



Western Samoa:

Cyclones Drive Forests to the Edge

Western Samoa has suffered two major cyclones in two years. These affected the country's development: its buildings, roads, water and electricity supplies, and agriculture were severely damaged or destroyed in many cases. But perhaps one of the most startling, and possibly most damaging in the long term, is the environment.

Mr Brian Bell, an environmental consultant from New Zealand, was called in by Western Samoan Government to carry out an environment and wildlife survey. This aimed to assess the impact of Cyclones "Ofa" and "Val" on some of Western Samoa's endangered species, and on its already fragile environment.

"It is too late to assess the immediate impact" said Mr Bell, "but I noted that where small pockets of national vegetation are still intact, they should take only two years to be back to normal." These areas were on the lower slopes of the central mountains, and were protected from the devastating winds.

"However," continued Mr Bell, "the high montane [mountain] country will take much longer, up to 10 years in many cases. It depends on how adaptable the tree species are to mile-a-minute."

Mile-a-minute is a creeping vine that smothers young seedlings and saplings with incredibly rapid growth. It loves full sunlight, which is now abundant in areas where the branches of the large rainforest trees were stripped by the winds. So, mile-a-minute has now spread from adjoining agricultural land into the forests. This weed has been in Samoa for some time, but only now has it had such favourable growing conditions.

"Of course agriculture will also play a role in how fast the forests will recover," said Mr Bell. "It is now easier to extend cattle grazing and plantations into these [previously untouched] areas, as the undergrowth and trees have been cleared by the cyclones."

As for individual species, Mr

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Adrienne Farago, SPREP's Biodiversity Conservation Officer, discusses the plight of Western Samoa's forests with New Zealand consultant, Brian Bell. (Photo: SPREP)

Bell saw that the fruit bats and fruit-eating birds were now "okay". However, the big question is how good will the breeding season be this year? This will depend on how fast fruit trees recover. Hunting pressure may also severely hinder recovery of pigeons. "Killing 2 or 3 pigeons now may severely deplete the future population. Hunting was not a problem before the cyclones but it is now," he said.

Mr Bell is also suggesting an overall recovery strategy to the government. It will focus on:

1. Ways to handle the present problems,
2. Contingency plans for the next bad cyclone, and
3. Longer term plans to protect shrinking habitats.

He said there was particular need to protect the high montane forests, as these are a vital source of

(Cont'd on page 2)

From the Director's Desk

Talofa and welcome to another edition of the Environment Newsletter. The Secretariat's headquarters has settled in well to its new home, with staff adapting well to the new environment.

We are making final preparations now for the United Nations Conference on Environment and Development - the Earth Summit - in Rio de Janeiro. Delegates from throughout the Pacific region will be attending, many with the kind support of funding agencies such as AIDAB, NZ, UNDP and Canada, and the co-ordination of SPREP. I too will attend to represent the interests of SPREP and the region it represents.

Much has been said about environmental problems in recent months: this Earth Summit has helped focus our attentions on the precarious future our fragile planet now faces. It is

a future of environmental degradation and shrinking natural resources if we do not act now. At the same time, less developed countries must be allowed to develop economically using the resources at their disposal. It is a fine line.

Two notable issues, and the subject of associated Conventions to be signed at the Earth Summit, are global warming and conserving biodiversity. Both the Climate Change Convention and the Convention on Biological Diversity Conservation have been subject to intense negotiations and lobbying by many groups among developed and developing countries.

An important group that emerged in the Climate Change Convention was AOSIS (Association of Small Island States), with over 30 member countries from the Pacific, Indian,

The
Director,
Dr Vili
Fuavao



and Atlantic Oceans and the Caribbean Sea. It formed an united front to the larger countries, to get important "island" issues on the meeting agendas and into the Convention.

Unfortunately, with time pressing, the last Convention meetings before the Summit stressed speed, and the need for something to sign at UNCED. Some important ideas were deleted from the Conventions, particularly that for biodiversity, as full consensus could not be reached in time.

We wish all delegates well in their efforts at UNCED, and hope that the Pacific environment will be the winner at the end of it all.

Vili A. Fuavao
Director

Forests to the Edge

(Cont'd from page 1)

biodiversity, and protect watersheds from erosion, declining water quality and sedimentation on some of Western Samoa's already degraded coral reefs and mangroves.

Mr Bell sees a big problem in translating legislation that is already present into action at the village level. "It is a question of how to get on-site awareness," he

said. "The problem varies from village to village, but community education is the key. The government, government agencies and NGOs such as the O Le Siosiomaga Society, must take leading roles, and must include local matai (chiefly) councils, schools and churches in the education process".

