



Pacific Partnership Initiative on Sustainable Water Management

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Issue: IX, March 2006

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Welcome to the ninth 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. This issue has a special focus on World Water Day and its theme "Water and Culture".

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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News

World Water Day 22 March 2006- "WATER AND CULTURE"

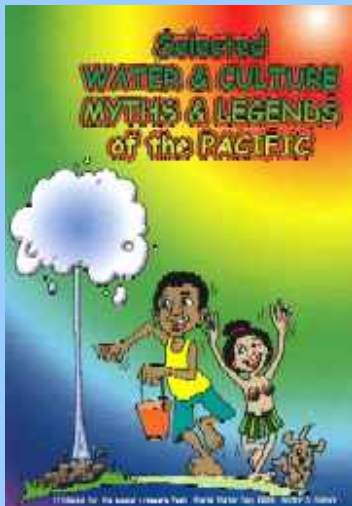
SUVA, Fiji Islands, 22 March 2006 – Water is essential for life. We all need 20 to 50 liters of clean water each and every day. However, millions of people around the globe face water shortages and struggle daily to meet this basic need.

"Water & Culture" is the theme for this year's World Water Day and it challenges us to look at the many ways of using, conserving and celebrating water, anchored in different cultural traditions across the world. Water plays a central role in many religions and beliefs. As a source of life, it represents (re)birth and as water cleanses the body, it purifies it. Both these qualities confer a highly symbolic status to water.

World Water Day emerged from the United Nations Conference on Environment and Development (UNCED) in 1992 and the importance of water continues to be recognised with the UN General Assembly proclaiming the years 2005 to 2015 as the International Water for Life Decade.

As in previous years, the South Pacific Applied Geoscience Commission (SOPAC) and Live and Learn Environmental Education are organising the Pacific World Water Day campaign. "Plan for Water, Plan for Life, Water for Life" is the overarching motto linked to this year's theme. SOPAC and Live & Learn have produced awareness materials comprising of posters, photo packs, stickers and water & culture bags. These materials have been distributed throughout the Pacific region to encourage the observance of World Water Day.

To mark World Water Day in Fiji, an exhibition will be held at the Fiji Museum in Suva from 10:00am to 12:00 noon on Wednesday 22nd March 2006. The event is open to the public and attendance is expected from



For further information on World Water Day please visit:

[http://www.sopac.org/
World+Water+Day+2006](http://www.sopac.org/World+Water+Day+2006)

or contact:

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Marie Fatiaki
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Live and Learn Environmental Education
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schools, NGOs, the private sector, donor organisations and government ministries. Selected primary and secondary schools around Suva have also been invited to participate in the celebration.

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[UNESCO Funding for Water Resources Assessment - Solomon Islands](#)

Funding has been made available to the Department of Mines & Energy of the Solomon Islands from UNESCO's Participation Program. The Contribution from the 2004-2005 Biennium covered the purchase of hydrological equipment for water resources assessment for water supplies and hydropower. The grant will also be used to raise awareness on Water related issues.

The equipment purchased from NIWA and DATAFLOW New Zealand comprises water level recorders, rainfall gauges and streamflow equipment for low flow and high flow gauging. The equipment will assist the Water Resources Division to install hydrological monitoring stations at priority sites in the Solomon Islands.

The UNESCO funding addresses an important need of the Solomon Islands Water Resources Division which has been severely lacking hydrological equipment over the past years.



For further information on UNESCO Funding in Solomon Islands please contact:

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Solomon Islands
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[Building Water Resources Management Capacity – Cook Islands](#)

Aitutaki, an “almost atoll” island in the Cook Islands is reliant on groundwater for the bulk of water supplied to the local and sizeable tourist population. Upgrading of the water supply system through a donor funded project 10 years ago also established a Water Monitoring Programme consisting of an extensive salinity, temperature and water level monitoring schedule. However, the Programme proved difficult to maintain as equipment which broke down was not replaced and there was a need for external technical support.

Since the end of 2004 SOPAC, with funding support from UNESCO, along with the Department of Water Works in Rarotonga have been working with the Aitutaki Water Supply to build water resources management capacity. The Department of Water Works have developed a GIS database of the water supply infrastructure on Aitutaki through a CIDA funded climate adaptation project and have trained local staff in its use. Local staff have also been involved in the Pacific Hydrological Training Courses facilitated by SOPAC in collaboration with UNESCO and WMO and funded by NZAID. In addition new monitoring equipment has been purchased and a programme mapped out to continue training and developing capacity not only to collect but to analyse and interpret monitoring data in order to be able to make informed decisions on how to best manage the water resources of Aitutaki. This work is a good example of how members of the Partnership can effectively work together to promote sustainable water management in the Pacific.



For further information on Water Resource Management please contact:

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linda@sopac.org





For further information on the Technical Conference please visit:

www.wmo.int/index-en.html

or contact:

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Chief Hydrology Division
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Geneva 2-Switzerland
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Technical Conference on WHYCOS

A two day Technical Conference on World Hydrological Cycle Observing System (WHYCOS) was held on the 30th and 31st January 2006 followed by the seventh meeting of the WHYCOS International Advisory Group (WIAG) on the 1st to 2nd February 2006 in the WMO Secretariat in Geneva.

