



Conserving the environment for the peoples of the Pacific

The 2003 Annual Report of the
South Pacific Regional Environment Programme

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The South Pacific Regional Environment Programme (SPREP) is an intergovernmental organisation charged with promoting cooperation and supporting protection and improvement of the Pacific islands environment and ensuring its sustainable development.

SPREP's members consist of 21 Pacific island countries and territories, and four countries (*) with direct interests in the region:

American Samoa	French Polynesia	Niue	Tokelau
Australia*	Guam	Northern Mariana Islands	Tonga
Cook Islands	Kiribati	Palau	Tuvalu
Federated States of Micronesia	Marshall Islands	Papua New Guinea	United States of America*
Fiji	Nauru	Samoa	Vanuatu
France*	New Caledonia	Solomon Islands	Wallis and Futuna

The Pacific region





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A message from the Director



In this year's Annual Report, I am most concerned to demonstrate the impact of SPREP's work. By impact, I mean the positive effect that our work has had on the people of the Pacific. In some cases this is easy to demonstrate, for example in SPREP's work to safeguard fresh water supplies to communities. In others, it is more difficult, especially in the areas where we have been working to give consideration to Pacific viewpoints, such as major international meetings and conventions.

The stories you will read in these pages have been selected to show some of the positive impacts of our work. They do not represent all of SPREP's work; rather they give a flavour of our work that is continually advancing across a broad front.

Working in partnership with talented people and like-minded organizations has been an important cornerstone in reaching out to our regional communities and achieving some of the goals we have set out to attain. Our limited staff numbers sometimes makes it necessary to seek out people who are able to implement elements of our various programmes for us. Australian Volunteers Internationals has been instrumental in helping SPREP make this happen, with a Human Resource Development Officer who worked throughout the region assisting environment departments with institutional strengthening and individual capacity-building skills.

Looking skywards, training has also been a component that SPREP and UNEP have collaborated on in a joint effort to reduce the amount of greenhouse gases in the atmosphere. Air conditioning systems in cars, offices and utilities are often the culprits, more so when they have not been properly maintained. Training industry personnel in best practices has been one solution.

Many SPREP members are now aware of adaptation type measures to counter the threat to their island lifestyles from climate change. This report highlights the impact an innovative guide being piloted in several Pacific communities is having, through the Canada International Development Assistance adaptation project. What it does is let the people themselves take the lead in and identify areas of most concern about climate change, sort out what needs to be done. And how to do it.

Introducing alternative methods of analysis to increase community participation is never easy, particularly in traditionally based developing countries. Our report highlights how the International Waters Programme have started to win over communities using a methodical analysis



What is SPREP?

SPREP is the regional intergovernmental forum for environmental affairs in the Pacific islands. It serves 21 Pacific island countries and four metropolitan countries. SPREP works by promoting cooperation in the Pacific islands region to protect and improve the environment and to ensure sustainable development. The organisation runs two programmes. **Island Ecosystems** works to assist Pacific island countries and territories to manage island resources and ocean ecosystems so they can support life and livelihoods. **Pacific Futures** works to assist Pacific island countries and territories to plan and respond to threats and pressures on island and ocean systems.

Staff are drawn from within the Pacific basin and operate in fields such as:

- Terrestrial island ecosystems
- Coastal and marine ecosystems
- Species of special interest
- People and institutions
- Multilateral agreements and regional mechanisms
- Environment monitoring and reporting
- Climate change and atmosphere
- Knowledge management.



Japan royals visit SPREP

In October 2003 the SPREP Secretariat hosted their Royal Highnesses the Prince and Princess Akishino of Japan as they inspected SPREP's Training and Education Centre. Fully funded by JICA the two-storey structure includes a multi-media facility, fully networked computer lab and conference facilities. Although not a SPREP member, Japan, through the Japan International Cooperation Agency (JICA), has provided significant assistance to the work of the Secretariat across a number of fronts.

The royals were in Samoa as part of an official visit to the Pacific region. Prince Akishino is a keen naturalist and had requested a review of the environmental problems facing the Pacific. In a 30-minute address, Director Asterio Takesy outlined some of these challenges and also told the royal visitors, "Japan has been a very generous partner to SPREP and we are thankful. The Secretariat is also keen to collaborate in opportunities to expand on this partnership."

method for resolving water related issues in Palau and the Kingdom of Tonga. The end game has been to encourage greater community involvement in environmental decisions that involve the important work being carried out by the International Waters Programme team.

While accessing fresh water has been an ongoing challenge for Tonga, out at sea their whale-watching industry continues to enjoy increasing popularity. Even so, arguments are now being made as to how these magnificent mammals are costing the fishing industry substantial revenues by taking "free lunches" from long line fishers. In our report SPREP takes up the case on behalf of the whales.

On the water, shipping carried more than 90 percent of world trade and the Pacific provides many of the key shipping lanes. Lots of shipping also means the potential for enormous amounts of waste to be dumped haphazardly from these vessels. Our story shows how the International Maritime Organization and SPREP are using an international legal instrument to both set out standards for ship owners and port authorities, as well as providing more practical arrangements to deal with shipping wastes.

Pollution, neglect and degradation have all contributed to the declining volume of many marine resources. Efforts to conserve what remains are approaching a crisis point.

Fish for subsistence for example are not only smaller but are a lot harder to find. For tiny isolated islands with small populations like Tokelau, this poses questions about their lifestyle and future existence. During 2003, SPREP began a detailed study on this atoll to develop practical plans to conserve their marine resources.

One thing all Pacific islands have in common is an over-dependence on fossil fuels to power homes, villages, transport, communication and businesses. Our fragile economies and transport logistics make this system especially vulnerable to problems of supply and price fluctuation. How we can turn to using our own natural resources for alternative methods is the reasons behind the Pacific Islands Renewable Energy Programme (PIREP). The potential renewable energy that is on offer, virtually on our doorstep, could one day provide many Pacific islands with self-sufficient energy systems. A United Nations Development Programme-funded project, PIREP, offers some promising possibilities, not to mention cost savings.

Conversely the quest for the dollar is frequently the root cause of the world's spiral into the environmental abyss. The paradox is in the Solomon Islands where production of shell money by women ensures a traditional currency and an ancient cultural legacy is still maintained. Shell money may never be in demand as a

stock exchange currency but its indigenous significance and the role that local women play in safeguarding inshore resources is proving to have an immeasurable value of its own.

The sharing of environmental ideas across such a diverse group of cultures is a learning curve for many of us, but more so when it involves the most valued members of our communities, our children. There is still a long way to travel before environmental education becomes part of Pacific school curricula. In the meantime, we detail here how SPREP worked with a number of partners to develop a multi-level environmental education kit that from initial responses is proving to be a hit in the schools.

At the regional level the journey to conserve our environment continues through the Pacific Roundtable for Nature Conservation, which, since starting in 1997, has been gaining good momentum and support. The trump card for the roundtable is that it brings together on an equal footing public and private sector donors, civil groups and others with an active role in nature conservation. This group supports the 5-year Action Strategy for Nature Conservation, which is focussed on mainstreaming. Those involved in making this happen tell us about what this participatory

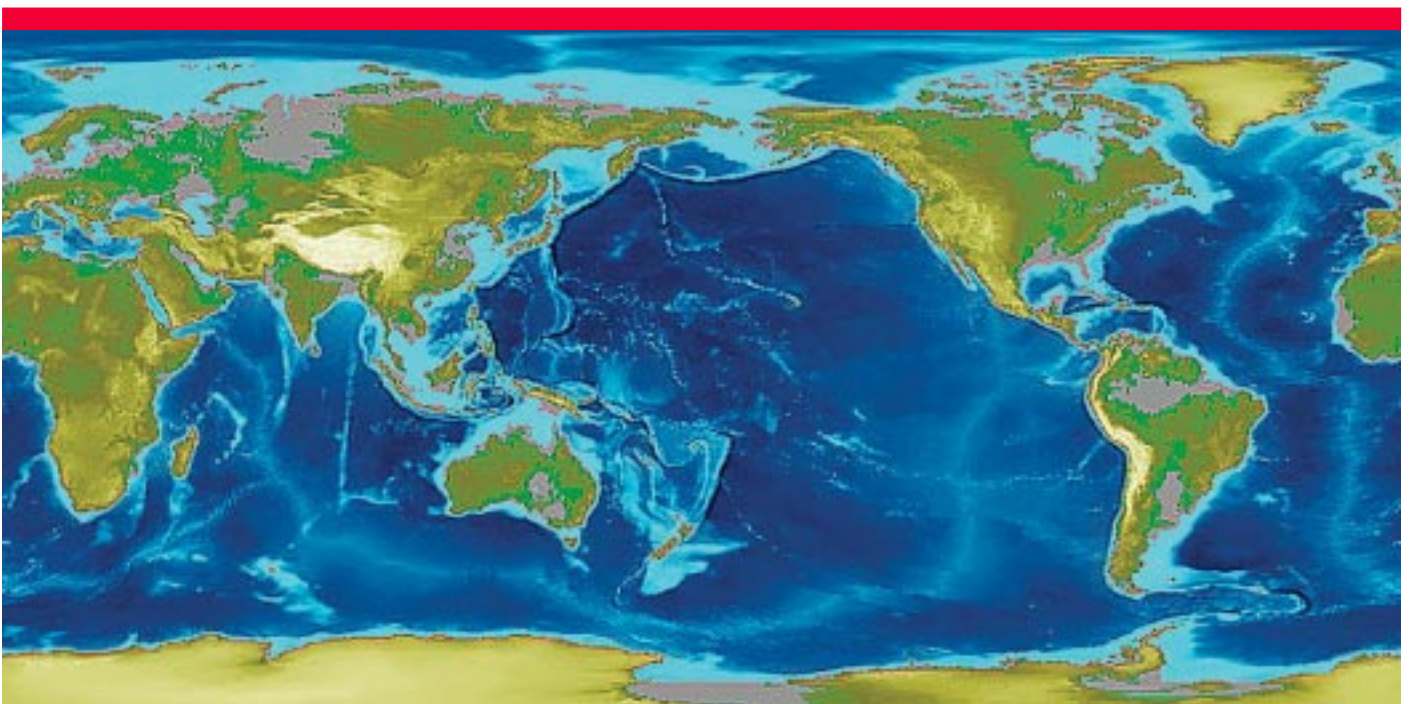
approach means in terms of collective action.