Lastly, Mr Bell saw limitations in staffing. "Training practical people is the key," he said. He saw a need for a specialist wildlife officer and two or three education officers in the Environment Section, to help educate the community and to show them practical ways to protect these shrinking habitats. "We need people to get their hands dirty to save these endangered species", said Mr Bell.

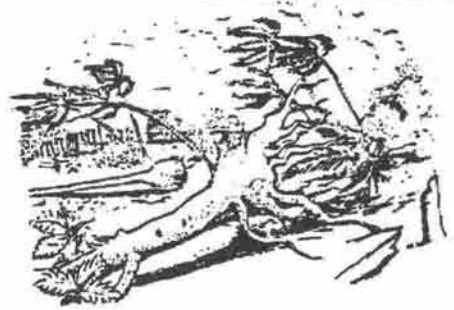
SPREP also has on-going efforts to protect habitats and biodiversity. The new five-year South Pacific Biodiversity Conservation Programme (SPBCP) is nearing implementation. It aims to promote the establishment of sustainable protected areas, where local communities are to be closely involved with the planning and management of these areas. There is already planning and discussions under way for such areas to be set up in SPREP member countries such as Fiji, Palau, Tonga and Western Samoa.

"The problem varies from village to village, but community education is the key. The government, government agencies and NGOs ... must take leading roles ..."

Brian Bell
Environmental Consultant

The opinions expressed in this article are not necessarily those of the SPREP Secretariat.

Cyclone Val in American Samoa



Those living in the South Pacific are well aware of the incredible damage to agricultural production, economic development and human endeavour caused by tropical cyclones.

Experts warn us that we might be in for more of these because of global warming. But what does it do to our native animals and plants, especially those already endangered and under pressure from human activities?

In January 1992, an emergency study in American Samoa studied this and related questions in the aftermath of Cyclone Val. Three scientists, with extensive experience in evaluating tropical rainforests, focused on American Samoa's first proposed national park near Pago Pago, and islands in the Manua group.

The study by Nafanua Paul Cox, Dixie Pierson and Thomas Elsquist noted that nearly 70% of trees

were defoliated by the high winds of Val, but that the trees would be expected to recover quickly. It also noted that the Manua forests were not as bad as with Cyclone Tusi in 1986.

However, the future is not too bright for some animals. The Tongan flying fox (*Pteropus tonganus*) normally feeds on new fruit and flowers. These were destroyed by the cyclone. In the meantime, they will feed on coconuts. This makes them easy prey for wild dogs, cats and pigs, and to hunting by humans. The Samoan flying fox (*Pteropus samoensis*) is better adapted to cyclones, as they can eat leaves, which re-appear quickly on defoliated trees that still live. Overall, however, flying fox populations have still not recovered since the onslaught of Cyclone Ofa two years before. Val will further affect numbers.

Birds, especially doves and pigeons, were severely affected by damage to the rainforest. There were few birds around during the ten-day study. As these birds have been noted to move closer to villages after cyclones to find food, they themselves are hunted for food as they are a delicacy for Samoans.

After their study, the scientists recommended a ban on hunting flying foxes, pigeons and doves. They also pointed out how important it was to preserve rainforest on privately-owned land around the proposed national park. As it is impossible to predict when the next cyclone might hit, it will be necessary to preserve rainforests through the islands, not just in the national park, if the goal is to protect these endangered species.

(Thanks to C. Johnston and L. Hamilton, EWC, Hawaii, USA.)

Crocodiles in Palau

The IUCN has prepared an Action Plan to help save the world's crocodilians. A high priority of this Plan is to find out the status, size, class and distribution of crocodilians not previously and systemically surveyed. Palau is one such place.

Excess hunting has decimated local populations, where there was once a sustainable skin industry. This is important, as crocodiles

are at the top of the food chain, and their removal could lead to unforeseen and irreparable damage to Palau's ecosystems. They are also a valuable, though over-exploited, natural resource that must be carefully managed if they are to help balance the ever-declining terms of trade in Palau.

It has been shown in many countries that a powerful tool in maintaining some crocodilian popula-

tions was sustainable yield utilisation (SYU) of wild populations. The economic incentive is a conservation tool benefitting wildlife and the local people. IUCN is using SYU as a cornerstone in promoting and preserving biodiversity.

