



Tarawa, Kiribati:

New Initiatives in Regional Co-operation Head Seventh SPREP Meeting

A number of initiatives based on co-operation between Pacific island countries headed the agenda at the Seventh SPREP Meeting in Tarawa, Kiribati on 11-13 October.

During the very full agenda, delegates discussed SPREP's 1995 work programme and budget. This work programme aims to address the major environmental concerns of the Pacific islands, including changing global climate, declining biodiversity, growing pollution problems and degrading coastal ecosystems.

The three-day meeting noted or endorsed a number of regional actions, including a procedure for carrying out the *Programme of Action from the Global Conference for Small Island Developing States* from Barbados earlier this year. This process will include SPREP member countries, SPREP and ESCAP.

The SPREP Meeting approved the new *Action Strategy for Nature Conservation in the South Pacific 1994-1998*, which provides practical

guidelines for Pacific island countries seeking to protect their fragile environments.

Pollution is also a major concern in the region, where there has been a rapid expansion of waste disposal problems. The meeting endorsed the contribution from Pacific island countries into a proposed global programme to protect the marine environment from human activities on land. This information will now be sent to UNEP as part of a global effort to combat this problem.

For the SPREP Secretariat, the meeting endorsed its new *Corporate Plan*, which will establish the structure of this rapidly growing intergovernmental organisation. It also agreed to a short-list of companies for a competition to design a *permanent SPREP headquarters building* in Apia, Western Samoa. SPREP is still seeking funding to build this headquarters.

Nearly 60 representatives from 18 member countries, as well as regional and international organisations, institutions and NGOs, met at the Otintaai Hotel on South Tarawa.

The **Eighth SPREP Meeting** will be held in Apia, Western Samoa, in September 1995.

Kiribati President Opens SPREP Meeting

Kiribati's President, H.E. the Hon. **Teburoro Tito**, opened the Seventh SPREP Meeting in Tarawa, Kiribati on 11 October.

The Hon. Tito warmly welcomed delegates, reiterating the Kiribati government's support for international, regional and national efforts "to ensure a long term perspective in the utilisation of resources for the benefit of mankind".

The President also noted that "our resources are so basic and scarce, and our ability to improve them so limited. Therefore, the onus is perhaps strongest and more pro-

nounced for us to think and act sustainably." He stated that the environment policy of the new Kiribati government would not differ to that of the previous government. "We are ... committed to a regional approach and regional co-operation towards protecting, conserving and managing the environment. Nationally, we are committed to the notion of sustainable development", he said.

In reply, the representative from New Zealand, Priscilla Williams, referred to the special qualities of

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the people of Kiribati, and of its Pacific island neighbours, in understanding the true meaning of being "small island developing states".

Ms Williams praised the region's cohesiveness, dedication and awareness of its special needs, and its ability to relate international and regional issues to the natural environment. She attributed much of the effectiveness in which Pacific island countries as a group work towards environmental protection to the guidance provided by SPREP under the Director, Vili Fuavao.

Dr Fuavao then described how the demands on SPREP "have increased in leaps and bounds, as we take up the challenges of implementing the ambitious work programme that you have entrusted to us".

Dr Fuavao also observed that one message from donors at the Global Conference on Small Island Developing States at Barbados earlier this

year was "that donor assistance is likely to decline." He pointed out that "it was very important to ensure that policy is put in place, at regional and national levels, to ensure that effective implementation of the SPREP work programme, dialogue and the spirit of partnership between member countries, donors and the Secretariat is maintained".

Representatives from member countries, and other regional and international organisations and NGOs, were greeted before the Meeting by a traditional ceremony of dance and song at nearby Eita village *maneaba*, or meeting house.

This was the Hon. Tito's first presentation to an international meeting since becoming President, after his country completed elections eleven days beforehand.

Ms Makurita Baaro, Kiribati's Secretary of Foreign Affairs and International Trade, was elected to chair the Meeting.

Acronyms

ADB Asian Development Bank
 AIDAB Australian International Development Assistance Bureau
 AOSIS Alliance of Small Island States
 CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora
 CNMI Commonwealth of Northern Mariana Islands
 EIA Environmental Impact Assessment
 ENSO El Niño Southern Oscillation
 ESCAP Economic and social Commission for Asia and the Pacific
 EU European Union (formerly EC)
 EWC East West Centre
 FAO Food and Agriculture Organisation (UN)
 FCCC Framework Convention for Climate Change
 FFA Forum Fisheries Agency
 FSM Federated states of Micronesia
 GEF Global Environment Facility
 IMO International Maritime Organisation
 IPCC Intergovernmental panel for Climate Change

IUCN World Conservation Union
 NEMS National Environmental Management Strategies
 NGO Non-government Organisation
 NZ New Zealand
 OECD Organisation for Economic Co-operation and Development
 PIANGO Pacific Island Association of NGOs
 PIDP Pacific Islands Development Programme (EWC)
 PNG Papua New Guinea
 RMI Republic of the Marshall Islands
 SOPACS South Pacific Applied Geoscience Commission
 SPBCP South Pacific Biodiversity Conservation Programme
 SPC South Pacific Commission
 SPREP South Pacific Regional Environment Programme
 UH University of Hawaii
 UN United Nations
 UNDP United Nations Development Programme (UN)

Palau to Accede to SPREP Agreement

Representatives at the SPREP Meeting in Kiribati welcomed a statement by the Pacific islands' most recently independent country, Palau, outlining their new political status and their decision to accede to the *Agreement Establishing the South Pacific Regional Environment Programme*.