The notion of enhancing communication also prompted us to spend some time reinventing the SPREP website. Our former site was missing the X factor required to draw in the audience and numbers we wanted to capture. The response and feedback since the relaunch in September suggests it is well worth a visit over at <http://www.sprep.org.ws>

During 2003, SPREP was invited to attend the Forum Economic Ministers Meeting (FEMM) and witnessed some welcome progress to the approach of partnering environment needs and economic policy. The ministerial statement called for more proactive interaction between treasury and environment departments, by developing strategies that complement both agendas. As we are all aware, this is no easy task given, for example, the trade imbalances with developed countries, and the ongoing battle to control inflation with limited national budgets. However, FEMM have now given clear indications they are keen to do their part for environmental concerns and economic development to come together. This can only augur well for the future.

Sometimes it is necessary to make some significant changes to the way we operate in order to better embrace SPREP's vision

The Pacific ocean is the largest body of open water in the world, with some of the smallest and most isolated states



for the future. The outcome of this was reached during the SPREP Meeting in 2003 where it was agreed that the Secretariat would move from a project-based organisation to a programmatic way of working. Focusing on programme delivery will give the Secretariat the space to be more flexible in our initiatives and plans that can more readily meet the needs of our members. This also provides our partners with a clear framework to work from, be it financial, in kind assistance or joint implementation. The overriding factor is that this system will allay many concerns held by our member countries and territories over the Secretariat not being responsive enough to the needs of the members

I must make mention with due gratitude of the significant support we have had from several non-member countries and organizations. Just recently the People's Republic of China provided a generous grant for SPREP activities. The Government of Japan has continued to assist with financial assistance and volunteers who have provided important expertise for some of our programs and logistical services. We also

welcome the Washington-based Conservation International who, along with the World Meteorological Organization, have subregional offices here at SPREP. Of course the organizations' four metropolitan members Australia, France, New Zealand and the United States have shown valuable support for all our initiatives and programmes, as have our friends and counterparts from regional and international organisations, such as the United Nations Environment Programme.

This year has been one of change for SPREP yet a year of consolidation for me. As we worked to deal with the change from a project to a programme structure within the Secretariat and strive to meet the many requirements of the members, I have been able to take a firmer hold of the direction in which SPREP is taking. I believe the way ahead is now clearer for our Pacific people's environmental efforts to secure the best for their families and communities.

Asterio Takesy
Director

Conserving Tokelau's marine resources

Fish catches were dropping and shellfish were becoming scarce, so the Tokelau government asked SPREP to collaborate in developing plans to manage the marine resources in the area. "We were requested to provide information on the status of the marine conservation areas specifically, the lagoons and outer reef generally and make recommendations for management and conservation actions," said Mary Power, SPREP's Coastal Management Adviser and the leader of the expert team that went to Tokelau. The team also included two country counterparts from each atoll.

Assessing the marine habitat



A rapid marine habitat assessment of Tokelau's three atolls showed a general low diversity of reef species with some regionally common species extremely rare or absent. Certain fish, like coral trout, as well as octopus, cowries and sea cucumbers, were not found at all or in very low numbers. "There is strong evidence that harvesting in certain parts of the atolls has been in excess of sustainable levels," said Power. "This impact is affecting the overall nature of the resources."

The Tokelau atolls are virtually closed biological systems, so the reefs and lagoons are very susceptible to overfishing. Each atoll has a marine conservation area, but with little or no active management. Traditional management of harvesting behaviour is already part of

Tokelau's culture and is regularly practiced to give reef resources time to recover or as insurance against future poor harvest periods. However, changes in fishing pressure due to new technology (gill nets, outboard motors, refrigeration, etc.) mean that traditional methods also need to be supported by scientifically based management practices.

Meetings with key community groups focused on community concerns about the status of their marine resources and the atoll environment generally. The communities generally perceive the conservation areas as unsuccessful in their current state. Many people said that the rules are not being followed because of the lack of serious penalties and enforcement of the rules. "They call it closed but it can't be because people still go there," was one comment. Most people felt that stronger management of the conservation areas is essential if they are to be successful. This includes stricter rules and tougher punishments.

The team found that the nature of the closure in the conservation areas was critical. Even if everyone is observing the rules of the conservation area, the usual practice is to open it up for harvesting for special events. "Experience from other Pacific island countries shows that this sort of conservation area management does not work as a way of sustaining marine resources in the long term," said Power. "Communities in other countries such as Fiji and Samoa are now realizing that only conservation areas that are permanently closed will succeed as sustainable management tools for

Foua Toloa, who provided in-country liaison to the team, facilitating a workshop





Tokelauan elders in a community meeting

the long-term sustainability of marine resources."

Solutions to the problem are complicated because conservation appeared to be a concept that is relatively new to the Tokelau communities. "It's really important to Tokelau because we have limited resources and need to control the amount of fish we catch and the number of clams we harvest," said one resident. But at the same time people did not necessarily see it as relevant to themselves. Most people interviewed had heard of it but saw it as something for tomorrow, for future generations. The

concept of long term or permanent closures is still something that will take quite some time for people to come to terms with.

The team will follow up its work with a formal report and recommendations and by seeking support for the management of conservation areas. It is likely that Nukunono atoll will pilot the active management of the conservation areas and an awareness-raising programme on marine resource use and conservation. It seems that Tokelau residents can look forward to a steady supply of food from the sea in the future.



Women making money in the Solomon Islands

The future of traditional shell money in the Solomon Islands is safer after a SPREP-coordinated study of the issue. Shell money in the form of strings of shell disks or beads is still used today in the Solomon Islands as currency and it is also very important in ceremonial occasions. Women traditionally make the money as an income-earner, but continuing unrest and economic problems in the country

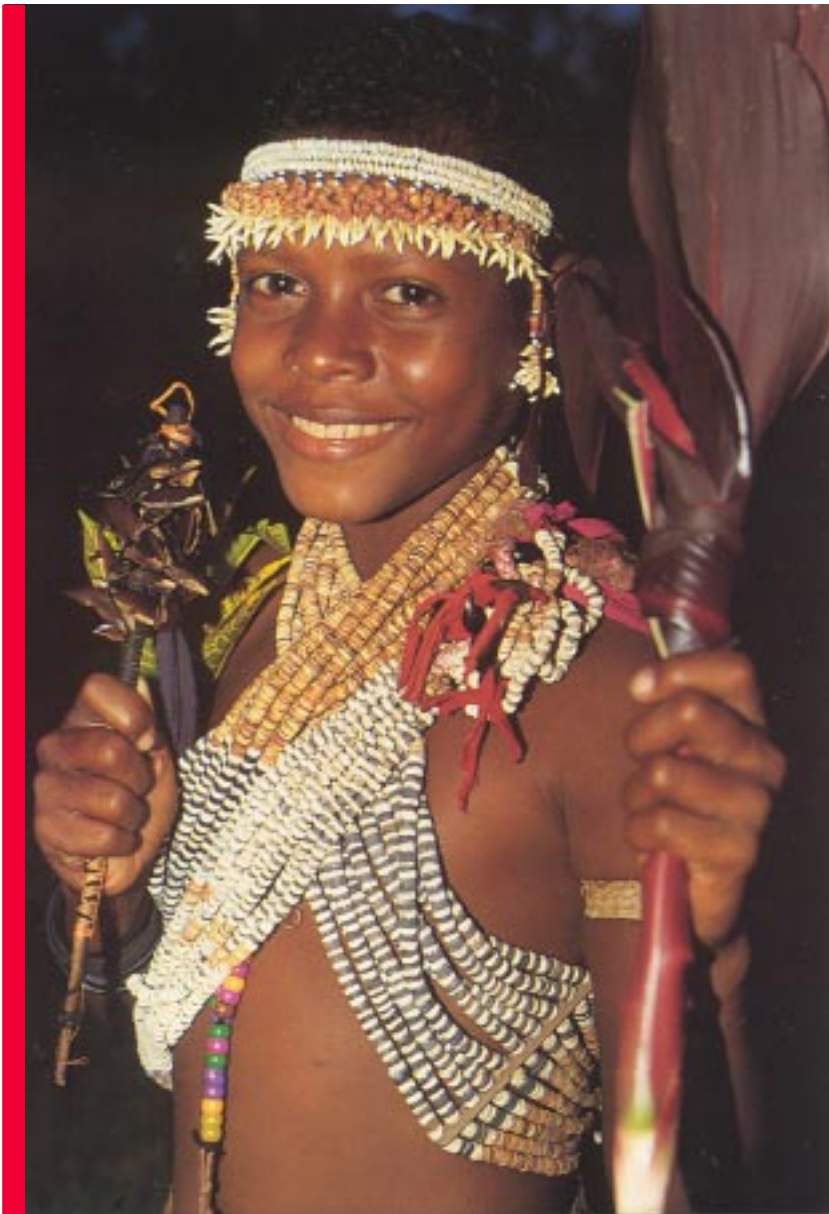
were leading to over-harvesting of the marine resource as more people turned to the ocean for food and income.