There was some controversy over what species of crocodiles were present in Palau. The study

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PM opens new SPREP Headquarters

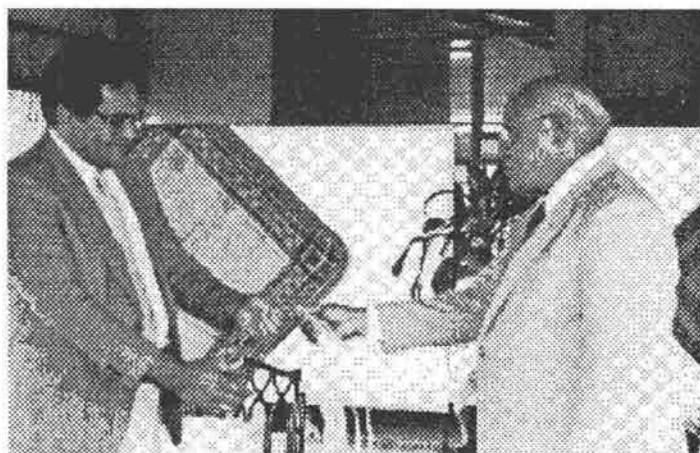
The Prime Minister of Western Samoa, Tofilau Eti Alesana, officially opened the new Headquarters of SPREP at Vaitele near Apia, Western Samoa, on 27 March 1992. He welcomed the region's environmental organisation to its new home, and handed over the compound to its Director, Dr. Vili Fuavao.

Dr Fuavao commented that, with this opening, SPREP had now "come of age" as an autonomous institution, able to look after and fend for itself. "With our move from Noumea," said Dr Fuavao, "(SPREP is) fulfilling the wishes of member governments ... : to have a strong, lean and independent environmental organisation, for the whole region. Now more than ever, we need such an organisation."

Dr Fuavao continued: "As (Pacific) island nations struggle for economic development amid a world recession, many development projects are being contemplated to help fight growing trade deficits: tourist development, min-

ing, port development, logging, and factories. Many of these also affect the fragile natural balance of our islands, especially along our coasts. They may pollute our lagoons, destroy reefs and mangroves, or make extinct plants and animals so necessary for our forests."

Dr Fuavao commented that Pacific island nations must allow our nations to move ahead, to improve their standards of living, to educate and keep their children healthy. "But we must also make sure we have islands to pass onto our children, lagoons fit to fish in, and with fish to catch, along with the birds and trees that we knew in our childhoods," he said.



*Tofilau Eti Alesana, Prime Minister of Western Samoa (left), hands over the key to the new SPREP Headquarters to Dr Vili A. Fuavao, Director of SPREP.
(Photo: W.S. Gov't Information Section)*

Dr Fuavao congratulated the Prime Minister on his foresight in offering Western Samoa as the new home for SPREP, and for the assistance in establishing the office. The move was made especially difficult after the ravages of Cyclone Val on Western Samoa in December 1991, and the government made every effort to ensure the move was as planned.

Dr Fuavao also acknowledged the financial help of the Australian government in the move from Noumea, and the logistical help of the New Zealand High Commission in Apia

The ceremony was attended by members of the Cabinet and the Opposition, as well as the diplomatic corps and various international agencies. ■



*Welcome
to the new
SPREP
Headquarters*

(Photo: SPREP)

**Do you have news or
concerns about the
Pacific's environment?**

**Write an article for the
Environment
Newsletter ...
Today!**

Ecotourism: Can this be a Happy Marriage?

Environmentalists often criticise tourism development in the South Pacific as a major source of coastal degradation. This occurs especially where the tourist industry is more developed, in countries such as Fiji.

Older style development often meant filling in mangroves or lagoons to build large modern hotels. These cater for tourists looking for the sun, sand and sea. This development also has many environmental problems such as degraded coral reefs, polluted lagoons, declining fish stocks for local people, and deteriorating traditional cultures.

But Fiji, a leader in traditional South Pacific tourism, is also the site of an experiment that may relieve the economic pressure to start more of these resorts. Fiji is offering something very different: ecotourism. By "marrying" a comfortable, "low-key" tourist destination with a pristine tropical rainforest, local villagers on Taveuni Island hope to "sell" their area as a destination to "ecotourists". These are a new breed of world travellers, looking for something off the usual tourist map, and who enjoy the beauty of unspoilt nature.

Taveuni has a number of unique features for the ecotourist: the spectacular Tavoro waterfalls, unspoilt rainforest which is comparatively

safe to walk through, and a relatively "intact" local culture. Recognising these advantages, the *mataqali* (clans) in a district on Taveuni approached the Fijian Native Lands Board Trust and the Forestry Department to help them set up and manage a national reserve.

The result is Bouma Forest Park / Tavoro Falls Amenity Area, which is managed by the *mataqali* with the help of Alivereti Bogiva, Amenities Officer with the Department of Forestry. Visitors are greeted by an attendant who collects admission fees and sells local crafts. Walkers can use clearly-marked and well-planned nature trails to visit Tavoro Falls, which also has facilities. These are maintained by two labourers. Visitors see only a small part of the reserve, as the rest is a national reserve, used by local people only for traditional activities such as traditional agriculture, gathering and hunting and for building materials.