This was a major event during the first day of the *Seventh SPREP Meeting* in Tarawa, Kiribati. Mr. Victor Uherbelau, representing Palau, stated that his country was now moving to become a Party to the SPREP Agreement, after the *Compact of Free Association* between Palau and the United States came into force on 1 October this year.

The Meeting noted that **Kiribati** acceded to the Agreement on 16 August, while the representatives of **France** and **Australia** also informed the Meeting that their countries would also soon accede to the Agreement.

When the *Agreement Establishing SPREP* comes into force, it will formalise the organisation's legal status as an intergovernmental, autonomous, regional organisation. Kiribati is the fifth country to accede to the Agreement, leaving only five more ratifications needed for the Agreement to enter into force.

UNEP United Nations Environment Programme (UN)
 UNESCO United Nations Educational, Scientific and Cultural Organisation (UN)
 UNFPA United Nations Population Fund (UN)
 UNGA United Nations General Assembly
 UNITECH University of Technology (PNG)
 UoG University of Guam
 UPNG University of Papua New Guinea
 USA United States of America
 USP University of the South Pacific
 WMO World Meteorological Organisation
 WWF World Wide Fund for Nature



Vili A.
Fuavao

The **Seventh SPREP Meeting**, held in Tarawa in early October, was quite successful thanks to the excellent organisation provided by the Government of Kiribati. The Meeting was also blessed by the presence of His Excellency the President of Kiribati, Hon. Teburoro Tito, who welcomed participants and officially opened the Meeting.

The Seventh SPREP Meeting will be remembered for the number of decisions made. Only two or three agenda items were deferred from a list of over twenty items.

SPREP's *Corporate Plan* was approved and had since been implemented. The mechanism proposed by the Secretariat for reporting and following up the outcomes of *Barbados Conference* was also approved. This allows the Secretariat to consolidate its efforts in ensuring that the region adequately addresses its responsibilities to the Commission for Sustainable Development.

The *Work Programme and Budget* is the centrepiece of all SPREP Meetings, and an ambitious programme was approved for 1995.

To successfully implement this work programme, the Secretariat needs all your continued advice and support. Other institutional issues, such as procedures for the SPREP Meeting and for appointing the Director, were also approved.

The Meeting was briefed by the delegates from USA on the *International Coral Reef Initiative*, in which SPREP is now participating. We will report on this initiative in a late issue of this newsletter.

On a positive note, the **Government of Tuvalu** has become the seventh country to ratify the *Agreement Establishing SPREP*. We need only three more ratifications to bring the Agreement into force. I would like to request those countries that have not ratified the Agreement to do so as soon as possible to formalise SPREP's legal position as an autonomous regional organisation.

1995 has been declared as the **Year of the Sea Turtle** by a number of regional meetings during the year. The Secretariat has been busy preparing this region-wide campaign to save the region's dwin-

dling populations of sea turtles. We were happy to see the region's overwhelming response to SPREP's *turtle art competition* for school children, based on the theme "Let Our Turtle Family Live". **Congratulations to the winners.** We look forward to your assistance in this campaign next year.

Finally, let me take this opportunity to thank all of you for your support which enabled us to have another successful year. I hope the Christmas season brings you and your loved ones peace and comfort. Have a **Merry Christmas and Happy New Year** from all of us in here in the Secretariat.

God bless you all,

Vili A. Fuavao
Director

"One World" Ready to Expand



The current **One World** project has reached its halfway point. After eighteen months, there is now a network of environmental journalists, information officers and NGO workers from around the Pacific islands region who regularly correspond with each other and Radio Australia.

These people meet regularly on the **PEACESAT** network, to exchange environmental information and ideas. They also provide information and radio material to the producers of Radio Australia's "One World" environmental radio program.

"One World" regularly provides environmental information to the Pacific islands. The weekly half-hour English program broadcasts

on short-wave around the Pacific islands, as is 15-minute versions in French and Tok Pisin. The program is also distributed in these languages by cassette tape and transcripts direct to the region's radio stations. Written transcripts are also mailed to print media.

The network is now looking to expand further into the region, particularly to the region's journalists. The One World producers encourage all journalists and environment information officers to contribute material on local environmental concerns to be used in the "One World" program.

The project is also expanding its use of electronic mail through the so-called Pactok network, which has already been established in a num-

ber of Pacific island countries. This will allow more regular and rapid communications between the people involved in One World.

Radio Australia manages this AIDAB-funded project in co-operation with SPREP and the Public Radio Network.

For more information, contact:
Ms Judi Cooper,
Business Development Manager,
Radio Australia.
Fax: (61-3) 629 1899
Internet: radoz@pactok.peg.apc.org
Pactok: 90:613/101
or
Mr Wesley Ward,
Information Officer, SPREP
Fax: (685) 20 231
Internet: sprep@pactok.peg.apc.org
Pactok: 90:685/101



Gerald Miles

Sustainable Development Officer

GEF to Fund Barbados Programme of Action

The GEF Council has decided that the Barbados *Programme of Action* provides a sound framework for allocating GEF funds to island countries at a recent meeting in Washington DC, USA.

