



Pacific Partnership Initiative on Sustainable Water Management

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Issue: XI, October 2006

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

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

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

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

Highlights

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News



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Pacific Partnership Steering Committee Meeting

The 2nd Steering Committee meeting of the Pacific Partnership Initiative on Sustainable Water Management was held on 22 September 2006, Honiara, Solomon Islands. The objectives of the meeting were to:

- a) Review progress of implementation of the RAP at national, regional and global levels;
- b) Review operation and function of the Coordination Unit;
- c) Discuss priority actions for implementation in the next two years;
- d) Provide recommendations to the Coordination Unit on its activities;
- e) Inform SOPAC Council of the Partnership's activities and recommendations.

The meeting provided main recommendations as follows:

The facilitator was urged to continue in the job and it was suggested that the importance of the Partnership be stressed to SOPAC Council who should be urged to continue to support the Coordination Unit. It was suggested that a proposal be prepared for submission to interested parties such as NZAID, Japan Water Forum, ADB etc.

Advocate specific inclusion of water and sanitation in the Pacific Plan as a key strategic sector and specify that the Pacific Plan be consistent with the Pacific Regional Action Plan on Sustainable Water Management. This recommendation was discussed by SOPAC's Council at the 35th Annual Session and subsequently Water and Sanitation has been added as priority area for attention in the Pacific Plan by Pacific Island Leaders at their 37th Pacific Islands Forum meeting held in Nadi, Fiji 24-25 October 2006.

Encourage all member states to promote the importance of integrated water and sanitation management in their national development strategies and plans and to increase investments at the local and national level in addressing the Millennium Development Goals for water and sanitation.

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Sustainable Integrated Water Resources and Wastewater Management Project

Project Design Commences

In July 2006, the 'Sustainable Integrated Water Resources and Wastewater Management project for Pacific Island Countries' commenced its Project Development Facility (PDF)-B phase as part of a Global Environment Facility (GEF) funded project. The initiative is implemented by the United Nations Development Programme (UNDP) and United Nations Environment Programme (UNEP) and executed by the South Pacific Applied Geoscience Commission (SOPAC) and makes use of the Pacific Partnership Initiative on Sustainable Water Management.

In supporting the PDF-B Phase of the project, a project adviser, Ms Rhonda Bower has been recruited to facilitate the design phase and work is still underway to secure a second adviser for the project to work with her.

An Inception Meeting was held in Honiara, from 25-27 September 2006 in parallel with the 35th SOPAC Governing Council Meeting. The meeting brought together the project focal points from the Pacific as well as other interested partners and provided an opportunity for information sharing, networking as well as a catalyst for the start of project design with agreed workplans, activities and timeframes.

The Inception meeting followed the 2nd Steering Committee Meeting of the Pacific Partnership Initiative on Sustainable Water Management which provided opportunities to identify complementarities and support of existing or planned work.

We are very pleased with the support provided by the GEF in the process to date and turn our attention at this point the important activity of project design.

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For further information on Water Safety Plans please visit:
www.waterquality.crc.org.au/
or contact:

Water Safety Plans Program

The Water Safety Team comprising of officers from SOPAC, WHO and Ministry of Health-NZ successfully completed scoping missions, training and planning workshops in the four selected pilot countries including Tonga, Cook Islands, Vanuatu and Republic of Palau. Participants from organization learned on the planning processes of water safety plans for rural and urban drinking water supplies. Experts from MoH-NZ were running a week long workshop, with group work, field visits and information made available during the workshop in order to formulate the necessary plans and carry out improvements were required in the system.

The pilot countries are proceeding with the guidance of the steering committees. A technical expert made available from NZ-MoH for each country will advice on the completion of Water Safety Plans within the next month.

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[Water Quality Monitoring Capacity Building Programme](#)

The programme commenced in May 2006 and the country selection process has been completed. Four countries have been selected as pilots and the findings and experience will then be replicated to other PICs as follow up projects. The pilot countries are Cook Islands, Niue, Vanuatu and the Marshall Islands.

The next stage is to undertake missions to the pilot countries to consult relevant stakeholders assess the water quality monitoring capacity of the in-country labs and identify key areas with respect to water quality assessment and management. Laboratory assessments have already been completed for Marshall Islands and Vanuatu. Similar missions will be undertaken for Cook Islands and Niue early next year.



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[North Pacific Hydrological Training course](#)

The NZAID funded North Pacific Hydrological Training course took place in Pohnpei, Federated States of Micronesia, from the 2nd to the 6th of October, 2006.

14 participants from the 3 Pacific Island countries of FSM, Guam and Marshall Islands attended the week long training at the Cliff Rainbow Hotel.

Specific requests from the FSM participant who attended the 1st and 2nd course on Hydrology in Fiji in 2004 and 2005, saw the course being taken up to the North Pacific, and this time, there was more involvement from the island states of Yap, and Chuuk and the Pohnpei Utilities Corporation.

Also attending the course were representatives from the Conservation Society of Pohnpei and Pohnpei EPA.

The course material was developed and delivered by Dr Leroy Heitz, Director of the Water and Research Institute of the Western Pacific (WERI) at the University of Guam (UoG) and the material was more oriented towards atoll island hydrology and was well suited to the participants working backgrounds.

In the future, it is hoped that there will be more regional trainings of this sort to cater for the atoll islands.

