SPREP
South Pacific Regional Environment Programme

Eleventh SPREP Meeting of Officials

Working Papers

Volume II

10–12 October 2000
Guam

Volume II

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31 August, 2000

**South Pacific Regional Environment Programme
(SPREP)**

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 7.3.2.1: Biosafety

Purpose of Paper

1.   To inform the Meeting of the adoption of the Biosafety Protocol to the
Convention on Biological Diversity and to seek the Meeting's support for the
development of a regional strategy to address the implementation of the Biosafety
Protocol.

2.   To present to the Meeting the Draft Regional Invasive Species Strategy for
consideration and endorsement.

Background

3.   Biosafety may be defined as securing a country against unwanted outcomes
from the introduction or use of organisms or their products. With the advent of
modern biotechnology, these organisms and their products do not naturally occur,
even with traditional husbandry methods. Rather, they have been developed by
manipulating specific parts of an organism's genes and using these parts (often in
unrelated organisms) to create new features in the recipient or products that can be
used in otherwise traditional and unmodified consumable products.

4.   On the 29 January 2000, the Cartagena Biosafety Protocol to the Convention
on Biological Diveristy was adopted. It was declared open for signature at the fifth
Conference of the Parties to the Convention on Biological Diversity in May 2000 and
will remain open for signature until July 2001.

5.   A decision adopted by the fifth Conference of the Parties calls upon Parties to
the Convention on Biological Diversity to sign the Protocol at the earliest opportunity
and also calls upon States that are not Parties to the Convention to ratify, accept,
approve or accede to it, as appropriate, without delay, thereby enabling them also to
become Parties to the Protocol.

6.   At present only Samoa has signed the Protocol. There are ten other Pacific island countries that are Parties to the Convention on Biological Diveristy, a number of which have asked SPREP to place priority on biosafety issues including the implications of the costs and benefits of becoming a Party to the Biosafety Protocol.

7.   SPREP has been assisting Pacific island delegations in the negotiations of the Protocol. Now that the Protocol has been finalised, an increasing number of SPREP Members are expected to sign on in the near future. There is a clear need for the issues that the Protocol raises to be systematically and proactively addressed over a medium to long-term period. Many of these issues are either regional in nature or can be more effectively dealt with on a regional basis. There are also others that need to be clarified and to be clearly understood before Pacific Island Countries can make informed decisions on whether or not to sign.

8.   The issues need to be addressed through a systematic and proactive approach, an approach that the Secretariat considers warrants the development of a regional strategy that would clearly identify the critical issues, the most effective options and a programme of action for addressing them. The same strategy should address the capacity building needs of the Small Island Developing States of the Pacific, most of which have not addressed biosafety regulatory regimes.

9.   At the last SPREP meeting, the invasive species programme received strong endorsement from Secretariat countries including the development of a regional strategy. Accordingly a technical review was commissioned to facilitate informed decisions for countries to create a regional strategy at a workshop held in Nadi, Fiji in 1999. The strategy has been produced as created and agreed to by the workshop and is presented to the SPREP Meeting for its endorsement.

Recommendation

10.   The meeting is invited to:

  ➤ **note** the paper;
  ➤ **endorse** the Secretariat's endeavours to attract donor funding for a position of Biosafety Officer and the development of, and subsequent implementation of a Regional Biosafety Strategy; and
  ➤ **endorse** the Draft Regional Invasive Species Strategy.

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4 August, 2000

Draft
Invasive Species Strategy
for the Pacific Islands Region

Written by the Regional Invasive Species Workshop delegates,
Nadi Fiji, 26 September - 1 October, 1999.

INTRODUCTION

BACKGROUND

Pacific islands are particularly vulnerable to the effects of invasive species. After habitat destruction or modification, invasive species are responsible for more species extinction than any other cause. Further, the rate of extinction of native species has been higher on islands than anywhere else in the world. Invasive species have also degraded native ecosystems. Mitigation of the effects of invasive species on biodiversity is best co-ordinated regionally. In response to this need, the New Zealand government funded an Invasive Species Programme managed by SPREP for three years starting September 1998, with the intention of extending funding for another three years after 2001. One of the objectives of the invasive species programme (agreed to by SPREP member countries) was to develop a strategy for invasive species for use by all countries and relevant agencies in the region. Thus this strategy is intended for use until 2004.

To facilitate the production of the strategy, a regional workshop was held 26 September – 1 October 1999 in Nadi, Fiji, funded mainly by AusAID with some extra support from the United States Government. It aimed to draw together the pressing invasive species issues being experienced in Pacific island countries /territories and to derive strategic solutions.

All SPREP member countries and territories and non-governmental organisations working in the Pacific and with a known interest in invasive species, were invited to send a delegate to the regional workshop. Prior to the workshop, several technical reviews were commissioned to describe the status of terrestrial and freshwater invasive species in the Pacific islands. The reviews were restricted to those invasive species threatening the conservation of native species and natural ecosystems. These reviews were compiled into a summary issues and options paper which was circulated to all workshop delegates.

The workshop restricted itself to invasive species issues related to conservation of native biodiversity on land and freshwater habitats, the SPREP member countries and territories, and the development of strategic responses. The strategy has been produced exactly as written by the workshop except for some formatting and editing of this section and the acknowledgements. The strategy will be used immediately for implementing the Regional Invasive Species Programme (and other SPREP administered programmes). It will also be useful for other invasive species initiatives in the Pacific islands region, or indeed, for other regions in the world, especially those mainly comprised of islands.

INVASIVE SPECIES ISSUES IN THE PACIFIC

The following is a summary of the generic issues underpinning the invasive species problem in the Pacific islands region. They are described in greater detail in Appendix 1. Fundamental to the problems caused by invasive species in Pacific island Countries and territories is the shortage and inaccessibility of scientific information on basic biology for assessment of risks and management of invasive species. A related problem is the lack of awareness on the impacts of invasive species on biodiversity. There are insufficient networking mechanisms established for the dissemination of information to the relevant decision-makers and government officials. Coordination and collaboration within the region on the management of invasive species threats to biodiversity is not yet well developed.

Existing legislation, regulations and cross-sectoral policies in Pacific island countries and territories do not fully address the impact of invasive species on biodiversity. Enforcement of the legislation is sometimes inadequate.

There is a shortage of technically-trained personnel in Pacific island countries and inadequate quarantine and risk assessment facilities. There is insufficient funding for training of personnel, establishment of infrastructure, development of risk assessment procedures, management and research on invasive species.

STRATEGIC DIRECTIONS

AIM OF THE REGIONAL STRATEGY

To promote the efforts of Pacific island countries and territories in protecting and maintaining the rich and fragile natural heritage of the Pacific islands from the impacts of invasive species through cooperative efforts to:

- Develop and maintain an effective, coordinated network of information and technical expertise
- Prevent the introduction of new invasive species
- Reduce the impact of existing invasive species
- Raise awareness
- Build the capacity required to manage the threats posed by invasive species

Strategy 1: Information

Strengthen both basic and applied research on invasive species by identifying high-priority research needs, and encouraging work on high priority problems. Establish biological surveys for all member countries and territories. Emphasise prevention and early detection, and evaluation of exotic species that are present or are potential problems. Establish long-term monitoring of high risk native areas for incursions of recognised invasive species.

Strengthen linkages between Pacific island countries, territories and scientific institutions, sources of technical and research assistance or other bodies of information. Share information regionally through the establishment of mutually accessible databases and web sites.

Develop a regional clearing-house for information on invasive species that is easily accessible, perhaps through a web-based information system.

Strategy 2: Awareness

Raise public awareness of invasive species threats to conservation.

Work with economic interests (agriculture, aquaculture, forestry, horticulture, public health, shipping, military, some biocontrol operations and genetically modified organisms technology) to raise their awareness of risks to biodiversity of invasive species. Represent invasive species issues at regional and national meetings, and with funding organisations in order to increase awareness.

Develop awareness of the accidental movement of invasive species into new relatively pest-free areas, especially their inter-island transfer within one country.

Promote awareness of the inter-island transfer problem by education programmes in identification, establishing networks (national and regional) and early warning databases.

Develop awareness of the dangers of accidental introduction of invasive species to biodiversity. For example by the movement of machines and in particular the inter-island transfer of pests, especially from invaded areas to new or pest-free areas. The establishment of an effective communication network and a manual of existing and potential invasive species may assist with identification, behaviour, where to look, how to exclude, eradicate and control them.

Further communication of the problem can be achieved by networking, international linkages, national working groups, regional expert groups, and an early warning database.

Strategy 3: Infrastructure

At the national and regional level, develop ongoing training programmes in the areas of species identification, field detection, quarantine inspections, monitoring and the like, and a network of resources that allow for the transfer of information to appropriate field workers.

Develop and upgrade regional and national facilities such as reference collections and specialised facilities for border control.

Promote and strengthen initiatives that facilitate the use and sharing of existing regional facilities by government agencies in-country and between countries (e.g. South Pacific Regional Herbarium, Bishop Museum collections, quarantine facilities).

Strategy 4: Protocols

Develop and strengthen protocols and procedures – particularly:

- Develop and strengthen procedures to process applications for species introduction to assess their potential impact on native species or ecosystems.
- Promote the use of existing protocols for pest risk assessment, modified to accommodate Pacific island countries and territories, before pests are introduced into a country.
- Develop early warning and response systems for invasive species.
- Develop guidelines for pest management that consider the full biological and conservation consequences of control or eradication operations, including restoration.
- Collaborate with other organisations to develop appropriate policies to address the potential conservation/environmental risks of genetically modified organisms.

Strategy 5: Legislation

Survey existing environmental and other relevant legislation in each Pacific island country to determine its adequacy for protecting biodiversity from the threats of invasive species. Develop model legislation which includes provision for mitigating these threats and which makes use of principles for invasive species developed by other organisations (such as IUCN) and countries. Produce country-specific recommendations for modifying or developing new legislation which adequately regulates the following:

- importation of all living organisms
- surveillance for new incursions

- risk analysis of import applications
- assessment of environmental risks prior to introduction of genetically modified organisms
- quarantine procedures
- export of pests
- movements of species between islands
- control or eradication of invasive species
- monitoring

Strategy 6: Funding

Develop long-term external funding mechanisms that will ensure Pacific island countries and territories are able to undertake work for the management of threats from invasive species.

Make representation to government leaders to improve long-term funding to address the pressing issues of invasive species of conservation concern in the region. Demonstrate the extent of the invasive species problem in the region, cast in economic cost/benefit terms and the necessity of taking action. Secure support for invasive species issues among local communities (including village councils) as well as at national, regional and political levels (e.g. South Pacific Forum). In order to make these representations for more funding, determine and develop a regional resource of materials, in easy-read language, that identifies the magnitude of the invasive species problems in the region. Needed information includes: the area of natural ecosystems degraded by invasive species, their conservation impact and the consequences of not taking action.

Maximise funding self-sufficiency by promoting full participation of local communities in project development, management and implementation to ensure a long-term local commitment.

Promote invasive species as a criterion in national, regional, and international disaster management plans.

Strategy 7: Linkages

Establish and maintain a network among Pacific island countries/territories and organisations that improves communication, cooperation and information sharing, and that maximises the effectiveness of invasive species work in the Pacific. Specific actions include: development of common standards of border control, staff exchange programmes, nomination of an invasive species position within appropriate organisations, and establishment of national working groups and a regional expert group.

Regional participation is needed in the development of international standards and programmes that govern the movement of invasive species in commerce (e.g. Convention on Biological Diversity, International Plant Protection Convention, World Animal Health Organization (OIE), and others).

CONCLUDING COMMENTS:

The workshop confirmed the need for a regional invasive species strategy as a platform for obtaining funds for in-country projects. The country issues have been successfully tabled for those countries that participated (see Appendix 2). The regional invasive species strategy may now be used as a vehicle to: (1) seek funds from international agencies and donor-countries, (2) reinforce and guide national biodiversity management plans (such as the National Biodiversity Strategic Action Plans), (3) complement other regional invasive species programmes, especially the United States of America's Invasive Species Management Plan and (4) guide the Regional Invasive Species Programme administered by the South Pacific Regional Environment Programme in writing its annual workplans.

Finally, the workshop identified at least one regional generic need: a marine regional invasive species strategy and implementation plan which, together with the terrestrial regional species plan, may include wetland habitats such as intertidal zones (e.g. mangrove forests and estuaries).

Acknowledgements

Thanks are due to the foresight of the countries funding the workshop: Australia, New Zealand and the United States of America. Particular thanks must go to Susan Timmins and Sarah Lowe (New Zealand Department of Conservation and IUCN respectively) and to their employers. Gaye Harford (Xpand Management, NZ Ltd) expertly facilitated the workshop and Ruta Couper (SPREP) managed the administration.

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APPENDIX 1

List of invasive species issues developed at the workshop

1. Information

    ♦ Lack of information on the basic biology (including distribution) of many invasive species and of the best control methods – particularly biological control methods. Part of this lack of information includes a lack of accessibility and co-ordination of information within the region and outside the region.

    ♦ Lack of monitoring of high risk areas for invasive species (vulnerable sites).

2. Public Awareness

    ♦ Lack of understanding of the major threats posed by pests to conservation assets from public, politicians, other sectors. This results in a lack of public commitment for both biodiversity protection and management of invasive pests.

    ♦ Competition with conservation interests from agriculture, aquaculture, forestry, horticulture, some biocontrol operations, public health considerations, traditional practices, shipping, military and genetically modified organisms technology.

    ♦ Accidental introduction of invasive species: by movement of machines, boats and materials from pest invaded areas to pest-free areas, trampers/walkers, animals, smuggling operations.

3. Lack of Infrastructure

    ♦ Lack (quality and quantity) of technically trained personnel on the ground; species identification, field detection, quarantine inspections, control operations, monitoring, research. Lack of a mechanism for transfer of information to field workers.

    ♦ Inadequate facilities to: house confiscated species, fumigate, and implement adequate border control (amongst other things) but no support for upgrading some regional facilities and thus these facilities do not reach their full potential.

4.   Protocols

♦   Lack of a system to warn of impending threats.

♦   Lack of adequate pest risk assessment procedure which is accurate and can cope with all variables.

♦   Intractable problem of inability to predict invasiveness (risk assessment) of new species, including genetically modified organisms, at the border, or as a target for eradication or for control.

♦   Inadequate quarantine procedures, which are too cumbersome, and are not implemented (inadequate checks). Lack of collaboration in some instances (between different agencies/countries) and inefficient use of limited resources in some Pacific island countries/territories. No protocol to ensure detection/assessment of organisms/commodities being brought into a country, including illegally, and lack of emphasis on (recognition of) conservation threats at quarantine.

♦   No protocols to determine the priorities for eradication and control.

♦   Lack of early detection and evaluation action on new pest incursions may lead to bigger problems later.

♦   Lack of appropriate processes to implement legislation.

♦   Inter-island movement of pests is not controlled due to a lack of protocols and regulations.

♦   No control of the export of pests.

♦   Do not know or plan for the full biological and conservation consequences of control operations.

♦   Poorly defined or no standards of phyto-sanitary measures, pest risk analysis.

5. Legislation

♦ Absence or inadequate or ineffective legislation to protect conservation values.

♦ Lack of legislation that regulates exports and imports against the risks of invasive species.

♦ No capability for countries to write legislation.

♦ Not enough enforcement of legislation because of administrative restructuring, corruption, or local support.

6. Inadequate Funding

♦ Lack of funding for technical work such as research on control methods, taxonomy (identification), impact of invasive species, survey work, monitoring, eradication or control.

♦ Inadequate distribution of funding siphoned off by other activities within the country/territory (other than invasive species).

♦ Projects dependant on outside sources of funding.

♦ Poor mechanisms to ensure adequate and timely funding such as not coinciding with the timing of the life cycle of the invasive species.

♦ Not enough funding for resources and personnel or the mechanism in place for these people to set priorities to maximise the benefits for conservation.

7. Linkages

♦ Pacific island countries/territories and regional organisations do not yet share enough information or consult with each other e.g. sharing information and making agreements to set common standards for border control.

♦ Too little co-operation between quarantine officers and the public.

♦ Difficulties co-operating across international borders due to disputes and differing conservation values.

APPENDIX 2

List of Participants at Regional Invasive Species Workshop, Nadi, Fiji,
26 September – 1 October, 1999

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South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials

Guam
10 – 12 October, 2000

Agenda Item 7.3.2.2: Regional Framework for Access to Genetic Resources and Benefit Sharing

Purpose of Paper

1.   To inform the Meeting of the regional guidelines on access to genetic resources and benefit sharing adopted at a regional workshop held in Nadi, 14 - 17 March, 2000.

Background

2.   On March 14 - 17 2000, SPREP/World Wide Fund for Nature South Pacific Program WWF (SPP)/Foundation for International Environmental Law and Development (FIELD) convened a regional workshop on access to genetic resources and benefit sharing in preparation for the fifth Conference of the Parties to the Convention on Biological Diversity (CBD/COP5). The workshop was funded by the United Kingdom's Department of the Environment Darwin Initiative.

3.   The workshop provided the opportunity for Pacific island countries (PICs) representatives to contribute to the development of regional guidelines on access to genetic resources and benefit sharing. The guidelines were subsequently adopted and the relevant sections are annexed.

4.   The intent of the guidelines is to ensure that access to PICs genetic resources, many of which have high potential for commercial applications in the pharmaceutical industry, are properly regulated and managed.

5.   The Guidelines call on PIC government leaders and relevant Council of Regional Organisations in the Pacific (CROP) agencies, including SPREP, to consider these guidelines for appropriate action.

Recommendation

6.   The Meeting is invited to:

> **note** progress made so far in addressing the issues of access and benefit sharing (ABS) and intellectual property rights and to encourage Members to consider these guidelines for appropriate actions at the national level.

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19 August, 2000

**Relevant Excerpts from the Regional Guidelines for Access to
Genetic Resources and Benefit Sharing.**

"...Recognising the importance of having clear guidelines to assist Pacific island countries to develop access and benefit-sharing laws". The workshop participants "**call on** Pacific island country government leaders and relevant CROP agencies to consider these Guidelines for appropriate action, including the Forum Economic Ministers Meeting, SPREP Meeting, CROP Intellectual Property Rights (IPR) working group and others":

To recognise that:

- We have sovereign rights to use our own biological and genetic resources pursuant to our own environmental policies, and the responsibility to ensure that activities within our jurisdictions or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

- Biological and genetic resources should be conserved and used in a sustainable manner for the benefit of present and future generations of our peoples and of humankind generally.

- The traditional knowledge, innovations and practices of our indigenous and local communities relating to biological and genetic resources are an integral part of our natural and cultural heritages.

- The benefits arising out of the utilisation of genetic resources and associated knowledge should be fairly and equitably shared.

- These benefits should be used to promote the conservation and sustainable use of biodiversity for the economic and social development of our people.

- We have many biological and genetic resources in common and therefore have a common interest regarding access to and benefit sharing of these resources to our mutual benefit.