These funds will address four agreed global priorities: climate change, biodiversity, international waters and ozone.

"Global environmental problems being dealt with by the GEF are of great significance to islands", said Mr. Gerald Miles, Head of SPREP's Environmental Management and Planning Division. "The Barbados Conference recognised this and asked the GEF to take account of our special needs and requirements", he said.

Mr Miles also said that GEF funds are not assured for the Pacific islands, but that projects that meet the criteria of the GEF's Operational Strategy must first be developed, within the framework of the Barbados *Programme of Action for the Sustainable Development of Small Island Developing States*.

Important issues

At its most recent meeting in New York on 1-3 November 1994, the GEF Council agreed on a number of important issues on:

- an interim GEF *Project Cycle* and resource allocations for 1995;
- the status of the *International Waters portfolio*;
- *NGO participation*; and,
- the role of the *GEF Scientific and Technical Advisory Committee (STAP)*.

Project cycle

The key issues for the Pacific were to maintain transparency of, and participation in, the Project Cycle. The proposed project cycle presented by the GEF Secretariat was considered too complex, although it is hard to see how this can be avoided when dealing with over 100 participants, relevant organisations, three implementing agencies (each with their own interests in the GEF), the GEF Secretariat and the requirements of the Instrument.

The importance of a "country-driven" process and country participation in developing and carrying out GEF projects was dealt with relatively well in the meeting. However, it was assumed that country-level programming by the GEF may be required in the long run. This may duplicate existing national systems for programming and coordinating donor aid.

A **Project Development Fund (PDF)** was established with an initial fund of US\$ 15 million. From "Block A" funds, up to US\$ 50,000 per project will be allocated on request from countries for developing concepts into more complete projects for consideration by the GEF. For more developed or larger investment projects, "Block B" funds, up to US\$ 350,000, can be allocated.

A **GEF Operations Committee (GEFOP)** will be established to link proposed projects with the approved GEF work programme. It will review and recommend projects to be included in the work programme. This will replace the old Implementing Committee.

Although the GEFOP has increased in size, Participants will still need to be involved to ensure transparency in selecting projects.

1995 allocations

In 1995, projects up to a total of US\$ 280-320 million will be approved under the GEF, based on existing criteria and procedures. However, restrictions will apply: urgent proposals, or projects to build capacity for future GEF projects and activities to implement the Climate Change and Biodiversity Conventions as well as International Waters will receive priority. These funds are only indicative and not targets that must be met.

International waters

There was much support for early implementation of activities under International Waters. The Council is expected to adopt a broad definition of International Waters, and consider the role of UNEP's regional seas programmes and relevant conventions in the draft **Operational Strategy**. This Strategy should ul-

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History of the GEF

The Global Environment Facility was started in 1991 by the World Bank as a pilot programme to help protect the environment and so promote sustainable development.

It promotes international co-operation by providing additional funds to meet the "agreed incremental costs" of measures needed to attain global benefits in addressing:

- climate change;
- biological diversity conservation;
- international waters; and,
- ozone layer depletion.

The GEF was restructured and replenished after the Rio Earth Summit in 1992. It now has a Governing Council of 32 members, a Secretariat, a Scientific and Technical Advisory Panel and a Participants' Assembly, which will meet every three years. It now also has an extra US\$ 2 billion. The Governing Council must now decide how to spend these funds on the global environment.



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timately assist islands in implementing relevant parts of the Barbados Programme of Action.

NGO participation

It was generally agreed that there would be limited NGO participation - the criteria for NGO selection was deferred to the next session. It is expected that biannual meetings between NGOs and the GEF Secretariat (not funded from GEF resources) would be held. Up to ten NGOs (self-selected by the regions) would be allowed to observe Council Meetings. These NGOs are expected to be accredited to the UN.

The issue of accreditation, combined with the selection process, will give Pacific NGOs little chance of participating in Council Meetings. They will need to co-operate with Asian counterparts and discuss GEF issues with their national focal points.

The Role of STAP

The STAP is co-ordinated by UNEP and provides the GEF with its scientific and technical integrity.

The key issues of the composition, location and cost of STAP were discussed, as well as how it would effectively participate in the Project Cycle (and not slow projects down).

Constituencies will be able to propose experts for the STAP Roster of Experts. The location is still undecided, with the main contenders being Nairobi, Washington and Geneva. Additional costs will be limited to the permanent members of STAP, with a maximum of only ten percent for annual increases in administrative costs for the STAP Secretariat, currently based in UNEP.

STAP's primary role will be to provide strategic scientific and technical advice on the focus for GEF activities. Selected projects will be reviewed by the STAP, but it is not known yet how this will be done.

Pacific islands representation on the GEF Council

The GEF Council has 32 Constituencies. Each Constituency has one Member, one Alternate and two Advisers. The Pacific Islands Constituency is one of six Constituencies from the Asia region (as defined by the UN).

The countries in this Constituency are Cook Islands, Fiji, FSM, Indonesia, Kiribati, Nauru, Niue, PNG, Philippines, RMI, Solomon Islands, Tonga, Tuvalu, Vanuatu and Western Samoa.

