

# Pacific Partnership Initiative on Sustainable Water Management

Logon to: Pacific Partnership Initiative on Sustainable Water Management

Issue: X, June 2006

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

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

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

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

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## Pacific Island Countries take Action on Integrated Water Resources Management

The South Pacific Applied Geoscience Commission (SOPAC), have signed an agreement with the Global Environment Facility (GEF) in partnership with the United Nations Development Programme (UNDP) and the United Nations Environmental Programme (UNEP) to develop an innovative programme on Sustainable Integrated Water Resources Management (IWRM).

This initiative intends to address all key areas of the Pacific Regional Action Plan on Sustainable Water Management (Pacific RAP). The Pacific RAP provides a coordinated and holistic approach to water resources management and has significantly pushed water up the national and regional agenda including the nation of integrated approaches such as IWRM.

IWRM is a relatively new "brand" in the Pacific Islands. However, the concept and the approaches it embodies have been practised at a traditional level for centuries in the Pacific Islands.

The formal development of this concept into an IWRM management approach implemented in governance structures at the national level has not been a reality so far.

The aim of this regional project is to assist the Pacific Island Countries to implement and demonstrate Integrated Water Resources Management and Water Use Efficiency (WUE) plans, following a two-year design process in 2006-2007.

Ms Rhonda Bower has been recruited as IWRM Advisor to facilitate this design phase and she is well known to the Pacific region as former facilitator of the Partnership.

A Project Steering Committee (PSC) will be established, consisting of one representative from each participating country as well as representatives of the implementing agencies, representatives of the executing agencies, and other invited stakeholders.

The Pacific Partnership Initiative on Sustainable Water Management will be used as a foundation for the Project

Steering Committee and a first meeting is foreseen in September/October 2006.

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For further in information on HYCOS Agreement please contact:

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#### Pacific HYCOS Agreement signed with European Union

Pacific Island Countries have noted significant deficiencies in their national and local capacity to carry out essential water resources assessment and monitoring. The lack of information on water quantity and quality prevent small island countries from conducting proper planning, development and sustainable management of their limited and vulnerable water resources. Most small island countries do not have adequate baseline data that is readily available for planning and development and lack reliable hydrological databases.

Pacific HYCOS is a regional initiative to improve the management and protection of Pacific Island Countries' freshwater resources, through the provision of appropriate water resources management systems. The Pacific HYCOS is one of the regional components of the World Hydrological Cycle Observing System (WHYCOS), a World Meteorological Organization (WMO) programme targeting the improvement of basic observation activities, strengthening regional and international cooperation and promoting free exchange of data in the field of hydrology.

The Pacific- HYCOS project was developed by WMO in collaboration with the South Pacific Applied Geoscience Commission (SOPAC) and in consultation with countries and territories in response to the hydrological needs of the region. The Project focuses on several core activities to be carried out including flood forecasting, water resources assessment in major rivers, water resources databases, drought forecasting, groundwater and water quality monitoring and assessment.

The 3-year project (2006-2009) with a total cost of 3,524,970 Euro will be implemented by SOPAC with its incountry counterparts at the National Hydrological Services in collaboration with WMO, UNESCO and the Fiji Meteorological Service. The EU Water Facility will fund up to 2,524,970 Euro with further contributions for the project provided through several regional programmes established by SOPAC and its

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partner organisations.

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For further in information on Pacific Action Matrix please visit:

www.sopac.org/tiki/tiki-index. php?page=CLP+Pacific +Partnership

or you can directly access the Search Engine through:

www.sopac.org/tiki/tikisopac\_actionmatrix.php

and the Insert Form through: <a href="https://www.sopac.org/tiki/tiki-sopac\_actionmatrix\_insert.php">www.sopac.org/tiki/tiki-sopac\_actionmatrix\_insert.php</a>

or contact:

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#### Launch of the Pacific Water Action Matrix

The Pacific Partnership Initiative on Sustainable Water Management is pleased to present the Water Action Matrix Database that aims to monitor the implementation of the Pacific Regional Action Plan on Sustainable Water Management by all partner organisations in the Pacific region.

As one of the core functions of the Partnership's Coordination Unit supported by the Asian Development Bank (ADB), information related to projects and activities, is being collected in a central database that is accessible by everyone through a dedicated website.

Importantly everyone can contribute to the database by submitting information on their projects and activities whether these are regional or national or implemented by government departments, NGOs, CBO's, Donor, UN or, Regional Agencies, Universities or Research Institutes. Through the enhanced exchange of information, the Action Matrix Database will assist in increased collaboration, exchange of experiences and donor harmonization.

The website hosts a *Search Engine* as well as an *Insert Form* for the Pacific Water Action Matrix and can be accessed directly at

<u>www.sopac.org/tiki/tiki-sopac\_actionmatrix.php</u> and <u>www.sopac.org/tiki/tiki-sopac\_actionmatrix\_insert.php</u> respectively.

The Search Engine is structured around the six thematic areas of the Pacific Regional Action Plan. Under each theme there are key messages to stakeholders and under each key message are the identified actions listed. Through the search, information can be retrieved about water related projects and their details, including partner information, donors, timeframe, status and contact persons in tabulated format. Please note that you need not fill in the whole form to carry out a search.