The technical conference and the meeting was attended by fifty experts, representing HYCOS projects, basin organizations, space agencies, universities and research institutes, development banks and other donors. The WIAG has the mandate to facilitate the worldwide linkage and the coordination among all technical aspects of the WHYCOS programme and to provide guidance to ensure its successful implementation.

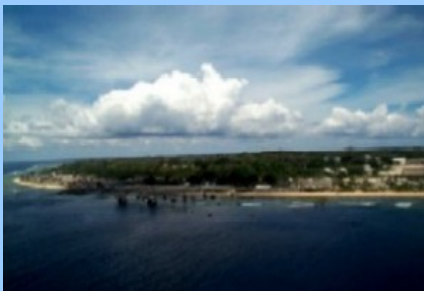
At the 7th WIAG session, participants discussed topics related directly to the implementation and management of the WHYCOS programme. They stressed the capital role that regional institutions (economic grouping or basin authorities) can have in promoting HYCOS components. The countries commitment towards the project and its sustainability was seen as a key factor in mobilizing donors' resources for the development of new components.

It also underlined the need to build country ownership and that each project should develop strategies whereby national resources progressively replace external funds in the project operation in order to ensure its sustainability. Other factors ensuring the sustainability of the project are the ability to generate useful products that meet the requirement of the widest range of end users, and the use of an optimal balance between simple, basic equipment and more modern technology.

WIAG members also recommended that the WHYCOS web site, beyond information on the implementation of

the programme and its component, should provide technical guidance and procedures and educational material, and host a forum for sharing methodologies and discussing issues of common interest among the HYCOS projects globally.

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For further information on Governing Water please contact:

Live and Learn
livelearn@connect.org.fj
www.liveandlearn.idea.org.au



[Governing Water in the Fiji Islands](#)

Last year the Live and Learn Environmental Education (LLEE) Governing Water Team completed workshops in many parts of the Fiji Islands, focusing on training local facilitators on how to address water governance issues and develop management plans in their communities. So far 150 local facilitators have been trained from the 46 Fiji communities that are part of the Governing Water Programme funded by the European Union. Under the European Initiative for Democracy and Human Rights, Governing Water Youth Groups in eastern Fiji also participated in Youth Lifeskills Training facilitated by Live & Learn and the United Nations Children's Fund (UNICEF) and included discussions on HIV/AIDS.

The Team also produced a Governing Water Manual which included information on water governance, tips for effective facilitation, and a detailed activity schedule designed to build capacity and promote community participation, building dialogue and critical thinking skills. Activities also include monitoring of waterways and water sources using simple water test kits. The manual is translated in Fijian and Hindi languages and currently used by the local facilitators. The final copy should be available for distribution to the facilitators and other interested parties by early 2006.

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[Fijian Communities Trial H₂S Water Quality Test](#)

Two communities in the eastern part of the Fiji Islands have successfully carried out simple water quality testing using H₂S (hydrogen sulphide) water monitoring toolkits developed by the World Health Organization (WHO). A half-day workshop had been held earlier on how to use the kit. The H₂S strip paper indicates the presence or absence of harmful bacteria in water.

In Fiji, WHO South Pacific Office, SOPAC, and the

For further information on Fijian
Communities Trial H2S Test
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Institute of Applied Sciences (IAS / USP) are testing the accuracy of the test, while Live & Learn with Governing Water communities, trial the effectiveness of the test as a community education tool. The workshop led the communities to take immediate action to safeguard water and clean up their wells, water tanks and surroundings after they found presence of bacteria through the H2S test.

The success of the water toolkit is now spreading out to other communities and will soon be part of the school curriculum.

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For more information visit the Small Island Voice website:

www.smallislandsvoice.org/
or the global forum:
<http://www.sivglobal.org/>

or contact:

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[Small Island Voices - Is the water clean?](#)

Small Islands Voices is an email platform which seeks to overcome the isolation of small islands by building capacity and strengthening local, regional and inter-regional communication. It tries to obtain islanders' views on environment and development issues at the local level and having these views contribute to the review of the 'Programme of Action for the Sustainable Development of Small Island Developing States'.

In the most recent issue of Small Island Voices, the problem of waterborne diseases found in rural areas in drinking water in Fiji was highlighted along with marine pollution due to untreated sewage discharge in the British Virgin Islands in the Caribbean.

You can contribute to the discussion forum by sending an email to gilliancambers@aol.com or visit the website www.smallislandsvoice.org/.

[Bottled Water : Pouring Resources Down the Drain](#)



For the further information on Bottled Water please contact:

Emily Arnold
epi@earth-policy.org

The global consumption of bottled water reached 154 billion liters in 2004, up 57 percent from that of five years earlier. Some of the largest increases in bottled water consumption have occurred in developing countries. Of the top 15 per capita consumers of bottled water, Lebanon, the United Arab Emirates, and Mexico have the fastest growth rates.