The Constituency Member is Indonesia. Western Samoa is the Alternate. The two Advisers are Philippines and SPREP.

Future meetings

The next two Council Meetings are planned for 30 January-1 February, and 3-5 May 1995.

For more information on the GEF and related issues, contact Gerald Miles, SPREP's Sustainable Development Officer and Head of Environmental Management and Planning.



First CASO Workshop

Conservation Area Support Officers - or CASOs - employed under the SPBCP, met in their first workshop at Nadi, Fiji. The workshop, held on 17-21 October 1994, aimed to introduce CASOs to the operation of the South Pacific Biodiversity Conservation Program operates.

The new CASOs discussed the roles and responsibilities of CASOs and the support available from SPREP's SPBCP team. They were also introduced to participatory planning and project management techniques.

Valentine Santiago, from Pohnpei, FSM, has been a CASO since March 1994. He presented

his experiences to the other CASOs. Most other CASOs were appointed less than a month before the workshop, from SPBCP conservation area projects in Fiji, Western Samoa, Vanuatu, Solomon Islands and Niue. A proponent for a proposed marine conservation area project in Kosrae, FSM, also attended the workshop.

Good Orientation

SPREP staff felt that the workshop provided a good orientation for the CASOs to the SPBCP by providing training in how to access resources, work planning and management, costing work plan activities, evaluation and monitoring.

CASO response to the workshop was also positive. "It helped me understand more about the role of the CASO" and "Very interesting and informative" were typical comments. Most CASOs requested "fewer lectures and more group discussions" in future workshops, using more interaction in small groups. It was also felt that more case studies should have been presented.

Future Plans

CASOs reviewed progress in developing Conservation Areas and discussed future activities and plans.

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Environment news for the Pacific islands

US Starts Coral Reef Initiative

USA has launched its International Coral Reef Initiative (ICRI) to help conserve domestic and international coral reef ecosystems.

The Initiative links US expertise with US island territories, developing countries, international organisations, scientists, the public and others to focus attention on the declining health of coral reefs worldwide.

Australia, Jamaica and USA will host a international meeting on coral reefs in Washington DC, USA, in December 1994.

Isle Watch, no. 6, 10/94.

New Environmental Research Centre for PNG

PNG's University of Technology in Lae has unveiled plans to establish an Environmental Research and Management Centre.

The Centre will aim to co-ordinate research and teaching activities for environmental issues in PNG. It will be established in response to the perceived need to integrate environmental conservation with industrial and economic development.

NAL News, no.7, 7-8/94.

New El Niño Center in Hawaii

The Pacific El Niño Southern Oscillation (ENSO) Applications Center was recently established in Hawaii. It will provide scientific data to help farmers, fishers, water departments and disaster managers plan for the adverse effects of ENSO events.

Isle Watch, no. 6, 10/94.

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National Activities

American Samoa:



The Great Samoan Turtle Mystery

Two turtles tagged with satellite transmitters were recently released from **Rose Atoll**, in American Samoa, to track their migration to feeding grounds elsewhere in the Pacific.

This year's effort by the territory's *Department of Marine and Wildlife Resources* follows on the success of a similar tagging exercise last year.

These mature female green turtles, which were tagged while nesting at Rose Atoll, will hopefully answer an intriguing question for local researchers - where do these turtles go when they are not laying their eggs at Rose?

The Department has also made the trial a *public awareness event* by running a **guessing competition** for local school students. They have to guess where the turtles will

travel to, and how long it will take them to get there.

This innovative research and public education activity also effectively supports other upcoming national and regional activities for the 1995 Year of the Sea Turtle.

For more information on this project, contact:

Peter Craig, Chief Biologist
Department of Marine and
Wildlife Resources
American Samoa Government
PO Box 3730
Pago Pago, American Samoa. 96799
Tel.: (684) 633 4456
Fax: (684) 633 5944

Ed.: We will report on the progress of these turtles in our next issue.

Where do you think they will go?

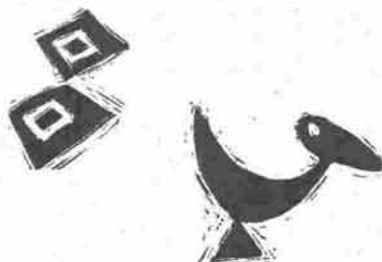
Help Needed! High Mortality Among Kiribati Birds

The Wildlife Conservation Unit on Kiritimati (Christmas) Island in Kiribati recently reported unusually high deaths among local colonies of **Wedge-tailed Shearwaters** (*Puffinus pacificus*).

In 1984, it was estimated that there were around one million of these birds on **Kiritimati**, one of the largest colonies known in the Pacific.

Kiribati's Ministry of Environment and Natural Resource Development intends to send its Veterinary Officer to Kiritimati to investigate the report and collect samples for analysis.

The **Environment Unit** in the Ministry would like to hear if other Pacific island countries have recently noted similar deaths in their colonies of Wedge-tailed Shearwaters.



If you have information, contact:

Bryony Jones, Veterinary
Officer
Agriculture Division, MENRD
Tarawa, Kiribati
Fax: (686) 28 295, 28 465



First CASO Workshop

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Future CASO training should focus on the technical aspects of establishing and managing a conservation area. This will be considered after Project Preparation Documents (PPDs) are completed for all projects.