SPREP is coordinating the Solomon Islands Women in Fisheries Project, which is being carried out by the Environmental Concerns Action Network of the Solomon Islands (ECANSI). Funding comes from the Canadian government through the Canada-South Pacific Ocean Development Program. "The goal of the project is to understand the important issues of sustainable management, conservation and development of marine resources currently faced by the women," said SPREP Coastal Management Advisor Mary Power.

"The development of a national network on women in fisheries is one of the longer term goals."

Part of the project was a case study of shell money production in Langalanga in the Central Malaitan province. The villagers in Langalanga make most of their income from producing shell money and jewellery from mollusc shells obtained in the lagoon (see box). "Shell money production is a monetary-driven activity widely practiced by the women in the area, and it has led to intense pressure on the resource," said ECANSI project officer Kristina Fidali. "We focused on the issues faced by the women in Langalanga and gathered baseline information that can help us incorporate traditional ecological knowledge into management and conservation strategies."

The case study showed that conditions in the villages are desperate, especially for women who bear much of the responsibility for family welfare, and who are burdened with the travel required for buying shells and selling shell money. Overharvesting, new technologies



A young boy from North Malaita in the Solomon Islands wearing a 10-string shell necklace



Photo JoAnne Braithwaite

Stall holder modelling her wares in a Honiara market in the Solomon Islands

and an increase in the demand for shell money for bride price and compensation threaten the shell resource.

Better management of these resources is vital to avoid the complete depletion of the resource. But as Power said, "This work should also stimulate interest in research into the cultural significance of shell money, and help women in Langalanga who are currently looking for ways to develop a museum and conserve valuable artifacts of the shell money trade. Another need identified in the case study is for research into how women in Melanesian culture can develop and maintain successful small businesses."

The immediate impact is clear - a valuable resource is being protected yet can still be used to improve livelihoods. Longer-term impact will give women a voice in the continued development of marine resources. In the Solomons women play a major role in fisheries and they need to become engaged in managing the resource they depend on.

Shell money - what is it made of?

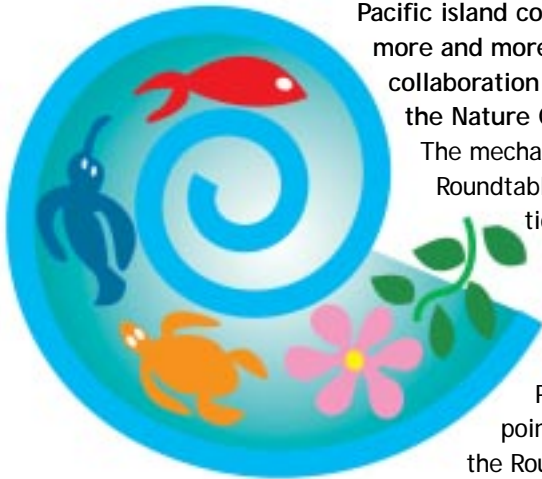
Traditional Langalanga shell money, called tafuliae, is made up of 10 strings of shell disks threaded together in particular patterns made up of a mixture of red, black, white and brown colours. These strands of shell range in length from 1.8 to over 2 m. The tafuliae is the end product of a long, labour-intensive process that has many steps.

There are four different types of shell used to make the red, black, orange and white disks in the tafuliae. A red-lipped rock oyster called romu (*Chama pacifica*) provides red coloured disks. Applying heat to a small white shell known locally as kee (*Beguina semi-orbiculata*) makes orange disks. Black disks are taken from large horse mussel shells called kurila (*Atrina vexillum*). Thick white disks are obtained from a ridged cockle known as kakadu (*Anadara granosa*). Occasionally a fourth shell, kekete, which is very rarely used, is interchanged with kurila.



Necklace courtesy Frank Wickham, SPREP

Collaborating for effective action in conservation



Pacific island countries are benefiting more and more from a novel method of collaboration pioneered by SPREP and the Nature Conservancy in 1998.

The mechanism is the Pacific Islands Roundtable for Nature Conservation. This is a forum that brings together all the organizations and donors active in nature conservation in the Pacific islands. "The main point is that membership of the Roundtable is entirely voluntary," said Kate Brown, SPREP's Action Strategy Adviser who is closely involved in the initiative. "Its key value is that it brings together people from the country as well as donor organisations and other groups to organise and coordinate their efforts to increase effective conservation action in the Pacific islands."

The Roundtable meets once a year in a different location in the region, although a number of working groups continue to operate throughout the year. The Roundtable principally examines conservation activities addressing progress, gaps and issues in the Action Strategy for Nature Conservation in the Pacific Islands Region (2003-2007). "In 2003, Roundtable members renewed their commitment to assist countries to operate their national biodiversity strategic action plans," said Brown. "This will have the most impact in locating funding for projects and bringing technical assistance to the countries that need it."

Intergovernmental and non-governmental organisations, as well as private and public donor groups and national agencies attend, as well as representatives from the community based organisations. This committed group of people can then discuss conservation work taking place around the Pacific and share what has been learnt. "Participants see it is a powerful tool for sharing expertise and learning

from the experience of others," said Brown. "It is the only forum in which major regional players come together to discuss and develop new ways to address the main issues of nature conservation facing the Pacific islands."

As a "working" roundtable, participants are senior representatives of organisations active in nature conservation in many countries in the Pacific island region. Members and meetings focus on action rather than debate or theory, volunteering for tasks to address key actions from the Action Strategy that are identified as critical gaps in conservation in the Pacific islands region. "It is an experiment in cooperation and leverage and the results have been very encouraging," said the current Chair of the Roundtable, Andrew Bignell of the Department of Conservation in New Zealand.

Apart from working on the Action Strategy, the Roundtable has been responsible for creating the first inventory of conservation activities in the Pacific region. This inventory is now available online at www.dev-zone.net/pirnc.

The Roundtable is gaining strength with every meeting, with a strong commitment from a core group of governments, NGOs, donors and SPREP. Members see much value in coordinating the activities of regional players and facilitating partnerships in activities of mutual interest. Samoa's coordinator of the National Biodiversity Strategic Action Plan, Tapa Suesi said, "The Roundtable can make a significant contribution to the practical implementation of grassroots community conservation efforts in the Pacific islands."

Successful Pacific course on preventing invasive species goes global

One of the Pacific's most challenging problems is that of invasive species - species that have moved between countries with the often-accidental help of people - and that cause ecological, social or economic harm in the new country. Examples like the forest-choking *Merremia* vine, the black rat, the giant African snail, the myna bird and the brown tree snake have become major destructive forces throughout the Pacific.

SPREP responded to direct requests from Pacific island countries and territories for in-country training on invasive species by developing a course that aims to suit people of all backgrounds. However, it has proved so successful that it is being adopted as a model for worldwide application.

"Invasive species are almost impossible to eradicate once they get a strong foothold in a new place - prevention is the most cost-effective approach," said Liz Dovey, SPREP's Bird Conservation and Invasive Species Officer. "The course focuses on reaching people on the ground that play a role in preventing new invasive species spreading between islands like quarantine and customs staff and cargo handlers. It is also important to include people such as agriculture and environment staff, who may be the first to detect establishing populations of new arrivals that have slipped the border net."

Fieldtrips, group activities and inviting the participants themselves to share their special knowledge are used as much as possible in

support of the technical core of the course. This recognition of the skills already held within countries is very much valued by the participants and contributes to the spirit of renewed enthusiasm the participants take away with them.

Developed with the financial help of the US Fish and Wildlife Service and with the technical and financial assistance of New Zealand, the 5-day course was very successfully tested in Niue, Vanuatu and Palau in 2003. The course is now progressively being presented to all the other Pacific island countries and territories. While the course offers a core of ten key modules presented from a Pacific-centred view, ranging from biodiversity, key invasive species, their impacts and ways of spreading, to detection and response techniques, each new presentation is tailored as much as possible to that country's local needs. "This takes a lot of work between courses but is worth it in the increased relevance it has to that country," commented Suzy Randall, a SPREP Programme Support Officer.

The course has had significant recognition in some countries. "At the end of the course in Palau we were invited by the Minister of Resources and Development, the Honorable Fritz Koshib, to give a presentation on invasive species to the traditional and political leaders," said Dovey.

Palau counterpart Joel Miles said "The presentation was very well received and the discussion went on for more than twice the



Threatening the Pacific lifestyle

The red imported fire ant, which has not yet reached Pacific island shores, is a direct threat to the Pacific way of life. Native to South America, the ant has spread north into the USA to be detected in recent years in both Australia and New Zealand. A formidable biting ant, it threatens Pacific islanders' open house and barefoot lifestyle, and the ability to make a living from their gardens and plantations in comfort. It also threatens the survival of many island species. As trade increases, the chance of accidental introduction of this pest increases.

Photo Manaaki Whenua - Landcare Research, New Zealand

(continued on next page)



Intercepting live material at the border is essential as one step in preventing the spread of invasive species

Networking improves marine conservation



Collaboration between an international marine network and Pacific environmental staff is having a positive impact on community-based marine management and protection efforts in the region. The Locally Managed Marine Area (LMMA) Network is a group of conservation projects and practitioners in 12 countries across southeast Asia and the Pacific that have joined together to increase the chances of success in their conservation work.

SPREP administers in the Pacific the International Coral Reef Action Network (ICRAN), an international effort that focuses on coral reef management and protection. "We are assisting people from ICRAN sites in the region to understand what the LMMA network offers, bringing them together and helping them apply that knowledge in their own work," said Miriam Philip, SPREP's Assistant Wetlands Management Officer who also works on the ICRAN project. "Some community marine projects in Samoa have already joined the network and they are finding that the contacts are assisting them to set up more effective marine conservation areas. We have also brought some project staff in the Marshall Islands into the network."