A treasurer representing the management committee pays the wages, but the *mataqali* manage the money that comes from admissions and craft sales for the good of the local community. Development projects include better housing and fees for schooling. In this way, the traditional *mataqali* system is maintained, and development continues. The pace of development may be slower, but it does not put traditional values and culture at risk. ■

For more information, contact:

Marguerite Young
Education Project Officer
WWF Australia
GPO Box 528
Sydney, NSW. 2001
Australia

(From WWF's Wildlife News
no.60, March-May 1991/2 -
with thanks!)

Crocodiles in Palau

(Cont'd from Page 3)

found only the salt water or estuarine crocodile, *Crocodylus porosus*. Other species may have been introduced on farms in previous decades, but the study did not find these in the wild. This is not surprising, due to a campaign waged over the past 30 years to exterminate crocodiles in Palau. This campaign was started by an isolated and unfortunate death.

The survey checked numbers and sizes of the present populations, and surveyed water conditions for potential breeding and farm sites. Another possible economic benefit raised was the use of wildlife tourism in accessible areas.

For more information, a copy of a Report to the Bureau of Resources and Development, Government of Palau, by H.Messel and W.King, is available from the Information Officer at SPREP. ■

A "Win" for Regional Turtle Project

The following letter was enclosed with a turtle tag, from a turtle caught and monitored by the Regional Marine Turtle Conservation Project (RMTCP). It speaks for itself ...

Philippines
12 February 1992

Dear Sir/Madam,

This is a letter to inform you about the Turtle which I caught on April 20, 1991 with a marked Metal Clip attached to the right front side of the body bearing "RMTCP-898 Return SPC/SPREP, BPDS, Noumea Cedex, New Caledonia."

I caught the turtle in the blue waters somewhere at Cape Espiritu Santo along the Philippine Sea near the Light House of Bateg Island, Laoang, Northern Samar, Philippines. The turtle was about three (3) feet wide by five (5) feet long in size. After removing the clip, I also put on the body my own marked metal clip (improvised) and let the creature go free into the sea on the same day.

I am only a poor and an ordinary Fisherman of Barangay Monbon, Palapag, Northern Samar, Philippines. Hence, I have no time to look for somebody to help me to write to you. You see I cannot speak nor write in English. It is only now that my friend Mr. Antonio Abalos with his wife Nancy visited me at home and upon remembering the turtle clip I requested him to write to you which he gladly did for me ...

Even if I am only an ordinary fisherman I feel that this thing that you started will do something good to science and civilization in the future.

With this letter I wish to let you know of my great happiness over my find. I hope you will also write to me soon.

Sincerely Yours,
ARMANDO ORUA

These efforts are vital for research programmes like the Regional Marine Turtle Conservation Project. They help conserve endangered turtle species by giving regional conservation officers vital data on their movements and habits, data that can be used to ensure they will be with us in a hundred years.

Armando Orua will receive his reply and a SPREP T-Shirt as thanks for his time and efforts. The turtles thank you too, Armando. ■

EnviroNews



Environmental News Briefs from
around the South Pacific

SPREP Hails Halt to Nuclear Testing

Dr Vili Fuavao, Director of SPREP, hailed France's temporary halt to nuclear testing in French Polynesia as the first positive step to France ending its programme in the region. He also called on other nations also causing environmental hazards in the region to follow France's positive lead.

(SPREP, 14/4/92)

USA ratifies Wellington Convention

Della Newman, US Ambassador in New Zealand, delivered USA's ratification of the Wellington Convention, which bans driftnet fishing in the South Pacific.

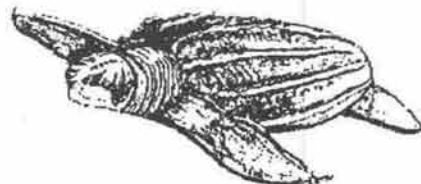
(Washington Pacific Report, 15/3/92)

SPACHEE Wins Award

SPACHEE was received a UNDP Partners-in-Development Award worth \$US2,900. It will be used to buy portable display boards and to publish awareness pamphlets.

(EnvironWatch, March 1992)

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New WWF Programme for the South Pacific

The World Wide Fund for Nature (WWF) first became involved in the South Pacific in the early 1970's in helping establish Fiji's Colo-i-Suva recreational park.

From this small beginning, it has since funded 27 projects in the region, and continues to be an important NGO concerned with protecting plants and animals in the South Pacific. Its projects aim to:

1. conserve endangered species and habitats;
2. help survey, establish and manage protected areas;
3. help manage natural resources;
4. document the traditional use and knowledge of natural resources;
5. support institutions; and
6. educate the Pacific peoples in the importance of conserving nature.