- Regional cooperation and coordination is desirable regarding policies, law and administrative practices in relation to access and benefit sharing of genetic resources.

And accordingly agree:

- **that** a core set of terms and conditions of access should be made available to each Pacific island country to form the basis of an access law.

- **that** access laws, bio-prospecting contracts and programmes of action should:

  1. be consistent with the Convention on Biological Diversity and other relevant international instruments,

  2. encourage the conservation of biological diversity and the sustainable use of its components,

  3. ensure the fair and equitable sharing of the benefits arising from the utilisation of genetic resources,

  4. enable access to genetic resources on mutually acceptable terms and on the basis that the prior informed consent of the resource owners is acquired,

  5. recognise the contribution of indigenous and local communities to the conservation and utilisation of biological and genetic resources; their stewardship of these resources; the need for *sui generis* laws to protect their traditional knowledge; and, compensation where such resources or knowledge are utilised,

  6. facilitate the transfer of technology and promote the development of biological, scientific and technological capacities at the local, national and regional levels,

  7. recognise that regional cooperation and coordination is desirable in respect to policies and law pertaining to access to and benefit sharing of biological and genetic resources,

  8. recognise the competence of two or more Pacific island countries to collaborate in the development and negotiation of contracts for access to and benefit sharing of genetic resources common to the countries concerned,

  9. incorporate, where appropriate, current principles of best practice.

- **that** rules concerning regional coordination in matters of access to genetic resources and benefit sharing be prepared and that such rules address, *inter alia*,

  1. common strategies for adding value to genetic samples, to be facilitated by relevant regional organisations,

  2. strengthening of relevant regional institutions through capacity building in terms of research, training and technology transfer,

  3. a harmonised legal regime,

  4. reciprocal treatment in accessing each other's germplasm,

  5. the access regime for wild-biodiversity germplasm as compared to that for agricultural germplasm,

  6. the creation of a common fund for contributions to be made to when a common genetic resource is exploited.

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 7.3.2.3: Pacific Islands Conservation Trust Fund

Purpose of Paper

1.   To inform SPREP member countries of progress to date with the development of the Pacific Islands Conservation Trust Fund initiative.

Background

2.   At the Sixth Pacific Islands Conference on Nature Conservation and Protected Areas (Pohnpei, Federated States of Micronesia 1997), Members of SPREP directed the Secretariat to develop plans in earnest to establish a regional trust fund for nature conservation. Subsequently, the Action Strategy for Nature Conservation in the Pacific Islands Region 1999 – 2002 identified the establishment of a regional trust fund as a critical mechanism to secure long-term support for conservation priorities in the Pacific Islands region from multilateral and bilateral donors.

3.   Since the 1997 conference SPREP, through the South Pacific Biodiversity Conservation Programme (SPBCP) has commissioned a number of reports, which consider the needs to be addressed in establishing such a fund.

Progress to date

4.   In October 1999, a regional workshop on the trust fund unanimously resolved that a Steering Committee comprising several knowledgeable and experienced stakeholders be established to have primary responsibility for completing a feasibility study on the fund's establishment, to progress further an extensive consultation process about how the fund should be designed and operated, and to approach possible donors.

5.   In May 2000, the Steering Committee submitted a broad outline concept paper on the trust fund to the United Nations Development Programme (UNDP) which is one of the implementing agencies for the Global Environment Facility (GEF). An official response from UNDP is expected shortly.

6.   An overview paper on the trust fund has also been produced and distributed widely to governments, NGOs and other possible stakeholders to raise awareness about the initiative and to promote interest in it. This document also outlines a process for the development of the fund to its design and establishment.
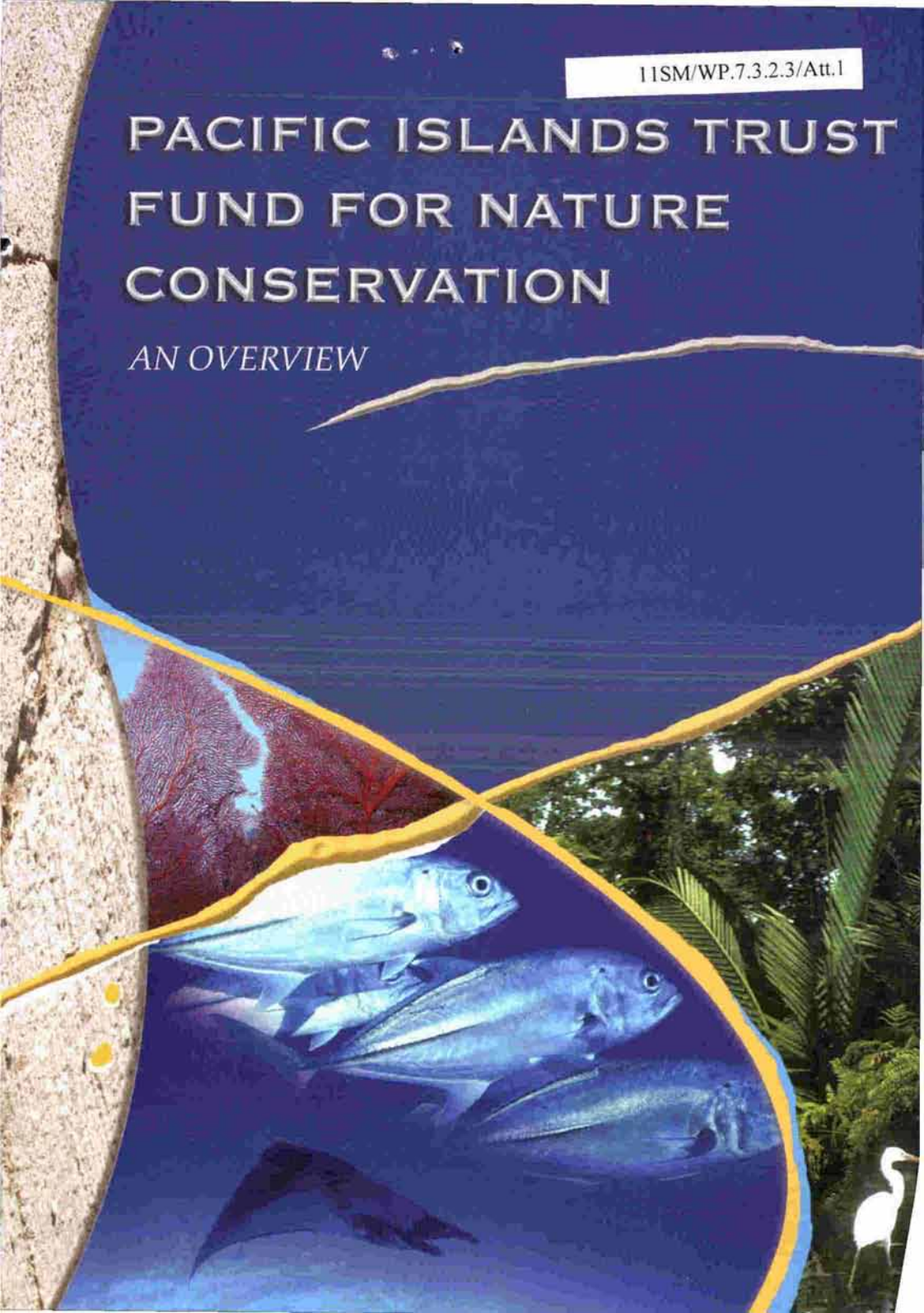
Recommendation

7.   It is recommended that the SPREP Meeting:

➢ take **note** of the progress to date in the development of the Pacific Islands Conservation Trust Fund; and

➢ **provide** further guidance to the Secretariat in pursuance of this important initiative.

PACIFIC ISLANDS TRUST FUND FOR NATURE CONSERVATION

AN OVERVIEW

1. PACIFIC ISLANDS BIODIVERSITY RESOURCES AT RISK

The Pacific Islands' biodiversity is unique. Over 50 per cent of the region's terrestrial plant species are found nowhere else on earth. The terrestrial animals include rich arrays of birds, reptiles, land snails and insects. Its national and international waters include the world's most extensive and diverse reefs, the largest tuna fishery, the deepest oceanic trenches and significant remaining populations of many globally threatened species including whales, turtles, dugongs and saltwater crocodiles.

At the same time, however, the region has more endangered and threatened species per head of population than anywhere else on earth. About half of the region's total biodiversity may be at risk.

Threats to the region's rich biodiversity continue to increase through habitat destruction from mining, logging, and costal degradation; over-harvesting of fish and wildlife; invasive species; and pollution.

While SPREP member countries have and are developing reasonably sound environment policies and strategies, those policies and strategies are mostly the domain of Governments. At the same time, there is a growing group of caring national NGOs, international NGOs, and multilateral and bilateral organisations which are looking for new and innovative ways of conserving the remaining biodiversity in SPREP countries, and promoting alternative economic activities which are environmentally friendly and more sustainable.

Most of these initiatives and strategies need, however, to be supported by a long term reliable funding mechanism or source such as a trust fund within the region. The regional trust fund if established and managed properly could become an extremely powerful conservation tool which could promote more conservation policy cohesiveness and tangible practical assistance amongst the island countries.

The trust fund will not be a replacement for traditional conservation project funding. Rather, it will be complementary and additional to project funding. Project funding should continue to be sought from an alternative donor or agency where the issue is best addressed by that form of support.

2. WHAT IS A CONSERVATION TRUST FUND?

A conservation trust fund is a funding and capacity building tool. It is designed to provide long term funding support for conservation activities. It is a legal arrangement in which a group of people (called the trustees) legally own and manage money that has been donated (entrusted) to them exclusively for a specified purpose. The trustees must only use the money for that specified purpose.

Trust funds have been established in fifty or more countries and have become increasingly important in facilitating the conservation of biodiversity. Trust funds have received enthusiastic support from both governments and NGOs throughout the world as a solution to the problems of insufficient and unreliable financial contributions for conservation programmes.

3. WHY A REGIONAL TRUST FUND?

Conservation of the Pacific islands region's biodiversity requires a long term commitment. There is therefore a need to provide a regular and reliable stream of financial and other support for community-based biodiversity management in the long term.

While there needs to be continued commitment to conservation activities at the national level, there are a number of conservation and sustainable resource management issues of mutual interest and concern which are best addressed in a strategic manner at the regional

level. They include migratory species, threats in the form of invasive species, and the regional prioritisation of efforts under the Convention on Biological Diversity such as intellectual property rights, biosafety and access to genetic resources.

A regional trust fund will operate as a leverage mechanism to gain the necessary support for conservation priorities. It will add value by enabling Pacific island countries and territories to work together on conservation issues of mutual interest and concern and further enable lessons learnt to be shared. In doing so, it will assist in achieving regional and global conservation benefits.

The Pacific small island developing states have special needs and face particular difficulties in implementing the Convention on Biological Diversity. While most countries and territories in the region are in the process of developing National Biodiversity Strategies and Action Plans (NBSAPs), resources are urgently needed for the early implementation of the NBSAPs. The regional trust fund provides a mechanism for addressing the national actions identified in NBSAPs as well as the administrative and procedural efficiency in delivering donor assistance to activities in those countries and territories.

The regional trust fund would co-exist with, and complement, national or sub-national trust funds. One of the possible objectives of the regional fund could be to assist in mobilising resources for long-term and sustainable funding of conservation across the region, including national and sub-national funds.

4. WHAT WILL THE MISSION AND OBJECTIVES OF THE REGIONAL TRUST FUND BE?

The suggested overall mission of the regional trust fund is to provide long term support for biodiversity conservation and sustainable resource management by Pacific island people. In doing so the trust fund should be designed to support effective activities that:

- Build capacity in adopting and incorporating into ongoing national conservation programmes (mainstreaming), successful community based approaches to biodiversity conservation and sustainable resource management.

  - Support and facilitate innovative approaches to biodiversity conservation and sustainable resource management.

    - Fostering partnerships, co-operation and co-ordination in addressing transboundary biodiversity conservation issues of mutual concern.

      - Leverage resources to support implementation gaps within the region.

      - Support the development of new financial and institutional mechanisms appropriate in the region, such as national trust funds to implement NBSAPs or their equivalent.

      - Provide long-term support for the conservation of globally significant biodiversity in a regional network of conservation areas.

5. WHERE HAS THE REGIONAL TRUST FUND IDEA COME FROM?

Pacific island governments, non-governmental agencies and regional and international agencies active in nature conservation in the Pacific Islands region have called for the establishment of a regional trust fund for nature conservation. At the Sixth Pacific Islands Conference on Nature Conservation and Protected Areas in 1997, formal approval was granted to the SPREP Secretariat by member countries to develop plans in earnest to establish a regional trust fund.

The Action Strategy for Nature Conservation in the Pacific Islands Region 1999-2002 identifies the establishment of a regional trust fund as a critical mechanism to secure long

long term support for conservation priorities in the Pacific Islands region from multilateral and bilateral donors (Objective 6).

Since the 1997 conference, SPREP through the South Pacific Biodiversity Conservation Programme (SPBCP) has commissioned a number of reports which consider the need for a regional fund, and which examine a range of legal and design issues that will need to be addressed in establishing such a fund.

In October 1999 a regional trust fund workshop held in Samoa unanimously resolved that a Steering Committee comprising several knowledgeable and experienced stakeholders be established. The Steering Committee was charged with the responsibility of completing a feasibility study on the fund's establishment, to progress further an extensive consultation process about how the fund should be designed and operated, and to approach possible donors. The Steering Committee includes representation from SPREP, four member countries (Samoa, Vanuatu, Palau, Tuvalu), the GEF NGO Focal Point for the Pacific (SANGO), a technical advisor on biodiversity conservation, and an international NGO.

In early May 2000, the Steering Committee submitted a broad outline concept paper on the trust fund to the United Nations Development Programme (UNDP) which is an implementing agency for the Global Environment Facility (GEF). A response from UNDP is expected shortly.

The figure on the last page shows the stage to which the trust fund development has reached.

6. THE PROCESS FROM HERE

Following UNDP endorsement of the concept, an application will be made to GEF for a grant (known as a PDF Block B grant) that will enable the design of the trust fund to be actioned in consultation with all stakeholders.

Considerable effort has already been expended in building stakeholder consensus about the rationale and objectives of the regional trust fund. The New Zealand Government has provided some funding for the preliminary stages of the trust fund development. A list of potential donors has been prepared by the steering committee and initial meetings are being planned.

When further financial support for the development phase has been secured, the type of fund, the specific vision and strategy for the fund will be developed and refined in an open process in which all stakeholders can participate.

The detailed design of the trust fund in terms of stakeholder representation and participation, how funds are to be distributed and on what projects, how the trust will be administered and other design issues will depend on outcomes from the consensus building process and discussions with potential donors.
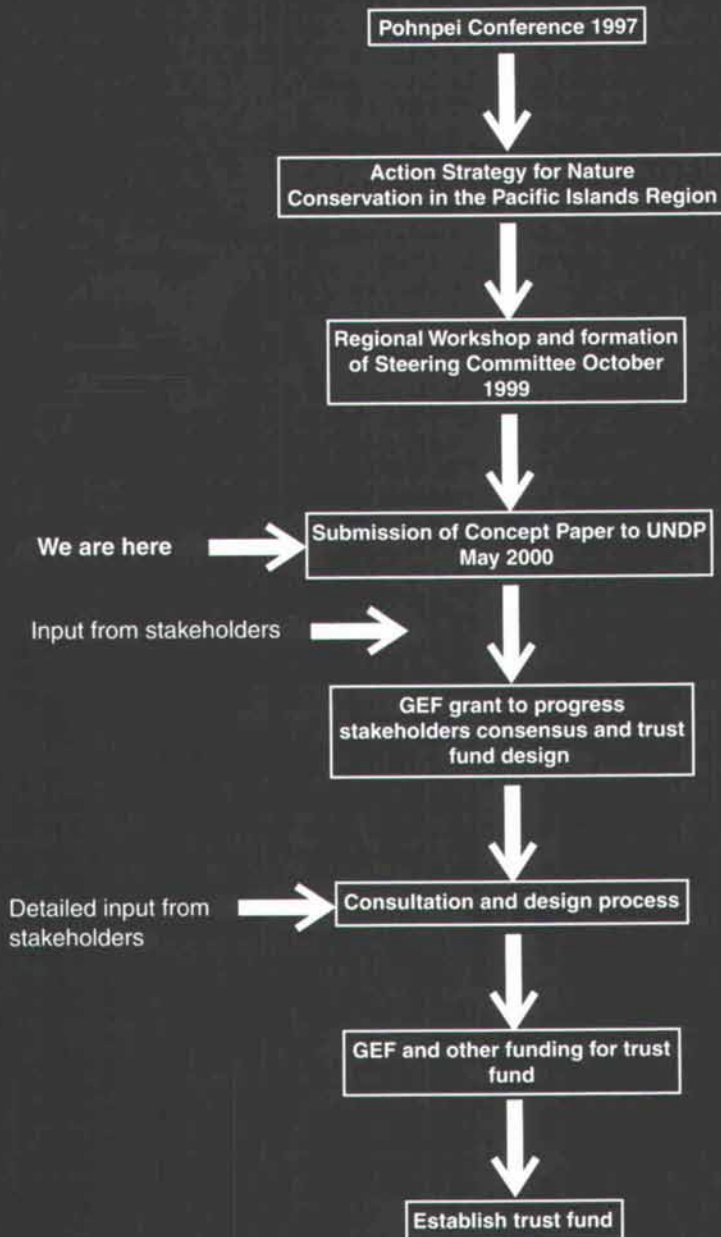
7. HOW MUCH MONEY WILL BE REQUIRED?