"The idea is to link the SPREP ICRAN sites to the network, make them aware of what is happening and available for them in the network," said Philip. The LMMA network provides guidance and capacity building to

members in the areas of project design, management, monitoring, analysis and communications. Using and adapting these skills allows project staff to increase the impact of their work. Commenting on an LMMA meeting in Fiji that he attended with SPREP support, Latu Afioga of Samoa's Aleipata Marine Protected Area said, "The participants shared their views on the different ideas they used to manage difficulties they faced in the progress of their work."

Members of the network increase their effectiveness through training and exchanging skills, increasing community involvement and learning, participating in site-to-site visits, conferences, workshops and internet-based discussions, sharing group lessons and results, advancing 'best practices' of marine conservation and building personal relationships between conservation practitioners. Collaboration with LMMA may well assist other ICRAN sites in the network to carry out similar studies to help them manage their marine resources better.

Invasive species, continued

allotted time. A few weeks later the President himself joined us in a community weed-pulling event." He went on to say that the recommendations of the Palau training are already being implemented: the President created a National Invasive Species Committee by executive order; the committee is developing a National Strategy for Invasive Species; tilapia eradication is underway; public awareness is growing; and other priority recommendations are being acted upon as well. "I believe that the presentation had a lot to do with this rapid response," said Miles.

It is this sort of recognition that increases the impact of the work. But the course has also been recognised globally. "Our workshop structure was recently selected by the Global Invasive Species Programme as the model for the development of a generic global invasive species course," said Dovey. "SPREP is assisting in the development of this course, which is designed to be adapted to other regions of the world."

The International Waters Programme: passing on skills

Operating at the community level is a distinguishing feature of IWP's approach. One of its objectives has been to magnify the impact of its work by increasing the capacity and skills of local staff so that they can then pass that

knowledge on to others. This way of working has had clear impact in many of the countries in which IWP is operating. Here we single out two examples, from Palau and Tonga, which make interesting stories.



Long-term impact in Tonga

A single workshop organised in a Tongan village has gone a long way towards solving a rural waste problem as well as having a long-term impact on improving local water quality. Nukuhetulu village in the district of Tongatapu is Tonga's IWP pilot community. One of its main environmental problems over the last decade has been the increasing amount of solid waste that households generate, in particular the illegal dumping of that household waste into the mangroves. "This dumping is killing the mangroves, polluting water supplies, poses a health hazard and is really ugly," said Sione Fakaosi, the IWP national coordinator.

Part of the problem is that waste collection is limited to the nearby town. Rural villages such as Nukuhetulu are responsible for managing their own waste. "But there is no community waste disposal site in Nukuhetulu and illegal dumping of waste along the coast started around 1985 when a road was constructed that reached the mangrove areas," said Fakaosi.

IWP Tonga is running a community-based project to deal with waste problems in Nukuhetulu. The effectiveness of a community project depends largely on the participation of local people, not only in identifying problems, but actually taking part in practical solutions. The Nukuhetulu Project Development Team organized a workshop for the community to combine IWP awareness, engagement and participatory activities. As group activities dug in to find the root causes of the problem, the

Nukuhetulu community realized that they, as well as other stakeholders, contributed to the issue. "The workshop helped participants understand that each individual household contributes to the problem as well as being affected by the problem," said Pelenatita Kara, one of the project team.

To get an idea of the scale and nature of the situation, all the households in Nukuhetulu collected rubbish and classified it. Then, using participatory problem analysis, "we found that poor management of solid waste was polluting the underground water, lagoon and ocean," said Asipeli Palaki, the technical adviser on the project. The pollution was having a direct effect on livelihoods. In the past the village had an abundance of food like mullet, jellyfish and mud shellfish from the mangrove; today those resources are rapidly diminishing. The villagers identified four causes of the

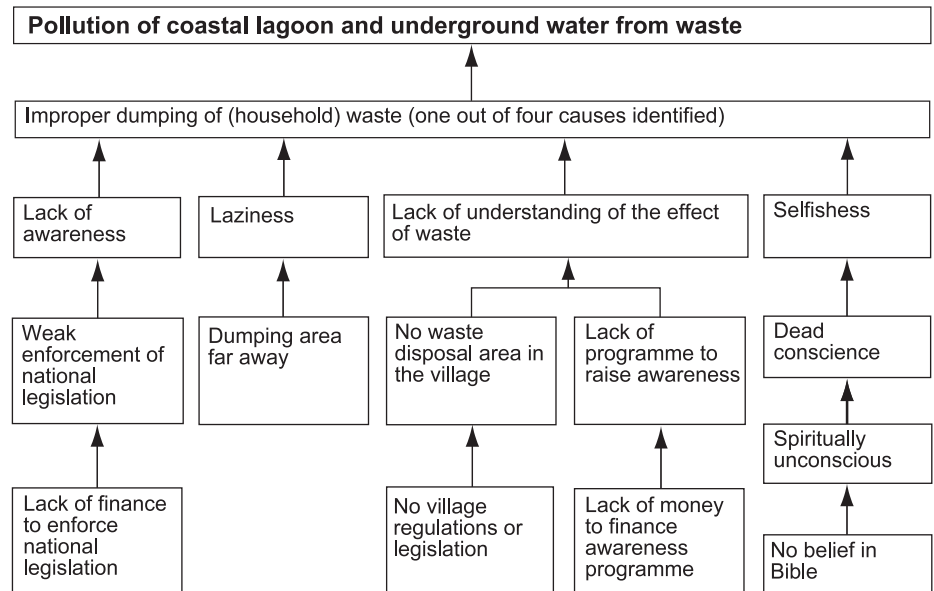
Nukuhetulu women working on problems at the workshop





International Waters Programme

Fig. 1. Part of the problem tree of the causes of water pollution



water pollution (Fig. 1): misuse of insecticide and pesticide, improper dumping of waste, untreated animal waste and dumping of sewage directly into the coastal lagoon from industry and nearby households. Further analysis identified a number of root causes to explain why the accumulation and dumping of the waste occurred (see box below). "These root causes provided the participants with a clear picture of how much they contribute to the problem," said Netatua Prescott, who conducted the analysis. Analysis of possible solutions later helped participants to start thinking about realistic solutions based on their understanding of the many root causes. "We organised a clean-up programme that collected household waste and removed the rubbish from the mangroves," said Takapuna Ika, community project adviser. "People were very surprised at the amount of rubbish they collected; about 30 tonnes from the residential area and 27 tonnes from the mangroves."

The initiatives have had both short- and long-term impacts. "The whole process has stopped further dumping in the mangrove area," said Pelenatita Kara. "But the workshop also made the community members understand that they are at the centre of the problem. To successfully solve the problem, they must participate in developing and implementing the solutions." And in another benefit, because poor waste management practices occur in many villages in Tonga, the work in the pilot community can also be applied throughout the country.

Root causes of village water pollution

- > Lack of proper management of household waste
- > Uncaring attitude
- > Overuse/misuse of insecticide and pesticide by growers.
- > Lack of a community awareness programme
- > No community legislation on waste control
- > Weak enforcement of current national legislation on waste
- > Lack of government allocated funds for the management of waste

Community participation in Palau

Together with two locally selected trainers, Joseph Aitaro, the Palau National Coordinator participated in a Train-the-Trainer course in Yap in July 2003. On return to Palau, Aitaro worked with the Palauan trainers to apply his newly gained knowledge. "We did the problem tree analysis several times before going to the community," he said. "In particular we did a problem tree analysis for waste issues in Palau with several focus groups based on age category. This was very valuable, for it allowed us to experience and develop our approach strategies for various stakeholders within the community."

The National Task Force selected Ngarchelong in the north of the country and Madalaih, a hamlet in Koror State, to host the community-based pilot activities. The selection process combined an analysis of strengths, weaknesses, opportunities and threats and problem tree analysis for each community. After the selection process, Aitaro met the State and hamlet leaders at both sites several times. "In Ngarchelong, the community was a little suspicious when we first contacted them but they became really enthusiastic when we started discussing issues and explained that IWP was a more action-oriented project."

Joseph worked with Ms. Rose Kip May, one of the IWP trainers, to conduct three community meetings to encourage full community participation. "For the longest time, waste has been a problem for the state, with social and economic issues," said Aitaro. "In this community, the existing landfill is on private property and the owner had agreed that the small household area could put their waste there but now the whole community is using it, thus causing social conflict within the community. We got all the key stakeholders together to address the problem, and also involved the governor of the State, the Honorable Browny Salvador, who understands that the community needs to be involved."

"We did another problem tree analysis and the people were amazed that they had so much

knowledge of the problem," said Aitaro, "Our biggest problem was that people were getting so excited. The hardest part of problem tree analysis is getting people to focus on the subject, but the great thing was that they all shared the same vision for the environment."

"The elders did not have such a high education level but they have a unique understanding of the ecosystem," noted Aitaro. "When we discussed waste they said that the landfill was just one problem. What about the coastal areas? This landfill is contaminating our watershed because it is running down to the coast. The younger people were focussed on waste but the older people saw that waste was just one element of the problem."

They are also now thinking about recycling material by splitting up their rubbish and working to reduce the volume of waste. "This requires the participation of every household in segregating the waste," said Joseph. "It also helps us collect data on how much waste is being generated and shows what we can reuse, like recycling aluminium cans."

"But the greatest effect is that now the people in the community have confidence in themselves," concluded Aitaro. "Through the technique of problem tree analysis they agreed one vision amongst themselves. Now they say to visiting experts, 'How can you help us?' rather than the expert saying, 'How can I help you?'"



The clean-up programme collected household waste and removed rubbish from the mangrove

International Waters Programme



Just how much fish do whales eat?

In recent years, the fishing industry has been complaining more and more about whales in the Pacific treating loaded fishing lines as longline lunchboxes. Longline fishing is becoming more common in the region and so are the complaints.