Even in areas where tap water is safe to drink, demand for bottled water is increasing—producing unnecessary garbage and consuming vast quantities of energy. Although in the industrial world where bottled water is usually associated with healthy living, it is often no healthier than tap water and can cost up to 10,000 times more. The United States produce 94 percent of the bottled water consumed domestically and also import water shipped some 9,000 kilometers from Fiji and other countries.

or visit:

www.earth-policy.org/Updates/2006/Update51.htm



There is no question that clean, affordable drinking water is essential to the health of our global community, but bottled water is not the answer in the developed world, nor does it solve problems for the 1.1 billion people who lack a secure water supply. Improving and expanding existing water treatment and sanitation system is more likely to provide safe and sustainable sources of water over the long term. In villages, rainwater harvesting and digging new wells can create more affordable sources of water.

The United Nations Millennium Development Goal for environmental sustainability calls for halving the proportion of people lacking sustainable access to safe drinking water by 2015. Meeting this goal would require doubling the \$15 billion a year that the world currently spends on water supply and sanitation. While this amount may seem large, it pales in comparison to the estimated \$100 billion spent each year on bottled water.

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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.

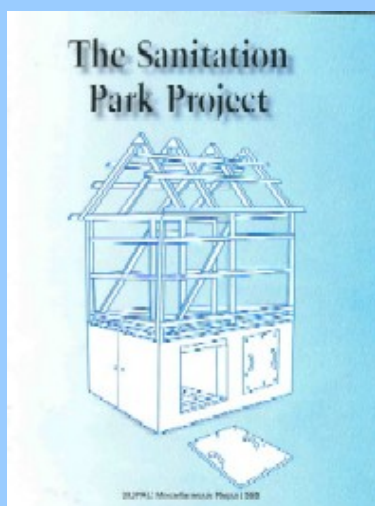
The Facilitator enables countries and development agencies to: identify successful previous activities and therefore improve the sustainability of subsequent interventions; reduce and prevent duplication of activities; link country requirements to development programmes (and vice versa); and augment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

Publications

Sanitation Park Project Flyer



A flyer on the Sanitation Park Project was developed to provide background information to community members, students and to interested individuals/institutions visiting the Park or for those who would like to make a visit. The flyer gives a brief description of the available Sanitation Park systems and their features. Existing demonstration systems include; a sanitary well, a water seal latrine, a septic tank and soakage trench, a ventilated improved pit latrine and a waterless or composting toilet. Wherever possible pictures and illustrations have been used to present these systems for better understanding. Lastly, some useful references have been listed for those keen on further investigation on one of the wastewater treatment option. Contact details on personnel of the project team are provided should you require specific data on a topic.

Copies of the Sanitation Park Project Flyer can be obtained from the **SOPAC Secretariat** (kamal@sopac.org) or you can download the document via the following website:

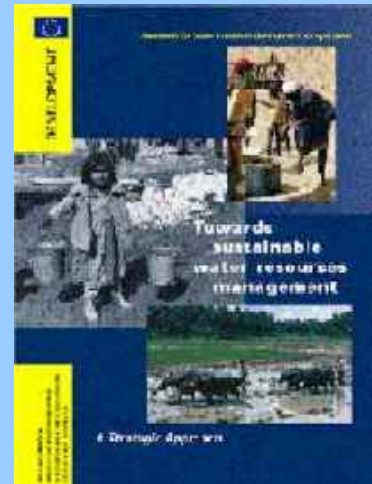
<http://www.sopac.org/Sanitation+and+Hygiene>

Water Resources development and management in an integrated and sustainable way for the benefit of all is based on a set of guiding principles.

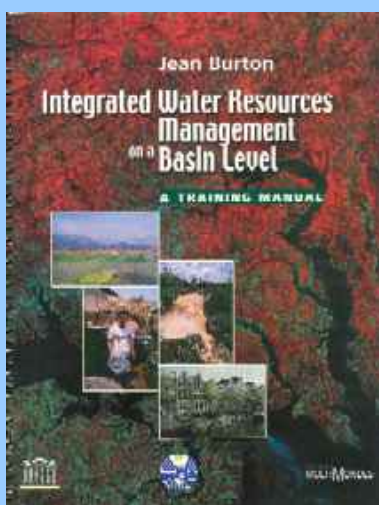
These Guidelines set out a strategic approach to the management and sustainability of water resources and the delivery of water-related services, providing a broad perspective of all aspects of water resources activities. They are designed to respond to the needs of EC staff and those of partner country governments and other professionals working for the Commission and its Delegations. Water issues are cross-cutting and the Guidelines should enable experts and non-experts to cross disciplinary and sectoral boundaries.

Copies of the Guidelines for water resources development co-operation towards sustainable water resources management can be obtained from the **European Commission**. For further information contact development@ced.eu.int.

Guidelines for water resources development co-operation towards sustainable water resources management



Integrated Water Resource Management on a Basic Level - A Training Manual



This manual is an introduction to the principles underlying the integrated water resources management concept: the focus will be on the approaches and management tools that facilitate its application, taking into account the size of the territory, whether it be national and international basins or sub-basin of local interest.

The manual is first destined to trainers who, through a national or a regional seminar, would bring the participants to produce a diagnosis of their basin and an action plan. A simple and field-tested framework will guide them throughout this learning process. On the other hand, those who would like to perfect their knowledge and improve their capacity to manage water uses in a more sustainable fashion can also use the manual.