A range of donors is crucial to the successful establishment and operation of the regional fund. While GEF is likely to be the principal donor, GEF funds will only be available to contribute to activities that support conservation of globally significant biodiversity in GEF eligible countries. Activities that fall outside the GEF criteria will need to be supported by funds from other donors.
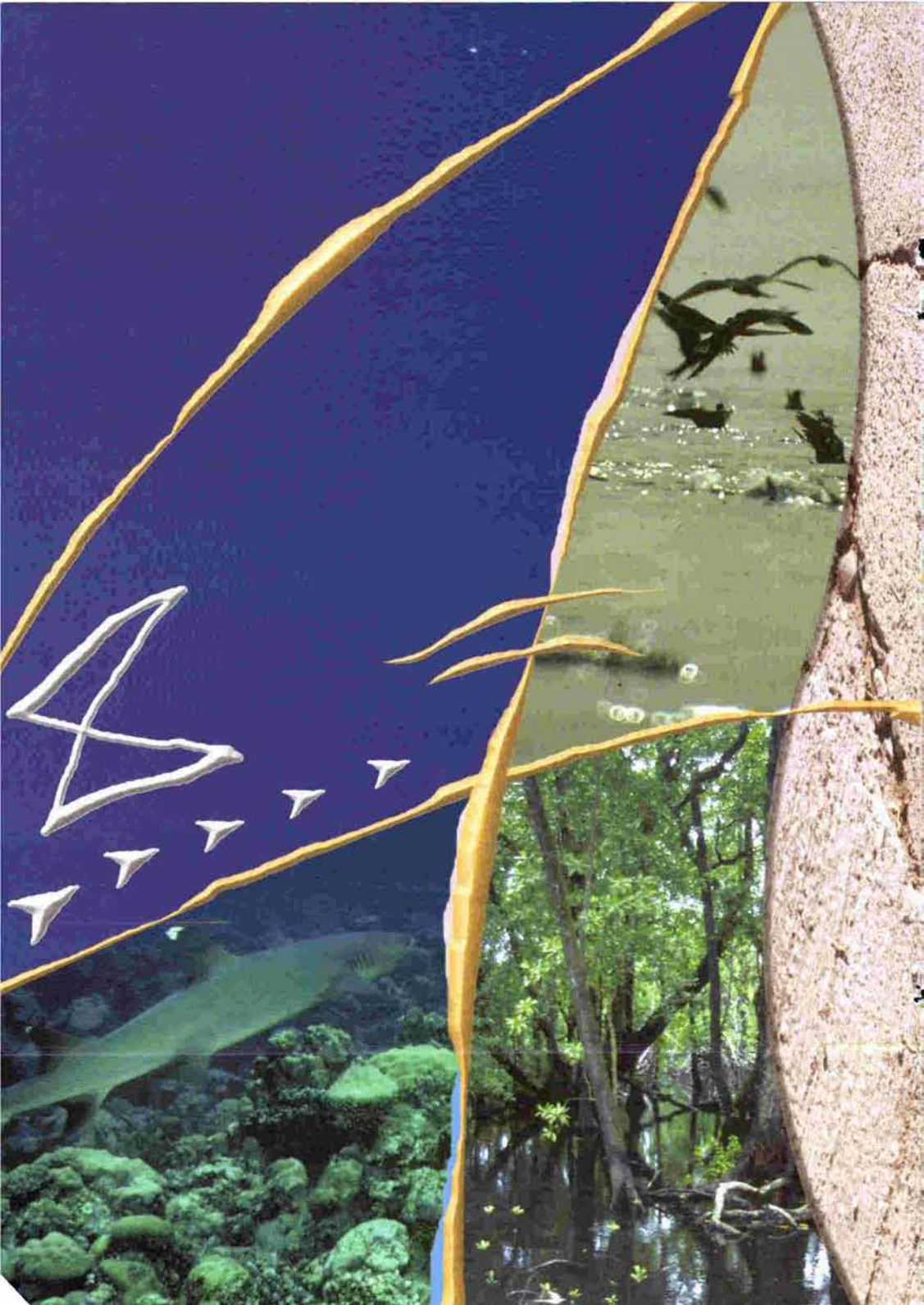
In order to operate the trust fund successfully, there needs to be sufficient income from the money invested in the fund to allow a meaningful conservation programme. What can be achieved will depend upon the focus of the fund, but because of the number of countries involved and the range of necessary actions it is likely that a fund of at least US$50 million will be needed.

8. WHAT ARE THE IMPLICATIONS FOR GOVERNMENTS?

Substantial resources will be required to fund the completion of the feasibility study, commence initial consultations and design work, and approach possible donors. In order to obtain funding from GEF it will be necessary to demonstrate both government and other stakeholder support for the development of the trust fund. This support may be in the form of either financial contributions or contributions in kind. In this respect, countries may need to plan a possible pledge towards the fund in their annual plans.

The regional fund is likely to be governed by a regional or stakeholder board with its members possibly drawn from SPREP member countries, donors, NGOs, and transnational corporations. The board of trustees would have wide ranging fiduciary responsibilities to raise capital, manage the fund's assets, preserve endowed capital, develop investment guidelines, hire asset managers, etc. One of the more sensitive roles of the board will be the overseeing of grant-making programmes.

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                          │   Establish trust fund   │
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South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 7.3.2.4:   SPBCP Conservation Area (CA) Award

Purpose of Paper

1.   To present the winner of the "Most Progressive Conservation Area Award 1999" under the South Pacific Biodiversity Conservation Programme (SPBCP).

Background

2.   The Award for the most progressive Conservation Area Project under the SPBCP was announced in 1998 as an incentive to encourage the seventeen projects under the Programme to increase efforts to achieve sustainability by the end of the year 2001.

3.   "Progress" was assessed on the basis of the activities carried out in each project as indicated in their quarterly progress reports submitted to the SPBCP.

The Winning Project

4.   The honour of winning the inaugural award for the Most Progressive Conservation Area under the SPBCP goes to the **Takitumu Conservation Area** in the Cook Islands.

Special Features of the Takitumu Conservation Area

5.   The Takitumu Conservation Area Project has shown encouraging signs of achieving sustainability status after SPBCP support as demonstrated by the following milestone achievements:

- Management responsibility has devolved from government to the three land owning families who are fully committed to the project.

- Both government and private sector are fully supportive of the project.

- The population of the endangered kakerori (Rarotonga flycatcher) has increased from 29 in 1989/90 to 223 in February 1999. (The main objective of the conservation area was to protect this bird species from extinction).

- Eco-tourism is proving very profitable for the project with the number of visitors increasing significantly each year. Other incomes for the project comes from a "One Stop Environment Shop" and sale of project souvenirs.

- Income from eco-tourism is being reinvested for the future management of the project, especially post SPBCP. Three trust accounts have been established with proceeds from this venture.

- The project has planned for a gradual take-over of funding responsibilities from SPBCP starting January 2001.

- A recovery plan for the kakerori has been approved and implemented with technical support from SPREP and Department of Conservation, New Zealand.

The Award

6.   The Award will include the following:

   a) A Certificate of Achievement;

   b) A trophy;

   c) Sponsorship for one project staff to the SPREP/USP/ICPL training course; and

   d) Representation at appropriate regional or international conferences to present project experience.

Recommendation

7.   It is recommended that the Meeting **note** the achievements of the Takitumu Conservation Area Project and offer its congratulations for being the first to win the SPBCP's Most Progressive Conservation Area Award.

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 7.3.2.5: South Pacific Whale Sanctuary

Purpose of Paper

1.　To update Members on the consideration of the proposal initiated by the Governments of Australia and New Zealand for the creation of a South Pacific Whale Sanctuary by the members of the the International Whaling Commission (IWC) at their 52nd Annual Meeting held in Adelaide, Australia from 3 to 6 July 2000.

Background

2.　SPREP Circular No. 63/00 dated 28 June 2000, provided members with a comprehensive background of developments to that date of the proposal for a South Pacific Whale Sanctuary.

3.　In part, the circular noted:

- the recognition by the Pacific Islands Forum in 1993 that a "*greater level of protection for whales and endangered or threatened small cetaceans was appropriate*" in supporting the proposal to establish a Southern Ocean Sanctuary;

- the support accorded by the Forum in 1998 "*to the development of a proposal to establish a South Pacific Whale Sanctuary for great whales to complement the existing Indian and Southern Ocean Sanctuaries*";

- that the proposed South Pacific Sanctuary would include waters of the following SPREP Members: Australia, American Samoa, Cook Islands, Fiji, French Polynesia, Kiribati, Nauru, New Caledonia, New Zealand, Niue, Papua New Guinea, Solomon Islands, Samoa, Tokelau, Tonga, Tuvalu, Pitcairn and Vanuatu;

- that, if created, the Sanctuary would affect IWC Parties only;

- that the proposed Sanctuary bans commercial whaling only of all nine great whale species;

- that traditional/subsistence harvest of whales will not be affected by the proposed Sanctuary; and

- that the proposed Sanctuary would provide a logical extension to the existing Southern Ocean Sanctuary thereby providing continuous protection to great whale species on their feeding and breeding grounds as well as their migratory pathways.

4. The final SPREP delegation attending the 52nd Annual Meeting of the IWC were Mr Tamari'i Tutangata, Director; Hon 'Akau'ola, Secretary for Fisheries, Kingdom of Tonga; Mr Verari Kula, Office of the Environment, Papua New Guinea and Ms Sue Miller, SPREP consultant.

5. Although the proposal for a South Pacific Whale Sanctuary was supported by a majority of the IWC parties at the meeting, it failed to receive the support of 75 per cent of the parties as required by IWC regulations for such a proposal. Hence, the proposal was defeated.

6. SPREP understands that the Australian and New Zealand governments are considering the steps that they might take in the future on the proposed Sanctuary.

Recommendation

7. The Meeting is invited to:

- **note** the developments relating to the proposal for a South Pacific Whale Sanctuary; and

- **consider** and **advise** the Secretariat about any further action required to be taken, in consultation with Members, to protect this highly migratory and endangered species.

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26 August, 2000

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 7.3.2.6: Pacific Islands Regional Marine Spill Contingency Plan (PACPLAN)

Purpose of Paper

1.   To provide an overview of the contents of PACPLAN and to seek the endorsement of PACPLAN (Document 11SM/WP.7.3.2.6/Att. 1).

Background

2.   The development of PACPLAN was an agreed activity of the "Pacific Ocean Pollution Prevention Programme (PACPOL) Strategy and Workplan" that was endorsed by the 10th SPREP Meeting held at Apia, Samoa in September 1998. Article 8 of the SPREP Convention Pollution Emergencies Protocol provides the legal mandate for the drafting of PACPLAN. The Secretariat's facilitation role in the formulation of PACPLAN is provided for in Article 9 of the Protocol.

3.   The process for the formulation and content of PACPLAN was discussed at the 1st PACPOL Workshop at Nadi, Fiji in November 1998 and a target for endorsement was set for the Eleventh SPREP Meeting at Guam in October 2000. The Secretariat prepared an initial draft that was circulated in June 1999. A deadline for comments was set for October 1999 to enable discussion at the 2nd PACPOL Workshop at Apia, Samoa in October 1999. However, comments were not forthcoming so an extension of the deadline was made to December 1999. The Secretariat accepted comments up until March 2000. Comments were incorporated into a final draft circulated in August 2000.

Contents of PACPLAN

4.   PACPLAN sets up a framework for regional co-operation for response to Tier 3 marine spills. Tier 3 spills are defined as large spills that are beyond the response capability of one country or have the potential to impact on more than one country. It sets the technical and geographical scope for a regional response and provides the guiding principles under which any regional response should be undertaken.

5.   PACPLAN allocates and defines the role of the Secretariat, Pacific island members, non-island members and industry. It prescribes a framework for the reporting of marine spill incidents and the activation of a regional response.

6.   It outlines the structure of a response operation and provides operational guidelines for a regional response. PACPLAN allocates primary and secondary response responsibilities for every Pacific island member. It identifies the national and regional stockpiles of response equipment within the region and provides for the implementation of a training and response exercise programme. It identifies potential financial mechanisms by which regional responses are to be financed. Finally PACPLAN prescribes a mechanism for its adoption, control and revision.

Steps to be Taken by SREP Members

7.   The maintenance and effectiveness of PACPLAN will depend, to a large extent on the strengthening of national marine spill response capabilities. PACPOL has provided a template Marine Pollution Prevention Act that provides a legal framework for managing national marine spill response and a mechanism for the establishment of a marine spill levy. PACPOL has also provided a National Marine Spill Response Plan (NATPLAN) template which caters for spills at Tier 1 and 2 levels. Members are requested to consider adopting both templates (already sent to Members). These will form a firm foundation through which PACPLAN will operate.

8.   The PACPLAN co-ordination and management functions are part of the SPREP Secretariat's functions as outlined in Article 21 of the SPREP Convention and Article 9 of the Pollution Emergencies Protocol. This function is currently being financed through project funds, however, in the long term, members will need to consider the direct financing of this function.

Support from International and Regional Organisations

9.   The Secretariat has signed Memoranda of Understanding with the International Maritime Organization (IMO), Secretariat of the Pacific Community (SPC) and the South Pacific Applied Geoscience Commission (SOPAC) for the implementation of PACPOL activities. The Forum Fisheries Agency (FFA) and the University of the South Pacific (USP) are also implementing partners.

10.   The Secretariat has forged strong links with the regional oil industry and marine spill response organisations such as the Australian Marine Oil Spill Centre (AMOSC), the Clean Islands Council (CIC) and East Asia Response Limited (EARL). These organisations have a significant role in PACPLAN.

Recommendation

11. The meeting is invited

  ➢ to **consider** the issues raised in the paper; and
  ➢ **endorse** PACPLAN as the framework for regional marine spill response.

3 August, 2000

Note: PACPLAN (11SM/WP.7.3.2.6/Att.1) has a number of blank pages with headings only. These refer to the sections where map attachments currently being prepared as part of the Regional Marine Pollution Risk Assessment Project will be inserted.

PACPLAN

PACIFIC ISLANDS
REGIONAL
MARINE SPILL
CONTINGENCY PLAN

(Final Draft for Endorsement)

Developed by SPREP under the auspices of:
PACPOL - the Pacific Ocean Pollution Prevention Programme
PACPOL Project MS2.

CONTENTS

1. INTRODUCTION

1.1   Background

In a region sometimes called 'Oceania', the health of the ocean is fundamental to the health of all aspects of the entire pacific islands region. Marine pollution is widely recognised as one of the three major threats to the world's oceans, along with habitat destruction and over-exploitation of living marine resources. Spills of oil and other chemicals into the marine environment, both from ships and land-based sources, is a significant source of pollution.

The importance of coastal and marine environments to every aspect of the lives of Pacific Islanders cannot be overstated, and the impacts of marine spills constitute a major concern for Pacific Island peoples.

Because of a lack of major land-barriers throughout the Pacific, combined with a complex pattern of trans-oceanic currents, the Pacific Ocean is perhaps the most highly connected and continuous ocean, in terms of water movement, on the planet. This compounds the seriousness of marine pollution for the region. Events in one area can have implications for other areas, as pollutants and contaminants are carried from their sources by ocean movements.

Pacific islands must therefore work together, through regional arrangements, if marine pollution is to be addressed effectively. No single country in the region can address this problem in isolation. There are a number of agreements, conventions, instruments, policies and other initiatives that require countries to work co-operatively to address marine pollution and protect the marine environment. At the international level these include; - the international *Law of the Sea* (LOS); *Agenda 21* arising out of the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992 and the *Barbados Programme of Action on the Sustainable Development of Small Island Developing States* arising out of the Global Conference on the Sustainable Development of Small Island Developing States, held in Barbados in 1994. At the regional level they include the *Convention for the Protection of the Natural Resources and Environment of the South Pacific Region* (the SPREP Convention) and associated Protocols and the *Action Plan for Managing the Environment of the South Pacific Region 1997-2000* (SPREP Action Plan).

The *South Pacific Regional Environment Programme* (SPREP), as part of its role to assist island members to address environmental issues and in accordance with the SPREP Action Plan, has developed a comprehensive programme to address marine pollution. This is called the *Pacific Ocean Pollution Prevention Programme* (PACPOL).

(Cooks) **PACPOL** has a number of initiatives to assist island members with marine spill prevention and response. A National Plan template has been formulated for countries to develop their own national plans. The other initiative is the development of a regional contingency plan called the *Pacific Islands Regional Marine Spill Contingency Plan* (PACPLAN).

PACPLAN provides the framework for co-operative regional responses to major marine spills in the pacific islands region, including broad aims and objectives, underlying spill response philosophies and priorities, roles and responsibilities of relevant organisations, regional and supra-regional linkages and mechanisms for accessing regional and supra-regional assistance.

1.2   Mandate

In addition to the international and regional instruments referred to above, the primary mandate for PACPLAN stems from both a specific regional convention and international convention, as outlined below.

1.2.1   SPREP Pollution Protocol

At Noumea, New Caledonia on 25 November 1986, the members of SPREP adopted the *Convention for the Protection of the Natural Resources and Environment of the South Pacific Region* (the SPREP Convention), with associated Protocols. The Convention includes a *Protocol Concerning Co-operation in Combating Pollution Emergencies in the South Pacific Region* (SPREP Pollution Protocol). The Protocol provides a formal framework for co-operation between pacific island countries and territories when responding to marine spills. The SPREP Pollution Protocol requires Parties to:

- Take initial action at the national level to respond to pollution incidents (marine spills).

- Co-operate with other Parties in the response to pollution incidents.

- Establish and maintain, within their respective capabilities, the means of preventing and responding to pollution incidents, including;
    - Enacting relevant legislation.
    - Developing and maintaining contingency plans.
    - Designating a responsible authority.

- Exchange information with each other and report all pollution incidents to relevant authorities and other parties likely to be affected.

- Provide assistance, within their capabilities, to other Parties who request such assistance.

- Facilitate the movement of personnel and materials needed for the response to a pollution incident into, out-of and through its territory.

- Develop and maintain, where appropriate sub-regional and bilateral arrangements for preventing and responding to pollution incidents.

The full text of the SPREP Convention can be obtained from the SPREP Secretariat (Appendix One).

1.1.2   OPRC Convention

At the international level, the International Maritime Organisation (IMO) has prepared the *International Convention on Oil Pollution Preparedness, Response and Co-operation 1990* (OPRC Convention). The OPRC Convention has requirements of Parties similar to those of the SPREP Pollution Protocol, as outlined above.

The full text of the OPRC Convention can be obtained from IMO (www.imo.org).

1.3   Aim & Objectives

The Aim of PACPLAN is:

- To prevent/minimise damage to marine and coastal environments and resources from major marine spills, and to hasten the recovery of any environments and resources damaged by major marine spills, in the pacific islands region.

The Objectives of PACPLAN are:

- To facilitate the implementation of both the SPREP Pollution Protocol and the OPRC Convention at the operational level for all SPREP island members, including those that are not yet parties to SPREP Pollution Protocol and/or the OPRC Convention.

- To promote and implement regional co-operation in planning and training for marine spill response, and in the actual prevention of and response to marine spills.

- To provide systems for the detection and reporting of marine spills within the area covered by the plan, including communications networks.

- To outline the counter-measures available to restrict the spread of a spill and minimise the environmental, economic and social impacts of a spill.

- To outline the mechanism and procedures by which SPREP island members may request assistance, in the form of specialised equipment and technical experts; from each other, from SPREP non-island members, from the oil industry and from other parties.

- To outline procedures for the recovery of costs of responding to marine spills.

- To outline arrangements for resourcing maintenance of PACPLAN and associated systems by SPREP.

1.4 Technical Scope & Tier One, Two and Three Spills

Traditionally, spill response plans tend to focus exclusively on oil spills. Internationally, there is increasing recognition that it is more effective and efficient to integrate oil spill response arrangements with those for all pollutants, including oil, chemicals and hazardous materials (HAZMAT).

PACPLAN therefore covers the response to spills into the marine environment of all forms of pollutants. However, it retains a focus on oil spills, as oil is the main pollutant likely to be spilled in the region.

PACPLAN covers spills into the marine environment from all sources, including both shipping and shore-based facilities.

