by the UN General Assembly in 1992. The World Water Day launch for the Pacific will be held in Fiji. Support will be provided to Pacific Island Countries to organise media campaigns, training workshops for students and teachers and educational awareness materials on sanitation and hygiene will be provided.

For more information on the International Year of Sanitation please contact:

Sharon Marks
Technical Advisor Communication and Education
Live & Learn Environmental Education
Email: sharon@livelearn.org.fj

Kamal Khatri
Water, Sanitation and Hygiene Officer
SOPAC Secretariat
Email: kamal@sopac.org



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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

Integrated Water Resource Management in Pacific Island Countries A Synopsis

Under the Global Environment Facility funded Integrated Water Resources and Wastewater Management Project 14 countries of the Pacific Region prepared detailed Diagnostic Reports summarising the status of their water resources and assessing the barriers to implementing Integrated Water Resource Management (IWRM) approaches in their respective countries. This Synopsis report represents a summary of the 14 Diagnostic Reports, providing a baseline status of IWRM approaches in country. It will provide a useful monitoring report over the coming years as countries start to implement IWRM approaches. The report provides some simple solutions to achieving IWRM in small island environments.

Copies of the Synopsis Report are available directly from SOPAC, or can be downloaded from the IWRM website:

<http://www.sopac.org/tiki/tiki-index.php?page=IWRM+Outputs>

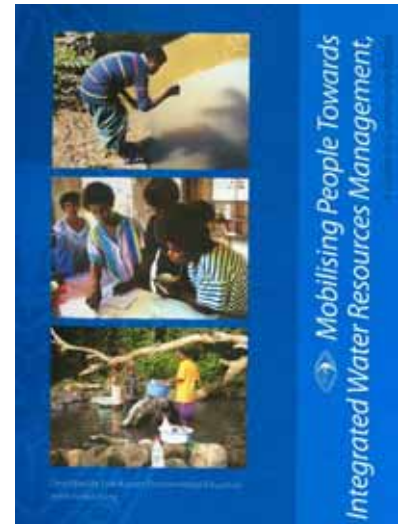




IWRM Community Mobilisation Guidelines

The final Community Mobilisation Guidelines to help assist communities and facilitators working with them to look at IWRM approaches at a village and community level are now available.

Developed by Live and Learn Environment Education, supported by SOPAC and UNDP and UNEP, the guidelines are a key output from the Project Design phase of the Sustainable Integrated Water and Wastewater Management project supported by the Global Environment Facility. This project will work with 14 countries in the Pacific starting in 2008. Through a network of national Demonstration Projects supported by regional capacity building components the project aims to raise awareness on IWRM approaches and strengthen national and regional approaches to integrate improved water management in the water sector and into wider national and community interventions.



The **IWRM Community Mobilisation Guidelines** is available on SOPAC website for download: <http://www.sopac.org/tiki/tiki-index.php?page=CLP+Publications>

Valuing the Environment in Small Islands

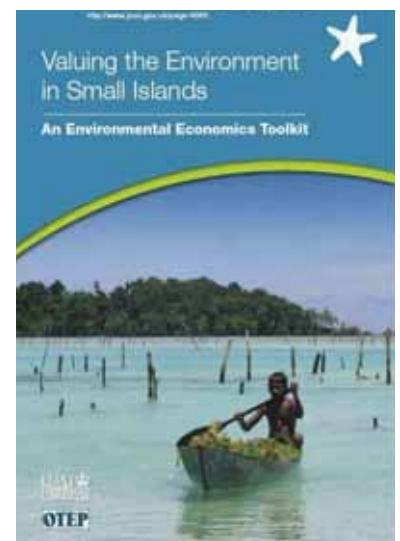
Although a large number of guides already exist on aspects of environmental valuation, none of these references specifically focus on the issues and needs of small islands. This toolkit was developed to address this gap. Its core aim is to provide a practical resource to meet the pressing needs of a 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:

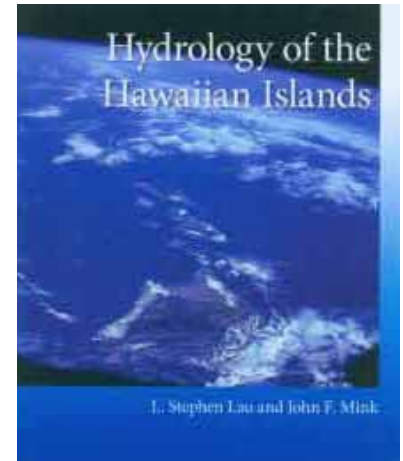
http://www.ukotcf.org/OTEP/docs/general_brochure.pdf





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? Answerstoquestionsuchastheseareessentialto 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.