[The battle against Pacific's water losses](#)

The battle against losses from water carrying infrastructure in the pacific island countries (PIC) are on. During the SOPAC Annual Session 2006 in Solomon Islands, utility operators, water providers and SOPAC Water Demand Management (WDM) Project Officer met to set out the priority of future work within the SOPAC led, NZAID funded WDM Project (2006-2009). All stakeholders agreed and wanted to focus on Leak Detection, which is one, and maybe the most important, part of a total WDM effort. This decision are further backed up by the Pacific Regional Action Plan on Sustainable Water Management Theme 4, where it is stated under Key Message 2 Supporting Statement; "Reducing the amount of unaccounted for water (demand side management) is the highest priority action item for the utilities throughout the Pacific island countries".

In some PIC's there is to a certain extent a combination of poor infrastructure, poor sanitation, and intermittent supplies that often poses a serious health risk. In periods when water is scarce there is also a temptation to augment treated water with untreated in an attempt to satisfy



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demand. Yet not all losses are the result of poor infrastructure and leaking pipes. What we call apparent losses from the network, and excessive use or misuse of water, are sometimes the result of people's attitudes, combined with low tariff structures or inadequate metering policies. These losses, and the overuse of water, can often be reduced by the introduction of demand management and water conservation programmes alongside the already mentioned initiatives to tackle leakage and improve the pipe network. In the PIC's, figures in general, vary from 40- to 60% of unaccounted for water. That makes us understand that together, these programmes form a strategy for restoring a potentially huge lost resource.

In the coming 3 years investments will be made on Leak Detection equipment and the training of each PIC's own Leak Detection Team. A Leak Detection Team led by a Team Leader where established at the Solomon Islands Water Authority (SIWA) during meetings in late September. Before 2007 it is hoped that also Niue, Cook Islands and Marshall Islands have established their respective teams. These four countries are the participants of the first WDM Project year. FSM, Kiribati and Papua New Guinea have expressed their interest in taking part in next years (from May 2007) effort.

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[Perceptions of Environmental Change and Water Resources on Nanumea Atoll, Tuvalu](#)

Local observations of changes in marine and terrestrial environments and perceptions of freshwater resources on Nanumea Atoll in Tuvalu were the focus of a recent project funded in part by SOPAC and linked to a larger research endeavour in environmental anthropology. The project was carried out by Heather Lazrus during the several months she spent living on Nanumea while conducting dissertation fieldwork in Tuvalu. Local observations and perceptions were collected through engaging community members in focus groups, extensive semi-structured interviews, and systematic survey questionnaires.

Nanumea, which shares many characteristics of physical vulnerability with Tuvalu's eight other low-lying islands and atolls, is already the most drought prone atoll and may become more so due to regional effects of global climate change. People living in Nanumea rely predominantly on rainwater for household consumption and access to good quality rainwater is therefore essential. Fortunately, unlike many low-lying coral atolls, Nanumeans also have access to limited fresh groundwater which was used for survival in the past and now provisions the Nanumea Drought Backup System. Vaipuna (wells dug to expose the freshwater lens) also provide a few households with an alternative source of freshwater. The installation (by Save the Children and later, the UNDP), and subsequent maintenance, of hundreds of household rainwater tanks on Nanumea has deeply influenced peoples' attitudes towards water by

making it a vastly more readily available resource which is generally preferred to the mildly to severely brackish groundwater. Community members' perceptions that local wind and precipitation patterns have been changing in recent years along with their concern about increasing population pressures, however, indicate that the reliance on rainwater catchments may make them vulnerable to water shortages in the future.

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For further information on El Niño please visit the Pacific ENSO Update Website:

www.soest.hawaii.edu/MET/Enso/peu/update.html

or

for a copy of the bulletin visit:

www.soest.hawaii.edu/MET/Enso/peu/2006_SB1/2006SpecialBulletin1.htm

[El Niño Condition](#)

Pacific ENSO Update released a special bulletin on September 28, 2006 to inform about the current status of the El Niño.

Current sea surface temperature and atmospheric conditions recently reached the El Niño threshold. This event started later than is typical and is anticipated to be of a weak to moderate intensity. This special bulletin was issued to update the information in the last full issue of the Pacific ENSO Update (3rd Quarter, 2006) because of the development of weak to moderate El Niño conditions. The next full issue of the Pacific ENSO Update (4th Quarter, 2006) will be issued in November with updated information.

This bulletin also contains local variability summaries for some North Pacific nations, including American Samoa, Guam, Federated States of Micronesia, Marshall Island and Palau.

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For further information on

[Practical Training in Sustainable Sanitation in Tuvalu \(9th- 20th October, 2006\)](#)

The workshop was part of IWP awareness and capacity building campaign addressing wastewater management, which took place after baseline assessment, water quality assessment, medical data analysis and cost benefit analysis. The IWP is funded through the Global Environment Facility (GEF) and co-managed by the Secretariat of the Pacific Regional Environment Programme (SPREP) and the United Nations Development Programme (UNDP).

The training consisted of 2 components: a review of decentralised sanitation technologies and their advantages and disadvantages, and a practical skills course involving the construction of a waterless composting toilet (CT). The Water and Sanitation Officer from the Public Works

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Department led the practical construction component of the training. Supervision was provided by Dr. Leonie Crennan who is a resource strategist and water and sanitation adviser who was involved with IWP in a review of community-based issues and strategies in waste management in the Pacific. Participants included representatives from government, NGOs, communities and the private sector in Tuvalu. Personnel from the Ministry of Health and Environment Department in Kiribati also participated with the WASH Officer from SOPAC.

An important aspect of the training was that participants were actively involved in the design and construction of the composting toilet (fixed chamber batch) and it was a hands-on approach training where the learning process was essential. The main feature of this system is that it has two treatment containers which are permanently placed and the seat can be moved when it is time to change chambers.