Copies of the Integrated Water Resource Management on a Basic Level - A Training Manual can be obtained from **UNESCO** or can be downloaded from the following website: http://www.unesco.org/water/ihp/iwrm_basins.shtm

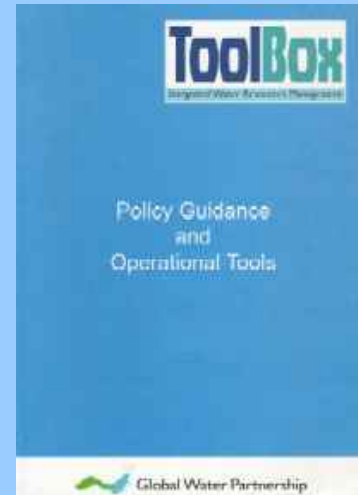
Policy Guidance and Operational Tools

The purpose of Global Water Partnership's (GWP) ToolBox on Integrated Water Resources Management is to provide water management professionals clear examples of good and bad practices and lessons learned from real life experiences of implementing IWRM.

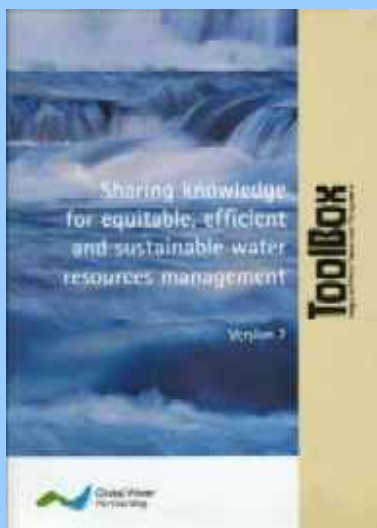
The GWP ToolBox contains a description of 50 tools for developing IWRM, each of which is supported with case studies, reference and organisations. Version 1: contains discussions on way IWRM and how the ToolBox can help - 'Policy Guidance' and the descriptions of the tools for IWRM themselves.

Copies of the Policy Guidance and Operational Tools document is available from **GWP**. More information on ToolBox is available on the GWP website:

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



Sharing knowledge for equitable, efficient and sustainable water resources management



The primary users of the IWRM ToolBox are water resource management professionals such as water resource planners, policy makes, river basin managers and political advisors. Other users will include local government staff, non-government organisations and the general public with water interests.

Version 2 - 'Sharing knowledge for equitable, efficient and sustainable water resources management ' is aimed to assist with the development of practices inspired by the principles of IWRM.

Copies of the Sharing knowledge for equitable, efficient and sustainable water resources management is available from **GWP**. More information on ToolBox is available on GWP website:

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

After 3 years of operation beginning on 1996, the Technical Advisory Committee (TAC) of Global Water Partnership (GWP) felt there was a need for a clarification and formulation of certain principles and recommendations within integrated water resources management - serving a general purpose of contributing to the implementation of IWRM, but also an internal purpose of establishing a common understanding within GWP and TAC.

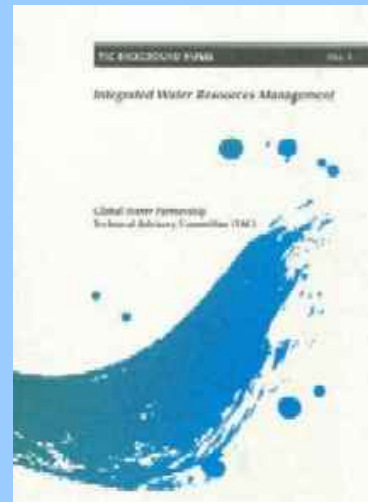
The present paper represents the "corporate view" of TAC on integrated water resources management and has been authored by all members of TAC in the period 1996 through 1999.

Copies of the Integrated Water Resource Management-Technical Advisory Committee Background Papers is available from GWP.

More information on Integrated Water Resource Management-Technical Advisory Committee Background Papers is available on **GWP** website:

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

Integrated Water Resource Management-Technical Advisory Committee Background Papers



The Island Climate Update



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>

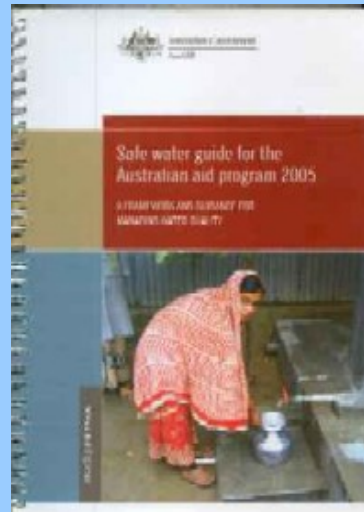
Safe Water Guide for the Australian Aid Program 2005

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.aid.gov.au



An 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:

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

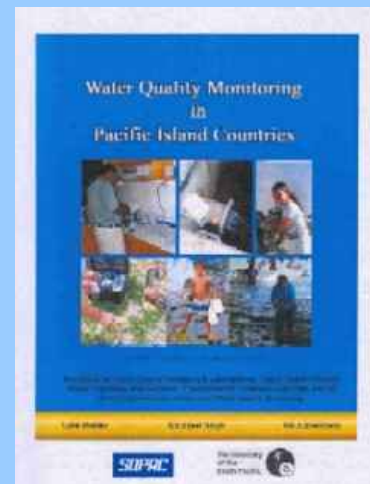
Water Quality Monitoring in Pacific Island Countries

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:

http://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:

http://www.sopac.org/tiki/tiki-sopac_download.php?path=

Integration of Social and Technical Science in Groundwater Monitoring and Management

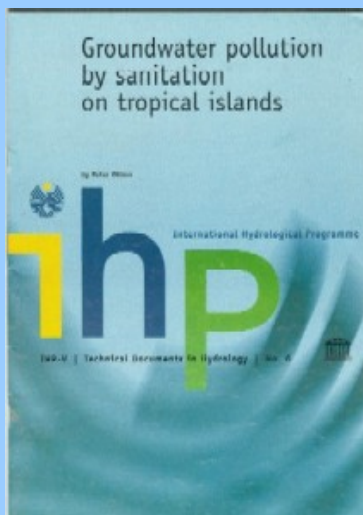
The integration of Social and Technical Science in Groundwater Monitoring and Management describes a groundwater pollution study on the island of Lifuka in the Kingdom of Tonga, in a village where private wells are an important source of water, in addition to dependence on household rainwater tanks and a public reticulated system. Comparison is also made with the findings of a ground water recharge project, which was undertaken on the island of Tarawa in the Republic of Kiribati, Central Pacific, where a reticulated groundwater system, sourced from a government controlled water reserve, was the primary focus of the study.

Copies of the Integration of Social and Technical Science in Groundwater Monitoring and Management 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+Publications>



Groundwater Pollution by Sanitation on tropical Islands



The objective of the Groundwater Pollution by Sanitation on tropical Islands is to review the scientific foundations for managing this issue with particular reference to small tropical islands. This includes a brief assessment of the extent of groundwater pollution by sanitation systems, the nature of contaminants, their fate in the subsurface environment including factors affecting their attenuation, and the methods which have been used to study the movement of sewage contaminants in groundwater. The report concludes with a summary of the options for managing this problem, including siting, design, and maintenance of sanitation systems, and techniques to undertake site specific studies.

Copies of the Groundwater Pollution by Sanitation on tropical Islands 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+Publications>

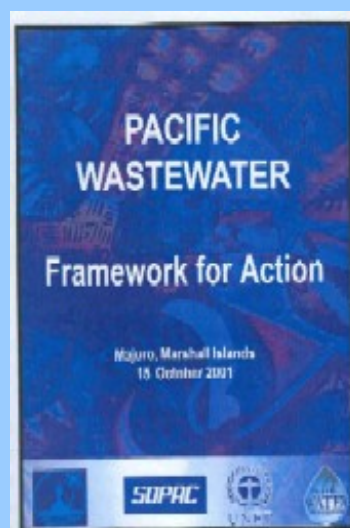
Pacific Wastewater Framework for Action

The Pacific Wastewater Policy Statement sets out a framework of guiding principles and policies to guide future development and co-operation by the Pacific Island Countries (PICs).

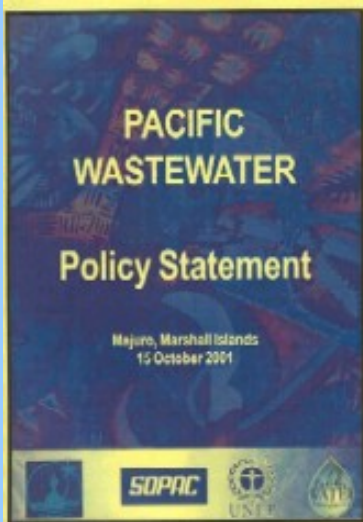
The Pacific Wastewater Framework for Action comprises a list of proposed actions to be undertaken at national and regional levels to achieve the goals that are laid out in the Pacific Wastewater Policy Statement and which refer to the GPA Strategic Action Plan and Guidance Document on Wastewater (UNEP/GPA, WHO, UNCHS-Habitat & WSSCC).

Copies of the Pacific Wastewater Framework for Action 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+Publications>



Pacific Wastewater Policy Statement



The Global Programme of Action for the Protection of the Marine Environment from Land based Activities (GPA) identifies the priority for action on sewage. In the Pacific region, a consultation process was facilitated by SOPAC, SPREP, PWA and the UNEP/GPA Coordination Office on wastewater management. A Regional Wastewater Management Meeting was held 10-15 October 2001 in Majuro, Republic of Marshall Islands and was the latest in the consultation process, which included preliminary sessions in February and March 2001 in Auckland and Apia. The Majuro meeting was sponsored by the Governments of Belgium, New Zealand and Taiwan/ROC.

The meeting brought together representatives from 15 Pacific Island countries (American Samoa, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, New Zealand, Niue, Papua New Guinea, Palau, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu), technical experts from in and outside the region, regional and international organisations (SOPAC, SPREP, SPC, PWA, WHO, UNESCO, UNEP/GPA), potential donors and NGO's, to complete the Pacific Wastewater Policy Statement and the Pacific Wastewater Framework for Action.