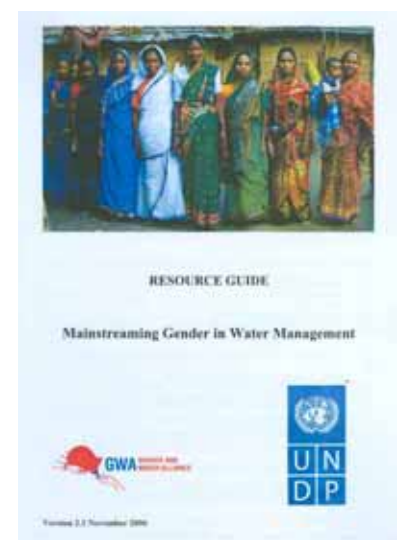
For further information on Hydrology of the Hawaiian Islands please visit the following link:
www.uhpress.hawaii.edu/cart/shopcore/?db_name=uhpress&page=shopflypage&product_id=4226

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/





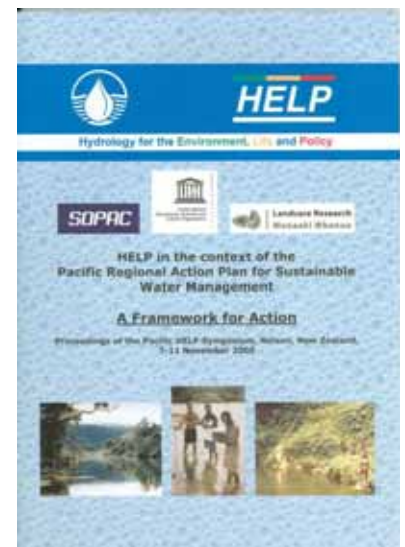
Hydrology for the Environment, Life & Policy

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.



Best Practices Guide for Water Laboratories

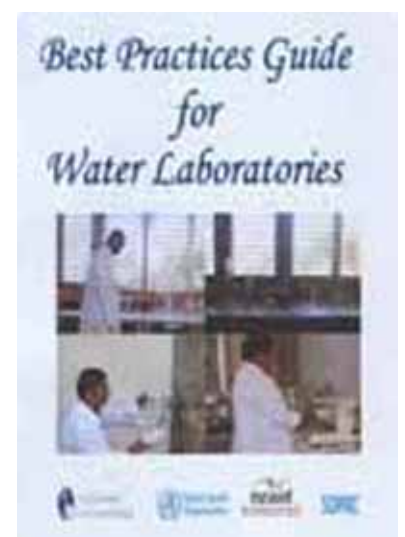
The guide is prepared as part of the NZAID-funded Pacific Water Quality Monitoring Capacity Building Programme that is being implemented by SOPAC, WHO and IAS-USP. It is intended to be a resource guide for small PIC water laboratories on best practices that can be employed in water laboratories.

The Guide is comprised of two parts:

Part 1 - outlines the 10 key 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).





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>



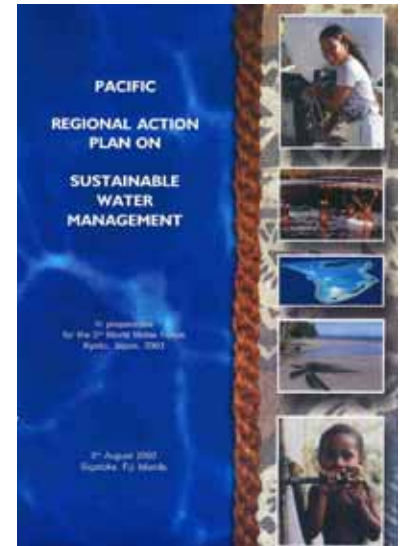
Pacific Regional Action Plan

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 on water and sanitation 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>