SPREP has taken a leading role in assessing the impact that whales have on fish populations as well as looking for ways to minimise their effect on fishers' livelihoods in the South Pacific. With support from the Oak Foundation, the US Marine Mammal Commission and the New England Aquarium, SPREP distributed a major report in 2003 based on a groundbreaking 2002 workshop on the interactions between whales and longline fisheries. International fishers and company executives, whale biologists and gear technologists discussed the removal of hooked fish and bait from longlines by small and medium-sized



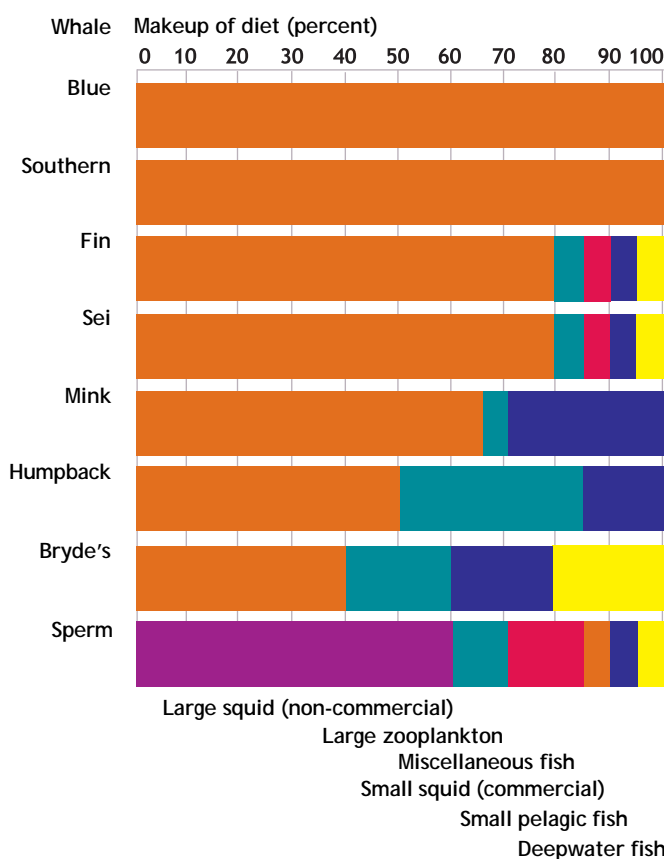
whales. One of the organisers, SPREP's Marine Species Officer, Job Opu, summarised the outcome by saying, "This meeting assisted marine conservation not only in the region, but around the world."

Work that SPREP commissioned for the meeting showed that whales take fish from longline fisheries all over the world. This is not new, because records go back at least 50 years. However, large whales have no real impact on commercial fisheries in the South Pacific region (Fig. 1), but the whales themselves risk getting tangled up in the gear. The workshop also worked out ways to minimize the opportunities for small whales to remove hooked fish from longlines (see Box 1).

Many of the large whales breed in the southern Pacific Ocean, which also supports a number of valuable fisheries, particularly tuna. Although most populations of large whales in the region are currently severely depleted, there is concern that if whales recover to prior levels, they will compete with these fisheries. The idea that a whale sanctuary could have significant adverse impacts on fishery resources by providing excessive and unnecessary protection for cetaceans that consume large amounts of marine living resources has proved to be false.

In fact, this is not the case, as the SPREP work showed. Most of the great whales feed on small crustaceans known as krill, which they filter out of the sea water using baleen plates in their mouths. There are no reports of large

Fig. 1. Diets of the great whales
Large whales have no real impact on commercial fisheries in the South Pacific region. The percentage of commercially targeted pelagic fish like tuna and sun fish that they eat is too small to register on the chart



whales in the South Pacific eating tuna. The smaller toothed whales, as in every other ocean of the world, do prey on longlines, but their impact is minor. Tim Lawson, of the Secretariat for the Pacific Community, estimates that whales take 0.8% of the catch. "This is significantly less than the share that sharks take," he said. Nevertheless, the industry perceives whales as a threat. Mike Donoghue from New Zealand's Department of Conservation said "We need ways in which fishers can avoid economic losses without harming some of the ocean's most special animals." Donoghue has been working with Job Opu and colleagues Greg Stone of the New England Aquarium and Randall Reeves, from the Cetacean Specialist Group of the International Union for the Conservation of Nature, to develop the idea and gather support. "There is a pressing need to address the interactions between whales and longline fisheries in South America, including the Falkland and Malvinas Islands, South Africa, Alaska and Indonesia, as well as the South Pacific," said Stone.

"While the negative feelings towards cetaceans expressed by some longline fishermen who have lost part of their catch are understandable, they are exactly the opposite of what we should be striving for," said Opu. "We need a recognition and an acceptance that diversity and abundance are signs of a healthy marine ecosystem."

Box 1. Ways to minimize the opportunities for small whales to remove hooked fish from longlines

- > manage vessel and gear noise, both in the design and operation of the vessel
- > noise should be minimised while travelling to fishing grounds and during operations (e.g. turn off echo sounder, reduce noise of winch, propeller)
- > consider changes in fishing season, gear, setting and hauling times, fishing areas
- > avoid hotspots - areas where cetaceans congregate
- > check (visually and/or acoustically) for potential predators before setting or hauling and try to avoid doing either when cetaceans are in the vicinity
- > suspend or delay hauling if depredation is noticed
- > improve the ability of fishermen to identify species
- > avoid chumming or discarding offal and bait in the vicinity of fishing locations
- > encourage fisherman to communicate their experiences with mitigation, and their concerns about depredation
- > use decoy vessel to distract cetaceans away from the fishing area
- > try setting dummy/false gear to mislead the cetaceans and direct them away from the fishing area
- > encourage scientists or observers to travel aboard longline vessels to provide expert advice on species identification and behaviour.

Better handling of ship's waste

National problems in handling ship's waste led SPREP to work towards amending an international treaty, which is having a significant impact across the region. Shipping is the life blood of the Pacific. An efficient maritime sector is critical to the economic, social and environmental well being of a region composed of small island countries and territories, where over 90% of all goods is transported by sea.

Ships routinely accumulate large volumes of waste during a voyage, like 'household' rubbish, kitchen waste, raw sewage, contaminated bilge water and used oil. To prevent ships dumping this waste into the ocean, the International Convention for the Prevention of Pollution from Ships (MARPOL) of the International Maritime Organization (IMO) requires countries that follow the Convention to accept the waste of all ships that call at their ports. This is an effective way to control marine pollution, but Pacific island countries and territories, in particular the smaller atolls, cannot handle the waste generated from international shipping.

SPREP works with the IMO on the Pacific Ocean Pollution Prevention Programme (PACPOL) to reduce ship-related marine pollution. Under this programme, SPREP carried out a comprehensive review entitled 'Improving Ships' Waste Management in Pacific Island Ports'*.

"There are currently five Pacific island country parties to MARPOL, but none of them can fully meet their obligation to provide



adequate ships' waste reception facilities, the only ports in the region that do so are in the Territories," said Sefanaia Nawadra, SPREP's Marine Pollution Adviser. "While the requirement to provide reception facilities is valid in the continental context it is not so for small island developing states. These states are already struggling to manage their own domestic waste because of their physical and financial limitations. So it is impractical and indeed unethical to require them to provide facilities to cater for waste from international shipping. There is no point in providing facilities when the final disposal of this waste is not environmentally acceptable."

International and domestic ships call into the ports of all the countries and territories in the Pacific region. "We found that the obligation to provide adequate reception facilities for ships' waste is the main reason why many Pacific countries have not become party to MARPOL," said Nawadra. To tackle this situation, Nawadra wrote a paper entitled 'SPREP Regional Arrangements for Ships' Waste Reception Facilities' that he tabled at the 49th Session of IMO's Marine Environment Protection Committee in July 2003. He proposed that all SPREP



*A full copy of the report can be downloaded from the SPREP website - www.sprep.org.ws

Members continue to be responsible for managing the wastes generated from their own domestic shipping, but would no longer be obligated to receive the waste of international shipping. Instead, six ports (see map) would be designated as regional ships' waste reception centres to provide facilities for international shipping. These ports were chosen because they meet MARPOL standards or have the potential to meet these standards with some minor improvements.

The Committee agreed that this regional approach satisfied the obligations of SPREP's Members under the MARPOL convention. SPREP Members present at the session made interventions in support of the proposal. Australia in particular was instrumental in finding a way for the proposed arrangements to be approved, even though there was no provision under MARPOL.

The approval of the proposal led to a resolution for an amendment to allow such regional arrangements to be implemented. All international shipping in the region, when taking into account their routes and duration of voyage, would be able to store their waste until they reached a reception centre or a commercial port outside the region. "This means that the Pacific becomes the first region to have a regional arrangement for ships' waste reception facilities approved," said Nawadra. It will have an immediate impact on improving the handling of ships' waste, as well as relieving many Pacific countries of the heavy burden of handling the international ships' waste. So more of these countries should join MARPOL. In addition, the work has paved the way for similar arrangements in regions such as Africa, Asia and the Caribbean.



Pacific ports designated as 'Regional Ships' Waste Reception Centres' that can receive and treat waste generated from international shipping:

1. Apra, Guam
2. Noumea, New Caledonia
3. Papeete, French Polynesia
4. Port Moresby, PNG
5. Suva, Fiji
6. Lautoka, Fiji

Training to shrink the ozone hole

Controlling the use and import of chlorofluorocarbons (CFCs) in the Pacific will reduce the region's dependence on these harmful ozone-depleting substances. CFCs play a major role in the destruction of the ozone layer. They are controlled under the Montreal Protocol on Substances that Deplete the Ozone

2003 ozone hole

The Montreal Protocol, the most successful multilateral environmental agreement in existence, has reduced CFC use by 80% since 1989. Yet a huge ozone hole continues to develop each year over Antarctica. According to scientists from the British Antarctic Survey and the National Aeronautical and Space Administration (NASA), the 2003 ozone hole was the second largest recorded. It reached 28.3 million km² in September 2003, slightly smaller than September 2000, when the largest ever hole recorded covered 29.9 million km². In 2002 the ozone hole covered 21 million km².