The annual cost to Tuvalu of poor sanitation management was found to be approximately \$A500,000 in research conducted by Padma Lal, Kelesoma Saloa and Faleali Uili (Report: Economics of Liquid Waste Management in Funafuti, Tuvalu). Based on the economic, health and environmental considerations using economic net benefits as the criteria for selection, the order of preference of technology for Tuvalu came out to be:

1. Compost toilets – new
2. Compost toilets – add on
3. Replace leaking septic tanks with plastic tanks (unviable)
4. Replace septic tanks – concrete tank (unviable)
5. Hybrid (plus septic) (unviable)
6. Mini treatment system (unviable)

For the above reasons IWP Tuvalu organised this training as part of awareness and capacity building in their pilot site at Alapi and Senala villages.

After an extensive campaign over several years, on human waste problems, water conservation, and promotion of compost toilets (CT), peoples' perception is changing on this system. The adoption of this technology is likely to be slow, just like anything new. Changing people's sanitation habits in any culture is recognised as a long and challenging process.

A trial composting toilet previously built through the Tuvalu Waste Management Project at a family home has been working successfully for 5 years, and the family have had no water shortages during this time despite the droughts. Other public composting toilets built during that project have not been properly maintained, which is common with public toilets.

The theoretical sessions and topics included the invisible threats to health and the environment which are contained in sewage, and design and maintenance issues for common wastewater technologies (such as septic tanks). The

sessions also covered history of CTs globally, uses of CTs in the Pacific and Australia, maintenance requirements and available improved designs.

In conclusion, Funafuti has few choices available to it in regards to sustainable management of human wastes, and water conservation. If the country does not tackle these issues urgently, the problem is likely to become more acute as population increases.

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[Flood Modelling Management Training - Apia, Samoa](#)

Introduction to Flood Hydrology, River Modelling and Floodplain Mapping

Flood Modelling Management Training was conducted from 12th July till 2nd August 2006 which included, learning new terminology, data collection and exercise for training.

A consultant from HR Wallingford, United Kingdom Mr. Darren Lombroso conducted the 3 week long training with the help of a Risk Assessment Specialist, Mr. Michael Bonte and a Hazards Assessment Adviser, Ms. Litea Biukoto from SOPAC.

The training proceeded as a capacity building initiative aimed at upgrading the ability of local human resources and a simulation of the model will be upgraded in the next phase of the project.

A national team from the core group is made up of the disciplines involved within the ministry, mainly of Hydrology from the Water Resources Division with flood monitoring, Weather from the Meteorology Division with flood prediction, forecasting and PUMA with drainage, infrastructure and protection works.

Two softwares introduced were;

1. Hydrological Engineering Centre's Hydrologic Modelling System (HEC-HMS) and;
2. Hydrological Training Centre's River Analysis System (HEC-RAS)

HEC-HMS was developed by the US Army Corps of Engineering over a number of years. It was designed to simulate the precipitation – runoff process of catchments. It was also designated to be applicable to a wide range of geographical areas and also to solve wide range of problems. It can be used in flood hydrology, water resources, effect of urbanization on catchments, flood forecasting, design of dam spillways and floodplain regulations.

HEC-RAS was also developed by the US Army Corps of Engineering. It is an integrated package of hydraulic analysis programs in which the user interacts with the system through the use of Graphical User Interface. It can

perform steady and unsteady flow water surface calculations. It can be used to estimate flood levels, assess the design of flood mitigation measures, assess the design of bridges and culverts, floodplain regulations and dam breaches.

Both softwares requires lots of data to be inputted in order for it to work, that is why the second phase of the project will continue sometime in October through t November 2006.

All participants ere awarded with certificates of completion of phase one.

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For further information on IGR-2 visit the UNEP/GPA web site:

www.gpa.unep.org/bin/php/igr/igr2/home.php

or

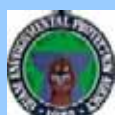
To get a copy of the Wastewater Management Training in the Northern Pacific Region DVD contact:

Tammy Anderson

Phone: 475-1663, 688-9800

or

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[United Nations Environment Programme \(UNEP\) Second Intergovernmental Review in Beijing](#)

Three representatives from the Guam Environmental Protection Agency (Guam EPA) attended the United Nations Environment Programme (UNEP) Global Programme of Action (GPA) Second Intergovernmental Review meeting in Beijing from October 16th - 20th.

Conchita S. N. Taitano, manager of the Air and Land Programs division, Peggy Denney, program coordinator for education and outreach, and management analyst Margaret Aguilar attended the IGR-2 as part of the United States delegation.

The trio presented an exhibit about the UNESCO-IHE Wastewater Management Training in the Northern Pacific Region, which was held on Guam in June. The presentation included a static display and a film developed by Guam EPA and KGTF TV 14.

The group, headed by Taitano, gave a presentation entitled Cooperative Environmental Governance: Pacific Small Island Developing States Partnerships on Wastewater and Recycling Initiatives. The presentation included a discussion on the Pacific Islands Regional Recycling Initiative (PIRRIC). The Initiative is a multi-sectoral partnership involving multi-national governments, non-government organizations and businesses in Micronesia. Participants at the presentation discussed extending the Pacific experience to other regions and optimizing cooperation with the United Nations and regional institutions.

PIRRIC aims to develop and implement sustainable waste management in the Northern Pacific using communication, identifying funding through partners and providing a portal for information and guidance.

The IGR Meetings are a forum where Governments and other stakeholders meet to review the status of the implementation of the GPA and decide on action to be taken to strengthen the implementation of the GPA. The first IGR was in Montreal, Canada in 2001.