WWF is now establishing a Pacific Islands Programme, aiming

to support conservation efforts in the Pacific Island region. It will concentrate on maintaining biodiversity, promoting sustainable use of natural resources, and using traditional resource knowledge and practices. It will work closely with SPREP, through a Protected Areas Management Officer, to focus WWF help, on avoiding duplication of the work of other groups and to encourage co-operation between conservation agencies.

Government agencies and NGOs should be interested in the publication South Pacific Conservation Programme, which outlines the background information, as well as the proposed Programme. For a copy, contact:

South Pacific Programme Co-ordinator
WWF Australia
GPO Box 528
Sydney, NSW. 2001
Australia.

Acronyms

We use acronyms to save space. Here is a alphabetical list to make reading easier. (Cont'd on Page 9)

ACP African-Caribbean-Pacific (EC)
ADB Asian Development Bank
CIDIE Committee of International Development Institutions on the Environment
CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNMI Commonwealth of Northern Mariana Islands
EC European Community

EDF European Development Fund (EC)
EIA Environmental Impact Assessment
ESCAP Economic and Social Commission for Asia and the Pacific
EWC East West Center
FAO Food and Agriculture Organisation (UN)
FFA Forum Fisheries Agency
FS Forum Secretariat
FSP Friends of the People of the South Pacific
FSM Federated States of Micronesia
GEF Global Environment Facility
IPCC Intergovernmental Panel for Climate Change

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EnviroNews

(Cont'd From Page 6)

Basel Convention Now in Force

After its twentieth ratification, the *Basel Convention* banning trade in hazardous wastes is now enforced in ratifying countries. Only one SPREP member country, Australia, has ratified it. Certain OECD countries are intent on using loopholes in the Convention to continue the waste trade, which is increasingly spreading to LDCs worldwide.

(*Greenpeace Waste Trade Update 5.1*)

JACADS Shuts Down Again

The Johnson Atoll Chemical Agent Disposal System (JACADS) shut down again on 21 January, in a "minor incident" caused by an explosion. JACADS is a furnace used to destroy US chemical weapons on Johnson Atoll, situated between the Line Islands, Kiribati, and Hawaii, USA.

(*EnvironWatch, March 1992*)

Insurance Companies Bail Out

Insurance companies are taking the possible effects of global warming to heart! Insurers in Western and American Samoa either now refuse to provide cover for cyclone damage, or require an expensive structural engineer's report before insuring. Mortgagees now risk default to banks if they do not have insurance, according to Western Samoa's Attorney-General, speaking at the last preparatory conference on the *Climate Change Convention* before the Earth Summit in Rio. The Samoas had two major cyclones in two years. Tough times ahead ...

(*Greenpeace, Greenbase,*
10 May 1992)

(Cont'd on page 8)

Meeting Reports

Climate Change and the Pacific

Climate change and rising sea levels are issues close to the lips of many Pacific island leaders these days, especially with the lead-up to the Earth Summit in June 1992. But rising sea level through global warming is but one problem facing the region.

Noumea, New Caledonia, was the site for the *Second Regional Conference on Climate Change* on 2-6 April 1992. Representatives from Pacific Island countries and various national and international organisations gathered to consider the latest available information on climate change and rising sea levels, and to discuss priorities for future work in this field.

Scientists and activists, media and administrators all played important roles in the five-day conference. They gave direction to future work, encouraged collaboration, and developed SPREP's role in co-ordinating these activities through a comprehensive Climate Change programme. This will be co-ordinated by Dr Chalapan Kaluwin, SPREP's Climate Change Officer.

Most Pacific Island governments present endorsed Coastal Zone Management (CZM) studies and research as the priority for the programme, especially in for-

mulating criteria to assess the vulnerability of island coastal areas to sea level rise. This will entail more studies into the possible effects of climate change on agriculture, fisheries and marine ecosystems. These and related studies can be used to develop response strategies, effective legislation, information exchange and for raising community awareness.

The region also endorsed work already underway in the region, including:

1. SPREP Climate Change / Sea Level Rise Task team reports and studies;
2. In-country studies;
3. Case studies by the IPCC CZM group; and,
4. Other research programmes carried out in the region with the co-operation of the governments and institutes in Australia, USA and France.

SPREP is co-ordinating the region's inputs and responses in the *Climate Change Convention* to be signed by world leaders at the Earth Summit at Rio de Janeiro in June 1992. Dr Kaluwin updated the meeting on negotiations for the Convention, which aims to limit the global emissions of "greenhouse gases" to levels that may slow down or stop global warming.