Copies of the Pacific Wastewater Policy Statement 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+Publications>

Pacific Regional Action Plan on Sustainable Water Management

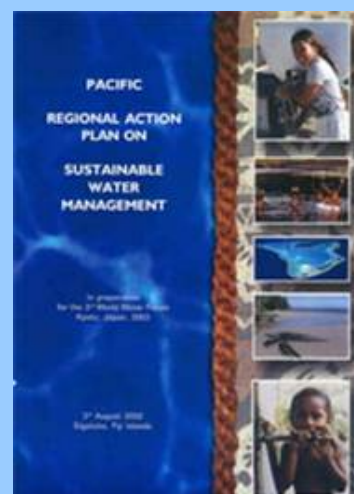
The national consultations as well as a regional meeting held in Sigatoka, Fiji from 29 July – 3 August 2002 provided a platform through which participants translated ideas into decisions and policy changes resulting in the Pacific Regional Action Plan on Sustainable Water Management (Pacific RAP).

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".

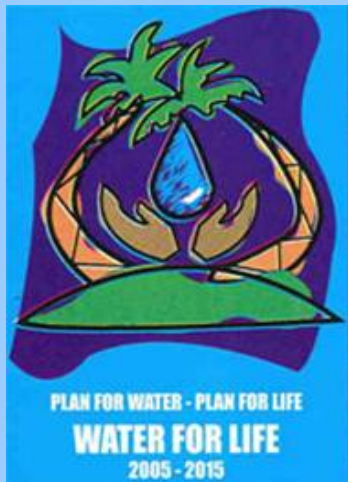
Copies of the Pacific RAP can be obtained from the **SOPAC Secretariat** (sarah@sopac.org) or you can download the document via the following website:

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

Pacific Regional Action Plan



World Water Day Campaign



World Water Day Material 2005 available: Water for Life

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 Environmental Education** (marie@livelearn.org.fj). you can download the document via the following website:

<http://www.sopac.org/WORLD+WATER+DAY+22+March+2005+-+WATER+FOR+LIFE>

Third Edition WHO 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 WHO's Pacific Regional Office (IddingsS@sp.wpro.who.int).



Hydrology and Water Resources of Small Islands: A Practical Guide



Hydrology and Water Resources of Small Islands: A 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** (sarah@sopac.org) or from the **UNESCO Apia Office** (hans@unesco.org.ws).

Harvesting the Heavens. A Manual for 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 Rainwater Harvesting in Pacific Island Countries



Harvesting the Heavens, Guidelines for Rainwater Harvesting in 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>

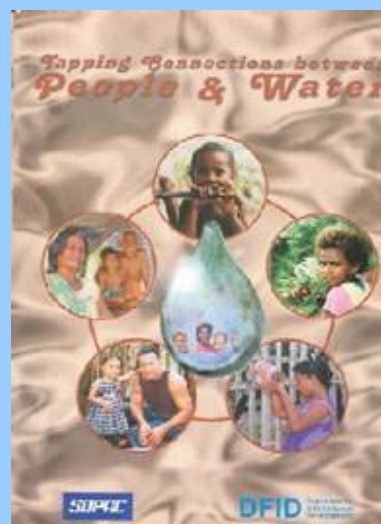
Tapping Connections between People & Water

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 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



Cap-Net - IWRM Tutorial

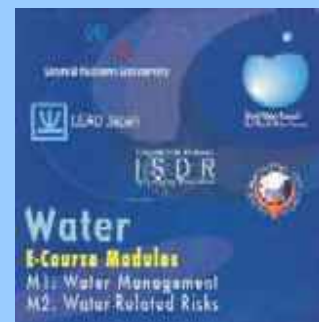
This DVD contains a brief introductory tutorial aimed at policy makers, water managers, trainers and educators who want a basic understanding of IWRM principle. It provides the case for IWRM and the argument against those who may oppose it on institutional or sectoral grounds.

Copies of this 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 this 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.

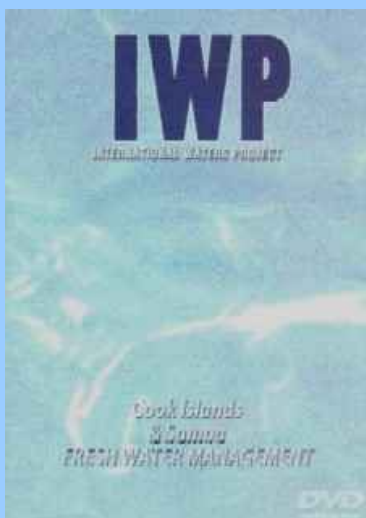
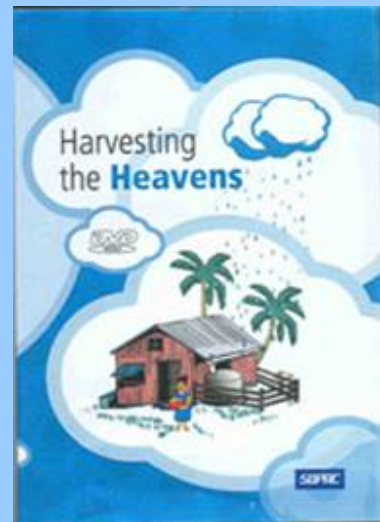
Copies of this DVD can be obtained from the **Global Water Partnership Secretariat**.