The Insert Form is also structured around the six thematic areas of the Pacific RAP. It could be used to insert records in



the Pacific Water Action Matrix Database which can be retrieved through the Search Engine. Fields marked with an asterix (\*) are mandatory fields and need to be filled before submitting the form.

We would encourage all partners active in the region to visit the Pacific Water Action Matrix website and assist us in updating the water actions with your project and activity information and provide us with any corrections if these are required.

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

or contact

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# <u>Pacific Island Countries host Water Safety Plans pilot projects</u>

Relevant government agencies in Tonga, Cook Islands, Vanuatu and Republic of Palau have agreed to host Water Safety Plan pilots. This was achieved through commitment from all agencies responsible for providing drinking water and monitoring or surveillance of drinking water quality during round table discussions in each country.

A Water Safety Plan is "a comprehensive risk assessment and risk management approach that encompasses all steps in the water supply from catchment to consumer to consistently ensure the safety of water supplies."

For a particular water supply scheme the Water Safety Plan will identify:

- hazards that the water supply is exposed to and the level of risk associated with each;
- how each hazard will and/or can be controlled;
- how the means of control will be monitored;
- how the operator can tell if control has been lost;
- what actions are required to restore control; and
- how the effectiveness of the whole system can be verified.

The Pacific Water Safety Plan Programme is a joint initiative





of the South Pacific Applied Geo-science Commission (SOPAC) and the World Health Organization (WHO) funded by AusAID. The programme is a response to the regionally endorsed Framework for Action on Drinking Water Quality and Health and plans to improve the health of people in the Pacific through strengthening of national capacity to maintain safe drinking water supply systems.

In addition, the New Zealand Ministry of Health will also support the pilot projects in each of the four countries by providing experts to train and assist participating agencies in developing and implementing Water Safety Plans.

A national training and planning workshop will be held in each participating country, beginning with Tonga in July 2006.

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For further information on Water Demand Management please visit:

www.waterquality.crc.org.au/

or contact:

Mathias Kleppen Water Demand Management Officer SOPAC

#### NZAID funds initiative on Water Demand Management

SOPAC and the Pacific Water Association (PWA) secured funding from New Zealand Aid (NZAID) for the Water Demand Management Programme for Small Island Countries in the Pacific. The proposal was developed in response to actions identified under theme IV Technology in the Pacific Regional Action Plan on Sustainable Water Management.

The purpose of this project is to see an improved capacity for water demand management in Pacific urban water utilities. During the 3-year project the following outputs are foreseen:

- Water demand management teams established, trained and functioning with increased capacity within each participating utility.
- Water demand management plans for individual utilities developed and implemented.
- Experience of successful water demand management initiatives promoted and shared between utilities.

The programme is designed to work through local team leaders within each participating utility. These team leaders will be responsible for day-to-day implementation of the

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programme with the support of the regional project officer based at SOPAC.

Water utility staff will develop specific skills in identified priority areas, for example in leakage management and control or customer service, through the use of experienced consultants who will be contracted as part of the programme to provide training where required.

The activities carried out as part of implementing Water Demand Management plans will vary according to the utility. This programme will aim to fund pilot projects in the top two priority areas identified in the water demand management plans with possible funding of a third area or expansion of a successful pilot as funding allows.

The funding may be used to purchase both "hardware" such as water meters, leak detection equipment or bulk water saving devices for incentive or rebate schemes, as well as "software" which would include training, community education materials and technical expertise.

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For more information on Wastewater training course please visit:

www.gpa.unep.org/training/

www.worldwaterforum.org/

or contact

Kamal Khatri Water Sanitation and

#### <u>Wastewater Management Training in the Northern</u> Pacific Region

The Guam Environmental Protection Agency, in association with the United Nations Environment Programme (UNEP) Coordination Office of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), the Secretariat of the Pacific Environment Programme (SPREP), the South Pacific Applied Geoscience Commission (SOPAC), the University of Guam (UOG), and the UNESCO-IHE Institute for Water Education conducted a training course on Improving Sanitation and Wastewater Management for Pacific Islands, June 5-10, 2006 in Guam. As a result of the successful course in Fiji (24-28 October 2005) and requests from other Pacific Island countries, two additional workshops were planned for Guam and Papua New Guinea. The Northern Pacific course in Guam trained managers or senior supervisors from wastewater utilities or equivalent government department levels from Palau, the Federated States of Micronesia, the Republic of the Marshall Islands and Guam.

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The training is divided into 3 modules: (i) objective-oriented planning, (ii) conventional and innovative approaches to municipal wastewater management and (iii) presentation skills. The course comprised 5 days of specific training on wastewater management with a sixth consecutive day committed to 'training of trainers'. Lecturers from UNESCO-IHE, Guam EPA and SOPAC facilitated the training programme. The training incorporates standards of the Train-Sea-Coast programme of the United Nations Division for Ocean Affairs and the Law of the Sea (UN/DOALOS), as well as the GPA Strategic Action Plan on Municipal Wastewater Management.

The University of Guam in Mangilao was the venue for the 6-day training workshop. The training included stakeholder interviews and a fieldtrip to Gil Baza which was aimed to demonstrate to the participants the importance of involving stakeholders for wastewater management. The Office of Ocean Affairs, U.S. Department of State has provided financial support for these training activities.