Dr Kaluwin noted some satisfaction in the last preparatory conference formulating the Climate Change Convention, in that provisions were included for an insurance fund for small island nations severely affected by the effects of global warming. However, there were no definite levels of gas emissions set in the Convention. This was due to pressure from some developed and OPEC countries,

who feared economic losses through the lower use of petroleum if emission levels were set for all countries.

[Editor's Note: The new SPREP / UNEP Pacific Environmental Assessment and Management Information System (PEAMIS) is being established at SPREP. It will be a useful tool in assessing the vulnerability of Pacific island coastal zones to sea level rise and climate change.]

Regional Organisations Seek More Co-operation

The members of the South Pacific Organisations Co-ordinating Committee (SPOCC) met in Honolulu, Hawaii to develop common approaches in shared areas. These included dealing with donors, improving project management and budgeting, and developing collaborative programmes. The meeting, which was chaired by Sitiveni Halapua, Director of PIDP, and attended by heads of FFA, Forum Secretariat, SOPAC, SPC, SPREP and USP, was held on 22 April 1992.

To improve co-operative efforts, SPOCC members will develop a regional strategy for determining regional programmes. This strategy will establish priorities for regional activities, aimed at benefiting Pacific Island Countries. SPOCC members are concerned that donors continue to establish independent regional programmes, without using existing institutions. This regional strategy will also ensure more collaboration between

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Meeting Reports: SPOCC 92

(Cont'd From Page 8)

donors helping the region. Collaboration and communication between donors is essential if they are to avoid duplication and waste of resources.

To avoid this waste, SPOCC identified ways of improving information flow. For example, more regular meetings were needed, not just annual gatherings. FFA and SPC recently lead the way by meeting to discuss their responsibilities for marine resources.

Preparations for UNCED highlighted regional concerns for the environment. The results of UNCED will be incorporated in a regional strategy, based on national priorities. This will be presented to Pacific leaders at the South Pacific Forum at Honiara in July 1992.

All participants were satisfied with progress in improving co-operative efforts. There will be a special meeting of SPOCC during the July Forum to review this progress. The 1993 meeting will be hosted by SPC in New Caledonia. ■

Agriculture and the Environment

Many consider that modern agriculture and the environment often conflict. Overuse and abuse of pesticides, cropping steep slopes, and running cattle in watershed areas are a few practices affecting the health of the environment and humans in some areas.

But this does not need to be so. Traditional shifting agriculture on high islands and the "babai pits" on atolls show that man can live in harmony with the environment, as long as population pressure does not build up too high.

This is now the dilemma. Modern agriculture must aim to feed rapidly growing populations on Pacific islands, and to produce export income to help offset growing trade deficits in most island countries.

However, researchers and innovative farmers are developing new methods to increase agriculture production, without destroying the environment. Some of these are discussed in the new

serial, *Journal of South Pacific Agricultural* (ISSN:1018-7774), published by the Institute for Research, Extension and Training in Agriculture (IRETA), USP Alafua Campus. It was formerly the *Alafua Agricultural Bulletin*.

The first issue (Vol. I No. 1. January - April 1992) also touches on a number of environmental issues, including:

- * alley-cropping and agroforestry to stop erosion and improve soil fertility;
- * solar drying copra, instead of using wood -fueled driers; and,
- * how a cyclone can affect crop production, a vital issue in the global warming debate.

It is hoped future issues will continue to address modern agricultural problems with sustainable and environmentally sound practices in mind.

For more information, contact:

IRETA Information Officer
USP Alafua Campus
Private Mail Bag
Apia, Western Samoa ■

EnviroNews

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Torres Straits

Water Quality Study

Australia and PNG will together fund a water quality study in the Torres Straits to check the effects of waste runoff from the Ok Tedi gold and copper mine.

(*Washington Pacific Report*,
10:15, 4, 1 May 1992)

Help for Rare Pacific Birds

A regional strategy and a database are tools that may help save endangered South Pacific birds. The strategy, to be co-ordinated by SPREP, will provide a blueprint for conducting surveys and gathering vital data to help manage species at risk.