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[Programme for Water Governance in Solomon Islands](#)

The Pacific Programme for Water Governance project (PFWG) funded by EU and facilitated by SOPAC, aims at implementing water sector reforms in Pacific Island Countries (PICs), particularly on improving water governance. The Solomon Islands was selected in 2005 as one of three Pacific Island Countries, in accordance with PFWG selection criteria, to benefit from the initiative. KEW Consult Ltd, a consultancy firm based in Samoa, is the consultant for this project and currently working in collaboration with the Solomon Islands Government and SOPAC to develop and enhance new and existing water governance initiatives through appropriate policy and legislation formulation as well as public awareness programmes.

Programme activities for 2006 commenced with a visit to the Solomon Islands by one of KEW's consultants, Ms Veronique Provo, to collect important water related data and initiate dialogue with relevant Government stakeholders in the water sector. The host organisation was the Department of Mines and Energy, Ministry of Natural Resources. That visit/assignment was followed by a 4 day observational/water study tour to Samoa, involving a delegation of Government Heads of 3 distinctive water organisations, namely Mr Robinson Fugui, Director of Environmental Health, Ministry of Health, Mr John Waki, General Manager of Solomon Islands Water Authority and Mr Charlie Bepapa, Director of Mines, Energy and Water, Ministry of Natural Resources. The Water Study Tour was a result of the volatile events that took place following the general elections in Honiara in April, which precluded the ability of Latu Kupa and Kisa Kupa of KEW Consult to travel to Honiara to engage in consultation with key stakeholders over water policy and regulatory issues. The outcome of the study tour was positive, particularly as Samoa has already made significant progress in enhancing its water governance processes and systems and lessons could be learnt from their experience. A working group for the governance programme, involving the three S.I delegates was duly established to further advance the aims of the SIWG programme.

A further consultation is scheduled to be held in November with wider stakeholders and follows on from the consultation meeting that was held in September with Government and NGO stakeholders during the time of the SOPAC meeting in Honiara. That meeting was hosted by SIWA and drew out various issues relating to the draft policy. Now that the SIWG programme is drawing to a close, the major challenges that remain is for the consultation and awareness programmes to continue with the assistance of William Garaema, Programme Coordinator, who was recruited specifically to coordinate consultation and awareness programmes on the draft policy and legislation and maintain a close link with KEW

Consult. It is hoped that more funds would be secured to ensure that the draft policy and legislation are finalised after effective country-wide consultation has been achieved.

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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

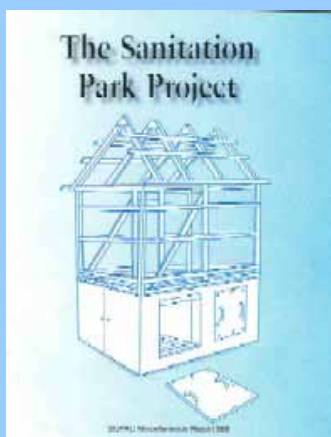
(and vice versa); and augment existing and proposed activities nationally and regionally.

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

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.

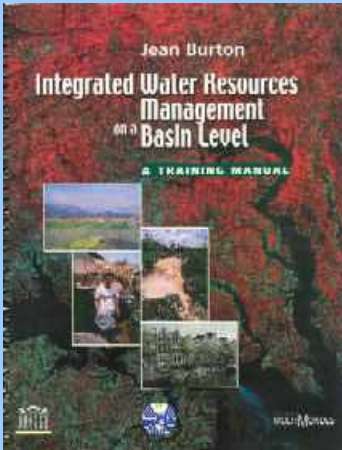
These Guidelines set out a strategic approach to the management and sustainability of water resources and the delivery of water-related services, providing a broad perspective of all aspects of water resources activities. They are designed to respond to the needs of EC staff and those of partner country 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.shtml

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/>

Policy Guidance and Operational Tools

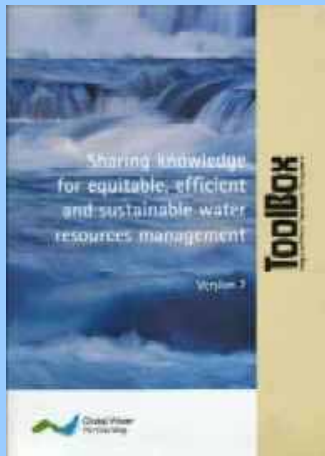


Sharing knowledge for equitable, efficient and sustainable water resources management

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.

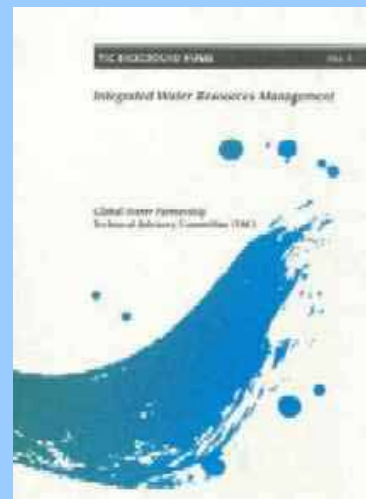
The present paper represents the "corporate view" of TAC on integrated water resources management and has been authored by all members of TAC in the period 1996 through 1999.