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For further information on 4th World Water Forum please visit:

www.worldwaterforum.org/

or

www.iisd.ca/ymb/worldwater4/

## No "Right to Water" in Ministerial Declaration 4th World Water Forum

The assertion that access to water is a human right was not included in the ministerial declaration adopted at the 4th World Water Forum, which ended in Mexico on 22 March 2006. Some delegates argued that inclusion would generate legal problems.

The ministerial declaration lacked any reference to private investment, while stating that "governments have the primary role in promoting improved access to safe drinking water".

The 4th World Water Forum in Mexico was attended by delegates from the Pacific region including Papua New Guinea, New Zealand, Australia, Samoa, Fiji, Guam, Palau and French Polynesia with support provided for some attendees by the Japan Water Forum.

A specific Asia Pacific booth was established with special attention to the Pacific subregion on the opening day 16

México 2006 4th. World Water Forum



March 2006. A permanent booth on Pacific activities was established by Live and Learn Environmental Education who participated in the Water Education for Teachers (WET) programme.

Pacific presentations were provided on 18 March 2006 including Water Governance and the need for Water Information in Fiji by Fiji's Mineral Resources Department in the session hosted by WMO. SOPAC presented the outcomes of the Rainwater Harvesting Demonstration Project in Tonga in the session hosted by the International Rainwater Harvesting Association (IRHA) and UNEP.

The Ministerial preparation meeting for Asia-Pacific on 20 March 2006 was hosted by the Japan Water Forum and coorganised by SOPAC in Hotel Nikko. It was agreed that SOPAC would be the main focal point for the Oceania component of the Asia-Pacific Water Forum.

On Asia-Pacific Day, 21 March 2006, Ms. Kay Kalim Kumaras provided a speech on behalf of the Pacific participants. The Ministerial session and Senior Officials meeting on 21-22 March 2006 was attended by H.E. Mr. Fritz Koshiba from Palau and Mr. Moefaauo Taputoa Titimaea from Samoa.

The outcomes of the 4<sup>th</sup> World Water Forum for the Pacific Island Country included increased linkages between Un and international agencies as well as enhanced collaboration with other small island countries.

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For further information on Asia-Pacific Water Forum please visit:

http://www.apwf.org/

or contact:

Noriko Yamaguchi

#### <u>Asia-Pacific Water Forum launched at 4<sup>th</sup> World Water</u> <u>Forum</u>

Ministers from seven countries in the Asia-Pacific region announced the creation of the "Asia-Pacific Water Forum" (APWF), as part of the activities surrounding the 4th World Water Forum.

The Ministers responsible for water resources from China, Bangladesh, Korea, New Zealand, Palau, Mongolia, and Pakistan issued the following joint declaration:

"During the regional process leading up to the 4th World Water Forum, it became clear that several water-related issues and challenges were common across the entire Asia Pacific region.

Furthermore, with the increased interactions in the implementation of follow-up activities to the 3rd World Water

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## Asia-Pacific Water Forum



Forum held in Kyoto in March 2003, stakeholders in the region quickly recognized that the region's diversity was not an obstacle but rather an asset to the identification and adoption of solutions to specific water issues. Based upon this common understanding, we will establish a new network, the Asia-Pacific Water Forum, to work in complete solidarity to identify and adopt solutions to water issues in the region."

Mr. Ryutaro Hashimoto, Former Prime Minister of Japan and President of Japan Water Forum, described the process that lead to the creation of the APWF as "a remarkable example of regional cooperation" that illustrated the region's "stanch commitment to solving our most pressing water problems" adding to meet Millennium Development Goal on improved drinking water and sanitation.

According to UNICEF and the WHO, over 675 million people in the Asia-Pacific region lack access to improved drinking water, and nearly 2 billion live without access to proper sanitation.

In addition to the ADB, ten other international organisations came forward to support the APWF. The JBIC, UNESCAP, UNEP, UNICEF, UNDP, the Mekong River Commission, UNESCO, FAO, UNISDR and IUCN recognized the relevance and importance of the APWF, each noting the relevance of the initiative to advance water, environmental and developmental issues in the region.

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For further in information on Desalination please visit:

www.pacinst.org/reports/
desalination/index.htm

### <u>Desalination, With a Grain of Salt - A California</u> <u>Perspective</u>

The US based Pacific Institute has announced the release of a new comprehensive assessment of ocean desalination: "Desalination: With a Grain of Salt" (by H. Cooley, P. Gleick, and G. Wolff) The report, which includes a California review of the 21 plants proposed along the west coast, identifies the risks and benefits of desalination and addresses questions of cost, reliability, environmental impacts, coastal development, and water quality. The potential benefits of ocean desalination are great, but the economic, cultural, and environmental costs of wide commercialization remain high.

Long considered the Holy Grail of water supply, desalination offers the potential of an unlimited source of fresh water purified from the vast oceans of salt water that surround us. The public, politicians, and water managers continue to hope

or you can download the full report from:

www.pacinst.org/reports/ desalination/desalination \_report.pdf



that cost-effective and environmentally safe ocean desalination will come to the rescue of water-short regions. While seawater desalination plants are already vital for economic development in many arid and water-short areas of the world, many plants are overly expensive, inaccurately promoted, poorly designed, inappropriately sited, and ultimately useless. To avoid new, expensive errors, policymakers and the public need to take a careful look at the advantages and disadvantages of desalination and develop clear guidance on how to evaluate and judge proposals for new facilities.