Scientists had expected the ozone hole to shrink with the reduced emissions as a result of the Montreal Protocol. NASA scientist Paul Newman said, "While chlorine and bromine chemicals cause the ozone hole, extremely cold temperatures, especially near the edge of Antarctica, are also key factors in ozone loss." The fact that this year's ozone loss is much greater than last year's reflects the very different meteorological conditions between the two years.

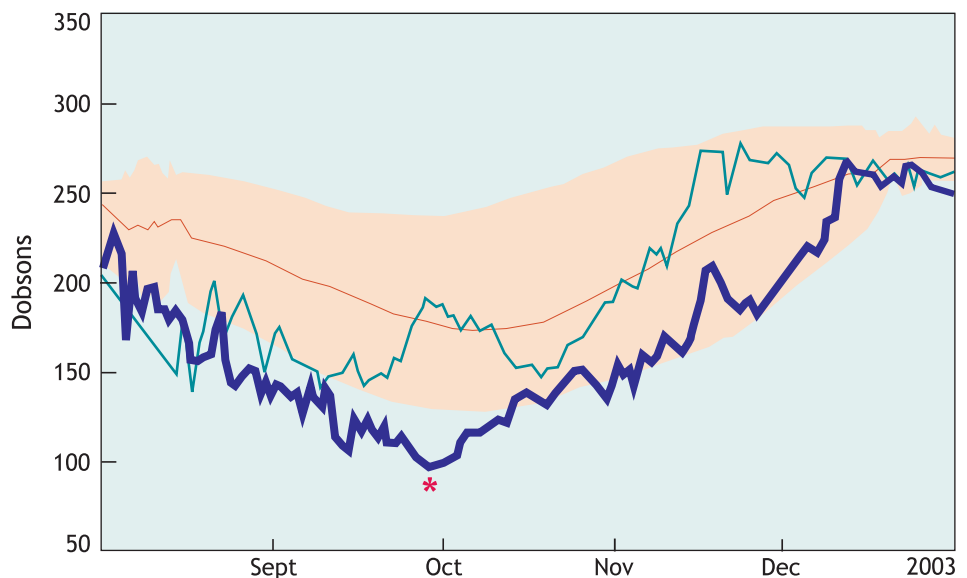
The thick blue line on the graph shows ozone concentrations during 2003. The asterisk (*) shows the lowest point in September. The green line represents the 2002 levels, the orange line is the median point and the pale orange zone shows the previous range. Data courtesy NASA's Total Ozone Mapping Spectrometer.

Layer, as well as under the laws that are yet to be put in place of many Pacific countries. In the Pacific, demand for CFCs is mostly for refrigeration and air-conditioning, especially in pre-1996 vehicles. In the global front, the high cost of conversion to the more ozone-friendly alternatives has created a demand for contraband CFCs, which a thriving black market delivers. "Despite the achievements of the Montreal Protocol, the problem of illegal trade persists," said Dr. Ezra Clark, Senior Campaigner for the Environmental Investigation Agency in the USA.

"Demand is high in the Pacific region for CFCs to

service the air-conditioners in imported second-hand vehicles of pre-1996 models," said Emma Sale-Mario, SPREP's ozone-depleting substances officer. "While imports of CFCs remain uncontrolled in most Pacific Island countries, this trade in second-hand vehicles poses a great risk to all countries' compliance."

As a practical component to attacking the problem of CFC use, SPREP is collaborating with the United Nations Environment Programme (UNEP) and the Government of Australia to train a core of refrigeration and air conditioning technicians who can return to their work and train other staff in the correct way to handle CFCs to prevent their escape into the atmosphere during routine servicing. Technicians are also trained to use alternative gases that are more ozone-friendly than CFCs. During 2003, SPREP ran seven train-the-trainer workshops: in FSM, Kiribati, the Marshall Islands, Palau, the Solomon Islands, Tonga and Tuvalu. Funded by the UNEP Multilateral Fund for the Implementation of the Montreal Protocol as well as the Government of Australia, the training programme draws personnel from local institutions as well as using SPREP staff. The New Zealand Institute of Refrigeration, Heating and Air-Conditioning Engineers (IRHACE)



(<http://toms.gsfc.nasa.gov/eptoms/dataqual/ozone.html>)



Scenes from the workshops: theory and hands-on sessions

Industry Training Charitable Trust (Inc.) provided trainers for the courses.

“The workshops included lectures on the harmful effects of ozone layer depletion and the Montreal Protocol, retrofitting and future developments in the refrigeration,” said Iain McGlinchy the project consultant. “We also had hands-on demonstrations with recovery equipment using actual refrigeration units in need of recharge and maintenance.”

“During 2003, we trained 120 people in good practices using CFCs in the seven core countries,” said Sale-Mario. “The long-term impact will be to enhance good service and technical practices in the refrigeration sector.” In a parallel programme, Fiji and Samoa ran train-the-trainer workshops in Fiji and Samoa, with UNEP and the World Customs Organization. The workshops were on ‘good practices of refrigeration’ that targeted refrigeration technicians and ‘controlling the imports of CFCs and other ODSs’ designed for customs officials. The workshops, again with financial support from the Multilateral Fund, trained 44

customs officers to train others to recognize and detect illegal imports of ozone-depleting substances and equipment containing such substances. In Samoa, the participants immediately went on to train another 17 officers. The Fijian participants expected to go ahead and train over 370 customs officers over the subsequent 12-month period. Both countries are also including a Montreal Protocol-related training module in the training curricula of new customs officers, thus gradually extending the impact of the initiative throughout the customs services.

“The approach has been very successful in changing the behaviour of the people who are actually using and controlling the gases,” concluded Sale-Mario. “This reduces CFC consumption and mitigates emissions of CFCs in the refrigeration and air-conditioning sector. Overall, the approach has been helpful in assisting the countries to comply with the phase-out schedule for CFCs under the regional strategy and the Protocol itself.”

Innovations in adapting to climate change

A new method that allows communities to choose the best response to the effects of climate change is having a clear impact in the Pacific. Taito Nakalevu, SPREP's Climate Change Adaptation Officer, developed the guide as a simple way for communities to assessing their vulnerability to climate change effects and the actions they can take to adapt to it. "The method is a systematic approach to assessing communities' vulnerability and capacity to adapt to climate change," said Nakalevu. Other agree. "The new method is user-friendly, it works well in communities and is very effective," said Brian Phillips of the Vanuatu Climate Change Office.

The work is part of a project that SPREP is executing for the Canadian International Development Assistance entitled Capacity Building for the Development of Adaptation Measures in Pacific Island Countries (CBDAMPIC). Initially the project is working in pilot sites in the Cook Islands, Fiji, Samoa and Vanuatu.

"The most important part of the work is building a team of national staff to ensure that the knowledge stays in the country, as well as giving ownership of the project to the national and community levels," said Nakalevu. "We have also carried out training on the guidelines in the four project countries and formed core teams, which actually go to the pilot communities to carry out the assessments."

Vanuatu community members



Frank Wickham, SPREP's Human Resources Development Officer, assisted in the training. "The training activity was able to develop and strengthen collaboration among national agencies and stakeholders in assisting communities assess their vulnerabilities and identify adaptation options," he said. "Participation by the host community in the training and related follow-up activities is critical."

The core teams, drawn from project staff, government and non-government groups, go to the sites and explain climate change and the purpose of the exercise to the community. Groups form that identify, list and prioritise climate-related problems and their effects on livelihood. The most significant problems are analysed to find their causes and effects. Adaptation options are developed then the findings from the community are complemented by the individual assessments of government experts who represent sectors like agriculture, fisheries, lands, meteorology, etc. These expert assessments help corroborate the community findings, allowing the whole community to choose the highest priority problem as the proposed adaptation project.

"The process builds the knowledge and understanding of communities on climate and sea level change issues," said Brian Phillips, who is also a member of the Vanuatu Climate Change Core Team. "Understanding the basic concepts of current and future climate change allows the whole community to identify and prioritise problems."

The work in Vanuatu is a good example of the impact of the method. Teams visited three pilot locations in Lateu, Luli and Panita. Using the guide the communities identified high priority actions. In Lateu, coastal flooding was creating unhealthy living conditions and damaging housing, with the conclusion that the whole settlement had to be relocated. At Luli, the assessment showed that the shortage of reliable water supplies was the





A community meeting

main priority. In Panita, the highest threat comes from coastal erosion and flooding. Again, there is no alternative but to relocate the settlement and its rainwater storage facilities to higher ground.



Corrosion of roof catchment from salt spray and volcano-induced acidic rain

Being on the windward side of the island, Luli suffers severe water shortages. The small settlement depends entirely on a single underground well. Rainwater is the only other source of water, but the settlement is exposed to salt spray and volcano-induced acid rain, making the rainwater itself acidic and iron roofing impractical for collecting water

In all of the locations the CBDAMPIC Climate Change Core Teams continue consultations with the provincial authorities, government departments, churches and NGOs for assistance in implementing the pilot projects. “At the national level, the SPREP method greatly broadens the understanding of the agencies involved of the crosscutting nature of climate change and variability,” said Phillips. “It creates a pool of expertise in the area of climate change adaptation and enhances sectoral collaboration and coordination.”