As a regional plan, PACPLAN applies only to spills where regional co-operation and/or supra-regional assistance are required. Under PACPLAN, such spills are classified as Tier Three spills. PACPLAN does not cover Tier One and Tier Two spills.

For the purposes of PACPLAN, Tier One, Two and Three spills are defined as follows:

Tier One

- Small spills that are within the response capability and resources of an individual port or oil terminal within the SPREP island member where the spill occurs, and

- Spills that impact or threaten to impact within the jurisdiction of that SPREP island member only.

Oil terminal or port specific contingency plans should cover tier One spills. Individual oil companies and port administrations should develop, implement and maintain such plans.

Tier Two

- Medium spills that are within the national capability and resources of the individual SPREP island member where the spill occurs, and

- Spills that impact or threaten to impact within the jurisdiction of that SPREP island member only.

Tier Two spills should be covered by National Marine Spill Contingency Plans (NATPLANs). Each National government should develop, implement and maintain a NATPLAN, through a National Marine Pollution Committee comprising, as a minimum; the national administrations for maritime transport, environment, fisheries/marine resources and disaster management and the oil industry.

Tier Three

- Large spills that are of a magnitude and/or severity that is beyond the response capability and resources of the individual SPREP island member where the spill occurs, and/or

- Spills that impact or threaten to impact within the jurisdiction of two or more SPREP island members.

Response to Tier Three spills should initially be according to the relevant NATPLAN, then supported by PACPLAN.

Set quantities and sizes of spills have intentionally not been used in the definition of Tiers. In some instances a relatively small spill may fit the Tier Two or even Tier Three category. Classification depends on the response capabilities and resources of the SPREP island member where the spill occurs, the prevailing conditions at the time of the spill and the types of environments impacted or threatened.

Allocation of any one spill to a particular Tier can only been done at the time of the spill, according to an assessment by the Lead Agency of the SPREP island member where the spill occurs.

Because in reality spills do not fall into convenient categories, the boundaries between Tiers will inevitably be blurred. Lead Agencies must therefore be prepared to involve the next highest Tier from the earliest moments, as it is easier to stand down an alerted system than to escalate a response by calling up unprepared reserves.

1.5   Geographical Scope

The geographical scope of PACPLAN, referred to hereafter as the PACPLAN Area, is the Pacific islands region. This is defined as the coastlines and all marine waters within the 200 nautical mile limits of the 22 Pacific island countries and territories which are members of SPREP (SPREP island members) (See Table One and Figure One – Map on previous page).

SPREP island members are grouped into two categories, the 14 independent and semi-independent countries (Pacific Island countries) and the eight territories (Pacific island territories - Table One).

In addition to the SPREP island members, there are four developed countries that are also members of SPREP (Table One). Although two of these, Australia and New Zealand, are arguably islands, all four developed countries are referred to as SPREP non-island members. They do not constitute part of the Pacific islands region/PACPLAN Area, but play a vital role in supporting PACPLAN (refer sections 2.3 & 6.1.3).

Table One: SPREP Member Countries and Territories

SPREP Island Members		SPREP Non-Island Members
Pacific Island Countries	Pacific Island Territories	
Cook Islands	American Samoa (US)	Australia
Fiji Islands	Northern Mariana Islands (US)	France
Kiribati	French Polynesia (France)	New Zealand
Marshall Islands	Guam (US)	United States of America
Federated States of Micronesia	New Caledonia (France)	
Nauru	Pitcairn Islands (UK)	
Niue	Tokelau (NZ)	
Palau	Wallis & Futuna (France)	
Papua New Guinea		
Samoa		
Solomon Islands		
Tonga		
Tuvalu		
Vanuatu		

1.6   Parties to the Plan

The Parties to PACPLAN are the 26 SPREP member governments (both island and non-island members as listed above), plus the oil industry, as represented by the oil companies which operate within the PACPLAN Area.

1.7   Underlying Principles & Protection Priorities

PACPLAN is founded on the following general principles:

- Every effort must be made by industry and government to *prevent* spills of oil and other hazardous materials from occurring, as the highest priority.

- Despite prevention measures, spills will occur from time to time, and it is necessary to have competent *contingency plans* in place to deal effectively with such spills, at the local, national and regional/international level. PACPLAN constitutes the regional/international response plan for the pacific islands region.

- The response to marine spills under PACPLAN will always seek to complement and make use of *natural forces* to the fullest extent possible.

- The response to marine spills under PACPLAN will always seek to maximise co-operation, co-ordination and integration *between government and industry*, and to adopt the most *cost-effective, efficient* and *practicable* response options available.

In the event of a marine spill requiring a response to be mounted under PACPLAN, the following protection priorities will be adhered to (in order of priority):

- Human life, health and safety.
- Biological habitat.
- Rare and endangered species.
- Commercial resources.
- Cultural resources.
- Non-commercial property and amenity.

Within these protection priorities, various marine and coastal environments and resources have varying environmental sensitivities, requiring further prioritisation of spill response efforts. The designation of environmental sensitivity grading requires assessment at a much larger scale than can be provided by a regional plan such as PACPLAN. Individual national marine spill contingency plans (NATPLANS) should designate environmental sensitivities for the coastal and marine areas of each SPREP island member. Guidance on the designation of environmental sensitivity grading is provided in the IPIECA/IMO publication *Sensitivity Mapping for Oil Spill Response 1996*.

The response to any spill carried out under PACPLAN should be consistent with the environmental sensitivity grading contained in the NATPLAN(s) for the SPREP island member(s) where the spill has occurred.

1.8   Risk Assessment

At the time of writing (April 1999 – July 2000), a quantitative, systematic assessment of the risks of marine spills has not been carried out for the PACPLAN Area. Three projects are contained in the "PACPOL Strategy and Workplan" that will provide a detailed and accurate marine spill risk assessment. These are PACPOL project RA 1: Marine Pollution Risk Assessment for the Pacific Islands Region, PACPOL project MS 1: Marine Spill Prevention Review; and PACPOL project PA 1: Environmental Audits of Oil Terminals. This section of PACPLAN will be updated as these PACPOL projects are completed. In the mean time, a general analysis, based on global data such as that cited in IPIECA (1991), provides the following overview.

The main sources of marine spills are (not in any priority order):

- Shipping accidents, including groundings and collisions, which result in fuel oil or oil/other hazardous materials carried as cargo, being released into the marine environment.

- Intentional/accidental (and illegal) discharges of waste oil by ships (vessel operations).

- Accidents during the loading and discharge of tankers.

- Accidents during the bunkering (fuelling) of ships.

- Discharges (both accidental and operational) of oil from offshore oil exploration and production facilities.

- Accidents involving shore-based facilities such as storage tanks, pipelines and road tankers, where oil/other hazardous materials escape and flow to the sea.

In addition, atmospheric fallout, natural seepage from sub-marine vents and urban run-off are significant sources of marine oil pollution, but generally result in chronic (and often more serious) pollution, rather than discrete, acute spills.

Figure Two indicates the estimated percentage that some of these sources contribute to total marine oil pollution on a global scale, and Figure Three indicates the estimated major causes of all oil spills on a global scale.

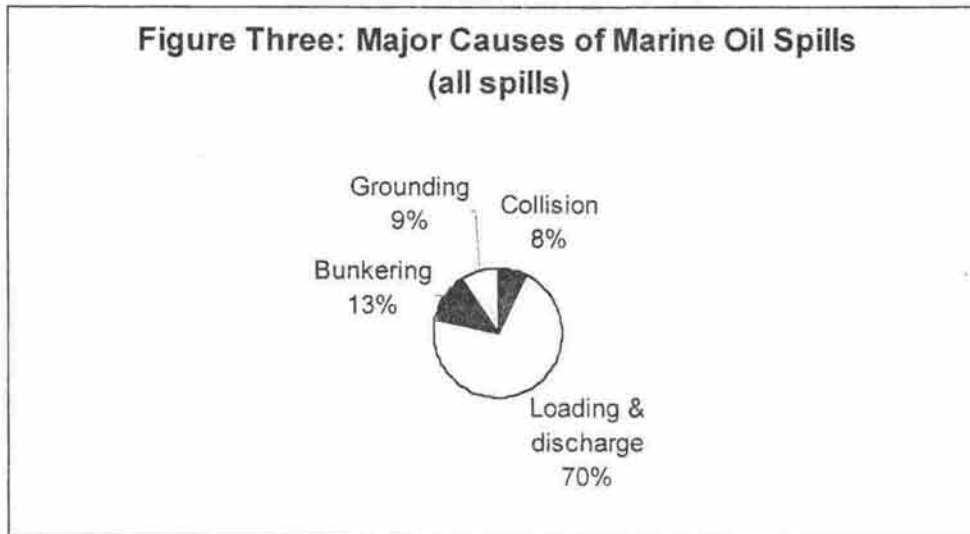It is clear that shipping activities are a significant source of marine oil pollution, with tanker accidents and vessel operations accounting for 45% of Figure Two.

Figure Two: Major Sources of Oil Pollution in the Marine Environment.

- Natural Sources 7%
- Exploration & production 2%
- Atmosphere 9%
- Tanker acccidents 12%
- Industrial discharge & runoff 37%
- Vessel Operations 33%

(Source: US Academy of Sciences, cited in IPIECA 1991)

It is also clear that the handling and transfer of oil and oil products from ship to shore and shore to ship, rather than shipping accidents, accounts for the vast majority of oil spills from ships. Loading and discharge of tankers and bunkering of ships accounting for over 80% of spills in Figure Three.

Figure Three: Major Causes of Marine Oil Spills (all spills)

- Grounding 9%
- Collision 8%
- Bunkering 13%
- Loading & discharge 70%

(Source: ITOPF, cited in IPIECA 1991)

Whilst similar data has not been collected and analysed specifically for the PACPLAN Area, it is likely that the breakdown would be similar. The highest risk of spills in the Pacific islands region is therefore likely to be during the handling of oil, oil products and other hazardous materials from ship to shore/shore to ship, while in port.

National marine spill prevention and response planning should therefore focus on ports and terminals where ship bunkering and tanker operations are carried out.

Whilst ship groundings only account for 9.3% of all spills in Figure Three, they usually result in much larger spills than oil handling operations, as indicated by Figure Four. On a global scale, ship groundings account for over 50% of the largest spills, as indicated in Figure Four (iii).

Figure Four (i-iii): Major causes of marine oil spills (various size classes)
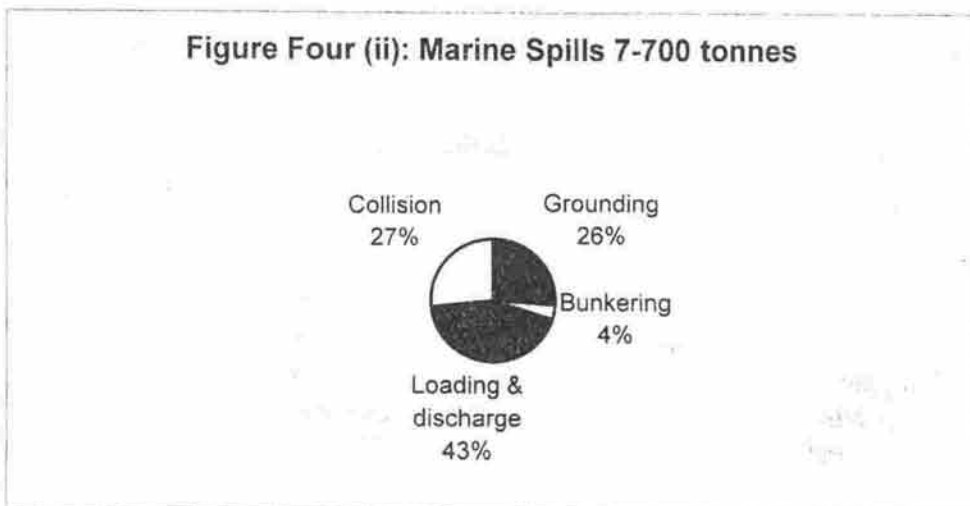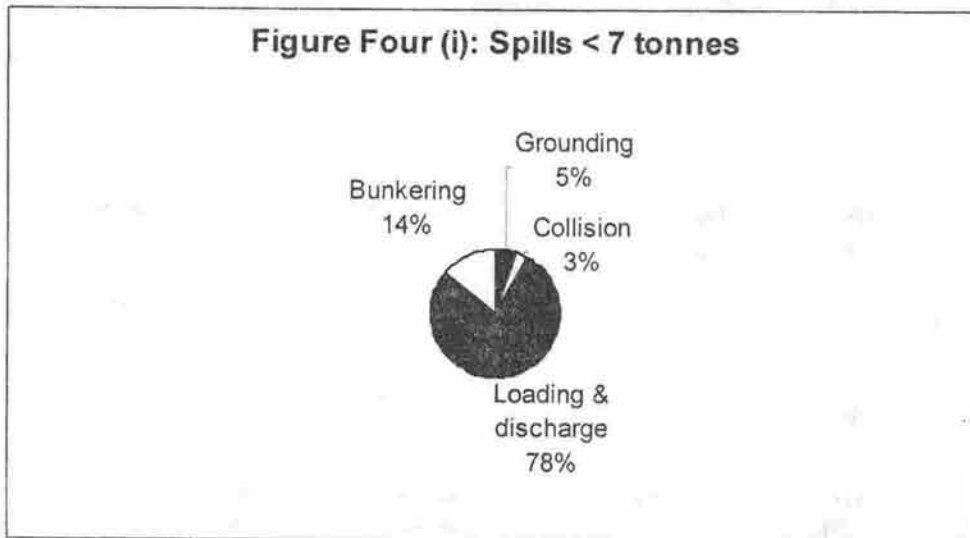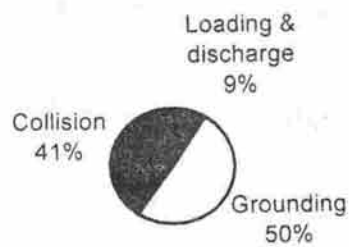*(Source: ITOPF, cited in IPIECA, 1991)*

Figure Four (i): Spills < 7 tonnes

Grounding 5%
Bunkering 14%
Collision 3%
Loading & discharge 78%

Figure Four (ii): Marine Spills 7-700 tonnes

Collision 27%
Grounding 26%
Bunkering 4%
Loading & discharge 43%

Figure Four (iii): Marine Spills > 700 tonnes

Loading &
discharge
9%

Collision
41%

Grounding
50%

As PACPLAN is designed to address Tier Three spills (i.e. major spills), ship groundings and collisions are the major risk factor of concern to PACPLAN.

The PACPLAN Area is host to several categories of seagoing traffic, which can be grouped as follows:

- Transit shipping: Ships that pass through the region without stopping en-route to other destinations.

- International shipping (as distinct from transit shipping): Ships calling at the major ports of the region from outside the region, either with incoming cargo or tourists (cruise ships) or to take out exports.

- Regional shipping: Ships trading (both cargo and passengers) between the countries and territories within the region.

- Domestic shipping: Ships trading (both cargo and passengers) within each country and territory in the region.

- Foreign fishing fleet: Fishing vessels from distant water fishing nations operating within the region.

- Domestic fishing fleet: Fishing vessels from the Pacific islands themselves, and

- Miscellaneous: Private vessels, yachts and special purpose vessels such as warships and research ships.

In terms of potential to cause Tier Three spills (and hence relevance to PACPLAN), transit shipping and international shipping are considered the highest risk categories. SPREP has carried out a preliminary assessment of ship groundings, in developing the Manual *Ship Groundings in the Pacific Islands Region – Issues & Guidelines* (Preston et al 1997). This assessment found that transit shipping transects the region in several well-established "shipping lanes" (Figure Five). In general,

these routes attempt to take advantage of the shortest distance between points of departure and destination while minimising the necessity of passing in close proximity to islands or hazards to navigation such as submerged reefs. It should be noted that these routes often vary and due to seasonal weather patterns, proximity to intermediate ports and other factors, there is sometimes more than one major route between the same two points.

For example, there are at least two major routes between Sydney and Panama. One goes north of New Zealand and then eastward over a great circle route of 7,719 miles. The only landmasses in proximity to this route are the northern tip of New Zealand, Pitcairn and the southern Galapagos. An alternate route from Sydney passes between Norfolk Island and New Caledonia, then south of the Lau islands in Fiji, west of Savai'i in Samoa, continuing south of Tokelau and through the Line Islands of Kiribati. This route, covering a total distance of 8,375 nautical miles, crosses the Equator and merges with the major "central route" that tracks across the Pacific from the Philippines to Panama from roughly 5° to 7° North latitude.

Some major routes of concern, i.e. those which pass in proximity to islands or reefs in the PACPLAN Area, include the alternative Sydney–Panama route described above, as well as the following:

- Southern Asia to Panama via Torres Strait, passing in proximity to Fiji and French Polynesia.

- Southern Asia to Panama via Torres Strait, passing in proximity to Papua New Guinea's Louisiade Archipelago, the Solomon Islands, southern Kiribati (Gilbert group) and north-eastern Kiribati (northern Line Islands).

- Eastern Australian ports to Japan, passing in proximity to the southern tip of the Louisiade Archipelago, New Ireland, the Federated States of Micronesia (central Caroline Islands) and Northern Mariana Islands.

- Sydney to Honolulu, passing in proximity to the Solomon Islands (Santa Cruz Islands), Tuvalu and central Kiribati (Phoenix Islands).

Cargoes carried by vessels on these routes include crude oil shipped on an opportunistic basis from Indonesia and South Australia to Hawaii and the West Coast of the USA, and refined petroleum products from Singapore and other Asian ports to both North and South America. Transit shipping carrying cargoes other than oil also poses a pollution threat, with some of the larger bulk carriers carrying in excess of 5,000 tonnes of heavy fuel oil.

As there is little oil refined in the Pacific islands region (the only active refinery is in the Highlands region of Papua New Guinea, refining small amounts of oil for domestic use), crude oil is not a major component of inbound/outbound cargoes although, as noted above, some crude oil transits the region from time to time.

On the other hand, products refined from oil (distillate, petrol and so forth) are one of the principal cargoes entering the region. The total regional demand for all product forms of petroleum is estimated by the South Pacific Forum Secretariat to be in the neighbourhood of 23,633,000 barrels (3.2 million tonnes[1]) per year or about 65,000 barrels (8,870 tonnes) per day. Of this total, all must

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[1]   7.33 barrels = 1 metric tonne = 256 imperial gallons = 308 US gallons

be imported from outside the region by sea except for about 5,000 barrels (680 tonnes) per day that is produced and consumed in the Highlands region of Papua New Guinea (Energy Section, Forum Secretariat). The main consumers of imported petroleum products are Guam, with about one third the total; PNG with roughly 20 percent; New Caledonia, with 13 percent; and Fiji and French Polynesia, each using about 10 percent.