The potential benefits of ocean desalination are great, but the economic, cultural, and environmental costs of wide commercialization remain high. In many parts of the world, alternatives can provide the same freshwater benefits of ocean desalination at far lower economic and environmental costs. These alternatives include treating low-quality local water sources, encouraging regional water transfers, improving conservation and efficiency, accelerating wastewater recycling and reuse, and implementing smart land-use planning.

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Tasleem Hasan Water Quality Officer SOPAC

# Water Quality Monitoring Capacity Building Programme for Pacific Island Countries

South Pacific Applied Geoscience Commission (SOPAC), the World Health Organization (WHO) and the Institute of Applied Sciences (IAS) have secured funding from NZAID for the period 2006-2009, for a Regional Water Quality Monitoring Programme, which is a key initiative of the Pacific Regional Action Plan on Sustainable Water Management.

The programme has just commenced in May 2006 and is still in the early stages. Through the Pacific Partnership Initiative on Sustainable Water Management, the programme aims to create sustainable national capacity in Pacific Island Countries (PICs) for maintaining safe quality of drinking water, surface, ground and coastal waters. This should enable the relevant agencies involved to take actions to safeguard and improve the health of Pacific Island peoples.

Due to the time-frame and budget of the Water Quality Monitoring Programme we envisage being able to effectively pilot the initiative in five countries over the mentioned 3year period. The findings and experience can then be tasleem@sopac.org



replicated to other PICs as follow up projects. The key principles of the programme are to:

- Build local capacity to monitor the quality of water through addressing the priority problems related to water quality assessment and management;
- Supply (where needed) some very basic water quality monitoring equipment;
- Provide laboratory training on analysis techniques and proper storage of data;
- Develop proper water quality monitoring programmes and standards through pilots in the selected countries.

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For further information on 4th World Water Forum please visit:

www.pigcos.org/Meetings/ 11th\_RMSD/ 11th\_RMSD\_Meeting.htm

www.niwascience.co.nz/ncc/
icu/archive

or contact

Linda Yuen Project Officer SOPAC <u>linda@sopac.org</u>





#### Island Climate Update Review

The 11th SPREP Regional Meteorological Services Directors' Meeting (11RMSD) will be held in Noumea, New Caledonia from 10 – 14 July and is hosted by the Government of New Caledonia and Meteo-France. This meeting provides an opportunity for Pacific NMS and regional collaborative partners to pursue joint decisions on the outcomes of the previous round of WMO RA V meetings.

One of the major aims at the Meeting is to increase existing and/or establish new technical links and cooperation between National Metrological Services (NMS) and other partners in order to build the region's capacity in monitoring and forecasting weather and climate related extreme events.

The Island Climate Update (ICU) bulletin is one such tool that has been used in the region. The ICU project is a collaboration between NZAID, NIWA, SPREP and SOPAC, under which monthly bulletins have been produced since 2000. The 70th issue is due to be published in early July. An evaluation survey was conducted earlier in the year through the dissemination of a questionnaire. Feedback obtained from this survey as well as from regional meetings where the ICU was presented, indicated that the bulletin was a relatively influential source of climate information. This is especially true for the NMS directors who made up the majority of the survey respondents. Results of the survey have been compiled by the ICU Review Team of SOPAC, SPREP and NIWA. The results of the review will be presented at 11RMSD by Dean Solofa, Jim Salinger and Linda Yuen.



Many respondents have identified tropical cyclones, floods and droughts as extreme climate events of the highest concern in their countries. They have found the several of the ICU's products and services to be most useful for better preparing themselves for these as well as other climatic extremes. These include the ENSO update, rainfall forecast, tropical cyclone forecast and educational outreach activities. In addition to these, many respondents have also found the feature articles quite informative and hope to see more stories from PICs and updates on on-going projects in different islands.

Contribution of the ICU under NZAID funding has been received from BOM, PEAC and the NOAA National Climate Centre. The 11RMSD will also serve as an avenue for further discussions between existing project partners and other interested organisations.

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## Background on Water in Small I sland 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.

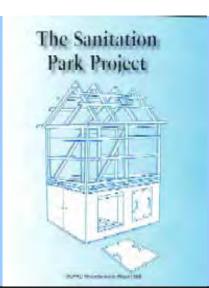
A working group of CROP agencies (Council of Regional Organizations of the Pacific) and NGO representatives has been set up to act as the overall coordinating body of the Pacific Type II Initiatives. Facilitators are asked to report to this Sustainable Development Working Group on a regular basis.

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 <a href="marc@sopac.org">marc@sopac.org</a>

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

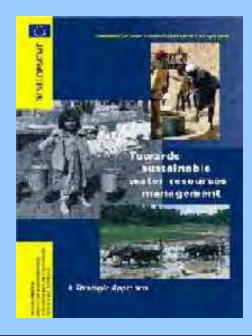
http://www.sopac.org/Sanitation+and+Hygiene

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

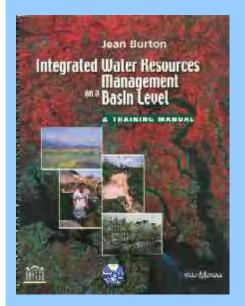
These Guidelines set out a strategic approach to the management and sustainability of water resources and the delivery of water-related services, providing a broad perspective of all aspects of water resources activities. They are designed to respond to the needs of EC staff and those of partner country 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 <a href="mailto:development@ced.eu.int">development@ced.eu.int</a>.