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

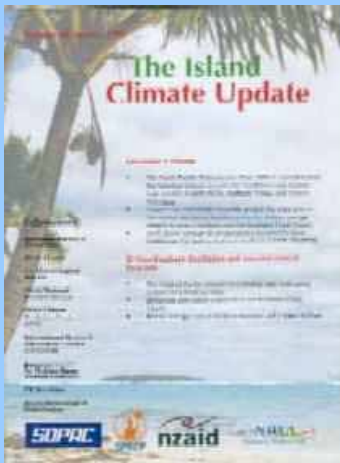


The Island Climate Update

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.niwasience.co.nz/ncc/icu/archive>



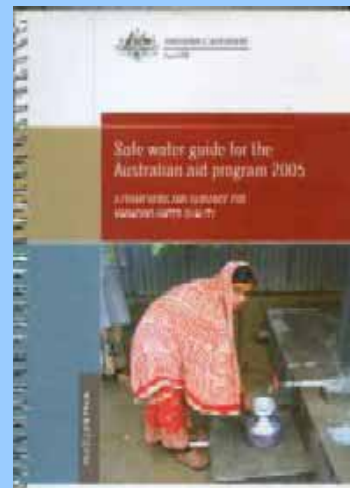
Safe Water Guide for the Australian Aid Program 2005

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

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

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

www.ausaid.gov.au



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

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

Water Quality Monitoring in Pacific Island Countries



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=/data/virlib/JC/JC0143.pdf&file=JC0143.pdf&loc=JC

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>

Integration of Social and Technical Science in Groundwater Monitoring and Management



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>

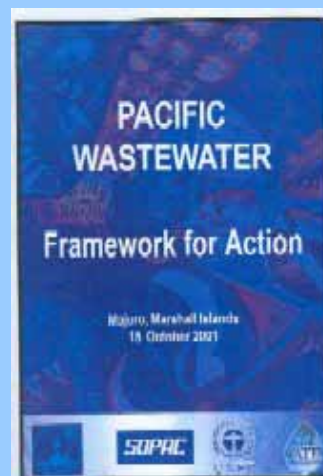
The Pacific Wastewater Policy Statement sets out a framework of guiding principles and policies to guide future development and co-operation by the Pacific Island Countries (PICs).

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 refers to the GPA Strategic Action Plan and Guidance Document on Wastewater (UNEP/GPA, WHO, UNCHS-Habitat & WSSCC).

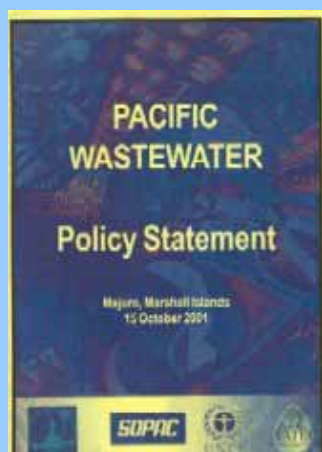
Pacific Wastewater Framework for Action

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).

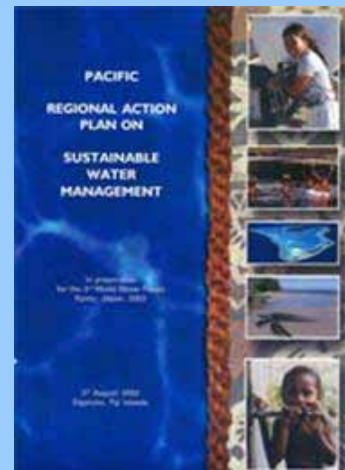
Pacific Regional Action Plan

The outcomes of the consultation were carried forward

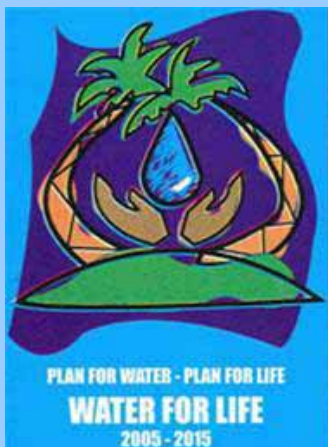
and presented during the 3rd World Water Forum in Kyoto as part of the theme "Water in Small Island Countries".

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

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



World Water Day Campaign



World Water Day Material 2006 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 Environment Education** (marie@livelearn.org.fj). You can also download the document via the following website:

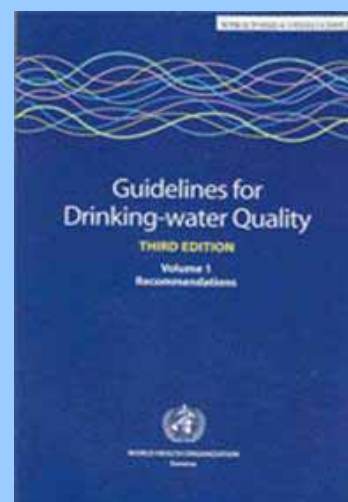
<http://www.sopac.org/tiki/tiki-index.php?page=World+Water+Day+2006>

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.

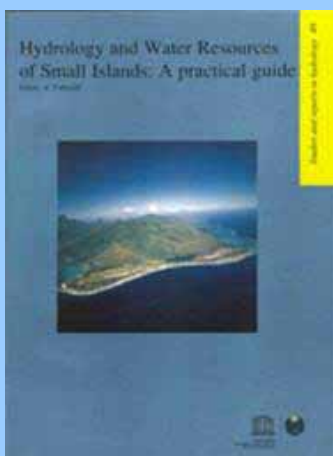
Copies of the Guidelines for Drinking - Water Quality are available from **WHO's** website:



http://www.who.int/water_sanitation_health/dwg/gdwq3/en/

or from the 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** (mathias@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.