Major supplies to these centres enter the Pacific on medium-range (MR) tankers, mainly in the 25,000–50,000 DWT (dead-weight) class, which service Fiji, Samoa, Solomon Islands, Papua New Guinea, New Caledonia and French Polynesia. As an example of traffic levels, about 16 MR tankers come to Fiji per year (10 or 11 from Australia, 5 to 6 from Singapore). Guam's products come almost exclusively from Singapore, while Papua New Guinea receives most of its supply from Australia. In American Samoa, a 16,000 tonne MR tanker from Honolulu regularly replenishes the shoreside terminal storage at Pago Pago (total capacity: 194,900 barrels) for use by fishing vessels as well as the island's two canneries and power plant.

Although countries such as Samoa and Solomon Islands, with relatively low levels of fuel consumption, do not have the demand for the large quantities carried by MR tankers, such ships often divert from their normal routes to provide service to these areas in return for payment of a "divergence fee".

There are basically three routes for medium range tankers (parentheses indicate stops that are not always made):

- Melbourne, Port Moresby, Lae, Madang, Rabaul, (Honiara);
- Singapore, (Noumea), Vuda, (Vatia, port for Fiji's gold mine), (Apia), (Suva);
- Melbourne, Noumea, Suva.

South of the equator, local coastal tankers (LCT) service other locations, mainly out of Vuda (Fiji). These include Tonga, Niue and the Cook Islands to the east, Tuvalu and Kiribati to the north and Vanuatu to the west. These ships, of which an example is the *Pacific Rover,* have a capacity of 800 to 1,000 tonnes of oil-based products. A 6,000 tonne ship, the Golden Craig, services Mobil's outlets in Palau, Federated States of Micronesia and the Marshall Islands.

As well as delivering to shoreside bases, several ocean-going tankers (exact number unknown but probably three to six at any one time) operate in support of the tuna purse seine vessels in the western and southern parts of the Pacific islands region. These tankers, which are mainly controlled by Korean and Taiwanese interests, are available to steam to points on the constantly changing fishing grounds, but usually operate outside the exclusive economic zone of any one country. As a rule they do not enter island ports and are for the most part invisible to island authorities.

In addition to transit shipping and carriage of oil in the region by tankers, regional and domestic shipping in general and the foreign and local fishing fleet further compound the regional marine spill risk scenario. A more detailed analysis of regional shipping is given in Preston et al 1997.

2. ROLES & RESPONSIBILITIES

2.1 SPREP Technical Secretariat

The SPREP Technical Secretariat, located in Apia, Samoa, has the following roles and responsibilities under PACPLAN:

- Maintaining and updating the plan, including:
    - Staying abreast of developments and changes that affect the content of the plan, and *(Tonga)* **and notify member countries before** amending the plan.
    - Managing the distribution of the plan, which is a controlled document.
    - Maintaining a register of holders of the plan.
    - Ensuring that all holders receive updates to the plan as they occur.

- Organising and managing the annual PACPOL workshops, including training in marine spill response, a desktop exercise of PACPLAN and a regional co-ordination meeting (refer section 9).

- Providing/co-ordinating scientific and environmental advice to island member governments in the event of a spill.

- Assisting SPREP island members, if required, with requests for external assistance in the event of PACPLAN being activated (refer section 6).

- Managing the Pacific Regional Marine Spill Reporting Centre (PACREP), including dissemination of reports to affected parties and reporting annual spill statistics to interested parties (refer section 3.1).

- Maintaining and updating the SPREP Guidelines and Template for National Marine Spill Contingency Plans (SPREP NATPLAN Guidelines), and assisting SPREP island members to develop and implement NATPLANS.

- **Maintaining a regional inventory of available marine spill emergency response equipment.** *(NZ)*

- Generally assisting SPREP island members in the prevention of, planning for and response to marine spills.

The SPREP Technical Secretariat will develop and maintain the necessary staff and material resources to enable it to fulfil these responsibilities, within the resources made available from the general PACPOL programme.

2.2 SPREP Island Member Governments

Each SPREP island member government (including both Pacific Island countries and territories) has the following roles and responsibilities under PACPLAN, in accordance with national capacity:

- Developing and maintaining a NATPLAN and a National Marine Pollution Committee (National Committee), including any necessary sub-plans for local areas such as individual ports (SPREP has developed NATPLAN Guidelines, which are available on computer disc as a template, that provide countries with an "instant" contingency plan consistent with all relevant international and regional conventions, based on best-practice principles in relation to marine spill contingency planning).

- Drafting, passing, implementing and enforcing national marine pollution legislation (SPREP and SPC have developed Model Marine Pollution Legislation, which is available on computer disc as a template, that provides countries with "instant" legislation consistent with all relevant international and regional conventions, based on best-practice principles in relation to marine pollution legislation).

- Designating a Responsible Authority, which has legal responsibility for administering and enforcing the national marine pollution legislation and for the overall management of the NATPLAN. Ideally, the Responsible Authority should be the national maritime transport administration.

- Designating a Lead Agency, which has operational responsibility for managing the response to marine spills. The Lead Agency may or may not be the same as the Responsible Authority. Ideally, they should be the same.

- Reporting all marine spills to PACREP, in accordance with section 3 of PACPLAN.

- Taking effective action at the national level initially, to respond to marine spills that occur within its jurisdiction.

- Co-operating with and assisting neighbouring countries and territories in the response to marine spills, in the form of personnel and/or equipment, when such assistance is requested and in accordance any relevant Memorandum of Understandings and/or joint spill response plans developed bilaterally/multilaterally between neighbouring SPREP island members (refer section 5.14).

- Facilitating the provision of any external assistance that might be requested (refer section 6).

- Complying with the national government obligations of the SPREP Pollution Protocol and the OPRC Convention not covered above (refer sections 1.1.1 and 1.1.2).

- Reporting to SPREP any changes in circumstances, including levels of risk of marine spills, capability to manage marine spills, internal administrative arrangements and contact details, that may require revision and updating of PACPLAN.

- Attending the annual PACPOL workshop.

2.3   SPREP Non-Island Member Governments

Subject to their capabilities and the availability of relevant resources *(Aust.)* each SPREP non-island member government (Australia, France, New Zealand and USA), has the following roles and responsibilities under PACPLAN:

- Assisting SPREP island members in preventing marine spills and planning and preparing for the response to marine spills. This assistance should be provided though SPREP, under the auspices of PACPOL, in the form of financial support, support-in-kind and/or technical assistance for relevant PACPOL projects, including training and equipment acquisition projects.

- Assisting SPREP island members with the actual response to marine spills, in the form of personnel and/or equipment, when such assistance is requested and in accordance with section 6 of PACPLAN.

- Attending the annual PACPOL workshop.

2.4   Industry

(Changes to 2.4 according to NZ comments)

Oil, **shipping and fishing companies together with port/harbour management agencies** operating in the region have the following roles and responsibilities under PACPLAN:

- Giving highest priority to preventing spills from tankers, **vessels, ports,** terminals, depots and other facilities owned and/or operated by the companies.

- Immediately reporting all marine spills from their facilities both to the Lead Agency/Responsible Authority in the country/territory where the spill occurs and to PACREP, in accordance with section 3 of PACPLAN and the relevant NATPLAN.

- Developing and maintaining local marine spill response plans, for individual tankers, **vessels, ports,** terminals, depots and other facilities owned and/or operated by the companies which are potential sources of spills, and ensuring that these plans are compatible and integrated with relevant NATPLANS.

- Establishing and maintaining stockpiles of marine spill response equipment for individual tankers, **vessels, ports,** terminals, depots and other facilities owned and/or operated by the companies, with the types and amounts of equipment being appropriate to the level of risk at each facility.

- Ensuring that staff is appropriately trained in marine spill prevention and response.

- Taking effective action at the local level initially, to respond to marine spills that occur at industry facilities.

- Co-operating with and assisting governments in the response to marine spills, in the form of personnel and/or equipment, when such assistance is requested and in accordance with each country/territory's NATPLAN.

- Providing the resources of the Australian Marine Oil Spill Centre Pty Ltd (AMOSC) to respond to spills from facilities owned/operated by AMOSC member companies, in accordance with relevant arrangements/agreements between AMOSC and its member companies.

- Providing the resources of AMOSC to respond to spills from non-oil industry facilities, as part of any assistance package provided to a SPREP island member by the Australian government, should the Australian government request such assistance from AMOSC, and in accordance with relevant arrangements/agreements between AMOSC and the Australian government (refer section 6.1.4.2).

- Providing the resources of Clean Islands Council (CIC) to respond to marine spills in the region, should such assistance be requested, and in accordance with *(to be developed in consultation with CIC)* (refer section 6.1.4.3).

- Providing the resources of East Asia Response Ltd (EARL) to respond to marine spills in the region, should such assistance be requested, and in accordance with section 6.1.4.4.

- Actively participating in the National Committees in each SPREP island member country and territory, and in planning, exercises and training activities.

- Attending the annual PACPOL workshop.

3. US Oceania Regional Contingency Plan (ORCP)

Under the United States (US) *Oil Pollution Act 1990* (OPA 90), Regional Response Teams (RRT's) are established for various regions of US jurisdiction, including an *Oceania Regional Response Team* (ORRT) for the US Pacific islands. These comprise the Territory of American Samoa, the Territory of Guam, the State of Hawaii and the Commonwealth of the Northern Marianas.

ORRT is an inter-agency team comprising US Federal, State and Local government agencies chaired jointly by District 14 of the US Coast Guard (USCG) in Hawaii and Region 9 of the US Environmental Protection Agency (USEPA) in San Francisco. ORRT advises on response planning and actual responses to marine spills in the US Pacific islands.

ORRT has developed an Oceania Regional Contingency Plan (ORCP), which provides the framework for the response to marine spills in these jurisdictions. Responses to spills in the US Pacific islands are conducted under ORCP, and not PACPLAN.

However, the US Pacific islands (excluding Hawaii) may request external assistance from non-US parties under PACPLAN, in accordance with section 6. Like-wise, non-US parties may request assistance from the US and/or US Pacific islands under PACPLAN, in accordance with section 6.

4. Pollution Reports & Communications

4.1   Pacific Regional Marine Spill Reporting Centre (PACREP)

Under PACPLAN, SPREP has established and maintains the Pacific Regional Marine Spill Reporting Centre (PACREP), at its office in Apia, Samoa.

PACREP is simply the SPREP fax number, and provides the focal point for receiving and relaying information concerning any marine pollution incident in the region. PACREP is a facility where:

- Reports (Pollution Reports or POLREPS) of all marine spills in the region are sent to by the Lead Agency and/or oil company where the spill occurs.

- Other parties potentially affected by a spill can be alerted from.

- The progress of a spill can be monitored, through the receipt of Situation Reports (SITREPS) from the Lead Agency where the spill occurs, allowing updates to be provided to affected parties.

POLREPS received by SPREP through PACREP are entered into a database and Geographic Information System, to provide a long-term picture of trends in marine spills throughout the region. This will assist updating of risk assessments and targeting of prevention, education, surveillance and enforcement efforts, and provides a performance indicator for spill prevention efforts and state of the environment reporting. SPREP is responsible for reporting annual spill statistics from PACREP to interested parties.

The contact details for PACREP are contained in Appendix One and are provided on the standard POLREP and SITREP transmission forms (Appendices Two and Three).

It should be noted that PACREP is NOT an emergency response facility, and is only functional during normal business hours. Its main purpose is for the collection, analysis and dissemination of spill data. The Lead Agencies in each country/territory should ensure that national marine spill emergency reporting and alerting systems are established and maintained (refer sections 4.2. - 4.5.).

4.2   Surveillance & Spill Detection

The initial detection of marine spills is not something that can be planned for. All personnel in various industries and government agencies involved in tasks where it is possible to be the first to observe a spill, including but not restricted to ships' crew, aircraft crew, oil company employees, port personnel and members of the general public, should be required to and be able to report a spill to the relevant authorities.

The requirement to report spills to the relevant authorities should be mandated under national marine pollution legislation, including penalties for failure to report a spill.

In order to enable spills to be reported, it is necessary for the Lead Agency in each Pacific island country/territory to broadly publicise relevant pollution emergency contact numbers, including those for PACREP. Methods of publicising such contact numbers include the emergency section of telephone directories, notices to mariners; notices to aircrew, signage at boat ramps, marinas and ports, bumper/boat stickers and educational posters and pamphlets.

In addition to relying on opportunistic reports of spills as outlined above, under PACPOL SPREP is developing a Regional Marine Pollution Surveillance System (PACPOLPatrol).

PACPOLPatrol will utilise existing surveillance platforms and programmes such as the pacific patrol boats programme, Forum Fisheries Agency (FFA) aerial surveillance programme and routine civil aviation. This programme includes:

- Training of Pacific patrol boat personnel and fisheries/aerial surveillance personnel in marine pollution surveillance.

- A system for voluntary participation by civil aviation as opportunistic observers during routine flights and voyages. Participants from this sector will receive training in marine pollution surveillance.

- Development of mechanisms for the rapid reporting of observed pollution incidents to PACREP and directly to enforcement and response authorities within national jurisdictions.

- Development of a standardised pollution reporting format for completion by surveillance personnel and submission to PACREP at the end of each surveillance mission.

PACPOLPatrol will greatly enhance the regional capability to detect and report marine spills, especially in offshore areas remote from shore. This programme will also assist effective enforcement action and provide data on the sources, frequencies, locations and types of marine spills in the region for use by management.

4.3   Initial Pollution Reports (POLREPS)

Recognising the importance of rapid dissemination of information in the event of a marine spill, any ship's master or crew, aircraft crew, oil company employee, port personnel or any other person observing a marine spill should immediately and urgently report the spill to the Lead Agency in the country/territory where the spill has occurred. Appendix One provides contact details for the Lead Agencies in each Pacific Island country/territory.

The Lead Agency should complete a POLREP, using the standard format contained in Appendix Six, and transmit this to SPREP/PACREP via facsimile. POLREPS should be transmitted to SPREP/PACREP for ALL spills, not just Tier Three spills.

The Lead Agency in each country/territory should also disseminate all POLREPS to all affected/interested parties, including those potentially affected by the spill, such as neighbouring governments if it appears likely that the spill may affect their sea areas and shorelines

4.4   Situation Reports (SITREPS)

In order to provide periodic updates on pollution incidents, the Lead Agency in the country/territory where the spill has occurred, should transmit SITREPS to PACREP and all affected/interested parties via facsimile at regular intervals throughout the spill, using the standard format contained in Appendix Three.

4.5   Post-Incident Reports (POSTREPS)

After a pollution incident, each government affected should prepare a brief report including:

- Assessment of the response operation, including reference to equipment used, its effectiveness, additional equipment, and training needs.
- Documentation of clean-up costs.
- Assessment of environmental and economic damage.
- Details of problems encountered.
- Recommendations regarding amendment or revision of NATPLANs/PACPLAN.

When each government has compiled these individual reports, the On Scene Co-ordinators and other personnel should meet with SPREP to review their collective experiences and compile an overall Post-incident Report (POSTREP), including if necessary, any recommendations for amending or revising PACPLAN (in accordance with procedures in section 10).

5. Response Operations

5.1. General

It is not the purpose of PACPLAN to provide detailed technical information on the specific methods and techniques that should be used to respond to a marine spill. These should be provided in the respective NATPLANS of each Pacific Island country and territory. However, in responding to a marine spill, a logical sequence of actions should be followed as outlined in sections 5.3 to 5.13.

5.2 Incident Command System (ICS)

Response operations cannot be effectively carried out unless there is a clear organisational structure to command and control the response. This structure should be established by the designated Lead Agency of the government in each country/territory, and detailed within each NATPLAN.

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Many developed countries, including Australia, New Zealand and the US have adopted a standard Incident Command System (ICS). To ensure consistency and inter-operability, a simplified version of the ICS is the preferred arrangement for SPREP island members.

The overall structure of the preferred ICS is depicted in Figure Six. The Incident Commander is the ultimate decision-making authority in relation to spill response activities, and should be vested with the necessary decision-making powers. Further details on ICS, including a breakdown of the roles and responsibilities of the various groups, are provided in the SPREP NATPLAN Guidelines.

5.3 Secure Human Life, Health and Safety

The highest priority when a spill has occurred is to take action to ensure that there is no threat to human life, health and safety. This should take precedence over all other actions.

5.4 Stem Spill Source

The second priority action is to attempt to stop the flow of oil (or other pollutant in the case of spills other than oil), in order to minimise the potential size, extent and severity of the spill.

5.5   Spill Assessment & Reporting

Once attempts have been made to stem the flow of oil (or other pollutant), the nature, size, extent, severity and likely movement of the spill should be assessed, and a POLREP completed and transmitted urgently to the Lead Agency and PACREP, in accordance with section 3.2.

Assessment of the spill should include an attempt to classify it as Tier One, Two or Three (refer section 1.3), and determine whether or not PACPLAN should be activated. The assessment of Tier levels may change over time and should be periodically reviewed during the spill.

5.6   Spill Surveillance and Forecasting

It is vital that the likely movement of the spill is assessed, in order to identify possible impact areas and determine the most appropriate response options. Visual observation of any spill is essential and the Lead Agency(ies) under the appropriate NATPLAN(s) should use those resources identified in the NATPLAN(s), such as charter, military, or commercial aircraft, to assess and monitor the movement of the spill. Surveillance resources which are participants of PACPOLPatrol (refer section 3.2) may or may not be available to assist in this regard, advice on this should be sought from SPREP via PACREP.

Meteorological and hydrographic data should be obtained by the Lead Agency(ies) and analysed to obtain predictions of expected spill movement. Local knowledge from people such as fishermen and mariners should be used as a valuable source of expertise on likely spill movement.

In some areas, sophisticated spill trajectory prediction systems may be available, such as computer models. Information on the availability of such systems for various areas can be requested from SPREP non-island members, in accordance with section 6.

5.7   Leave Alone and Monitor

Should surveillance and forecasting indicate that the spill is unlikely to impact on coastlines and is likely to remain in open water, then the best option is to leave the spill alone, allowing natural physical and biological degradation to occur. As outlined in section 1.5, the response to marine spills under PACPLAN should always seek to complement and make use of *natural forces* to the fullest extent possible.

However, it is vital that the movement of the spill is closely monitored, through continuing surveillance and forecasting (as per section 5.6). The next stage of response operations should be activated if even the slightest possibility of coastal impact arises.

5.8   Containment & Recovery at Sea

Should surveillance and forecasting indicate that the spill may impact on coastlines, the possibility of containing and recovering the oil at sea to prevent such impact should be pursued. The techniques and equipment available for containment and recovery at sea should be outlined in the relevant NATPLAN(s) for the county/territory(ies) where the spill has occurred.

The ability to conduct effective containment and recovery operations at sea will be limited by the nature of the spill, available equipment, physical conditions and logistical considerations. In many instances, especially in open water, containment and recovery at sea may not be possible.