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 prefect 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: <a href="http://www.unesco.">http://www.unesco.</a> org/water/ihp/iwrm basins.shtml

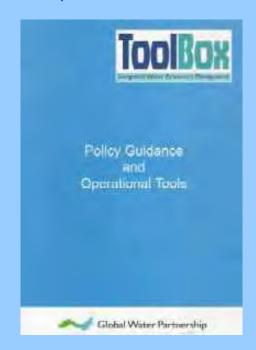
The purpose of Global Water Partnership's (GWP) ToolBox on Integrated Water Resources Management is to provide water management professionals clear examples of good and bad practices and lessons learned from real life experiences of implementing IWRM.

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.

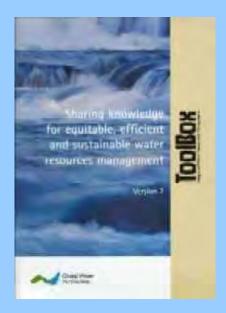
Copies of the Policy Guidance and Operational Tools document is available from GWP. More information on ToolBox is available on the GWP website:

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.

Integrated Water Resource
Management-Technical
Advisory Committee
Background Papers

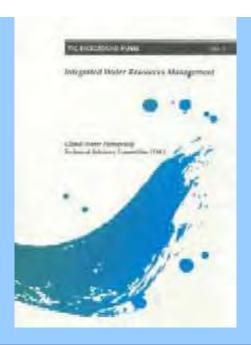
The present paper represents the "corporate view" of TAC on integrated water resources management and has been authored by all members of TAC in the period 1996 through 1999.

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

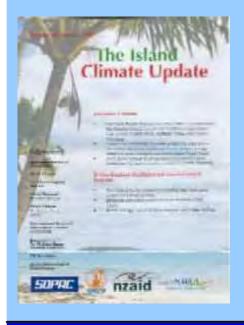
More information on Integrated Water Resource Management-Technical Advisory Committee Background

#### Papers is available on GWP website:

http://www.gwpforum.org/



## 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 NI WA ICU website:

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

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

#### Safe Water Guide for the Australian Aid Program 2005



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:

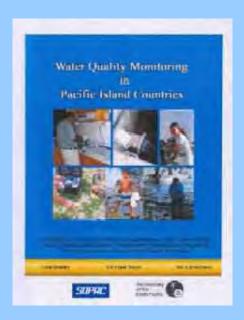
http://www.sopac.org/tiki/tiki-sopac\_download.php?path= /data/virlib/MR/MR0554.pdf&file=MR0554.pdf&loc=MR The Water Quality Monitoring in the picture is the first of its kind guideline that has been developed by the Institute of Applied (IAS) of the University of the South Pacific (USP) and the South 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:

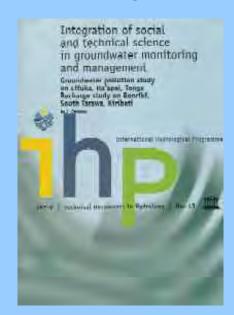
http://www.sopac.org/tiki/tiki-sopac\_download.php?path=
/data/virlib/JC/JC0143.pdf&file=JC0143.pdf&loc=JC

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.

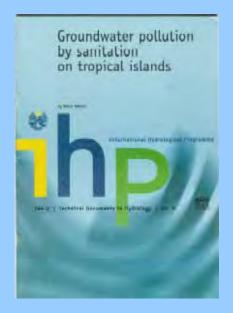
Copies of the Integration of Social and Technical Science in Groundwater Monitoring and Management can be obtained from the SOPAC Secretariat (<a href="mailto:kamal@sopac.">kamal@sopac.</a> org) or you can download the document via the following website:

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 sitting, 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

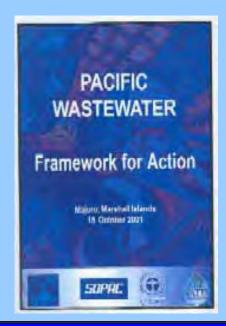
The Pacific Wastewater Policy Statement sets out a framework of guiding principles and policies to guide future development and co-operation by the Pacific Island Countries (PICs).

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).

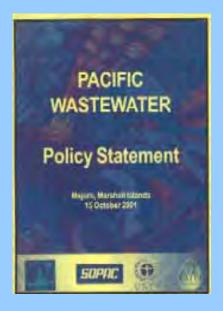
Copies of the Pacific Wastewater Framework for Action can be obtained from the SOPAC Secretariat (<a href="mailto:kamal@sopac.org">kamal@sopac.org</a>) or you can download the document via the following website:

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

Pacific Wastewater Framework for Action



#### 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 (<a href="kamal@sopac.org">kamal@sopac.org</a>) or you can download the document via the following website:

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

#### <u>Pacific Regional Action Plan on Sustainable Water</u> <u>Management</u>

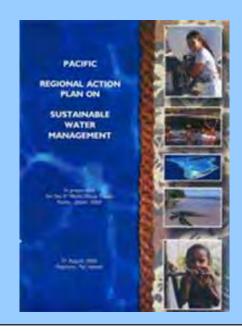
The national consultations as well as a regional meeting held in Sigatoka, Fiji from 29 July – 3 August 2002 provided a platform through which participants translated ideas into decisions and policy changes resulting in the Pacific Regional Action Plan on Sustainable Water Management (Pacific RAP).