Income generating activities (IGAs) captured the interest of many participants who requested IGA training. Workshop participants identified other training needs, such as conservation management, farming systems, forest conservation methods, project management, financial control, species identification and community development.

Participants called for in-country training better for raising awareness on the need for conservation areas with SPBCP providing a "framework for the activity".

This workshop will be followed by in-country training in 1995. The *Training Notes* used will be improved so the CASOs can use these

as reference material. A "How-to-Do" manual will soon be produced to further assist the CASOs in specific activities in their CAs.

Workshop resource persons were: Alivereti Bogiva (Fiji Department of Forestry), Demei Otobed (Palau) and Teariki Rongo (Cook Islands). Other representatives were Mr. Ken Anitok (Marshall Islands) and Ms. Kushma Ram (Pacific Concerns Resource Centre - NGO). Mr. Elvit Remas (Conservation Area Manager, PNG) and Mr. Patrick Toanenen (Chairman of a Conservation Area Committee, PNG) represented a sister GEF project in PNG.

Tonga, Kiribati and Tuvalu has not yet appointed CASOs and were not represented at the workshop. Tonga has now selected a CASO whose appointment is expected to be confirmed shortly. Kiribati and Tuvalu are expected to select CASOs next year. ☛☛☛

New Environment Group for Palau

Concerned individuals in Palau recently formed the Palau Conservation Society, hot on the heels of the signing of the country's Compact of Free Association with USA.

The Society believes it can play an important part in Palau's future development, especially as the government decides how best to use the funds provided by USA under the Compact.

"We see that there will be a lot of development ... and ... perhaps a non-government organisation should be formed to try, and not to stop development, but to ensure that our beautiful island environment ... could be conserved for now and for the future, as well as for the visitors", said the Society's chairman,

Dr Minoru Ueki, in a recent "One World" radio program.

Dr Minoru pointed out that the Compact only guarantees funds for 10-15 years for the government of Palau, so it is looking at development options to best use these funds. "The focus today (by the government) is on tourism", said Dr Minoru.

The chairman expressed concern that the type of tourism seen in Saipan (CNMI), Guam and Honolulu would severely affect the local environment. "The Palau Conservation Society feels that we must educate the people, we must work with the government to ensure that the environment is not destroyed".

Ed.: Thanks to Carolyn Court of "One World" for the interview with Dr Minoru.

Participants and resource people for the first CASO Workshop in Nadi, Fiji, in October 1994.

Photo: Ramesh Studios, Nadi.



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Marshalls Proposes Nuclear Waste Facility to UN

In a recent address to the UNGA, RMI's Foreign Minister, Hon. Phillip Muller, said his government would welcome the participation of the world community in the development in developing a nuclear waste facility in RMI.

He told delegates of a "pre-feasibility" study into the possible use of Bikini and Enewetak Atolls for safe storage sites.

Washington Pacific Report, 13:2, 15/10/94.

Regional Waste Treaty Nears Completion

The regional treaty to control the movement of hazardous wastes around the region, the so-called Waigani Treaty, is entering final negotiations.

A recent meeting in Suva cleared up many key issues, which was needed to see the treaty open for signing at the next Forum meeting in Port Moresby in 1995. The treaty will complement the international Basel Convention, which Pacific island countries are also being encouraged to accede to.

UNDP to Fund CZM Plan for Marshalls

The UNDP Suva office recently announced a project to develop a coastal zone management (CZM) plan for the Marshall Islands, for assistance from the International Ocean Institute at USP.

Dr Suresh Raj, Sustainable Development Advisor at UNDP Suva, outlined the growing conflict between the need to use coastal and inshore resources now, and the need to ensure a sustainable supply of these resources.

USP Bulletin, 27:38, 28/10/94.

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Tuvalu PM Seeks Resettlement Sites

Tuvalu's Prime Minister, Hon. Kamuta Latasi, has renewed an appeal in a recent visit to Australia to consider resettling Tuvaluans if his country is sunk by rising sea levels.

Washington Pacific Report, 13:2, 15/10/94.

Laucala Bay to Receive Help

Wastewater experts and marine scientists have joined forces to review the future of the Kinoya Sewerage Treatment Plant that empties into Laucala Bay in Suva.

Experts from USP, Australia and New Zealand are looking at plans for a larger plant that will eventually treat waste from 350,000 people.

A meeting with government officers noted that major issues for the current plant were protecting the marine life in Laucala Bay, protecting the health of people swimming and fishing in the Bay, and developing an odour-free plant.

USP Bulletin, 27:38, 28/10/94.

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From ENSO, Climate Prediction is Born ...



Atmospheric scientists have used their understanding of the earth's weather patterns to predict the weather for over 100 years. As the atmosphere is very complex and this understanding is far from perfect, these predictions have been limited to several days ahead.

Weather forecasts provide vital information to many users: farmers, sailors, fliers and industry. Now, as understanding improves, seasonal climate forecasts are now becoming reality, which will become important for social and economic planning.

To review the current knowledge in this area, the United States National Oceanographic and Aeronautical Administration (NOAA) convened the Workshop on Short-Term Climate Prediction, and their Applications for Social and Economic Benefit and Sustainable Development. This was held in Bali, Indonesia, on 7-9 November 1994.