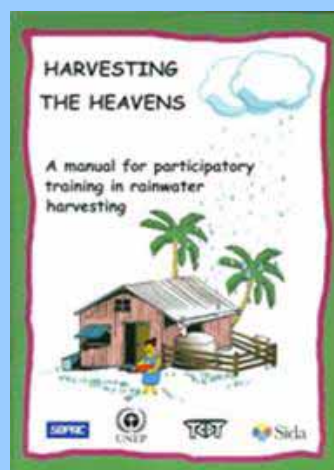
The manual is targeted for use by Non-Government Organisations (NGOs), Community-Based Organisations (CBOs) or people involved in rainwater harvesting, and contains a number of participatory techniques, tools and activities based on best practices from a variety of sources.

Copies of this Manual can be obtained from the **SOPAC Secretariat** (arieta@sopac.org) or you can download the

Harvesting the Heavens, A Manual for Participatory Training in Rainwater Harvesting

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).

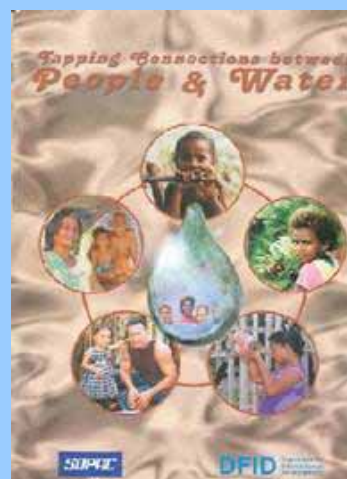
Copies of this Guideline can be obtained from the SOPAC Secretariat (arieta@sopac.org) or you can download the document via the following website:

<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.

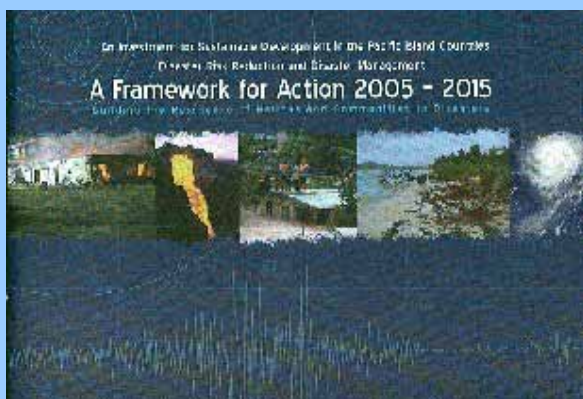
The handbook can be used by field workers when working with communities to install and maintain water and sanitation systems. It can also be used to support health and hygiene programmes. The handbook raises seven Questions to think about. The Questions can be a checklist to identify important connections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

A Framework for Action 2005 - 2015



There is ongoing and increasing vulnerability of Pacific Island nations and communities to impacts of disaster. This has led to increased national regional commitments to disaster risk management on an 'all hazard' basis in support of sustainable development. This Framework for Action 2005 - 2015 has been developed to respond in part to these commitment.

Copies of this Guideline can be obtained from the **SOPAC Secretariat** or you can download the document via the following website:

www.sopac.org/tiki/tiki-sopac_download.php?path=/data/virlib/MR/MR0613.pdf&file=MR0613.pdf&loc=MR

Multimedia



Cap-Net - IWRM Tutorial

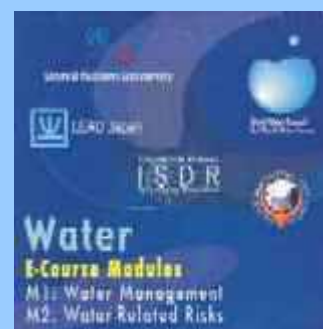
This DVD contains a brief introductory tutorial aimed at policy makers, water managers, trainers and educators who want a basic understanding of IWRM principle. It provides the case for IWRM and the argument against those who may oppose it on institutional or sectoral grounds.

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.

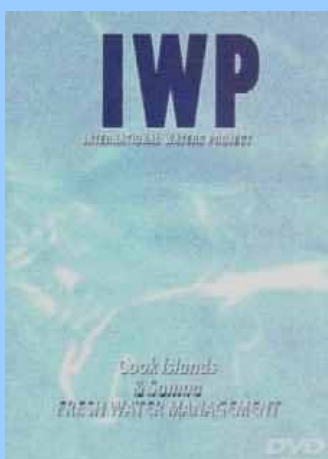
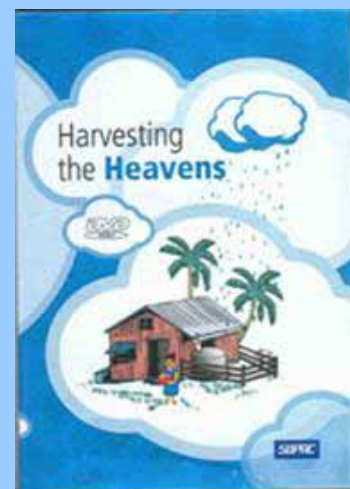
Copies of this DVD can be obtained from the **Global Water Partnership Secretariat**.

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

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



Cook Islands & Samoa Fresh Water Management

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

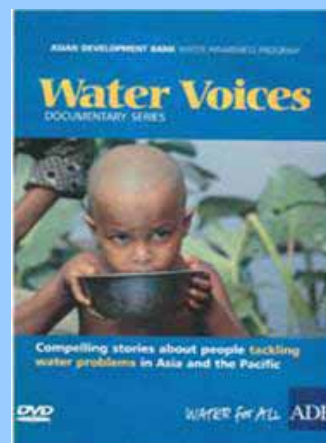
Copies of this documentary can be obtained from the **SPREP Secretariat**.