(*Pacific World*, 23, p 20,
May 1992) ■

Acronyms

(Cont'd From Page 7)

| | |
|--------|--|
| IUCN | World Conservation Union |
| NEMS | National Environmental Management Strategies |
| NGO | Non-government Organisation |
| OECD | Organisation for Economic Co-operation and Development |
| PIDP | Pacific Islands Development Programme (EWC) |
| PNG | Papua New Guinea |
| SOPAC | South Pacific Applied Geoscience Commission |
| SPC | South Pacific Commission |
| UN | United Nations |
| UNCED | United Nations Conference on Environment and Development (UN) |
| UNDP | United Nations Development Programme (UN) |
| UNEP | United Nations Environment Programme (UN) |
| Unesco | United Nations Educational, Scientific and Cultural Organisation |
| USA | United States of America |
| USP | University of the South Pacific |
| WMO | World Meteorological Organisation |
| WWF | World Wide Fund for Nature |

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Environment Book Review

Biodiversity and Food

Where do important local food sources, such as pigs, yams, taro, babai and kumara, come from? They come from wild sources, originally hunted or gathered by our ancestors, and then "domesticated" for agriculture.

Wild types of these crops and animals are a vital source of genetic variation. Many modern breeds and varieties use genetic material from these wild sources to improve their production and give resistance to pests and diseases. So the world must conserve these sources of wild genes to protect our agricultural industries.

These and other issues in biodiversity are discussed in *The Wild Supermarket: the Importance of Biological Diversity to Food Security*, produced by WWF International. It is well-illustrated, and gives good examples from around the world. It would be useful background information for teachers and educational curriculum writers, NGOs and people with an interest in preserving our wildlife.

Copies are available from:

WWF Australia
GPO Box 528
Sydney NSW 2000
Australia.



PIMRIS Newsletter

The Pacific Islands Marine Resources Information System (PIMRIS) aims to gather all forms of information about living marine resources in the Pacific, especially technical reports, books and pamphlets. Through this newsletter, it is easier to locate new publications and to contact people in the region. It co-ordinates a wider cooperative group of information centres which can provide information about living marine resources.

For more information, contact:

Ganeshan Rao, PIMRIS Co-ordinator
USP Library
PO Box 1168
Suva
Fiji

Can Nature Survive Global Warming?

This subject is very topical in the Pacific at present, especially as the very survival of some Pacific Island countries are affected by this ensuing global disaster.

A discussion paper titled *Can Nature Survive Global Warming?* was published by the WWF to discuss this subject. It addresses issues such as effects on coral reefs, an increase in the number and severity of cyclones, and the effects on coastal ecosystems. All these vitally concern peoples of the Pacific. NGOs and government departments should be particularly interested in this information.

A copy of this paper is available through:

WWF Australia
GPO Box 528
Sydney NSW 2000
Australia.

Caring for the Earth

Caring for the Earth aims to help the people of the world. It defines two needs:

to get commitment to a new world-wide ethic that promotes sustainable living; and

to translate this ethic into practice.

It is intended that policy shapers and decision makers will use it to affect the course of development and the condition of our environment. It is a message to politicians and executives in the public and private sectors, and affects people everywhere.

Published by the IUCN, UNEP and WWF, it follows from the *World Conservation Strategy* published in 1980.

Caring for the Earth outlines Principles for Sustainable Living, Additional Actions for Sustainable Living, and guidelines to help users adapt the principles to their needs and capabilities.

Copies of the strategy are available from the Director at SPREP.

Mapping Important Ecosystems for Western Samoa

Knowing where to start is important for any planning. This is essential when it could mean the survival of endangered plants and animals.

In Western Samoa, the Government, with help from SPREP, carried out a project to establish much basic information. This is required to know where to begin in saving some of the country's endangered species. They needed to know where were the ecologically

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important areas, and what should be the relative priorities for protection for these areas.

Sam Pearsall (The Nature Conservancy, Hawaii), Arthur Whistler (UH Botany Dept.) and many international agencies and NGOs co-operated to produce *Terrestrial Ecosystem Mapping for Western Samoa: Summary, Project Report, and Proposed National Parks and Reserves Plan*. The authors used remote images from satellites, ground studies and local information to produce colour maps and photos showing the important sites worthy of protection.

Copies of *Terrestrial Ecosystem Mapping: ...* are available from the Director at SPREP.

Clamlines

After more than a year in recess, the newsletter *Clamlines* is now alive and well. Produced by the International Centre for Living Aquatic Resources Management's (ICLARM) Giant Clam Research Group, it looks at appropriate technology for growing and harvesting giant clams. Giant clams are an important part of coral reef ecosystems and of the diets of many Pacific islanders. They are also disappearing fast in many parts of the Pacific.

The newsletter looks at the latest research from the Coastal Aquaculture Centre in Solomon Islands, and gives some useful information on how this resource could be better used and maintained.

For more information, contact:

Patricia Munro
Editor, *Clamlines*
ICLARM South Pacific Office
PO Box 438
Honiara, Solomon Islands.