The workshop aimed to explore the production and disseminating of climate forecasts to promote sustainable development and increase wealth in the Asia-Pacific region.

There was a wide cross-section of participants from the physical and social sciences, economics, government and industry, and human services (e.g. health).

The workshop specifically:

- ⊕ provided a scientific review of the current understanding of the *El-Niño / Southern Oscillation* (ENSO) phenomena;
- ⊕ explored the economic and social benefits from systematically applying climate forecast information;
- ⊕ identified the climate prediction needs of the main economic sectors affected by short-term climate variability; and,
- ⊕ proposed a way of producing and disseminating climate forecasts.

Know Thine Enemy: ENSO and Sustainable Development

Scientific studies showed a close relationship between ENSO and extreme climate variability in the Asia-Pacific region. Elsewhere, in Europe, Africa and North America, the impacts are important but the relation is not as strong.

Knowing the state of ENSO explains the major part of climate variability in Asia and the Pacific. Therefore, if it is known beforehand what ENSO will do in the future, Pacific islanders can anticipate its impacts and plan accordingly.

Since ENSO cannot be avoided, preparation is the only weapon in reducing the bills which accompany an ENSO. The first use of climate predictions began in the mid- to late-1980's. In 1987, farmers in Peru increased their gross value by 3% in that year, despite a significant ENSO which usually reduces

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The ENSO Phenomenon

The prevailing easterly trade winds in both the northern and southern hemispheres of the Pacific Ocean set up converging ocean currents. These currents gather warm ocean water over the Western Pacific and Coral Sea.

Because of these circulations, and the land barriers of Australia and Asia, the warm waters do not disperse, and so accumulate over a number of seasons. The oceans and atmosphere are closely linked by convection and evaporation caused by this warm water.

The warm water acts as a heat store. Every so often, the stored heat exceeds the natural heat balance, and the excess heat stored is suddenly discharged,

disrupting the atmosphere and ocean system.

At first, the trade winds weaken as there is an enormous shift in the masses of air, which disturb the high and low pressure systems across the Asia-Pacific region. The weakened trade winds allow the warm water in the Western Pacific to run eastward along the equator, and spread into the cooler ocean water near South and Central America.

This shift in ocean currents is called the *El Niño*, while the atmospheric shift is the *Southern Oscillation*. This coupled phenomenon, known as ENSO, involves both the atmosphere and the ocean, and so is a complex problem to unravel.

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A History of ENSO

The 1982/83 ENSO event was perhaps the largest of this century. It caused major changes in the climate of the entire globe. Flooding in the Americas, droughts and fires over Australia and Asia, and hurricanes over Hawaii and French Polynesia can be attributed to this event.

As well as causing widespread human suffering and death, these extreme climate conditions caused damage worth over US\$ 8.1 billion. Because of the 1982/83 ENSO, one of the largest, most intensive scientific experiments ever conducted was planned and carried out. A collaborative effort involving some 22 nations and millions of dollars, the Tropical Oceans, Global Atmosphere Coupled Ocean Atmosphere Research Experiment (TOGA-COARE), ran from January 1985 to October 31 1994.

This experiment cast light on many unknowns concerning El Niño, and confirmed that the impacts of ENSO are truly global. It also revealed that ENSO is a naturally occurring event with a long history, and that many natural ecosystems, including flora and fauna, have adapted to the natural cycle of ENSO. Some ecosystems even depend on ENSO for their survival.

For example, research has shown that turtles are sensitive to subtle variations in air pressure, and vary the number and location of their eggs laid, depending upon the state of the ENSO signal. Pelagic fish such as tuna also migrate according to the availability of their food, which in turn is affected by the movement of warm ocean waters during ENSO.

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From ENSO, Climate Prediction is Born ...

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production through drought. This was accomplished through a systematic effort to select appropriate crops and plan seeding times based on climate predictions.

In 1991, farmers in the Ceara region of Brazil were able to maintain agricultural production at their usual levels, despite receiving 23% less rainfall than normal. These benefits are now also possible in the Pacific region.

New ENSO Applications Centre

In the Pacific region, an ENSO applications centre was established in August 1994 in Honolulu, Hawaii. This is a joint initiative of NOAA, UH, UoG and the Pacific Basin Development Council. SPREP will be involved in providing the "outreach" for this project, helping to transmit climate predictions to the many potential users in the wider Pacific islands region.

Climate affects all human activity, so it is expected that ENSO predictions will have vital use in all areas of daily life. This includes:

- ☉ economic activity, such as agriculture, fishing, manufacturing, and forestry;



Satellite photo of Cyclone Kina.

- ☉ social development, such as human health and population patterns; and,
- ☉ reducing the impacts of natural disasters such as tropical cyclones, floods and droughts.

Linking Information and Users

A new, exciting era of accurate climate prediction is now with us, and with the current levels of knowledge, scientists must pass this information on to users.

The current major problem is matching the information available to the needs of the users. Scientists must be more aware of these needs, and the users must be more familiar with the current level of understanding, including what is, and is not, possible in predicting climate variability. More regional and national workshops are planned to address this issue.

It is important that there is effective dissemination of current knowledge to users, while skills and techniques in predicting climate changes are also developed and improved. The needs of users will influence the direction of research, as will research results.