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".

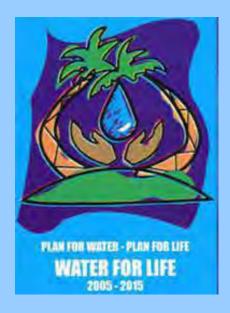
Copies of the Pacific RAP can be obtained from the SOPAC Secretariat (<a href="mailto:arieta@sopac.org">arieta@sopac.org</a>) or you can download the document via the following website:

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

## Pacific Regional Action Plan



### World Water Day Campaign



#### World Water Day Material 2006 available: Water for Life

World Water Day grew out of the 1992 United Nations Conference on Environment and Development (UNCED). In recognition of the freshwater goals agreed to in the conference the United Nations declared 22 March each year to be observed as World Day for Water. The theme for World Water Day 2006 is 'Water and Culture'.

The South Pacific Applied Geoscience Commission (SOPAC) together with Live and Learn Environmental Education and other stakeholders are coordinating various World Water Day activities in the Pacific region. In Fiji, the WWD campaign has begun with poetry and essay competitions in primary and secondary schools and will intensify with radio talkback shows, quizzes, training and awareness programmes using materials produced and TV sessions. The annual World Water Day celebration will be held on the 22nd March at the Fiji Museum.

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:

www.sopac.org/WORLD+WATER+DAY+22+March+2005+-+WATER+FOR +LIFE

# Third Edition WHO Guidelines for Drinking-Water Quality

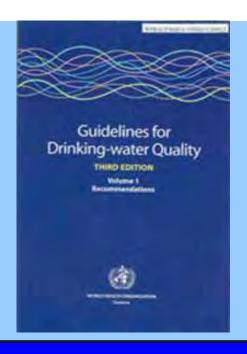
Since the second edition of WHO's Guidelines for Drinking water Quality, there have been a number of events that have highlighted the importance and furthered understanding of various aspects of drinking-water quality and health. These are reflected in this 3rd edition of the Guidelines.

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.

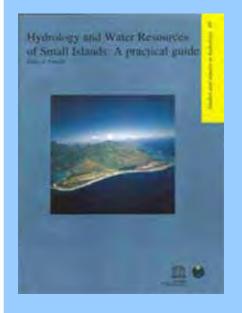
Copies of the Guidelines for Drinking - Water Quality are

available from WHO's website: <a href="http://www.who.int/">http://www.who.int/</a> water\_sanitation\_health/dwg/gdwg3/en/

or from the WHO's Pacific Regional Office (<a href="IddingsS@sp.">IddingsS@sp.</a> 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 (alena@sopac.org) or from the UNESCO Apia Office (hans@unesco.org.ws).

# <u>Harvesting the Heavens, A Manual for</u> Participatory Training in Rainwater Harvesting

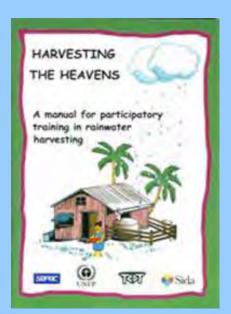
This manual of Participatory Training in rainwater Harvesting was developed as part of the United Nations Environment Programme (UNEP) project titled "Pilot Project on Empowering Women in Rainwater Harvesting in the Pacific Atoll Islands" with funding from the Government of Sweden.

The manual is targeted fro 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.

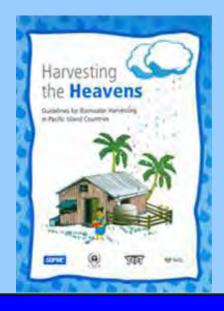
Copies of this Manual can be obtained from the SOPAC Secretariat (<u>arieta@sopac.org</u>) or you can download the document via the following website:

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

Harvesting the Heavens, A Manual for Participatory Training in 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 (UNDP) 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 (<a href="mailto:arieta@sopac.org">arieta@sopac.org</a>) or you can download the document via the following website:

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

#### Tapping Connections between People & Water

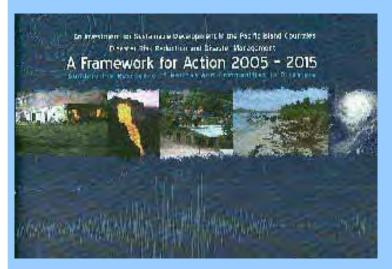
Everyone uses water and everyone needs some kind of sanitation. The way water is used depends on the island where you live: the climate, the landforms, and the source of water. It also depends on the tradition and customs of the family and community, their income and the size of the population.

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 (<u>arieta@sopac.org</u>) or you can download the document via the following website:

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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



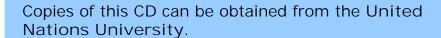
#### Cap-Net - I WRM Tutorial

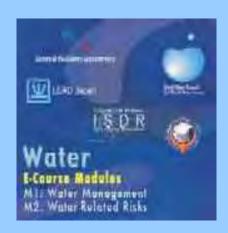
This CD contains a brief introductory tutorial aimed at policy makers, water managers, trainers and educators who want a basic understanding of IWRM principle. It provides the case for IWRM and the argument against those who may oppose it on institutional or sectoral grounds.

Copies of this CD 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.







#### Toolbox

This CD 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.