Meetings 1992

June

- 1 - 3 SPREP Environmental Education Workshop, American Samoa.
- 3 - 14 UNCED, Rio de Janeiro, Brazil.
- 11 - 27 SPREP Teacher Training Workshop, FSM.
- 29 - 3 SPREP EIA Training Workshop, July Kiribati.
- 29 - 11 SPREP Marine Ecology Training Workshop, July Tonga.

July

- 8 - 9 23rd South Pacific Forum, Honiara.
- 10 - 11 4th Post-Forum Dialogue, Honiara.
- 30 - 3 SPREP EIA Training Workshop, Aug. Palau

August

- 10 - 14 SPREP EIA Training Workshop, Fiji.
- 17 - 21 SPREP EIA Training Workshop, Tonga.
- 24 - 28 SPREP EIA Training Workshop, and Launch of National Environment Management Strategy, Marshall Is.
- 31 - 1 Launch of National Environment Management Strategy, FSM.
- 31 - 3 SPREP EIA Training Workshop, Sept. FSM.

September

- 14 - 16 SPREP Inter-Governmental Meeting, Apia.
- 21 - 25 SOPAC Governing Council Meeting, Nuku'alofa.

October

- 32nd South Pacific Conference, Suva.
- SPC 17th Meeting of the Committee of Representatives of Governments and Administrations (CRGA)
- Launch of National Environment Management Strategy, Solomon Islands.
- 17 - 21 World Congress for Education and Communication on Environment and Development, Toronto, Canada.

November

- 33rd Meeting of the IUCN Council, Gland, Switzerland.
- 2 - 6 2nd Princess Chulabhorn Science Congress: Environment, Science and Technology, Bangkok, Thailand.

- 2 - 13 SPREP EIA Training Workshop and Launch of National Environment Management Strategy, Cook Islands.
- 23 - 27 SPREP EIA Training Workshop, Tuvalu.
- SPREP EIA Training Workshop, Western Samoa.

December

- 3 - 8 SPREP EIA Training Workshop, Niue.

These dates are subject to change without notice. Dates and venues for later meetings will be added when available.

Conferences

Ecotourism Business in the Pacific: Promoting a Sustainable Experience.

Where? Uni. of Auckland
Conference Centre

When? 11-15 October 1992

Organised by?

EWC, Honolulu, Hawaii, USA.
Environmental Science,
University of Auckland, New Zealand.
Pacific Asia Travel Assoc.

Contact: Mr N. Thom,

Conference Director
Environmental Science,
University of Auckland
Private Bag 92019
Auckland, New Zealand
Fax: (+649) 373 7434
Phone: (+649) 373 7599 Ext. 5659

Register by 31 July 1992.

World Congress for Education and Communication on Environment and Development.

Where? Congress Canada,
Toronto, Canada.

When? 15-21 October 1992

Organised by?

North American Assoc. for
Environmental Education
Council of Outdoor Educators, Canada
Unesco
Ontario Assoc. of Geographic and
Environmental Educators

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The Last Word ...

from the Editor

Welcome to the latest issue of SPREP's Environment Newsletter. The office has settled down now to organised mayhem, especially with the Earth Summit at Rio in June. This is the one of the Earth's best chances to do something about the state of its environment, and its better use of resources so that our children will know the plants, animals, land and sea that we have known.

A major concern at the Earth Summit is saving and protecting biodiversity. Biodiversity is the large number of different plants and animals that exist together in ecosystems. This issue focuses biodiversity conservation, and how it is being addressed around the Pacific.

At the last SPREP Intergovernment Meeting, the SPREP Secretariat was asked not to forget NGOs in its work

programme. In this light, this and future issues of the Environment Newsletter will feature an NGO and some of its current projects. This issue looks at the World Wide Fund for Nature, and its South Pacific Programme.

Another new regular column starting in this issue is "EnviroNews", containing news snippets from in the region and around the world, about the Pacific environment and some of the current issues affecting it.

If you have news about your project or local issue that you think may interest others in the Pacific, write to me at SPREP, at the address at the bottom of this page. Please include a photo or two, with a caption, if you can.

Enjoy this new issue of SPREP's Environment Newsletter.

Conferences

(Cont'd From Page 11)

Contact:

ECO-ED Secretariat
110 Elington Ave. W.
3rd Floor
Toronto, M4R 1A3
Canada

Fax: (+1416) 482 9601

Phone: (+1416) 482 9212

2nd Princess Chulabhorn Science Congress. Environment, Science and Technology: the Challenges of the 21st Century.

Where? Bangkok, Thailand.

When? 2-6 November 1992

Organised by?

Chulabhorn Research Institute, Bangkok
UNEP

Call for Papers: by 31 July 1992

Contact:

SPREP for further details.

AIR MAIL

Stamp

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