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Mangroves Under Threat

Renewed clearing threatens the largest mangrove ecosystem in the Western Pacific, at Vaiusu Bay near Apia, Western Samoa. The government is pressing ahead with plans to build a public access road into cleared areas, and new commercial and residential buildings have already been erected.

The local environmental NGO, the *O Le Si'osi'omaga Society*, presented a petition to halt the clearing to the government from concerned local residents and surrounding villagers. They are concerned at the continued loss of a major local food source.

Talamua, 1:6, 11/94.

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Making Better Decisions

Decision makers must also become more aware of the many benefits of climate prediction. During the workshop, NOAA released a document entitled "A Proposal to Launch a Seasonal-to-Interannual Climate Prediction Program". This describes how an international climate prediction programme might be established.

The Director of NOAA's Office of Global Programs, Michael Hall, noted that a ministerial meeting for world leaders will be convened in the first half of 1995 to discuss this document, and related issues. This meeting is an initiative direct from USA's Vice President, Al Gore, highlighting the level of concern and commitment from USA.

This workshop was an initiative of USA and sponsored by NOAA, the Indonesian National Institute of Aeronautics and Space (LAPAN) and the University of Tokyo Centre for Climate System Research (CCSR).

☉☉☉



Books, videos, slides and other materials from SPREP and other environmental organisations in the Pacific islands.

Wetland Benefits

Wetlands are vital for island economies and the way of life. According to the definition of "wetland" in the Ramsar Convention, they include most coastal areas in our region. These areas are also under increasing pressure, especially from poorly planned development.

The Asian Wetland Bureau, the International Waterfowl and Wetlands Research Bureau and Wetlands America recently published *Wetlands Benefits: the Potential for Wetlands to Support and Maintain Development*, compiled and edited by Jon Davies and Gordon Claridge. This is a timely book which outlines the physical, economic and social benefits from maintaining healthy wetlands.

With ample diagrams and clear layout, the book would be most useful for administrators and decision makers, as well as teachers and university students.

For more information, contact:
Asian Wetland Bureau
Institute of Advanced Studies
University of Malaya
59100 Kuala Lumpur
Malaysia
Tel.: (603) 756 6624
Fax: (603) 757 1225

Latest SPREP Releases

With growing work programme, SPREP publications now cover a wide range of subjects on environmental and related issues. New additions to the SPREP catalogue include:

▣ *Traditional Practices and their Implications for Sustainable Development in Tonga* (SRS 71), by Sione L. Tongilava, is the first, in what is hoped will be a series of national studies, on the importance of traditional management practices in Tonga for sustainable development.

▣ *In-country EIA Training in the Pacific Islands: a Review of the SPREP EIA Training Programme* (SRS 85), by Komeri Onorio, a stimulating review of SPREP's recently completed EIA training programme.

▣ *A Weather Satellite Receiving System for Pacific Island Nations* (SRS 87), by Colin Schulz, is a timely report, as we enter the cyclone season, on possible low-cost systems for receiving weather data from satellites.

▣ *La lettre de l'environnement*, the French language version of SPREP's *Environment Newsletter*, which we hope will again be a regular quarterly publication. It starts with issue no. 38.



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Australia Completes Major Nauru Study

Australia has presented a comprehensive study on rehabilitating Nauru's landscape after decades of phosphate mining. The report recommends leveling limestone pinnacles using local mining equipment, and using residual phosphate, local organic matter and imported soil to initially rehabilitate around five hundred acres.

Washington Pacific Report, 13:2, 15/10/94.

Pacific Churches - "Stop Greenhouse Gases"

At a recent meeting in Majuro, RMI, the Pacific Council of Churches has supported Pacific island leaders by calling on industrialised countries to reduce their emissions of greenhouse gases.

The Council expressed grave concern for the environment, livelihoods and very ways of life for all Pacific islanders if present levels of greenhouse gas emissions continue.

They also called on all island governments to sign and ratify the FCCC as soon as possible.

PCC Press Release, 30/11/94.

For more information on these and other SPREP publications, write to:
The Director, SPREP
PO Box 240, Apia, Western Samoa.
Tel.: (685) 21 929
Fax: (685) 20 231
Internet: sprep@pactok.peg.apc.org
Pactok: 90:685/101

Training Courses and Workshops

Integrated Coastal Management

When? 23/10 - 3/11/95.

Where? Silliman University, Dumaguette City, Philippines.

Who for? Professionals responsible for planning and managing coastal management.

Course Aims:

The participants will design strategic coastal plans that:

1. link principles of resource management with sustainable development;
2. use the policy process;
3. use various management techniques, including EIA, permits and public education;
4. encourage communities to participate; and,
5. use appropriate techniques to gain broad public support.