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 this documentary 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>



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.

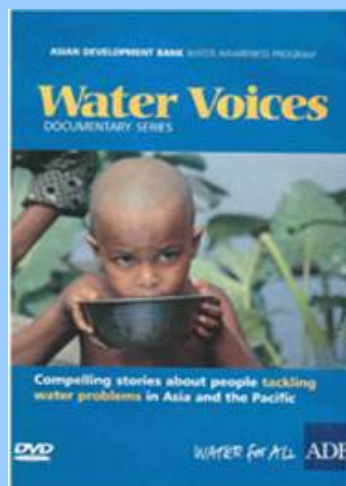
Copies of this documentary can be obtained from the **SPREP Secretariat**.

Water Voices Documentary Series

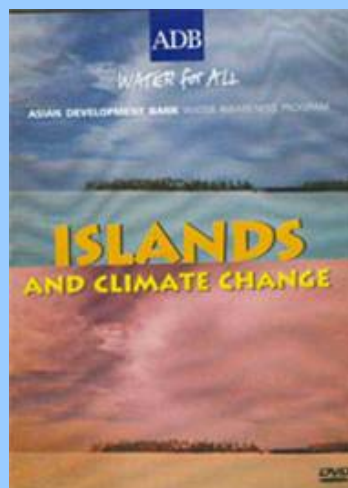
Water is essential to all life. And yet one in three Asians lacks access to safe drinking water, and half the people living in Asia and the Pacific do not have access to adequate sanitation. Conflicts over sharing of scarce water resources are increasing at an alarming rate.

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 2006

DATE	EVENT	LOCATION	DETAILS
30 th Jan-2 nd Feb	Technical Conference in conjunction with the Seventh Session of the WHYCOS International Advisory Group (WIAG)	WMO Secretariat, Geneva	WMO is organizing a Technical Conference in conjunction with the Seventh Session of WIAG to officially launch the WHYCOS Guidelines and WHYCOS web portal and take the opportunity to invite River/Lake Basins Organizations, financial partners and other partners to exchange experience on the new technologies available in hydrological data observation and monitoring.

March 13 th -14 th	Australian Water Summit Sydney 2006 'Progress and investment; identifying the priorities'	Sydney, Australia	This summit will focus on the key strategic issues facing the water industry including updates of the activities and priorities of the Australian National Water Commission (NWC), including guidance on implementation plans for the commitments by State, Territory and Australian Governments under the National Water Initiative and the development of a framework for the National Competition Policy assessments by the NWC, and progress on the implementation of the Australian Government Water Fund. http://www.unesco.org/water/water_events/Detailed/1139.shtml
March 16 th -19 th	Putaruru Water Festival 2006	Putaruru, Waikato, New Zealand	The Putaruru Water Festival will celebrate this resource, emphasizing the importance of its sustainable use. The event is expected to attract a great deal of participation from a variety of cultural and age groups. http://www.unesco.org/water/water_events/Detailed/1167.shtml http://www.putaruru.co.nz/
March 16 th -22 nd	4WWF	Mexico City, Mexico	The World Water Forum is an initiative of the World Water Council that has the aim of raising the awareness on water issues all over the world. The World Water Fora are built on the knowledge, experience and input of different types of organizations active in the global water polity. http://www.worldwaterforum4.org.mx/home/genwwf.asp?lan=3 http://www.worldwatercouncil.org/index.php?id=18
March 17 th -21 st	First International Water and Film Event	Mexico City, Mexico	Organised as part of the 4th World Water Forum, the programme includes four film categories: full length feature films; documentaries or educational programmes; awareness-raising short films; and awareness-raising spots. Prizes will be awarded in the last two categories. http://www.worldwaterforum4.org.mx/home/fest_cine.asp
March 22 nd	World Water Day 2006	Suva, Fiji	Organised by: SOPAC and Live and Learn in Suva Fiji marking the UNESCO Theme: Water and Culture. http://www.sopac.org/CLP+Water+Awareness
March 22 nd	World Water Day 2006	International	Organised by: UNESCO Theme: Water and Culture 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. http://www.unesco.org/water/water_celebrations/index.shtml
April 3 rd	EU WF Information Seminar	Suva, Fiji	EU WF Information Seminar will be held at Holiday Inn, Suva, Fiji. For more information please contact Horst Pilger, European Commission Delegation for the Pacific on email: Horst.Pilger@cec.eu.int .
April 3 rd -7 th	7th International Conference on Urban Drainage Modelling (UDM) and the 4th International Conference on Water Sensitive Urban Design (WSUD)	Melbourne, Australia	This conference incorporates UDM and WSUD conferences and will deal with two highly topical issues in Urban Water management: modelling of urban drainage systems and the interfaces to other parts of the urban water cycle current achievements and problems in Water Sensitive Urban Design (WSUD), also known as Low Impact Development Design. http://www.unesco.org/water/water_events/Detailed/1114.shtml
May 17 th -19 th	Second Interagency Conference on Research in the Watersheds (ICRW)	Otto, North Carolina	The purpose of this conference is to highlight current research on watershed science and management. For further information contact Randy Fowler at dlfowler@fs.fed.us or 828-524-2128 ext 111. http://www.ars.usda.gov/News/docs.htm?docid=9909
August 1 st -4 th	2006 International Water Conference	Hyatt Regency, Auckland, New Zealand	Water2006 is a unique event for New Zealand which will focus entirely on scientific and research advancements in the water environmental field. A core team of people including engineers, scientists and researchers have formed a technical group to