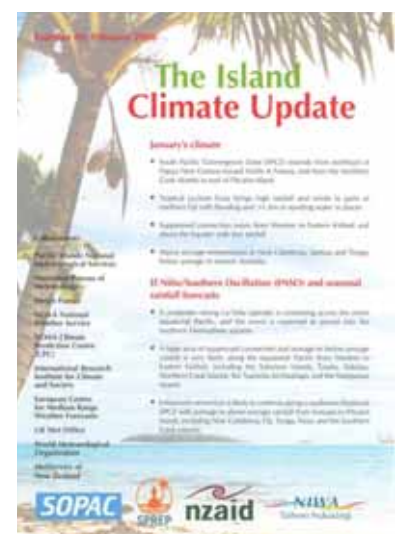


ICU bulletin

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>



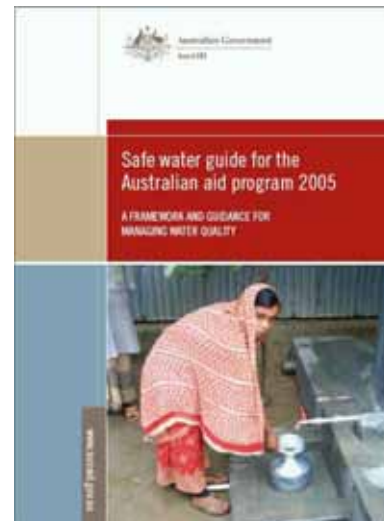


Safe Water guide for the Australian aid program

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** 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/virlib/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

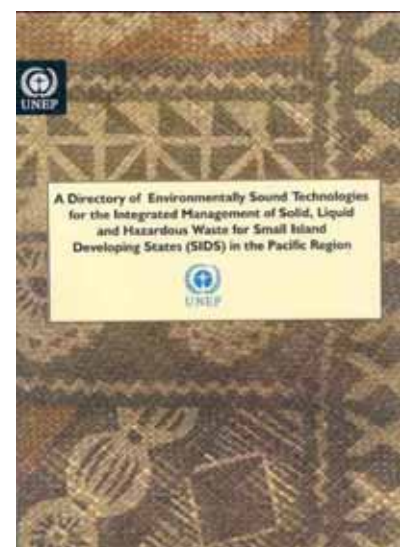


Directory of Environmentally Sound Technologies for the Integrated Management of Solid, Liquid and Hazardous Waste for Small Island Developing States (SIDS) in the Pacific Region

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/dwq/gdwq3/en/ or from the **WHO's Pacific Regional Office** (IddingsS@sp.wpro.who.int).



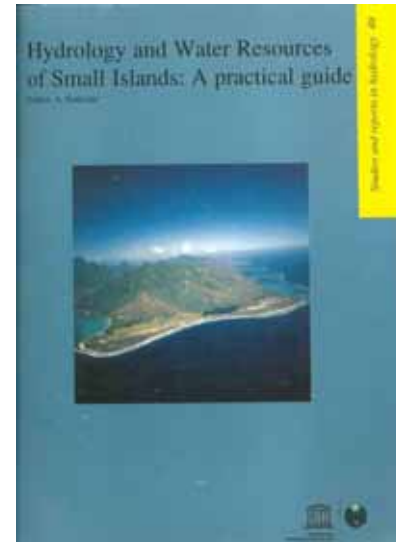


Hydrology and Water Resources of Small Islands: Practical Guide

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).

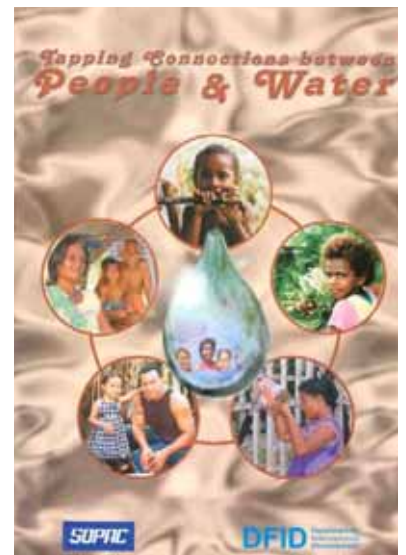


Tapping Water Connections

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 Connections"** 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

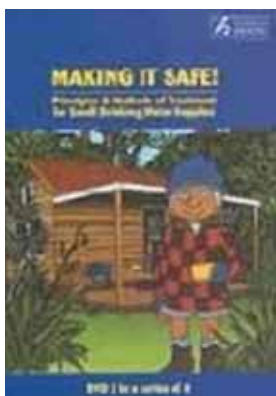
Don't Bug Me? – Pathogens and Pathways in Drinking Water Supplies



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.