5.9   Use of Oil Spill Dispersants

In the event that containment and recovery is not possible, or is only partially effective, another possible option to prevent or minimise the spill from impacting on the coast is to disperse it at sea, using chemical dispersants.

Dispersants can be applied to the spill from vessels or aircraft. The techniques and equipment available for the application of dispersants should be outlined in the relevant NATPLAN(s) for the county/territory(ies) where the spill has occurred.

As with containment and recovery at sea, the effective use of dispersants will be limited by the nature of the spill (including the type of oil and its dispersability), the availability of dispersant stocks and application equipment, physical conditions and logistical considerations. In many instances, effective dispersal of oil at sea may not be possible.

In addition, the inappropriate use of dispersants can cause worse environmental impacts than undispersed oil. Dispersants are pollutants themselves, and their use can temporarily increase the toxicity of the oil, by increasing its surface area to volume ratio and thereby increasing the release of the toxic components of the oil into the marine environment. If used in very shallow water and on shorelines, they can cause the oil to penetrate into sediments, creating potential long-term pollution problems.

The use of dispersants should therefore only occur under strict supervision by competent environmental and scientific authorities (SPREP can provide such advise), and in accordance the SPREP Guidelines On the Use of Oil Spill Dispersants (available from SPREP and contained in the SPREP NATPLAN Guidelines).

If dispersants are used in accordance with the SPREP Guidelines, they represent a very useful oil spill response tool.

5.10   Foreshore Protection

In most circumstances, despite best efforts to contain and recover and/or disperse a spill at sea, a weather-driven spill is highly likely to impact on coastal environments and resources. Efforts will therefore have to be made to protect foreshores. Options include the use of oil spill booms to physically prevent oil from impacting on the foreshore, or to direct it to preferred collection points (such as a sandy beach), where it can be recovered.

The techniques and equipment available for foreshore protection should be outlined in the relevant NATPLAN(s) for the country/territory(ies) where the spill threatens to impact.

The ability to conduct effective foreshore protection operations will be limited by the nature of the spill, available equipment and personnel, physical conditions and logistical considerations. In virtually every situation, it will only be possible to protect a relatively small area of foreshore. It is therefore absolutely necessary to clearly establish protection priorities, in accordance with the relative environmental sensitivities and resource values of the threatened coastal environments and resources.

The designation of environmental sensitivity grading requires assessment at a much larger scale than can be provided by a regional plan such as PACPLAN. Individual NATPLANS should designate environmental sensitivities for coastal and marine areas, and foreshore protection operations should give priority to protecting the most valuable/sensitive coastal environments and resources as identified in these environmental sensitivity grading.

In the event that detailed environmental sensitivity grading and protection priorities are not available, the following general protection priorities should be used, consistent with section 1.5 of PACPLAN (in order of priority):

- Biological habitat.
- Rare and endangered species.
- Commercial resources.
- Cultural resources.
- Non-commercial property and amenity.

5.11   Foreshore Clean-up

In the likely event that a spill does impact on coastal resources and environments, it may be necessary to conduct foreshore clean-up operations. However, before proceeding with clean up, the option of leaving the oil (or other pollutant) alone and allowing natural physical and biological degradation to occur, should be considered. This is consistent with section 1.5, whereby the response to marine spills should always seek to complement and make use of *natural forces* to the fullest extent possible. However, this option is only likely to be acceptable in very remote, unpopulated areas or with high-energy wave environments.

The techniques and equipment available for foreshore clean up should be outlined in the relevant NATPLAN(s) for the country/territory(ies) where the spill has impacted.

An important consideration during foreshore clean up is to ensure that clean-up operations do not cause greater environmental damage than the spill itself (for example heavy machinery damaging sand-dunes, use of dispersants on foreshores driving oil into the substrate etc).

5.12   Oiled Wildlife Operations

It is highly likely that wildlife will become contaminated in the event of a spill, including sea-birds and shorebirds, marine reptiles (e.g. nesting turtles) and possibly marine mammals.

The techniques and equipment available for rescuing, cleaning and rehabilitating affected wildlife should be outlined in the relevant NATPLAN(s) for the country/territory(ies) where the spill has impacted. Because of the complexity of such operations, it may be necessary to have a separate oiled wildlife plan as a sub-set of each NATPLAN.

The status of wildlife species as rare, threatened and/or endangered under international biodiversity and species protection conventions and classification systems (e.g. IUCN Red List Categories) should be considered in prioritising oiled wildlife response. SPREP can provide technical advice in this regard. Requests for such assistance should be made in accordance with section 5.

5.13   Oily Waste Management

An often difficult problem created by oiled foreshore clean-up is the generation of quantities of recovered oil and oily waste, which needs to be treated, recycled and/or disposed. The problems of oily waste management are exasperated on small islands such as those of the region, due to severe limits on management options.

Oily waste management arrangements should be outlined in the relevant NATPLAN(s) for the country/territory(ies) where the spill has impacted.

In many circumstances in the Pacific islands region, the best option may be to ship oily waste off the island that has been impacted, to a destination which has the proper waste management facilities. This option may require some form of external assistance. Requests for such assistance should be made to SPREP non-island members, in accordance with section 6.

It should be noted that the trans-boundary movement (i.e. shipment between countries) of waste oil and oily wastes is regulated under both the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal* (the Basel Convention) and the *Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region* (the Waigani Convention).

Any shipment of waste oil and/or oily waste collected from a spill clean up should therefore comply with the requirements of these two conventions. SPREP can provide technical advice in this regard. Requests for such assistance should be made in accordance with section 6.

5.14   Joint Response Operations

The response to some marine spills under PACPLAN may require joint response operations by two or more SPREP island member governments. Such situations include:

- A spill within one jurisdiction which moves or threatens to move into an adjacent jurisdiction(s).

- A spill in international waters which moves or threatens to move into two or more adjacent jurisdictions.

Under these circumstances, the government whose waters are closest to the pollution incident should assume the lead role and be initially responsible for reporting the spill to SPREP using the PACREP/POLREP system. This government should also be responsible for tracking the spill and any necessary initial response.

The Lead Agency should inform neighbouring government(s) and these should activate their own response plans in close co-ordination with the government that has assumed the lead role.

Any government may escalate the response by calling for assistance from other SPREP island members, non-island members, the oil industry and/or other external parties, in accordance with section 6.

In the event that the spill moves across national sea boundaries, agreement should be reached between the governments concerned for the orderly transfer of the lead role and on-scene co-ordination function.

In preparation for possible joint operations, neighbouring countries/territories may wish to develop joint marine spill response plans and enter into bilateral or multilateral Memorandums of Understanding (MoU), which, amongst other things, should:

- Clearly define command and liaison structures for joint response operations.

- Outline procedures for co-operative use of vessels, aircraft and spill response equipment.

- Identify agreed protection priorities.

- Provide arrangements for marine operations in, or overflying of, each other's territory.

Surveillance flights to evaluate or assist in the response to marine spills may require the overflight of territorial and internal waters of another government. In order to optimise the use of aerial resources, each government should make advance arrangements with neighbouring governments for the rapid granting of permission for overflights and for the use of their airport facilities. Such arrangements should be included in respective NATPLANS and any applicable joint response plans.

Appendix Five provides a model of a MoU that countries/territories may use as the basis for developing their joint response arrangements.

5.15 Chemical Spills/HAZMAT Response

As outlined under section 1.3, PACPLAN is designed to cover the response to spills into the marine environment of all types of pollutants, including oil, chemicals and hazardous materials (HAZMAT).

However, technical details within PACPLAN relate primarily to marine *oil* spills. This reflects the fact that oil is the main pollutant likely to be spilled in the region, and the fact that the discipline of oil spill response is far more developed and advanced than that of chemical spill/HAZMAT response.

In the event of a chemical/HAZMAT spill within the PACPLAN Area, the general procedures and arrangements of PACPLAN should be followed. In addition, the NATPLAN of each SPREP island member, if developed in accordance with the SPREP NATPLAN Guidelines, should cover the response to chemical/HAZMAT spills. The NATPLANS should therefore outline the techniques and equipment available for chemical/HAZMAT spill response in each country/territory.

Should a SPREP island-member where the chemical/HAZMAT spill has occurred require technical advice and assistance with the response, this should be requested from SPREP non-island members, in accordance with section 6.

6. EXTERNAL ASSISTANCE

6.1 Requests for Assistance

Should the Lead Agency within the SPREP island member country/territory assess a spill to be a Tier Three spill (refer sections 1.3 and 6.5), it should complete a Request for Assistance form, as contained in Appendix Four, transmit it via facsimile directly to the party from which it is seeking assistance (refer Appendix One for contact details for assistance providers), and copy it to SPREP via PACREP.

The US Pacific islands (American Samoa, Guam and Northern Marianas), when requesting assistance from the US, should do so in accordance with the US ORCP, and not PACPLAN. The US Pacific islands should use the PACPLAN procedures when requesting assistance from non-US parties.

Whilst requests for assistance should be made directly from the requesting country/territory to the assistance provider, a requesting country/territory may ask SPREP to facilitate the request for assistance.

In requesting assistance, the requesting country/territory should provide as much information as possible about the nature of the spill and be as specific as possible about the type of assistance required. Determination of the most appropriate assistance package should be carried out through discussions/communications between the requesting country/territory and the assistance provider.

Requesting parties must bear in mind that the onus is on the Lead Agency in their country/territory to manage the overall spill response effort, including facilitating the activities of the assistance providers through ensuring customs, immigration, quarantine and logistics arrangements are in place (refer sections 6.2 and 6.3) and providing the command and control elements of the response. If the above responsibilities cannot be met the effectiveness of external assistance will be hampered, and such assistance should not be requested.

Five levels of assistance are available, as outlined below.

6.1.1 Assistance from a Neighbouring SPREP Island Governments

In the first instance, SPREP island governments should seek assistance from neighbouring island governments. Such requests for assistance should be made directly between the neighbouring governments, and copied to SPREP through the PACREP system. They should be in accordance with any relevant MoU between the neighbouring governments and any applicable joint response plan(s) that the neighbours may have in place (refer section 5.14).

6.1.2 Assistance from SPREP Technical Secretariat

In the event of a marine spill in a SPREP island member country/territory, the SPREP technical secretariat may provide or arrange technical advice in the following areas:

- The availability and application of spill trajectory prediction systems.

- The use of oil spill dispersants, including application of the SPREP Guidelines on the Use of Oil Spill Dispersants.

- Environmental sensitivity gratings and protection priorities.

- Oiled wildlife operations.

- Oily waste management.

- Environmental and scientific matters relating to the spill response in general.

Such advice would generally be provided remotely by SPREP from its office in Samoa. SPREP would be unlikely to be able to provide personnel to physically attend the spill due to limits on personnel numbers and other priority tasks.

In addition to being able to provide technical advice in the above areas, SPREP would also be able to arrange for the provision of technical advice in other, non-environmental areas, including operational disciplines, by other parties, and assist countries and territories in requesting external assistance, in accordance with sections 6.1.3 to 6.1.5 below.

SPREP also has a role in assisting countries with pre-spill planning, through the various PACPOL projects that it has initiated and manages. These include:

- Assisting countries/territories with spill prevention through PACPOL Project MS 1: Review of Spill Prevention Measures.

- Assisting countries/territories to develop NATPLANS through PACPOL Project MS 2: SPREP NATPLAN Guidelines & Template.

- Assisting countries/territories with training and exercises through PACPOL Project MS 3: Annual PACPOL Workshops.

- Assisting countries/territories with spill response equipment through PACPOL Project MS 4: Regional Spill Response Equipment Strategy.

- Assisting countries/territories to identify protection priorities and develop environmental sensitivity grading through PACPOL Project MS 5: Coastal Resource Mapping.

6.1.3 Assistance from SPREP Non-island Governments

Should the spill be of a magnitude and/or severity that additional assistance is required, SPREP island governments should seek assistance from a non-island government.

Each SPREP non-island member is the *primary source of assistance* for the SPREP Island members listed under the primary column in Table Two, and depicted in **Attachment 2**.

Should a spill be of a size and/or severity that requires external assistance from more than one source, each SPREP non-island member is the *secondary source of assistance* for the SPREP island members listed under the secondary column in Table Two, and depicted in **Attachment 3**

Table Two: Primary and Secondary Sources of Assistance - Divisions of Responsibility

Assistance Provider	Primary source of assistance for:	Secondary source of assistance for:
Australia	Nauru	FSM
	Papua New Guinea	Fiji
	Solomon Islands	Guam
	Tuvalu	New Caledonia
	Vanuatu	Northern Mariana Islands
	Kiribati	Palau
		Tonga
France	French Polynesia	Cook Islands
	New Caledonia	Marshall Islands
	Wallis & Futuna	Niue
		Pitcairn
		Vanuatu
New Zealand	Cook Islands	American Samoa
	Fiji	Nauru
	Niue	Papua New Guinea
	Pitcairn	Samoa
	Tokelau	Solomon Islands
	Tonga	Wallis & Futuna
USA	American Samoa	French Polynesia
	FSM	Kiribati
	Guam	Tokelau
	Marshall Islands	Tuvalu
	Northern Mariana Islands	
	Palau	
	Samoa	

6.1.4   Assistance from the Oil Industry

6.1.4.1 In-Country Industry

In the first instance, SPREP island governments that require assistance from the oil industry should seek it from the oil companies that operate within its jurisdiction. Such requests for assistance should be made directly between the government and the Oil Company, and be copied to SPREP through the PACREP system. They should be in accordance with the relevant NATPLAN, which should outline the mechanisms for integration between in-country government and industry capabilities.

In general, the oil industry should be entirely responsible for the physical resourcing of the response to spills from its own facilities, under the command and control of the government Lead Agency. The industry should also provide assistance to government for the response to non-industry spills on a cost-recovery basis, with costs ideally being recovered from the polluter.

6.1.4.2 Australian Marine Oil Spill Centre (AMOSC)

The Australian Marine Oil Spill Centre Pty Ltd (AMOSC) is an oil spill response co-operative financed by 10 participating Australian oil companies; Ampol, Apache, BHP, BP, Esso, Mobil, Santos, Shell, Wapet and Woodside. Three member companies, BP, Mobil and Shell, are active in the PACPLAN Area..

AMOSC maintains AUD$10M worth of state-of-the-art Tier Three (i.e. major spill) oil spill response equipment and a small technical staff, on 24 hour call to assist the responses to oil spills throughout Australia. AMOSC represents the Australian oil industry's contribution to the Australian government's overall national oil spill plan.

Access to AMOSC resources is preferentially given to member companies. The fee-paying member companies have a Service Contract that guarantees access to a certain level of equipment and expertise in an emergency, at a hire-out rate that is substantially less than that charged to non-members. AMOSC gives priority to responding to spills from ships or facilities owned by member companies.

Third parties, such as governments, can gain access to AMOSC resources by signing a Third Party Agreement each time they require access (although AMOSC and the Australian government have a pre-determined Hiring Agreement). Tariffs are substantially higher for third parties, and there is an up-front fee of AUD$50,000.

AMOSC's area of operation extends into the Pacific, covering much of the PACPLAN Area, although not north of the equator). AMOSC's priority mission in the Pacific is to respond to requests for assistance from member oil companies that operate within the Pacific. Under such a scenario, the relevant oil company would request AMOSC's assistance directly, under the industry's own arrangements.

In doing so, both the requesting Oil Company and AMOSC should keep both the government of the Pacific island country/territory where the spill has occurred and SPREP fully informed of there intentions and activities. It is of utmost importance that any response mounted by the oil industry to a marine spill in the PACPLAN Area is fully integrated with that mounted by the relevant government(s), and that the government Lead Agency retains overall command, control and co-ordination functions.

In the event of a Tier Three spill from a non-oil industry facility in the PACPLAN Area, AMOSC assistance would only be available as part of an Australian government assistance package, under the Hiring Agreement between the Australian government and AMOSC.

This means that AMOSC support for non-industry spills is only potentially available to those SPREP island member governments which have Australia as their primary and secondary source of assistance (refer section 5.1.3 and Figures Eight & Nine), and would only be triggered by a Request for Assistance to the Australian government (refer section 5.1.3). The inclusion of an AMOSC component in an Australian government assistance package would be at the discretion of the Australian government and AMOSC.

In addition to offering physical oil spill response services, AMOSC also runs a range of training courses, from a practical, operational, first-level responder course through to senior executive awareness courses. AMOSC provides the central training facility for all member oil companies in Australia, with commercial fees being payable for courses. Personnel from oil companies within the PACPLAN Area routinely attend AMOSC training courses. Those that have been trained to date are contained in the Regional Register of Marine Spill Responders held at SPREP. Representatives from government and other third parties can also attend AMOSC courses, on a fee-paying basis. The role of AMOSC in spill response training in the PACPLAN Area is covered in section 9.

6.1.4.3   Clean Islands Council (CIC)

(to be developed after consultations with CIC)

6.1.4.4   East Asia Response Limited (EARL)

East Asia Response Private Limited (EARL) was established in 1992 to provide prompt and efficient response to oil spill incidents in the Asia-Pacific region. It is a non-profit making organisation whose shareholders are amongst the major oil companies operating in the region. Participation in EARL is offered to any oil-related companies operating in the Asia-Pacific.

EARL is based at its Regional Centre in Singapore. It operates and maintains a US$9-million Tier 3 stockpile of equipment capable of being used in a wide range of oil spills situations and environment conditions. The team of specialist staff is able to provide technical support to companies requiring assistance. In addition to this primary role, the staff at the Centre is able to provide quality training to delegates either in Singapore or on location, and also offer consultancy services on oil spill related matters to industry.

EARL is on standby, 24 hours a day, with equipment capable of use in nearshore and offshore environments. Containment and recovery equipment, dispersant application systems and shoreline cleanup materials are available to enable a response to all oil spill situations.

To deliver the equipment and personnel to the scene of an oil spill incident, an L-382 Hercules aircraft is continually on standby in Singapore. In addition, the aircraft may be used to carry the Aerial Dispersant Delivery System (ADDS Pack), a high volume dispersant spraying system capable of treating large areas.

For quick marine response, EARL has three fast response vessels carrying a range of oil spill equipment and capable of dispersant application.

The team of highly trained specialists provides technical and supervisory support to companies requiring assistance.

EARL is committed to training in the region. The EARL team is able to provide high quality training to delegates at all levels of an oil spill response organisation.

The programmes range from general spill response courses covering all aspects of spill response planning, operations and management to equipment operation courses for operators. Courses may be tailored to suit individual requirements.

The courses are available at the Regional Centre in Singapore. The Centre has a purpose-built training facility with access to a diverse range of equipment and vessels. Alternatively, courses may be conducted on location in clients' facilities utilising their own oil spill response equipment.

6.1.4   Assistance from Other Parties

In addition to the above, Pacific island countries/territories may wish to request assistance from sources which are not party to PACPLAN. These include, but are not restricted to; the governments of Canada, Japan and the United Kingdom, the European Union, international organisations such as the International Maritime Organisation (IMO), United Nations Environment Programme (UNEP) and the Global Environment Facility (GEF), and international industry groups such as the International Tanker Owners Pollution Federation Ltd (ITOPF).