For more information:

The Training Co-ordinator
Coastal Resource Center
The University of Rhode Island
Narragansett Bay Campus
Narragansett, RI 02882. USA
Tel.: (1401) 792 6224
Fax: (1401) 789 4670
E-mail: markd@gsosun1.gso.uri.edu

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Meetings '94

Date	Meeting	Venue	Officer
January			
23 - 27	National SDN Workshop	Apia	N. Wendt
February			
6 - 17	INC 11 - Convention on Climate Change	Geneva	C. Kaluwin
<i>tba</i>	<i>Working Group on the Draft Regional Hazardous Waste Convention</i>	<i>Suva</i>	<i>Forum Sec.</i>
March			
6 - 9	Subregional Sea Level and Climate Workshop	Tarawa	C. Kaluwin
13 - 17	Subregional Sea Level and Climate Workshop	Rarotonga	C. Kaluwin
21 - 24	Subregional Sea Level and Climate Workshop	Port Moresby	C. Kaluwin
28 - 7 April	First Conference of Parties to the Convention on Climate Change	Berlin, Germany	C. Kaluwin
April			
2 - 7	TOGA '95: International Scientific Conference	Melbourne, Australia	N. Koop
May			
30 May-9 Jun	11th World Meteorological Organisation Congress	Geneva	N. Koop
June			
11-14	Sustainable Aquaculture '95	Hawaii	Pacon International
July			
<i>tba</i>	<i>27th South Pacific Forum Meeting</i>	<i>Port Moresby</i>	<i>Forum Sec.</i>
September			
<i>tba</i>	<i>Eighth SPREP Meeting</i>	<i>Apia</i>	<i>SPREP</i>
October			
23 - 27	Ocean and Atmosphere Pacific	Adelaide, Australia	C. Kaluwin

Notes: tba - to be advised. Meetings in *italics* are still to be finalised. Contact the organising agency or relevant SPREP officer for more details.

Conferences and Meetings

The International Women and Environment Conference

When? 24-26 March 1995.
Where? Melbourne, Australia.

For more information:

Ms Gabrielle Gelly
Australian Conservation Foundation
340 Gore St
Fitzroy, Vic. 3065
Australia.
Tel.: (613) 416 1166
Fax: (613) 416 0767

International Conference on Wetlands and Development

When? 8-14/10/95.
Where? Malacca, Malaysia.

Aims: The conference will identify options for integrating wetland conservation and sustainable development. Workshops will focus on:

1. wetlands and development agencies;
 2. wetlands, biodiversity and development; and,
 3. wetlands, local people and development.
- There is also a call for papers on these topics.

For more information:

Muralee Menon
Asian Wetland Bureau, IPT
University of Malaya, Lembah Pantai
59100 Kuala Lumpur, Malaysia
Tel.: (603) 756 6624
Fax: (603) 757 1225

Ocean and Atmosphere Pacific

When? 23-27/10/95.
Where? Adelaide, Australia.

Aims: The conference will focus on:

1. climate and sea level problems generally, particularly in the Pacific region;
2. global warming; and,
3. the ENSO phenomenon.

Call for papers on sea-level and climate variability and change, including monitoring, research and modeling. Abstracts due by 31/5/95.

For more information:

ICMS Pty Ltd
PO Box 8102
Hindley St
Adelaide, SA. 5000
Australia
Tel.: (618) 210 6776
Fax: (618) 212 510
E-mail: motid@pippin.cc.flinders.edu.au



Training Courses and Workshops

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Environmental Policy and Regulation

When? 22/5 - 9/6/95.

Where? International Law Institute, Washington, USA.

Who for? Lawyers and non-lawyers working in the environment area who need to improve their knowledge of environmental issues.

Course Aims:

Participants will gain practical, applicable skills in designing and implementing environmental law and policy. There are also three simultaneous one-week workshops on:

1. trade and the environment;
2. mining and the environment; and,
3. legal aspects and commercialisation of biodiversity.

For more information:

International Law Institute
1615 New Hampshire Ave, NW
Washington, DC. 20009. USA
Tel.: (1202) 483 3036
Fax: (1202) 483 3029
E-mail: training@ili.org

Do you have past or future events on the environment that you think Pacific islanders should know about?

Contact the Editor of the Environment Newsletter, at SPREP - today.

The Last Word ...

This is the last issue of *Environment Newsletter* for 1994, and the end of another busy year.

The **SPREP Meeting** is the organisation's major annual management meeting. SPREP's 26 member governments meet to discuss the work programme and budget, initiatives in regional co-operation and institutional arrangements.

The 1995 Meeting in Tarawa, Kiribati, will be remembered for the very heavy agenda and number of decisions made and initiatives approved. Read more on these in this issue.

1995 is the **Year of the Sea Turtle**, and SPREP has already begun the campaign by running a regional turtle art competition based on the theme for the year - *Let Our Turtle Family Live*. The results of this competition are inside. National campaigns are also being developed for the coming year,

and we look forward to working with member governments, NGOs and the concerned people of the Pacific islands in conserving our fast disappearing sea turtles.

The **South Pacific Biodiversity Conservation Programme** has begun in earnest in 1994, with the first meeting of Conservation Area Service Officers in Nadi, Fiji, in October. Read more on this workshop and on other programme activities.

The regular features in this issue continue, including *Book Review*, *Training Workshop* and *Conference* announcements, the *1995 Meetings* list and news pieces from around the region in *EnviroNews*.

Lastly, I take this opportunity to wish you all for the upcoming festive season.

Manuia le Kerisimasi,
Wes Ward
Editor

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Published by:
South Pacific Regional Environment Programme (SPREP)
P.O. Box 240, APIA, Western Samoa
Telephone: (+685) 21 929
Fax: (+685) 20 231
E-mail: sprep@pactok.peg.apc.org