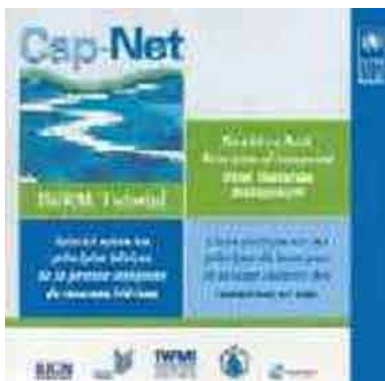
Making It Safe? - Principles and Methods of Treatment for Small Drinking Water Supplies



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

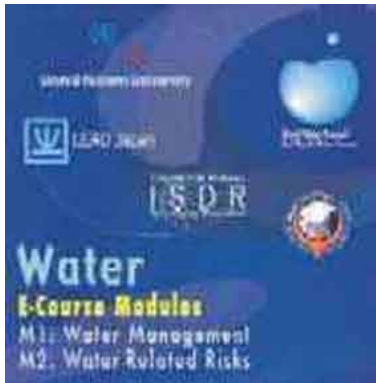


This DVD contains a brief introductory tutorial aimed at policy makers, water managers, trainers and educators who want a basic understanding of IWRM principle. It provides the case for IWRM and the argument against those who may oppose it on institutional or sectoral grounds.

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** (kamal@sopac.org) or you can download the document via the following website:

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



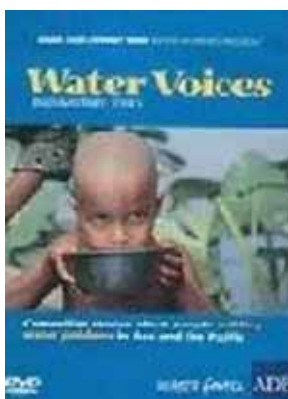
Cook Islands & Samoa Fresh Water Management



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



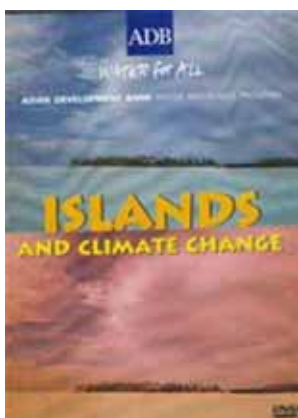
Water is essential to all life. And yet one in three Asians lacks access to safe drinking water, and half the people living in Asia and the Pacific do not have access to adequate sanitation. Conflicts over sharing of scarce water resources are increasing at an alarming rate.

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 2008

DATE	EVENT	LOCATION	DETAILS
28th January - 1st February	Third World Climate Research Programme International Conference on Reanalysis	Tokyo, Japan	The conference will consider not only global atmospheric reanalysis but also ocean and land reanalysis, mainly from the viewpoint of interaction with the atmosphere. http://jra.kishou.go.jp/3rac_en.html
February 21st - 22nd	1st meeting of the International Drinking Water Regulators (RegNet)	Geneva, Switzerland	The objectives of the first meeting of RegNet? are to:1) Review and seek agreement on RegNet's objectives 2) Review core elements needed for the regulation of drinking-water in order to best protect public health, building on WHO's Framework for Safe Drinking-water.3) Using core elements as a basis, identify strategic direction and prioritized Network activities (e.g. the development of internationally accepted best practices for the regulation of drinking-water). Note: Participation through invites only
March 14th	World Water Day 2008	Suva, Fiji	Organised by: SOPAC and Live and Learn in Suva Fiji
March 22nd	World Water Day 2008	International	Organised by: FAO Theme: Coping with Water Scarcity The international observance of World Water Day is an initiative that grew out of the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. www.unwater.org/wwd07/flashindex.html