SPREP member governments should use normal diplomatic channels when requesting assistance from these sources. SPREP itself may be able to facilitate such requests, but would only undertake do so when efforts to secure assistance from parties to PACPLAN are exhausted.

6.2 Customs, Immigration & Quarantine

For the effective provision of external assistance under PACPLAN, it is vital to move equipment, materials and personnel on-site without undue delay or formality. It is therefore essential that each government participating in PACPLAN has in place administrative arrangements to expedite customs, immigration and/or quarantine procedures for equipment and personnel entering or leaving its territory for the purpose of assisting it or another government in responding to a marine spill or the threat thereof.

Details of such arrangements should be included in each country/territory's NATPLAN and promulgated to all governments participating in PACPLAN, and to other parties which may be called upon to assist in the event of a pollution incident. Such details should include the essential customs, immigration and quarantine information that is required by the appropriate national authority to facilitate special arrangements. Ideally, such arrangements should include provisions for the rapid issue or waiving of entry visas as well as the arrangements for temporary importation of spill response equipment and material free of duty and/or import taxes.

6.3 Logistics

In the event of a very large spill, considerable amounts of equipment and expertise may be mobilised on an international scale to assist the country/territory(ies) requesting such assistance.

Before this is done it is imperative that a full evaluation is carried out to ensure that equipment and materials that are appropriate to the particular circumstances of the spill are the ones that are mobilised, and that the necessary logistical support is available locally. Logistical support that may be required locally includes aircraft unloading equipment, transport, cranes, vessels and oil storage facilities. In addition, the party requesting assistance must have in place:

- Pre-agreed arrangements for hire/contracting, payment, and insurance of equipment and personnel.

- A proper system to manage the health and safety of personnel sent to the affected country.

- Proper accommodation and hospitality services for personnel sent to the affected country.

- Proper equipment maintenance and decontamination facilities and systems, so that equipment is returned ready for future use.

Requesting parties must bear in mind that the onus is on the Lead Agency in their country/territory to manage the overall spill response effort, including facilitating the activities of the assistance providers and providing the command and control elements of the response.

6.4   Finances

6.4.1   Funding of Spill Responses - National Marine Pollution Funds (NATFUNDS)

It is recognised that many of the governments in the PACPLAN Area have inadequate resources, including financial reserves, to deal with major oil spills. From the moment a spill response commences, the ability to incur expenditure is required, or the Lead Agency will be unable to undertake essential operations such as the mobilisation of aircraft and vessels.

For spills from oil industry facilities, such expenditure will be covered directly by the relevant Oil Company. For spills from non-oil industry facilities, the government Lead Agency must be able to incur expenditure.

To counter the problem of lack of financial reserves and delegation to incur expenditure, the Regional Model Marine Pollution Legislation promulgated by SPREP and SPC includes provision for the collection of a pollution levy from shipping calling at a country/territory's ports.

Under the regional model legislation, the proceeds from this levy are deposited into a trust fund (National Marine Pollution Fund or NATFUND), and reserved exclusively for use in marine spill response. A board of trustees, comprising as a minimum a representative from the government Lead Agency, the oil industry and the shipping industry administer the NATFUND. Any expenditure from the NATFUND requires approval from the board of trustees, with administrative arrangements that allow rapid approval in the event of a genuine pollution emergency.

The legislation also provides for a cap on the fund, which is set according to the pollution risk and the acceptance that the NATFUND is only intended to underwrite the initial phases of a spill response. The relatively low volume of shipping in Pacific island countries/territories and the need to minimise the cost-imposition on the shipping and oil industries from the marine pollution levy, dictate that individual NATFUNDs are highly unlikely to be capable of covering the full costs of a spill response.

The above arrangements are not available if a Pacific Island country/territory's marine pollution legislation does not include the marine pollution levy/NATFUND provisions promulgated by the SPREP/SPC regional model legislation. It is the responsibility of individual governments to ensure that mechanisms are in place to financially enable the initial operations required to respond to a marine spill. The NATFUND arrangements promulgated by SPREP and SPC provide a useful model for adoption by countries/territories.

6.4.2 Funding External Assistance - Cost Recovery & Reimbursement

Once the NATFUND (or other financial mechanism as established in a country/territory) financially enables initial response operations, the assistance provider should provide financial underwriting of any subsequent external assistance, with full cost recovery processed once response operations are completed.

The reimbursement of costs for external assistance is dealt with in the OPRC Convention, with the basic principle being that the requesting country/territory and the assistance provider will co-operate in attempting full cost recovery from the polluter, under existing legal regimes (such as the 1992 Civil Liability Convention and the 1992 Fund Convention).

Where legal action does not result in full compensation for expenses incurred in the assistance operation, the requesting country/territory may ask the assistance provider to waive reimbursement of expenses that exceed the amount recovered from the polluter. In such cases, the OPRC Convention requires assistance providers to give due consideration to the needs of developing countries.

To assist in the recovery of costs, each government shall maintain individual records of action taken and equipment and other resources used, including detailed and complete records of all costs incurred. These records can be utilised both to support cost recovery, claims for compensation and for subsequent analysis of actions taken during the pollution incident, in order to upgrade PACPLAN.

6.4.3 Maintenance of PACPLAN

Whilst SPREP is responsible for maintaining PACPLAN and associated systems, resources will need to be made available to SPREP to carry out these functions. The main requirement is a percentage of PACPOL staff time to:

- Update and re-issue the plan form time to time;

- Maintain the Regional Register of Marine Spill Responders (refer section 9.4);

- Manage any POLREPs that come into the PACREP system;

- Facilitate any requests for assistance as they arise;

- Organise the annual PACPOL workshops, including the annual PACPLAN exercise;

It is estimated that 4 person months per year will be required to fulfil these roles, and approximately US$50K is required each year for the annual PACPOL workshops.

Funding is available for the two PACPOL staff positions until the end of 2000 for the Adviser and mid 2002 for the Project Officer. Resourcing will need to be secured thereafter. Funding for the annual PACPOL workshops is secured for 1999 and 2000, and needs to be secured thereafter.

In addition, approximately 10% of the time of a SPREP Administrative assistant and the GIS/Database Officer will be required to enter incoming POLREPs into the PACREP database and SPREP Geographic Information System (GIS), on an ongoing basis.

(Fiji) As PACPLAN is focussed on implementing the Pollution Protocol of the SPREP Convention, member countries, through their annual voluntary contributions should contribute to the maintenance of PACPLAN. Consistent with the application of the polluter pays principle the maintenance of PACPLAN could also be financed through contributions from member NATFUNDs proposed in the template Marine Pollution Prevention Act.

7. RESPONSE TERMINATION & POST-SPILL ACTIVITIES

7.1 Response Termination

In any marine spill response operation, a point is reached where the cost and effort involved in continuing clean-up operations outweigh the benefits to be gained. The OSC, in consultation with advisers and the National Committee, should determine the point when further effort and expenditure become unreasonable and can no longer be supported on grounds of environmental effectiveness and cost. The advice of scientific/environmental expertise, including any provided through external assistance, will be of paramount importance in determining when the environmental effectiveness of continued spill clean-up efforts do not justify continued expenditure.

Once a decision to terminate a spill response is made, it should be communicated to all affected/interested parties and also to SPREP through PACREP.

7.2 Equipment Cleaning/Restoration and Return

Oiled equipment should be cleaned as soon as possible after use. Cleaning should be carried out in a controlled situation where run-off can be contained without causing further pollution.

Equipment cleaning methods include:

- High pressure hosing.
- Steam cleaning (do not use on booms made of PVC, or plasticity of the boom will be lost).
- Apply dispersants and brush (especially heavily oiled booms).
- Flushing pumps that have been used to apply dispersants with fresh-water, immediately after use.

All oil collected from cleaning operations must be disposed of in accordance with the oily waste management procedures outlined in the relevant NATPLAN (refer section 5.13).

Once cleaning is completed, all equipment that has been provided through external assistance should be inspected and checked-off, and arrangements made in consultation with the assistance provider for returning/replacing the equipment.

7.3 Response Evaluation & Debriefing

As soon as possible after termination of clean up, a full de-brief session should be held, as outlined in section 3.5. The aim of the debrief session is not to assess the performance of individuals, but to evaluate the response and to translate any lessons learned into improvements to the relevant NATPLAN and PACPLAN, so as to improve the effectiveness of any future spill responses.

7.4 Damage Assessment & Monitoring

Following a marine spill it is necessary to conduct post-spill damage assessment and monitoring activities, in order to scientifically and quantitatively assess:

- Ecological damage.

- Impacts on commercial resources and activities such as fisheries, aquaculture and tourism.

It will also provide a baseline against which to measure recovery from the spill.

The information gathered will assist with:

- Determination of compensation claims.

- Better understanding of the effects of spills and the ability of the environment to recover from such effects.

- Better understanding of the effects and effectiveness of the various clean-up techniques used.

- Identification of any necessary ongoing restoration and rehabilitation requirements for damaged environments and resources.

Post-spill damage assessment and monitoring plans should be contained in each country/territory's NATPLAN. Responsibility for such plans should generally rest with the government environment agency, which provides the Environment Co-ordinator on the spill response team. The following general principles should apply to post-spill damage assessment and monitoring.

- The Environment Co-ordinator should organise joint government/industry monitoring teams, to undertake co-ordinated, integrated studies. This will avoid duplication of effort and the possibility of conflicting results that may be used for compensation claims.

- Assessment and monitoring should aim to be as quantitative as possible, and the basis of any qualitative assessments stated.

- Monitoring must be designed so as to be statistically valid and rigorous, with the levels of confidence clearly stated.

- Data collection should commence as soon as possible after the spill.

- The use of sound pre-spill baseline data is essential to the success of post-spill damage assessment and monitoring. The Environment Co-ordinator should rapidly identify all such data, including that held by government environment and fisheries agencies, universities and research institutions.

- The monitoring design should include the identification and monitoring of control sites.

- The monitoring design should include areas impacted by the spill, areas disturbed by clean-up activities and areas used for the storage of oily waste.

- All organisations involved in post-spill damage assessment and monitoring should keep detailed records of all costs and expenses associated with these activities.

- The results obtained should be published in the scientific literature, to assist the development of the spill response discipline in general.

SPREP can provide or arrange for technical advice and assistance in the area of post-spill damage assessment and monitoring. Requests for such assistance should be directed to SPREP through the PACREP system.

7.5   Environmental Restoration & Rehabilitation

Following a spill, it may be necessary to undertake activities to restore and rehabilitate damaged ecosystems and resources, for example replanting mangroves killed by a spill, rehabilitating beaches damaged by clean-up activities or transplanting coral to a high-use tourist area impacted by a spill.

Post-spill restoration & rehabilitation plans should be contained in each country/territory's NATPLAN. Responsibility for such plans should generally rest with the government environment agency, which provides the Environment Co-ordinator on the spill response team. The following general principles should apply to post-spill restoration & rehabilitation.

- Areas requiring restoration and rehabilitation should be identified during post spill damage assessment (refer section 7.4).

- In determining the best options for the restoration and rehabilitation, techniques that seek to complement and make use of *natural forces* to the fullest extent possible should be selected, including the option of allowing natural recovery without active intervention.

- The effects and effectiveness of restoration and rehabilitation efforts should be assessed through rigorous monitoring, as part of post-spill damage assessment and monitoring activities (refer section 7.4).

- All organisations involved in restoration and rehabilitation should keep detailed records of all costs and expenses associated with these activities.

- The results obtained should be published in the scientific literature, to assist the development of the spill response discipline in general.

SPREP can provide or arrange for technical advice and assistance in the area of post-spill restoration and rehabilitation. Requests for such assistance should be directed to SPREP through the PACREP system.

8. EQUIPMENT

8.1   National Resources

Effective marine spill response cannot be carried out unless appropriate equipment is available.

Each Pacific island country and territory should establish and maintain a national marine spill response equipment inventory capable of dealing with Tier Two spills, as defined in section 1.3. This inventory and procedures to access it should be contained in each country/territory's NATPLAN.

The national equipment inventory should be a joint government/industry arrangement, with both parties contributing and having access to the equipment. In general, the oil industry should provide the equipment necessary to respond to Tier One spills from its facilities, and government should provide the balance of the stockpile necessary to bring the capability up to Tier Two level.

In determining equipment needs, the oil industry and government should work closely together to ensure compatibility and inter-operability, and that the equipment procured is the most appropriate for the level of spill risk and local conditions.

The high capital cost and significant maintenance requirements of spill response equipment mean that regionally appropriate technology and local resources should constitute as much of the equipment inventory as possible.

In order to assist each Pacific island country and territory to establish the optimum equipment inventory for its situation, PACPOL includes a project to review current equipment levels in each country/territory and identify the procurements necessary to fill current deficiencies, through PACPOL Project MS 4: Regional Spill Response Equipment Strategy. Once the review is completed this project will seek to secure sources of support to procure the necessary equipment, plus provide training in its use and long-term maintenance. This section of PACPLAN will be updated as this project proceeds.

8.2   Regional Resources

There is no proposal under PACPLAN to establish a regional stockpile of equipment, as it is felt that this would simply duplicate what is already available through external assistance.

The most significant stockpiles of marine spill response equipment held within the region are:

- American Samoa (USCG and oil industry/contractor)
- Guam (USCG and oil industry/contractor)
- New Caledonia (French Navy).

Access to this equipment is via the Request for Assistance procedures in section 6.

The most significant stockpiles of equipment adjacent to the region are:

- Auckland (New Zealand National Plan resources).
- Brisbane, Sydney & Townsville (Australian National Plan resources)
- Geelong (AMOSC)
- Hawaii (USCG and CIC/contractors)
- San Francisco (USCG Pacific Strike Team)
- Singapore (EARL)

Access to this equipment is via the Request for Assistance procedures in section 6.

9. TRAINING & EXERCISES

9.1   Annual PACPOL Workshops

Marine spill response plans such as PACPLAN are only effective if relevant personnel receive adequate training and if the plan is exercised and reviewed on a regular basis.

The primary regional training activity for PACPLAN will be PACPOL Project MS 3: Annual PACPOL Workshops. These workshops are organised by SPREP and have three components:

* A four-day training course in marine spill response.

* A one day desktop exercise of a regional response to a major spill under PACPLAN.

* A half day PACPOL co-ordination meeting.

The four day training course is based on the IMO level 2 model course and is designed to target middle-management personnel from government environmental and maritime administrations and the oil industry in Pacific island countries/territories, who play key roles in the response to marine spills within their respective countries/territories.

The workshops are designed to provide a general but reasonably detailed overview of all aspects of the response to marine spills, and provide the participants with the knowledge and skills necessary to develop effective marine spill response arrangements within their countries/territories. They are rotated throughout the region each year.

9.2   Specialist Training Courses

Due to limits on resources and limits on the capacity of small island countries to absorb multiple training activities, it is not proposed to provide detailed training in specialist areas (e.g. first level responder, environmental and scientific support co-ordinator etc), under PACPOL.

It is considered to be more cost-effective to instead take advantage of the numerous specialist spill training activities that are already offered in countries adjacent to the region (e.g. Australia/AMOSC, New Zealand, USA), by sending Pacific islands delegates to these specialist courses on an opportunistic and needs basis, rather than to duplicate these courses within the region.

The regional oil industry should continue with in-country training of its personnel at its oil terminals and depots and also continue to send personnel to training courses at AMOSC in Australia, as an important contribution to regional training.

This combination of an annual regional workshop with attendance at specialist courses in countries adjacent to the region should provide the optimum level of marine spill training for the region, within the limits of available resources.

9.3   In-Country Exercises

Under each country/territory's NATPLAN, a national marine spill response exercise should be held in each country/territory on an annual basis. Such exercises should be joint government/oil industry activities and seek to further develop government/industry integration. Whilst responsibility for organising these in-country exercises rests with each National Committee, SPREP can provide technical advice and assistance.

9.4   Regional Register of Marine Spill Responders

As part of its role under PACPLAN, SPREP has established a Regional Register of Marine Spill Responders. This database includes details of all regional government and oil industry personnel who have attended the annual SPREP workshops, plus those who have attended specialist training courses such as those offered by AMOSC. It will allow tracking of training recipients, ensuring optimum selection of participants for future workshops and training. It will also provide a list of personnel who could assist with actual spill responses.

In order to assist SPREP with ensuring that the database is complete and up-to-date, the Lead Agency in each country/territory and AMOSC should submit to SPREP annual lists of personnel who have received training other than the annual SPREP workshop, including the details of the training received. Over time, personnel on this database could be organised to form a Regional Marine Spill Response Team.

10. ADOPTION, CONTROL & REVISION OF THE PLAN

10.1 Adoption of the Plan

PACPLAN will be adopted by consensus at an intergovernmental meeting of the South Pacific Regional Environment Programme (SPREP) and contracting parties to the SPREP Convention, with such adoption requiring written endorsement from the three major oil companies which operate within the PACPLAN Area (BP, Mobil and Shell).

10.2 Control of the Plan

Full contact details for all holders of controlled copies of PACPLAN are maintained on a register at the SPREP office in Apia, Samoa, in order to facilitate revisions and updating.

10.3 Revision of the Plan

The main body of PACPLAN may only be revised by agreement of an intergovernmental meeting of SPREP and contracting parties to the SPREP Convention, with written endorsement for such revision from the three major oil companies which operate within the PACPLAN Area (BP, Mobil and Shell).

Proposed revisions to the main body of PACPLAN may be submitted by any party to the plan to the SPREP technical secretariat for circulation to other parties for consideration. In order to be considered for adoption at an intergovernmental meeting of SPREP, any proposed revision to the plan must be circulated at least 90 days prior to that meeting.

Technical information contained in informational appendices, such as contact details, will be revised and updated regularly, and new informational appendices added as required, by the SPREP technical secretariat without the need for agreement by an intergovernmental meeting of SPREP. Such revisions and updates will be circulated by the SPREP technical secretariat to all registered holders of controlled copies of the plan.

The accuracy of technical information contained in informational appendices that relates to individual parties to the plan, is the responsibility of each party to the plan. All parties to the plan should report to the SPREP technical secretariat, any changes in circumstances, including levels of risk of marine spills, capability to manage marine spills, internal administrative arrangements and contact details, that may require revision and updating of the plan. The SPREP technical secretariat will then be responsible for circulating such updates to all registered holders of controlled copies of the plan.

ATTACHMENTS

Attachment 1: Transit shipping lanes in the PACPLAN Area.(To be added)
(NB: It should be noted that the routes depicted in Figure Five relate to transit shipping only. They do not include the routes followed by international shipping trading to and from the PACPLAN Area, and regional and domestic shipping within the Area. These routes have not yet been accurately mapped. They further compound the spill risk scenario within the region).