There are several other approaches to assessing the effects of climate change. However, the SPREP system is simple and operates at the grassroots level where people are concerned with what actually affects their lives most. This is its greatest strength - it is able to enlist community concerns to accurately predict the most serious effects of climate change on people and their livelihoods. The other approach that is increasing the impact of the work is the concentration on building up the capacity of local staff to continue the work in country. This is proving highly effective and Caribbean collaborators have expressed an interest in adapting the guide to their region.

Renewable energy in the Pacific

Countries involved in PIREP

1. Cook Islands
2. Fiji
3. FSM
4. Nauru
5. Samoa
6. Tonga
7. Kiribati
8. Republic of the Marshall Islands
9. Niue
10. PNG
11. Tokelau
12. Tuvalu
13. Palau
14. Solomon Islands
15. Vanuatu

Free hot water and cheap power may seem like pipe dreams, but a new project in SPREP is working towards just those goals. In a region with about the highest renewable energy potential per capita in the world, most electricity generation in the Pacific relies on petroleum products. Yet about 70% of the people in the Pacific islands countries still do not have access to electricity. The cost of petroleum products in the region is among the highest in the world but most countries rely on imported petroleum as the chief source of commercial energy.

The Pacific Islands Renewable Energy Programme (PIREP) has been established in SPREP with support from the Global Environment Facility (GEF) through the United Nations Development Fund (UNDP), as a first stage in a much wider approach. "The present dependence of the Pacific islands countries on fossil fuels to meet their energy needs is expected to continue, unless other alternative

cleaner and environment-friendly energy forms like renewable energy are widely used," said Tom Twining-Ward of UNDP, Samoa. "The urgent need to redirect the current energy path has been acknowledged by the Pacific islands countries."

Fifteen countries are involved and most have already established national coordinating committees to assess barriers to the widespread implementation and ultimately the commercialisation of renewable energy. "By identifying and understanding these barriers, their causes and effects, PIREP will also identify ways to remove the barriers," said Solomone Fifita, the Chief Technical Adviser who is running the project from SPREP. "This will stimulate the region-wide adoption and commercialisation of renewable energy."

The region has a number of options (see table). Compared to other countries, the Pacific has a high and relatively constant supply of solar energy. Technological advancement has made wind power a viable option for commercial energy services. Biomass from agriculture can substitute for fossil fuel. Hydropower resources for electricity production exist in a

A solar collector providing energy to a school in Sola, Vanuatu



number of countries. Waste-to-energy or biogas systems would not only contribute to increased energy independence but also help to address pollution and public health concerns, as well as providing a source of organic fertilizer. Geothermal resources remain untapped, as do the vast energy resources of the tropical ocean.

PIREP is the first and so far the only regional project in the climate change mitigation and energy sector. "The development goal of the current phase of PIREP is to prepare a regional approach to removing barriers to the development and commercialisation of renewable energy systems," said Fifita. "The purpose is the acceleration of the adoption and commercialisation of feasible and applicable renewable energy technologies." This exercise will, for the first time, identify clear renewable energy targets for the various governments.

"At this stage PIREP will prepare the much needed groundwork for more comprehensive regional and national initiatives," said UNDP's Twining-Ward. "PIREP is not an end in itself. It is a means towards an end, a Pacific PIREP II, which is expected to be one of several climate change projects that will be submitted to the GEF for funding."

PIREP has very great potential impact. Continuing the work means providing the Pacific with cheap sources of clean energy that will stimulate the economies of the region, while leading to a cleaner environment, reduction of greenhouse gases and the prospect of practical sustainable development into the future.



A wind generator in Mangaia, Cook Islands

Solomone Fifita, SPIREP

Overview of renewable energy applications in small island settings

Biomass	Bagasse: bagasse is used as fuel for sugar mills in, Fiji Biofuels: used to run small diesel generators in Fiji, Tuvalu and Samoa
Solar	Solar photovoltaic systems: particularly Kiribati, Tonga and Tuvalu Solar thermal: widely used renewable energy application in the Pacific
Hydroelectric	Several islands have mini-hydro power capacity of a few megawatts, such as Fiji, Solomon Islands, PNG and Samoa
Wind	The potential for wind energy and small wind and diesel hybrid power systems is being studied by several Pacific islands
Hybrid and other new	Solar or wind power with diesel. Wave and tidal power, and ocean thermal energy conversion are some of the other technologies that offer interesting opportunities in the Pacific



Sustainable development and Pacific partnerships

The small island developing states (SIDS) of the Pacific are not closed systems. They are affected by many national, regional and international influences. With their limited human and natural resources it is nearly impossible for most of these Pacific SIDS to support their aspirations for sustainable development, as individual countries. SPREP, with other regional organizations and partners, play an extremely important role in coordinating and supporting these countries, collectively, to move their sustainable development agenda forward.

The distribution of wealth, resources and social status within each country gives an accurate picture of progress towards sustainable development. This is largely a national issue, and communities must have a voice in the governance systems and processes that distribute wealth within individual countries. To this end SPREP has been advocating the use of the national assessment reports, which have been developed for international meetings like the World Summit on Sustainable Development (WSSD), and the 10 year review of the Barbados Programme of Action (BPoA+10), as a basis for the development of national sustainable development strategies (a WSSD target for 2005). "The national task forces and multi-stakeholder meetings set up to develop the assessment reports are as important, if not more important than the reports themselves," said Coral Pasisi, SPREP's Sustainable Development Officer. "Given that sustainable development is about integrating many different aspects of environmental, social, economic issues and development processes, it is impor-

tant that all the stakeholders that will be involved in the implementation of a national strategy are extensively involved in its development."

When requested, SPREP and other CROP agencies have been assisting Member countries by participating in their national forums to help link the assessment reports, development strategies, planning and budgetary systems. "In this way sustainable development becomes a priority in the national government and core elements are funded continually under the national budget," said Pasisi. "This shows international partners that the countries themselves are taking ownership of their sustainable development priorities."

In the region, SPREP has been championing the coordination and collaboration of regional and non-governmental organizations as well as donors and other partners. "We are working to ensure all our efforts better address the needs and priorities of national sustainable development," pointed out Pasisi. This work is being supported through the overall promotion and monitoring of the 14 Pacific Umbrella Initiatives or Type II Partnerships that were launched by Pacific leaders at the World Summit in Johannesburg. These partnerships allow all partners to meet on a common platform to create agreed priorities and long-term goals that are sustainable and achievable, and then to work together to achieve them. The aim would be to have one porthole into the Pacific Region where interested partners could look through and get a good picture of the priorities, past, current and planned activities in that area. They would then be able to choose where their interest best fit in that picture, and allocate resources or assistance accordingly.

As well as leading five of the Type II Partnerships, SPREP is Co-Chair of the Sustainable Development Working Group of the Council of Regional Organisations of the Pacific (CROP). SPREP, in consultation with the Working Group, is running the regional project to assist Pacific

Sustainable development

Our sustainable development goal should be to ensure, that at the very least, the future generations of the Pacific:

- > have at least the same number of resources to use, as we have today
- > have at least the same standard of living if not better, that we have today
- > have opportunities for economic growth and development

island countries in their preparations for BPoA+10, which is the acronym for the 10-year Review of the Barbados Programme of Action (Programme of Action for the Sustainable Development of Small Island Developing States). This task involves drafting most of the reports, assessments and briefs to support the process. "So far we have coordinated the drafting of the Pacific Regional Assessment and Draft Pacific Position for the BPoA+10," said Pasisi. "This has placed the Pacific region first off the blocks, amongst others regions, in regards of preparedness and input to the BPoA+10." As a result of these continuous efforts, many donor partners in the United Nations have expressed their support for the Pacific position and want to see it clearly reflected in the outcomes of the BPoA+10 meeting.

Another approach that SPREP is taking to support the Pacific countries is to provide them information and technical support to assist in their contributions in the international arena. Participating in meetings such as the Conferences of the Parties for the main multilateral environmental agreements, the World Summit, the Commission on Sustainable Development and the BPoA+10 will generate support for the Pacific countries and increase the flow of resources from multilateral and bilateral sources. "The importance of maintaining the recognition of the "special case" for SIDS in the international arena cannot be overestimated," said Pasisi. "It is this special case that we must use as a basis to fight for preferential access to resources and assistance amongst other developing and developed countries in the world. Some examples of where we need special treatment are the World Trade Organisation and the Global Environment Facility."

SPREP has assisted in securing decisions in the UN to maintain the special case of SIDS, and for the Global Environment Facility and other funding agencies to take into account the special circumstances of SIDS in their criteria to access funding. "SPREP has also helped to highlight some of the issues particularly important to Pacific island countries such as the plight of Niue following the devastation of Cyclone Heta, and Tuvalu following its flooding after record king tides," concluded Pasisi.

Web site launches new public face of SPREP

SPREP launched a new corporate image in 2003, starting with a redesigned web site that went public in August 2003. The new site has more content, a use-friendly design and a news section on the front page. The revision had an immediate impact, with the average number of hits per day increasing from 1616 in August to 3509 in September. Hits have remained at that increased level ever since. A French version is planned for the future.



Developing skills in Pacific environment staff

Building up the ability of the Pacific people to meet the challenges of the future is essential to reaching national and regional goals. A project that SPREP is running responds to the direct needs of a number of Pacific countries. With backing from AusAid, SPREP is working with Australian Volunteers International (AVI) to assist environment departments in the Cook Islands, Kiribati, the Marshall Islands, Niue, and the Solomon Islands to develop institutional and individual capacities. "This work will have a very specific and lasting effect within the countries," said Frank Wickham, SPREP's Human Resources Development Officer, who is supervising the project.

Having already spent several months in the Marshall Islands (see SPREP's 2002 Annual Report,) during 2003, JoAnne Braithwaite, a Human Resource Development Strategy Officer, from Australian Volunteers International spent 3-4 month periods in Kiribati, the Cook Islands and Niue. Most recently in 2004, she was in the Solomon Islands.