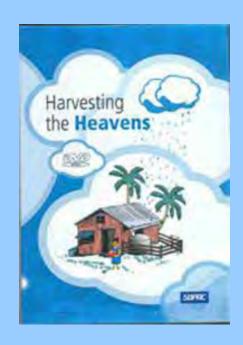
Copies of this CD can be obtained from the Global Water Partnership Secretariat.

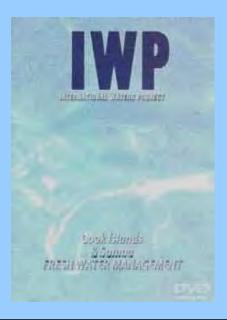
#### Harvesting the Heavens

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:







#### 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.

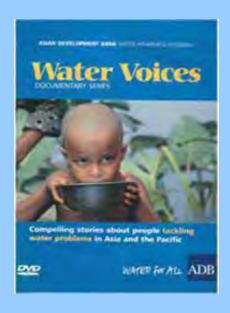
#### Water Voices Documentary Series

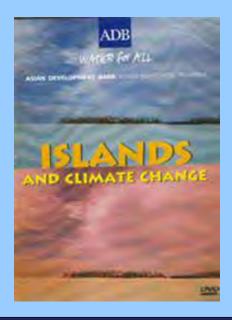
Water is essential to all life. And yet one in three Asians lacks access to safe drinking water, and half the people living in Asia and the Pacific do not have access to adequate sanitation. Conflicts over sharing of scarce water resources are increasing at an alarming rate.

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







#### 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 (<u>arieta@sopac.org</u>) or the Asian Development Bank.

(http://www.adb.org/Water/CFWS/Water\_Voices\_Videos.asp).

Pacific Water Agenda 2006

DATE

**EVENT** 

LOCATION

**DETAILS** 

30 <sup>th</sup> Jan-2 <sup>nd</sup> 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 <sup>th</sup> -14 <sup>th</sup>	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 16 <sup>th</sup> -19 <sup>th</sup>	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. <a href="www.unesco.org/water/water_events/Detailed/1167.shtml">www.unesco.org/water/water_events/Detailed/1167.shtml</a> <a href="http://www.unesco.org/water/water_events/Detailed/1167.shtml">http://www.unesco.org/water/water_events/Detailed/1167.shtml</a> <a href="http://www.unesco.org/water/water_events/Detailed/1167.shtml">http://www.unesco.org/water/water_events/Detailed/1167.shtml</a> <a href="https://www.unesco.org/water/water_events/Detailed/1167.shtml">http://www.unesco.org/water/water_events/Detailed/1167.shtml</a> <a href="https://www.unesco.org/water/water_events/Detailed/1167.shtml">http://www.unesco.org/water/water_events/Detailed/1167.shtml</a> <a href="https://www.unesco.org/water/water_events/Detailed/1167.shtml">http://www.unesco.org/water/water_events/Detailed/1167.shtml</a> <a href="https://www.unesco.org/water/water_events/Detailed/1167.shtml">http://www.unesco.org/water/water_events/Detailed/1167.shtml</a> <a href="https://www.unesco.org/water/water_events/Detailed/1167.shtml">https://www.unesco.org/water/water_events/Detailed/1167.shtml</a> <a href="https://www.unesco.org/water/water_events/Detailed/1167.shtml">https://www.unesco.org/water/water_events/Detailed/1167.shtml</a> <a href="https://www.unesco.org/water/water_events/Detailed/1167.shtml">https://www.unesco.org/water/water_events/Detailed/1167.shtml</a> <a fest_cine.asp"="" home="" href="https://www.unesco.org/water&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;March&lt;br&gt;16&lt;sup&gt;th&lt;/sup&gt;-22&lt;sup&gt;nd&lt;/sup&gt;&lt;/td&gt;&lt;td&gt;4WWF&lt;/td&gt;&lt;td&gt;Mexico City, Mexico&lt;/td&gt;&lt;td&gt;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&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;March&lt;br&gt;17&lt;sup&gt;th&lt;/sup&gt;-21&lt;sup&gt;st&lt;/sup&gt;&lt;/td&gt;&lt;td&gt;First International&lt;br&gt;Water and Film&lt;br&gt;Event&lt;/td&gt;&lt;td&gt;Mexico City, Mexico&lt;/td&gt;&lt;td&gt;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. &lt;a href=" http:="" www.worldwaterforum4.org.mx="">http://www.worldwaterforum4.org.mx/home/fest_cine.asp</a>
March 22 <sup>nd</sup>	World Water Day 2006	Suva, Fiji	Organised by: SOPAC and Live and Learn in Suva Fiji marking the UNESCO Theme: Water and Culture. <a href="http://www.sopac.org/CLP+Water+Awareness">http://www.sopac.org/CLP+Water+Awareness</a>
March 22 <sup>nd</sup>	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 <sup>rd</sup>	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: <a href="https://doi.org/10.1007/html/horst.pilger@cec.eu.int">https://doi.org/10.1007/horst.pilger@cec.eu.int</a> .
April 3 <sup>rd</sup> -7 <sup>th</sup>	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 <sup>st</sup> -12 <sup>th</sup>	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. <a href="https://www.un.org/esa/sustdev/csd/review.htm">www.un.org/esa/sustdev/csd/review.htm</a>
May 8th₋9th	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 <sup>th</sup> -12 <sup>th</sup>	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 <sup>th</sup> -17 <sup>th</sup>	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