			develop a programme . http://www.water2006.com/
August 20th-26th	2006 World Water Week in Stockholm	Stockholm, Sweden	The "annual global meeting place for capacity-building, partnership-building and follow-up on the implementation of international processes and programmes in water and development". The theme for 2006 is "Beyond the River – Sharing Benefits and Responsibilities". http://www.worldwaterweek.org/
September 26th-28th	3rd International Symposium on Integrated Water Resources Management	Bochum, Germany	The main topics are: from headwaters to the mouth - vulnerable interactions between landscapes, water & societies; flood risk, vulnerability & protection (a contribution to the International Flood Initiative); water management as a problem; water management as a solution. http://www.conventus.de/water/
October 2006 9th- 11th	ALL ABOUT KARST & WATER	Vienna, AUSTRIA	The conference provides: <ul style="list-style-type: none"> • presentations of scientific papers • presentations of applied projects and user experiences • company and product presentations • interdisciplinary discussions • excursions For more information please contact office@kater2006.at or visit the website http://www.kater2006.at/
October 2006 21st- 25th	Small Island Nations: Water, Wastewater and Environmental Issues WEFTEC 06 Conference and Exhibition run by Water Environmental Federation	Dallas, Texas	Subtopics include: Impact of Natural Hazards (floods, tsunamis, hurricanes, typhoons) on vulnerable water and wastewater infrastructure; Case studies and lessons learned from the 2004 Boxing Day Tsunami; Appropriate water and wastewater technology for areas with high energy costs and no/low operational base; * Responding to climate change (sea level rise, freak climatological events) in the water resources segment; Applying an integrated water and wastes management approach in small communities and small countries http://www.weftec.org/program
November 2006 14th-16th	Water in Mining 2006 "Multiple Values of Water"	Brisbane, Australia	An international conference organised by the Australasian Institute of Mining and Metallurgy in conjunction with the Sustainable Minerals Institute of the University of Queensland . Further information, call for papers and conference registration can be obtained at the conference website - http://www.ausimm.com/waterinmining2006
November 2006 25th-29th	Groundwater Quality 2007	Fremantle, Western Australia	Securing Groundwater Quality in Urban and Industrial Environments Web: http://www.clw.csiro.au/conferences/GQ07/

Selected Water Websites

ADB Water in Small Island Countries www.adb.org/Water/theme3.asp	Pacific ENSO Update http://lumahai.soest.hawaii.edu/Enso/subdir/update_dir/update.html
AOSIS Alliance of Small Island States www.sidsnet.org/aosis	Pacific Water Association www.pwa.org.fj
AUSAID www.usaid.gov.au	SIDSNET www.sidsnet.org
Australian Water Portal www.developmentgateway.com.au/water/index.html	UNEP http://freshwater.unep.net/
Barbados +10 www.sidsnet.org/Mauritius2004/	UNESCAP www.unescap.org

CSD12 www.un.org/esa/sustdev/csd/csd12/csd12.htm	UNESCO www.unesco.org/water
Co-operative Programme on Water and Climate www.waterandclimate.org	UNU www.inweh.unu.edu/inweh
East-West Center www.EastWestCenter.org/climate	WHO http://www.who.int/water_sanitation_health/en/
ESCAP www.unescap.org/esd/water/activities	WMO www.wmo.ch/web/homs/index.html
European Union www.europa.eu.int/comm/development/publicat/water/en/frontpage_en.htm www.euwi.net http://europa.eu.int/comm/development/index_en.htm http://europa.eu.int/comm/environment/water/index.html	World Bank www.worldbank.org/html/fpd/water
Gender and Water Alliance www.genderandwateralliance.org	World Summit on Sustainable Development www.johannesburgsummit.org
Global Water Partnership www.gwpforum.org	World Water Council www.worldwatercouncil.org
GWP Australia www.gwpaustralia.org	World Wide Fund for Nature www.wfpacific.org.fj
Island Climate Update www.niwa.cri.nz/NCC/ICU	WSSCC http://www.wsscc.org/
NZAID www.nzaid.govt.nz	NIWA www.niwa.co.nz
USGS http://hi.water.usgs.gov	SPC www.spc.int
USP www.usp.ac.fj	Japan Water Forum http://www.waterforum.jp/eng/index.html
SOPAC Water http://list.sopac.org.fj/Secretariat/Programmes/H2O/3rd_world_water_forum/index.html	UN-Water http://www.un.org/waterforlifedecade/

--- 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

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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:

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