The work is intensive and practical. "When I arrive in a new country, I have a mental checklist of the things I need to look at," she said. "They include determining whether training is linked to the organisation's strategic plan. How can staff be expected to achieve their vision if they are not given the skills to support it? I also review what processes exist

for the ongoing identification of training needs."

In Kiribati, she worked with the Environment and Conservation Department reviewing and making recommendations on their general management processes, developing systems for the management of their human resources development and identifying training needs. As a follow up to the work, AVI posted another volunteer to Kiribati to establish a community education unit, and an environment officer has been sent to New Zealand on a scholarship for further training.

A different situation faced Braithwaite in the Cook Islands. "New legislation had just been passed extending the Environment Act to all the islands, rather than just Rarotonga, so my arrival there was timely, to assist in the process of reviewing the organization structure, establishing Island Environment Committees and training 12 new staff", she said. The first thing she did was to "get everyone together and do a SWOT (strengths, weaknesses, threats and opportunities) analysis then interview everyone to find out what was happening in the office, the strengths that could be built on and the challenges that needed to be met." Plans for the implementation of the new Act are now well advanced.

"Niue was engaged in implementing their new Environment Bill," she said. "We had to work out a strategy that took into account Niue's situation of having three environment staff to meet all the environmental concerns of such a small population." The best approach was to leave environment activities with a number of existing groups while building up the skills of environment staff to monitor how work was being done and provide guidance when needed. "The last I heard the proposal had been submitted to the Cabinet," she said. "But the severe impact of Cyclone Heta at the end of the year has disrupted progress."

Ms Braithwaite is particularly concerned about training needs analysis and planning. "The challenge is to ensure that training funds

Discussions with staff at the Cook Islands workshop. JoAnne Braithwaite is on the far left



are spent as effectively as possible to meet the specific training and development needs of the member nations," she said. "I am concerned that the concept of training and development seems to be wedded to out of country workshops. So much staff development could be achieved through good performance management practices and on the job training. If staff had the opportunity to regularly review their own performance and receive good coaching, we would see a huge improvement in these organisations."

Regional workshops are effective at promoting good networking among nations. "However, national training allows core groups of staff to be trained who can then support each other in integrating newly learnt behaviours into daily work practice," she said.



"Pacific nations need to 'own' their training and development; to determine what they need, to seek the training to meet that need, and then to implement it."

In the end it all comes down to the people. As Braithwaite says, "I feel successful when I can influence the way people think about things."

Helping teachers teach

A novel information product called the Pacific Freshwater Education Kit has proved to be very useful in teaching children about an important aspect of the environment. Primary and secondary teachers had been asking for useful materials to help them teach science topics in their schools. "The starting point was some comments and requests from Pacific islands teachers," said Seema Deo, SPREP's Environmental and Educational Awareness Officer, who developed the project and wrote much of the text. "Then we used common sense and our knowledge of environmental realities and concerns in the Pacific islands to further develop the kit."

The kit provides comprehensive material for teaching and learning about the freshwater resources of Pacific islands. Fifteen information sheets provide clear and concise information on a range of water-related topics. Thirty activity sheets allow teachers to involve students in learning about water, with the help

of a booklet giving background information for the teachers to use. "Many of the activities also aim at developing positive attitudes and values towards the conservation of freshwater," said Rhonda Bower, the Sanitation Officer of the South Pacific Applied Geoscience Commission (SOPAC), who collaborated in developing the kit.

SPREP and SOPAC worked together in producing the kit, with funding assistance from the United Nations Environment Programme (UNEP) and the New Zealand Agency for International Development (NZAID). The challenge, when producing the material, was to present the freshwater situation of the Pacific in a way was relevant to the users' islands so that they could relate to it. Although basically a complete unit, the kit itself was developed as a project to demonstrate the usefulness of the approach. "We printed 1000 copies that SPREP and SOPAC distributed to focal points, selected schools and environmen-

tal organizations working in the region," said Deo, "Then we did a short trial exercise in two schools in Samoa to show how the kit could be used by teachers in different situations."

The two schools were Avele College and Robert Louis Stevenson (RLS). Because there was no introductory workshop before delivering the kit, the trial was going to show how the resource coped with different types of teachers and levels of students. "I concluded that the students were interested in the kit, the look of the resource and the engaging nature of the activities," said Alejandra Mejia-Restrepo, who did much of the artwork and design. "And the teachers were able to develop practical projects according to their needs."

Ms Masa Faasau of RLS used the kit with the 12-13-year-olds in her biology class. "As a biology teacher I found some interesting data about water," she said. "And the students were able to use the information sheets and follow the activities without help."

Mrs Shoonna Woods also from RLS asked to try the kit on her class of 6-7-year-olds because it was related to the subject she was currently teaching. "I used the material for most of the 6 weeks I spent teaching the topic Environment,"

she said. "The kit was practical and attractive, easy to follow and I could use the material in the areas of reading, science, maths, spelling and creative writing."

Mr Viliamu Lese of Avele College had some good results with his Year 12 students because the kit has a strong focus on conservation and intelligent use of freshwater. "The school has a big problem with poor water supply and waste of water due to faulty taps, leaking pipes and a general careless attitude from the students," he said. "Using kit activity No. 24 'Drip inspector' we divided into three groups and the students checked all the taps and pipes on the school ground."

Nikao School in the Cook Islands did the same exercise and had similar results. But they are going a bit further. "We supplied them with the electronic files and they are adapting the material further to suit their own needs," said Deo.

So the conclusions are clear. The kit has been a success and demonstrated that such an approach can have a high impact, bringing practical environmental topics into the classroom. The challenge now is to apply the approach in other areas.

One of the illustrations from the Pacific Freshwater Education Kit, by Alejandra Mejia-Restrepo



Finance and budget - 2003

Donor project contributions

Donor	Balance at 1-Jan-03	Income	Expenses	Transfers	Balance 31-Dec-03
Asian Development Bank	18 579	14 850	(36 136)	-	(2 707)
AusAID XB	92 131	532 215	(374 627)	-	249 719
AusAID XXB	(23 468)	291 586	(88 342)	-	179 776
BioNet	47 821	109	(29 264)	-	18 666
People's Republic of China	3 545	0	(16 405)	-	(12 860)
Canadian International Development Association	112 396	504 447	(230 763)	-	386 080
Commonwealth Secretariat	12 016	0	(65)	-	11 951
Canada South Pacific Ocean Development Program	70 841	286 640	(302 068)	-	55 413
Government of Denmark	79 737	8 887	(10 033)	-	78 591
Department of International Development	52 865	1 809	(146 740)	-	(92 066)
European Union	1 370	69 935	(122 780)	-	(51 475)
UN Economic & Social Commission for Asia	0	65 916	(62 705)	-	3 211
Government of France	54 622	63 640	(71 972)	-	46 290
GEO Schutzt Den Regenwald e.V	0	69 500	(5 523)	-	63 977
International Maritime Organisation	50 688	24 157	(82 108)	-	(7 263)
Government of Japan	60 519	6 256	(42 307)	-	24 468
Multiple Donors	150 477	274 200	(265 825)	-	158 852
Netherlands Red Cross Society	0	7 746	0	-	7 746
Natural Oceanic Atmospheric Admin	46 614	49 990	(20 941)	-	75 663
NZ Aid PIE	300 013	52 002	(219 908)	-	132 107
NZ Aid XB	48 993	310 842	(317 928)	-	41 907
Pacific Development & Conservation Trust	0	8 590	(8 791)	-	(201)
Other Aid Funds	(56 270)	2 515 019	(1 865 434)	(779 466)	(186 151)
UN Convention to Combat Desertification	16 481	87	(14 975)	-	1 593
United Nations Deveopment Programme	310 814	2 187 593	(2 470 268)	-	28 139
United Nations Environment Programme	506 276	383 595	(705 548)	-	184 323
UN Educational Scientific & Cultural Organization	3 531	0	(3 415)	-	116
Government of the United Kingdom	17 056	14 041	(3 495)	-	27 602
United Nations Technical Cooperation Activities	0	0	(4 638)	-	(4 638)
US Aid - Department of Environment	12 898	50 000	(38 885)	-	24 013
US Department of Environment/Los Alamos	142 806	75 103	(93 584)	-	124 325
US Fish & Wildlife Service	131 169	(19 437)	(9 414)	-	102 318
University of United Nations	(6 761)	63	0	-	(6 698)
Wetlands International	(1 769)	6 765	0	-	4 996
Western Pacific Regional Fisheries Management	0	1 769	(1 450)	-	319
Total	2 255 990	7 857 915	(7 666 337)	(779 466)	1 668 102

Staff list - 2003

Name	Designation	Nationality
TAKESY, Asterio**	Director	Federated States of Melanesia
LUI, Vitolio	Deputy Director	Samoa
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SITITI, Faamanatu	Driver/Clerk	Samoan
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TOOTOO, Amosa	Cleaner/Teaperson	Samoan
FOAGA, Gafatasi (Tino)	Maintenance Tradesman	Samoan
HUNT, Elia	Night Watchman	Samoan
GAGA, Silupe	Gardener/Groundskeeper	Samoan

*, Left during 2003; ***Arrived during 2003



Conserving the environment for the peoples of the Pacific

The 2003 Annual Report of the South Pacific Regional Environment Programme

SPREP's 2003 Annual Report contains stories that highlight some of the work that has had the greatest impact over the year, such as:

- > Conserving Tokelau's marine resources
- > Women making money in the Solomon Islands
- > Networking improves marine conservation
- > Community participation in Palau
- > Just how much fish do whales eat?
- > Better handling of ship's waste
- > Training to shrink the ozone hole
- > Renewable energy in the Pacific



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