Pacific Water Agenda 2008 - Continued

<p>April 7th - 11th</p>	<p>4th Global Conference on Oceans, Coasts, and Islands</p>	<p>Hanoi, Vietnam</p>	<p>The 4th Global Conference on Oceans, Coasts, and Islands will mobilize high-level policy attention, topical working groups, analytical papers, and other contributions to provide a review of progress achieved (or lack thereof) in advancing ecosystem management and integrated coastal and ocean management by 2010 at national and regional (transboundary) levels, and in the 64% of the ocean beyond national jurisdiction, and on the allied goals of reducing marine biodiversity loss by 2010 and of establishing networks of marine protected areas by 2012 (goals adopted by the world's political leaders at the 2002 World Summit on Sustainable Development).</p> <p>www.globaloceans.org/</p>
<p>April 15th - 17th</p>	<p>Water Down Under 2008</p>	<p>Adelaide, South Australia</p>	<p>A three day scientific program, pre-conference workshops and field trip is planned in association with a trade exhibition, a comprehensive partner program and opportunities for all delegates to enjoy pre and post conference tours to some of Australia's major attractions.</p> <p>www.waterdownunder2008.com/welcome.htm</p>
<p>May 19th - 23rd</p>	<p>Water Confernece</p>	<p>Noumea, New Caledonia</p>	<p>Economical and Social Commission of New Caledonia (CESNC) is organising a conference in partnership with the French Development Agency (AFD) in Noumea</p>
<p>June 23rd - 27th</p>	<p>4th Caribbean Environmental Forum & Exhibition (CEF-4)</p>	<p>Grenada</p>	<p>CEF-4 will be held in collaboration with the 14th Annual Wider Caribbean Waste Management Conference (ReCaribe 2008), an event that attracts professionals from various disciplines to share their experiences and knowledge.</p> <p>http://www.cehi.org.lc/Website/index.htm Selected Water Websites</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>
<p>Global Water Partnership www.gwpforum.org</p>	<p>USP www.usp.ac.fj</p>
<p>GWP Australia www.gwpaustralia.org</p>	<p>WSSCC http://www.wsscc.org/</p>
<p>Island Climate Update www.niwa.cri.nz/NCC/ICU</p>	<p>NIWA www.niwa.co.nz</p>
<p>NZAID www.nzaid.govt.nz</p>	<p>SPC www.spc.int</p>
<p>USGS http://hi.water.usgs.gov</p>	<p>Japan Water Forum http://www.waterforum.jp/eng/index.html</p>
<p>Water Virtual Learning Centre (WVLC), University of the South Pacific www.earth.fst.usp.ac.fj/index.php?id=4043</p>	<p>UN-Water http://www.un.org/waterforlifedecade/</p>
<p>World Summit on Sustainable Development www.johannesburgsummit.org</p>	<p>World Wide Fund for Nature www.wwfpacific.org.fj</p>



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

We have changed the frequency of issuing this newsletter from semi-annually to 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

Send a blank email message with the words

"unsubscribe" in the subject field to: sanjeshni@sopac.org to unsubscribe from this list if you wish not to receive any further issues in the future.

The Pacific Water Partnership Initiative News is produced by the Pacific Partnership Initiative on Sustainable Water Management for Water Awareness Program to provide water information to Pacific member governments, professionals, researchers, private sector and their counterparts in the donor community who are interested in water sector issues and initiatives.

For comments or more information:

Marc Overmars



Facilitator Pacific Partnership Initiative on Sustainable Water Management

SOPAC Pacific Islands Applied Geoscience Commission

Postal Address: Private Mail Bag, GPO, Suva, Fiji

Street Address: Mead Road, Nabua, Fiji

Tel: +679 338 1377 Fax: +679 337 0040

E-mail: marc@sopac.org

Web site: <http://www.sopac.org/CLP+Pacific+Partnership>

Sanjeshni Naidu



Project Officer Pacific Partnership Initiative on Sustainable Water Management

SOPAC Pacific Islands Applied Geoscience Commission

Postal Address: Private Mail Bag, GPO, Suva, Fiji

Street Address: Mead Road, Nabua, Fiji

Tel: +679 338 1377 Fax: +679 337 0040

E-mail: sanjeshni@sopac.org

Web site: <http://www.sopac.org/CLP+Pacific+Partnership>

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