Water Voices Documentary Series

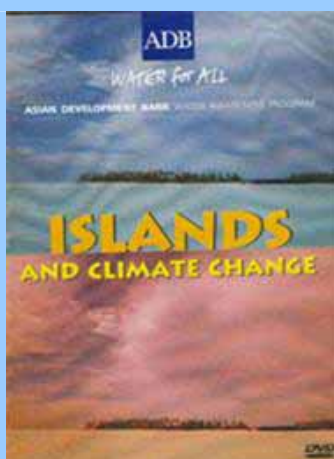
Water is essential to all life. And yet one in three Asians lacks access to safe drinking water, and half the people living in Asia and the Pacific do not have access to adequate sanitation. Conflicts over sharing of scarce water resources are increasing at an alarming rate.

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

Copies of this documentary can be obtained from the **SOPAC Secretariat** (arieta@sopac.org) or the **Asian Development Bank**



(http://www.adb.org/Water/CFWS/Water_Voices_Videos.asp).



Islands and Climate Change

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

Copies of this documentary can be obtained from the **SOPAC Secretariat** (arieta@sopac.org) or the **Asian Development Bank**.

(http://www.adb.org/Water/CFWS/Water_Voices_Videos.asp).

Pacific Water Agenda 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. www.unesco.org/water/water_events/Detailed/1139.shtml
March	Putaruru Water	Putaruru,	The Putaruru Water Festival will celebrate this resource, emphasizing

16 th -19 th	Festival 2006	Waikato, New Zealand	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. 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. www.worldwaterforum4.org.mx/home/genwwf.asp?lan= 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. 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. www.unesco.org/water/water_events/Detailed/1114.shtml
May 1 st -12 th	UN Commission on Sustainable Development (CSD-14)	New York, USA	The fourteenth session of the UN Commission on Sustainable Development (CSD-14) will meet at UN Headquarters in New York from 1-12 May 2006. As the first year of the second implementation cycle, CSD-14 will review progress in the following areas: Energy for Sustainable Development; Industrial Development; Air pollution/Atmosphere; and Climate Change. www.un.org/esa/sustdev/csd/review.htm
May 8 th -9 th	AWRA 2006 Spring Specialty Conference GIS and Water Resources IV	Houston, Texas, United States	The use of Geographic Information Systems (GIS) in the water sector continues to grow exponentially, making it an increasingly essential tool in water resources planning and management. The data can be mined to find out how much water is available and who the constituents are, including: who has access to it, who owns it, what it costs, how it got there, and how people and the environment are interacting with it. www.unesco.org/water/water_events/Detailed/1247.shtml or www.awra.org/meetings/Houston2006/index.html
May 9 th -12 th	Mayor's Asia Pacific Environmental Summit	Melbourne, Australia	ADB is organizing the water track session for this meeting of mayors and local government officials from all-over the Asia-Pacific region. The session will highlight small piped water network, zone approach, sustainable water and wastewater technologies, cost recovery and tariff reforms, and e-governance. www.adb.org/documents/events/2006/mayor-apes/default.asp
May 15 th -17 th	Regional Conference on Water Financing: Addressing	Manila, Philippines	The conference will include a forum on financing strategies for CEOs plus discussions on innovative financing mechanisms, PSP options for small towns, financing IWRM in river basins, and more.

	Financing Challenges through Good Governance		www.adb.org/documents/events/2006/Water-Financing/regcon.asp
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
May 22 nd -24 th	3rd Conference and International Exhibit	Manila, Philippines	Topics include water wastage control; wastewater treatment; water recycling and re-use; water conservation and demand management; and community water supply and sanitation sustainability. www.irc.nl/page/27605
May 23 rd -24 th	Integrated Water Resources Management and Challenges of Sustainable Development	Marrakech, Morocco	This congress will allow the different specialists in the field of water resources management to present and exchange information about the latest developments in their work related to integrated water resources management. www.fstg-marrakech.ac.ma/gire3d/anglais/index1.htm
May 30 th -31 st	Regional Conference on Water Financing: Addressing Financing Challenges through Good Governance	Manila, Philippines	The conference will include a forum on financing strategies for CEOs plus discussions on innovative financing mechanisms, PSP options for small towns, financing IWRM in river basins, and more. www.adb.org/documents/events/2006/Water-Financing/regcon.asp
June 5 th -10 th	Wastewater training	Guam	The training will include stakeholder interviews and fieldtrip to demonstrate to the participants the importance of involving stakeholders for wastewater management. For more information on the training course visit the website: www.gpa.unep.org/training/
June 15 th	Water and cooperation between the European Union and Latin America, Brussels, Belgium	Brussels, Belgium	Representatives of countries in the European Union and Latin America will meet in Brussels, Belgium, to facilitate the development of a water resources and sanitation strategy between the 2 regions. The meeting will be held under the auspices of the Government of Spain and WWAP.
June 12 th -30 th	Hydrological Training	Suva, Fiji	The 3rd course of the Hydrological Training Programme on Surface Water and Groundwater Hydrology is now scheduled to be held at the SOPAC Secretariat from the 12th of June to the 30th. The surface water trainees will begin on the 12th of June for three weeks and the groundwater trainees join them a week later, on the 19th for their two week stint. Field visits have been planned for both groups to the island of Moturiki where there are plans to do groundwater surveys as well as surface water gauging. For further information, please contact alena@sopac.org
July 10 th -11 th	Decentralised Water + Wastewater Systems	Fremantle, Australia	The conference will focus on design, operation, maintenance and management of small treatment units and the uptake of decentralised systems. Innovations in the field, case studies on safe and reliable systems, removal of nutrients, water reuse, and methods for unattended operation will be discussed at the conference. Water supply and the treatment of wastewater for single houses or housing complexes will also be discussed. www.etc.murdoch.edu.au/conferences/decent.html/
July 10 th -15 th	Pacific Met Directors Annual Meeting	Noumea, New Caledonia	Organised by Dean Solofa, PI-GCOS Co-ordinator at SPREP- for further details contact : DeanS@sprep.org
12 th Jul- 2 nd Aug	Samoa Flood Modelling Training	Samoa	ADB-Drainage, EU/WaSSP and SOPAC/EU Projects Reducing Vulnerability & HYCOS will be teaming up for the flood management project in Samoa. The training is aimed at building capacity in flood modelling/management for a core-group of 6 from Samoa.
July 18 th	Fiji Legislation Workshop	Suva, Fiji	Programme for Water Governance Consultation
July 24 th -27 th	Third International	Cairns, Australia	The Third International Conference on Climate Impacts Assessment will review our current level of understanding in climate impacts