May 17 <sup>th</sup> -19 <sup>th</sup>	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 <a href="mailto:dlfowler@fs.fed.us">dlfowler@fs.fed.us</a> or 828-524-2128 ext 111. <a href="http://www.ars.usda.gov/News/docs.htm?docid=9909">http://www.ars.usda.gov/News/docs.htm?docid=9909</a>
May 22 <sup>nd</sup> -24 <sup>th</sup>	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. <a href="https://www.irc.nl/page/27605">www.irc.nl/page/27605</a>
May 23 <sup>rd</sup> -24 <sup>th</sup>	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 <sup>th</sup> -31 <sup>st</sup>	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 <sup>th</sup> -10 <sup>th</sup>	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: <a href="https://www.gpa.unep.org/training/">www.gpa.unep.org/training/</a>
June 15 <sup>th</sup>	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 <sup>th</sup> -30 <sup>th</sup>	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 <sup>th</sup> -11 <sup>th</sup>	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. <a href="https://www.etc.murdoch.edu.au/conferences/decent.html/">www.etc.murdoch.edu.au/conferences/decent.html/</a>
July 10 <sup>th</sup> -15 <sup>th</sup>	Pacific Met Directors Annual Meeting	Noumea, New Caledonia	Organised by Dean Solofa, PI-GCOS Co-ordinator at SPREP-for further details contact: <a href="mailto:DeanS@sprep.org">DeanS@sprep.org</a>
12 <sup>th</sup> Jul- 2 <sup>nd</sup> 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 coregroup of 6 from Samoa.
July 18th	Fiji Legislation Workshop	Suva, Fiji	Programme for Water Governance Consultation
July 24 <sup>th</sup> -27 <sup>th</sup>	Third International Conference for Climate Impact Assessment	Cairns, Australia	The Third International Conference on Climate Impacts Assessment will review our current level of understanding in climate impacts 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. <a href="https://www.anu.edu.au/anuie/iccia/index.html">www.anu.edu.au/anuie/iccia/index.html</a>
August 1 <sup>st</sup> -4 <sup>th</sup>	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 . <a href="http://www.water2006.com/">http://www.water2006.com/</a>
August 20 <sup>th</sup> -26 <sup>th</sup>	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". <a href="http://www.worldwaterweek.org/">http://www.worldwaterweek.org/</a>
September 4 <sup>th</sup> -7 <sup>th</sup>	9th International River Symposium	Brisbane, Australia	The International Riversymposium 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 <a href="https://www.riversymposium.com">www.riversymposium.com</a> for more information.

September 17 <sup>th</sup> -20 <sup>th</sup>	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 <a href="https://www.unesco.org/water/water_events/Detailed/1264.shtml">www.unesco.org/water/water_events/Detailed/1264.shtml</a>
September 22 <sup>nd</sup> -28 <sup>th</sup>	SOPAC Annual Session 2006	Honiara, Solomon Islands	
September 25 <sup>th</sup> -27 <sup>th</sup>	Innovation in coping with water and climate related risks	Amsterdan 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 <a href="https://www.morga.com">www.morga.com</a> or <a href="https://www.morga.com">www.irc.nl/page/28120</a>
September 26 <sup>th</sup> -28 <sup>th</sup>	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 <a href="http://www.irc.nl/symposium/capacitydevelopmente">http://www.irc.nl/symposium/capacitydevelopmente</a> for a registration form and for regular updates on the organisation of the symposium.
September 26 <sup>th</sup> -28 <sup>th</sup>	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. <a href="http://www.conventus.de/water/">http://www.conventus.de/water/</a>
October TBC	1st GEF/IWRM Steering Committee Meeting	Suva, Fiji	

October 9 <sup>th</sup> -11 <sup>th</sup>	ALL ABOUT KARST & WATER	Vienna, AUSTRIA	<ul> <li>The conference provides:</li> <li>presentations of scientific papers</li> <li>presentations of applied projects and user experiences</li> <li>company and product presentations</li> <li>interdisciplinary discussions</li> <li>excursions</li> </ul> For more information on ALL ABOUT KARST & WATER please contact: office@kater2006.at or visit the website: www.kater2006.at/
October 21 <sup>st-</sup> 25 <sup>th</sup>	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 14 <sup>th</sup> -16 <sup>th</sup>	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 - <a href="http://www.ausimm.com/waterinmining2006">http://www.ausimm.com/waterinmining2006</a>
December 2 <sup>nd</sup> -7 <sup>th</sup>	Groundwater Quality 2007	Fremantle, Western Australia	Securing Groundwater Quality in Urban and Industrial Environments Web: <a href="http://www.clw.csiro.au/conferences/GQ07/">http://www.clw.csiro.au/conferences/GQ07/</a>
Selected	Water Websi	tes //	10/1/1/1/1/1

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.ausaid.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 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 <a href="http://hi.water.usgs.gov">http://hi.water.usgs.gov</a>	SPC www.spc.int
USP www.usp.ac.fj	Japan Water Forum <a href="http://www.waterforum.jp/eng/index.">http://www.waterforum.jp/eng/index.</a> <a href="http://www.waterforum.jp/eng/index">httml</a>
SOPAC Water  www.sopac.org/Community+Lifelines  +Programme+Water+and+Sanitation	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 <a href="mailto:sanjeshni@sopac.org">sanjeshni@sopac.org</a> 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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