	Conference for Climate Impact Assessment		research and assessment and new methods for assessing vulnerability and for building resilience and adaptive capacity both around the world and with a focus on the Pacific basin. www.anu.edu.au/anuie/iccia/index.html
August 1st-4th	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 4th-7th	9th International River Symposium	Brisbane, Australia	The International River symposium celebrates the ecological and social value of rivers, showcases world's best practice in river management and provides a global forum for research and policy development. Please visit our website at www.riversymposium.com for more information.
September 17th-20th	Water in the City Conference	Victoria, British Columbia, Canada	This conference will offer a holistic view of the many issues affecting water in urban areas, the interactions between these issues and the need to place them front and centre as we re-think our communities in the 21st century. Including - This conference will offer a holistic view of the many issues affecting water in urban areas, the interactions between these issues and the need to place them front and centre as we re-think our communities in the 21st century, emerging opportunities for re-use and recycling, clean safe drinking water – a key to community health www.unesco.org/water/water_events/Detailed/1264.shtml
September 21st	Science, Technology and Resources Network (STAR)	Honiara, Solomon Islands	Community Lifelines Programme: Water, Sanitation and Hygiene (WASH) Session
September 22nd	Steering Committee Meeting Pacific Type II Partnership Initiative on Sustainable Water Management	Honiara, Solomon Islands	The Pacific Partnership Initiative on Sustainable Water Management would like to take this opportunity to evaluate the progress of implementation of the Pacific Regional Action Plan on Sustainable Water Management and identify future opportunities for collaboration between partners.
September 25th-27th	Sustainable Integrated Water Resources Management (IWRM) Project Inception Meeting	Honiara, Solomon Islands	As a key activity of the PDF-B phase an Inception Meeting for the Sustainable Integrated Water Resources Management (IWRM) Project for Pacific Island Countries is scheduled for 21-26 September 2006 to run in parallel to the Science, Technology and Resources (STAR) Network Meeting and the 35th SOPAC Annual Session in Honiara, Solomon Islands.
September 22nd-28th	SOPAC Annual Session 2006	Honiara, Solomon Islands	
September 25th-27th	Innovation in coping with water and climate related risks	Amsterdam RAI, The Netherlands	Organized by: International Water Association (IWA); Netherlands Association on Water Management (NVA) and Aquatech 2006. Opportunity for internationally sharing of knowledge and experiences between scientists, practitioners, administrators, managers and other interested people www.morga.com or www.irc.nl/page/28120
September 26th-28th	Sustainable Water Supply and Sanitation Symposium: Strengthening Capacity for Local Governance	Delft, the Netherlands	The symposium aims to provide a platform for sharing experiences in capacity development for improved local governance. Participants will identify key challenges and actions to establish an agenda for strengthening local governance for sustainable water supply and sanitation services. Please consult http://www.irc.nl/symposium/capacitydevelopment for a registration form and for regular updates on the organisation of the symposium.
September 26th-28th	3rd International Symposium on Integrated Water	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

	Resources Management		Initiative); water management as a problem; water management as a solution. http://www.conventus.de/water/
October 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 on ALL ABOUT KARST & WATER please contact: office@kater2006.at or visit the website: www.kater2006.at/
October 11th-20th	IWP Sanitation Training – ‘Think Compost Toilet’	Tuvalu	
October 16th-20th	14th Regional Steering Committee Meeting for Southeast Asia and the Pacific - UNESCO IHP	Bangkok, Thailand	In conjunction with the "International Symposium on Managing Water Supply for Growing Demand" and the 3rd Asia Pacific Association of Hydrology and Water Resources APHW Conference (16-18 October 2006). Both the RSC Meeting and the International Symposium on Managing Water Supply for Growing Demand are being organised by the Thai National Committee for IHP, the Thailand National Commission for UNESCO and the Ministry of Natural Resources and Environment, Thailand. Financial support is provided by a Trust Fund to UNESCO from the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japanese Government, UNESCO Jakarta and the Department of Water Resources, Thailand.
October 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, tsunami, 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 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
December 2nd-7th	Groundwater Quality 2007	Fremantle, Western Australia	Securing Groundwater Quality in Urban and Industrial Environments Web: http://www.clw.csiro.au/conferences/GQ07/
December 4th-7th	30 th Hydrology & Water Resources Symposium	Launceston, Tasmania'	The Organising Committee of the 30th Hydrology and Water Resources Symposium has pleasure in inviting you to Launceston to share your hydrological and water resources experiences. Launceston is Tasmania's second oldest city and in 2006 celebrates its 200 year anniversary. The theme of the symposium is 'Past, Present and Future', and we have been fortunate in attracting four high profile speakers to address these themes. http://www.cdesign.com.au/hydrology2006/

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	SIDSNET

www.ausaid.gov.au	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 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.wwfpacific.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.

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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.

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