Attachment 2: Primary assistance groupings for each Pacific island country/territory and SPREP non-island member.(To be added)

Appendix One: PACPLAN Marine Spill Response Contacts

Table One: SPREP Technical Secretariat

SPREP Technical Secretariat
Marine Pollution Adviser South Pacific Regional Environment Programme PO Box 240, Apia, SAMOA Ph (685) 21929 Fax (685) 20231 Email sprep@sprep.org.ws Please transmit all POLREPs to fax (685) 20231 for entry into the PACREP database.

Table Two. Lead Agency (Maritime Administration), Environment Administration and SPREP National Focal Point for each SPREP Member Country/Territory.

(The preferred Lead Agency for assuming command of marine spill response in each country/territory is the national maritime administration. The maritime administration should be supported in this role by a National Marine Pollution Committee, chaired by the Lead Agency and containing, as a minimum, the national environment administration, the national fisheries/marine resources administration, the national disaster management administration and the local oil industry).

Country/Territory	1. LEAD AGENCY (Maritime Administration)	2. Environment Administration	3. SPREP National Focal Point
Cook Is	Director of Marine Ministry of Tourism & Transport PO Box 61, Rarotonga Ph (682) 28810 Fax (682) 28816	Director Environmental Services Ministry of Works, Energy & Physical Planning PO Box 371, Rarotonga Ph (682) 21256 Fax(682) 22256 Resources@environment.org.ck	Secretary Ministry of Foreign Affairs and Immigration PO Box 105, Rarotonga Ph (682) 29347 Fax (682) 212 47 secfa@foraffairs.gov.ck
FSM	Secretary Department of Transportation, Communication and Infrastructure PO Box PS2, Palikir, Pohnpei Ph (691) 320 2865 Fax (691) 320 5853 transfm@mail.fm	Secretary Department of Economic Affairs PO Box PS 70, Palikir, Pohnpei Ph (691) 320 2646 Fax (691) 320 5854	Secretary Department of Foreign Affairs PO Box PS 123, Palikir, Pohnpei Ph (691) 320 2613 Fax (691) 320 2933
Fiji	Director Marine Department PO Box 326, Suva Ph (679) 315 266 Fax (679) 303 348	Director Department of Environment. Ministry of Urban Development, Housing & Environment. PO Box 2131, **Govt. Bldgs.,** Suva Ph (679) 211 545 Fax (679) 303 515	Permanent Secretary Ministry of Urban Development, Housing & Environment. PO Box 2131, **Govt. Bldgs.,** Suva Ph (679) 211 416 Fax (679) 303 515
Kiribati	Director of Marine Ministry of Information, Communication & Transport Beitio, Tarawa Ph (686) 26003 Fax (686) 26572	Permanent Secretary Ministry of Environment & Social Development PO Box 234, Bikenibeu, Tarawa Ph (686) 28211 Fax (686) 28334 mesd2@tskl.net.ki	Permanent Secretary Ministry of Foreign Affairs PO Box 68, Bairiki, Tarawa Ph (686) 21342 Fax (686) 21466
Marshalls	Contact via 2.	General Manager Environmental Protection Agency PO Box 1322, Majuro Ph (692) 625 3035 Fax (692) 625 5202	As per 2.

Table Two continued.

Country/Territory	1. LEAD AGENCY (Maritime Administration)	2. Environment Administration	3. SPREP National Focal Point
Nauru	Contact via 3.	Contact via 3.	Secretary Department of External Affairs Republic of Nauru Ph (674) 444 3100 Fax (674) 444 3105
Niue	Director Public Works Department Alofi Ph (683) 4193 Fax (683) 4223 Email mechpwd@mail.gov.nu	Director Community Affairs Office PO Box 77, Alofi Ph (683) 4019 Fax (683) 4391 takaimoiu@mail.gov.nu	Secretary to Government Premier's Department PO Box 40, Alofi Ph (683) 4200 Fax (683) 4232 external@mail.gov.nu
Palau	Chief Division of Transportation Ministry of Commerce and Trade PO Box 1471, Koror Ph (680) 488 2559 Fax (680) 488 5129	Executive Officer Environmental Quality Protection Board PO Box 100, Koror Ph (680) 488 1630 Fax (680) 488 2963 eqpb@belau.com	Minister of State, Office of the Minister PO Box 100, Koror Ph (680) 488 2509 Fax (680) 488 2443
PNG	Secretary Maritime Division Department of Transport & Civil Aviation PO Box 1489, Port Moresby Ph (675) 321 1866 Fax (675) 321 4968	Secretary Department of Environment & Conservation PO Box 6601, Boroko Ph (675) 325 0180 Fax (675) 325 0182	As per 2.
Samoa	Secretary Ministry of Transport PO Box 1607, Apia Ph (685) 23700/237002 Fax (685) 21990	Director Department of Lands, Survey and Environment Private Mail Bag, Apia Ph (685) 25019 Fax (685) 23176	Secretary Ministry of Foreign Affairs PO Box L1859, Apia Ph (685) 63333 Fax (685) 21504 mfa@samoa.net
Solomons	Marine Department Ministry of Transport, Works and Aviation PO Box G32, Honiara Ph (677) 24942 Fax (677) 23798	Chief Environment & Conservation Officer Environment & Conservation Division Ministry of Forests, Environment & Conservation PO Box G24, Honiara Ph (677) 21521 Fax (677) 21245	As per 2.
Tonga	Secretary Ministry of Marine & Ports PO Box 144, Nukualofa Ph (676) 23168 Fax (676) 24267 Email marports@kalia.to	Secretary Ministry of Lands, Survey & Natural Resources PO Box 5, Nukualofa Ph (676) 23210 Fax (676) 23216	As per 2.
Tuvalu	Director Marine & Port Services Ministry of Works, Energy and Communications Vaiaku, Funafuti Ph (688) 20725 Fax (688) 20790	Secretary Ministry of Natural Resources & Environment Private Mail Bag, Funafuti Ph (688) 20102 Fax (688) 20113	Secretary to Government Office of the Prime Minister Private Mail Bag, Funafuti Ph (688) 20801 Fax (688) 20819
Vanuatu	Commissioner of Maritime Affairs Vanuatu Maritime Authority PO Box 45, Port Vila Ph (678) 23410 Fax (678) 23405	Head- Environment Unit Ministry of Lands and Natural Resources Private Mail Bag 063, Port Vila Ph (678) 25302 Fax (678) 23565 Email environment@vanuatu.gov.vu	Director-General Ministry of Lands and Natural Resources Private Mail Bag 007, Port Vila Ph (678) 25302 Fax (678) 25165

Table Two continued.

Country/Territory	1. LEAD AGENCY (Maritime Administration)	2. Environment Administration	3. SPREP National Focal Point
American Samoa	Supervisor U.S. Coast Guard Marine Safety Detachment P.O. Box 249, Pago Pago, 96799 Ph (684) 633-2299 Fax (684) 633-1933	Director American Samoa Environmental Protection Agency Office of the Governor Pago Pago Ph (684) 633 2304 Fax (684) 633 5801	As per 2.
French Polynesia	Commandante de la zone maritime Polynesie francaisie SP 91325 00204 Armées – POLYNESIE FRANCAISIE Ph (689) 46 50 00 Fax (689) 46 50 56 24 hour contact ph (689) 46 24 32 Fax (689) 42 39 15	Charge Delegation a l'Environment BP 4562, Papaeete, Tahiti, Polynesie Francaise Ph (689) 43 24 09 Fax (689) 41 92 52 delenv@mail.pf	Special Adviser for Foreign Affairs Department of External Relations BP 2551 Papaeete, Tahiti, Polynesie Francaisie Ph (689) 5347 28 Fax (689) 432011
Guam	Commanding Officer U.S. Coast Guard Marine Safety Office Guam PSC 455, Box 176 FPO, AP 96540-1056 Ph (671) 339-2001 Fax (671) 339-2005	National SPREP Representative Guam Environmental Protection Agency 15-6101 Mariner Ave, Tiyan, Barrigada Ph (671) 472 8863 Fax (671) 477 9402	As per 2.
New Caledonia	Director Department of Merchant Marine & Marine Fisheries Boite Postale 36 98845 Noumea Ph (687) 272 626 Fax (687) 287 286	Contact via 3.	SPREP Correspondant Government Delegate for New Caledonia and Wallis/Futuna French High Commission BP M2 Noumea Ph (687) 272822 Fax (687) 272 828
Northern Marianas	Supervisor U.S. Coast Guard Marine Safety Detachment Emergency Operations Center Capitol Hill Saipan MP 96950-5000 Ph (670) 233-9495 Fax (670) 233-9493	Director Division of Environmental Quality P O Box 13.4 Saipan MP 96950 Ph (670) 664 8500 Fax (670) 664 8540 deq.director@saipan.com	SPREP Contact Caller Box 1007 Saipan MP 96950 Ph (670) 664 2200 Fax (670) 664 2211
Pitcairn	N/a	N/a	First Secretary (Press & Public Affairs) British High Commission PO Box 1812, Wellington New Zealand Ph (64) 4 4726 049 Fax (64) 4 711 974
Tokelau	Contact via 2.	Director Department of Natural Resources & Environment Atafu, Tokelau Ph (690) 21227 Fax (690) 2108	As per 2.
Wallis & Futuna	Contact via 3.	Contact via 3.	Prefect (SPREP Correspondent) Chief Territorial Administrator Mata-utu Ph (681) 722 952 Fax (681) 72 324

Table Two continued.

Country/Territory	1. LEAD AGENCY (Maritime Administration)	2. Environment Administration	3. SPREP National Focal Point
Australia	Executive Manager International Relations Australian Maritime Safety Authority GPO Box 2181 Canberra City ACT 2601 Ph (61) 2 6279 5614 Fax (61) 2 6279 5009 michael.julian@amsa.gov.au	Director International Unit Department of the Environment and Heritage Level 5, NCC House 16 Moore St, Canberra Ph (61) 6 6274 1388 Fax (61) 6 6274 1858 richard.bomford@ea.gov.au	High Commissioner Australian High Commission Apia, Samoa Ph (685) 23411 Fax (685) 23159 o'callaghan@daft.gov.au
France	Contact via 3.	Contact via 3.	Deputy Permanent Representative French Delegation to the Pacific Community BP 8043, Noumea, New Caledonia Ph (687) 261 603 Fax (687) 261 266 jpgaltier@spc.org.nc
New Zealand	Divisional Manager Marine Environment Protection Maritime Safety Authority of New Zealand PO Box 27006, Wellington Ph (64) 4 473 0111 Fax (64) 4 473 1245 mike.patrick@msa.govt.nz	Secretary Ministry for Environment PO Box 10362, Wellington Ph (64) 4 473 4990 Fax (64) 4 471 0195 rmo@mfe.govt.nz	High Commissioner New Zealand High Commission Beach Road, Apia, Samoa. Ph (685) 21711 Fax (685) 20086
USA	Chief Marine Safety Division District 14 US Coast Guard 300 Ala Moana Blvd Honolulu HI 66950 Ph (1) 808 541 2114 Fax (1) 808 541 2116 trice@d14uscg.mil	Manager Pacific Insular Area Programs United States Environmental Protection Agency 75 Hawthorne Street (CMD-5) San Francisco CA 94105 Ph (1) 415 744 1559 Fax (1) 415 744 1604 lovelace.norm@epamail.epa.gov	Science Affairs Officer OES/OA/MLP, Room 5805 Department of State 2201 C Street NW Washington DC 20520 Ph (1) 202 647 3883 Fax (1) 202 647 9099 AlcantaraRR@state.gov

Table Three: Oil Industry

Australian Marine Oil Spill Centre (AMOSC)	Clean Islands Council (CIC)	East Asia Response limited (EARL)
Manager Australian Marine Oil Spill Centre PO Box 305, North Shore Geelong, Victoria 3214 Australia Ph (61) 3 5272 1555 Fax (61) 3 5272 1839 24 hour emergency pager (61) 016 379 326 amosc@amosc.com.au www.aip.com.au/amosc	(to be added)	Chief Executive Officer East Asia Response Limited Regional Centre 2 Jalan Samulun Singapore 2262 Ph (65) 266 1566 Fax (65) 266 2312 admin@earl.com.sg

Appendix Two: Standard Pollution Report (POLREP) Form

(This standard form is available in electronic format from SPREP if required)

PACPLAN
Pacific Islands Regional Marine Spill Contingency Plan

Pollution Report (POLREP)

Should you observe or receive a report of a marine pollution incident, please:
1. complete this POLREP in as much detail as possible,
2. fax it immediately to the Lead Agency for marine pollution where the incident has occurred.
(see PACPLAN for contact details of national Lead Agencies)
3. please also fax it to SPREP at + (685) 20231.

Name/contacts of person completing this report: _

Date/time of report: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ Date/time of incident: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Location of incident: Latitude: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ Longitude: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Description of location (e.g. name, distance and bearing to nearest landmark): _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
_ _

Nature and source of incident (indicate which of the following, identify vessels/specific source where possible):

- Vessel aground/collision and leaking oil: _

- Vessel underway and discharging/leaking oil: _

- Vessel at anchor/moored/berthed and discharging/leaking oil: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

- Land-based source: _

- Oil slick with no definite source: _

- Other (please describe): _

Visual appearance and extent of pollution (estimate area and quantity if possible): _ _ _ _ _ _ _ _ _ _ _ _ _
_ _
_ _

Direction and rate of drift of pollution: _

Wind speed & direction: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ Sea state: _ _ _ _ _ _ _ _ _ _ _ _ _ Tide: _ _ _ _ _ _ _ _ _

Identity & position of vessels in the vicinity: _
_ _
_ _

Photographs taken?: _ _ _ _ _ _ Samples taken?: _ _ _ _ _ _ Other action taken?: _ _ _ _ _ _ _ _ _ _ _
_ _
_ _

Please submit this POLREP immediately!
(Attach additional information if required)

Appendix Three: Standard Situation Report (SITREP) Form

(This standard form is available in electronic format from SPREP if required)

PACPLAN
Pacific Islands Regional Marine Spill Contingency Plan

Situation Report (SITREP)

As the response to a marine pollution incident progresses, please:
1. complete these SITREPs on a regular basis,
2. fax them to affected/involved/interested parties
3. please also fax them to SPREP at + (685) 20231.

SITREP No. _ _ _ _   Name/contacts of person completing this report: _

Date/time of SITREP: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _   Date/time of incident: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Location of incident: Latitude: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ Longitude: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Description of location (e.g. name, distance and bearing to nearest landmark): _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
_ _

Nature and source of incident (indicate which of the following, identify vessels/specific source where possible):

- Vessel aground/collision and leaking oil: _

- Vessel underway and discharging/leaking oil: _

- Vessel at anchor/moored/berthed and discharging/leaking oil: _

- Land-based source: _

- Oil slick with no definite source: _

- Other (please describe): _

Visual appearance and extent of pollution (estimate area and quantity if possible): _ _ _ _ _ _ _ _ _ _ _ _ _ _
_ _
_ _
_ _

Direction and rate of drift of pollution: _

Wind speed & direction: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ Sea state: _ _ _ _ _ _ _ _ _ _ _ Tide: _ _ _ _ _ _ _ _ _

Events since POLREP/last SITREP: _
_ _
_ _
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_ _
_ _
_ _
_ _

(Attach additional information if required)

PACPLAN
Pacific Islands Regional Marine Spill Contingency Plan

REQUEST for ASSISTANCE

Requesting Country/Territory: _____

Lead Agency: _____
    Contact person: _____
    Phone: _____ Fax: _____ Email: _____

Request to: _____ Fax: _____

Nature of Pollution Incident: _____
_____

Type of pollutant spilled: _____ Quantity: _____

Location of spill (Latitude & Longitude): _____

Source of spill: _____

Environmental impacts (actual and threatened): _____
_____
_____

Action taken to date: _____
_____
_____

Assistance Required: _____
_____
_____

Technical Advice? ☐ If yes, in what areas? _____
_____
_____
_____
_____

Personnel?: ☐ If yes, what areas of expertise?: _____
_____
_____

Equipment?: ☐ If yes, what types and for what purpose?: _____
_____
_____
_____
_____

Are customs, immigration and quarantine procedures cleared for incoming personnel and equipment? ☐
Details: _____
_____

Are logistics, including transport and accommodation, in place for incoming personnel and equipment? ☐
Details: _____
_____

(Attach additional information if required)

Appendix Five: Model Memorandum of Understanding for Bilateral Co-operation

(This model MoU is available in electronic format from SPREP if required)

Memorandum of Understanding (MoU) Between
(Lead Agency for Government of   ) and (Lead Agency for Government of   )
on
Marine Spill Preparedness and Response

1. In accordance with the provisions of the International Convention on Oil Pollution Preparedness, Response and Co-operation 1990 (OPRC 90), and the Protocol Concerning Co-operation in Combating Pollution Emergencies in the South Pacific Region (SPREP Pollution Protocol), *(insert name of Lead Agency)* and *(insert name of Lead Agency)*, which are the national Lead Agencies responsible for the overall command and control of the response to marine pollution incidents in *(country/territory)* and *(country/territory)* respectively, hereby place on record their intention to co-operate on marine spill preparedness and response.

2. In the event of a marine pollution incident, each national Lead Agency can request assistance from the other party. The requesting party shall be the sole judge of the need for such assistance.

3. Requests for assistance will be directed through *(channels to be agreed and details inserted)*.

4. The parties will keep each other advised of the designations of officers authorised to request assistance under his MoU.

5. Subject to availability of relevant resources under their direct control, each party undertakes to provide equipment, materials and personnel for the purpose of assisting the response to a marine pollution incident. The party receiving the request may also make equipment, materials and personnel not under the direct control of a party, for example those under the control of the oil industry, available following a special approach for those resources.

6. When requesting equipment, the requesting party will itemise the equipment by referencing the type, name, size etc from the national equipment inventory lists as provided from time to time.

7. Reimbursement of costs of assistance will be determined in accordance with the provisions of OPRC 90.

8. Experienced personnel will accompany specialised equipment at the discretion of the providing party.

9. To facilitate Customs requirements all equipment and materials will be entered on behalf of the government of the requesting party.

10. Transport of equipment, materials and personnel will be by the most convenient means and will be arranged at the time of the incident after consultations between each party.

11. Each party agrees to regularly consult on matters relating to marine spill response, including exchanging:
    *   information on changes in equipment and materials,
    *   copies of contingency plans and marine pollution laws,
    *   information on significant pollution incidents,
and conducting joint exercises and training activities.

1. The parties agree to co-operate in the enforcement of marine pollution laws.

2. This MoU will come into effect at the date of signing and will remain in effect unless terminated by either party, giving the other party six months notice in writing of its intention to terminate.

Signed in duplicate at *(insert location)* on this .... day of ....

....
(insert name/ position of authorised signing officer)   *(insert name/position of authorised signing officer)*

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 7.3.2.7: Waigani Convention

Purpose of Paper

1.   To urge Pacific islands countries to become Party to the *Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region* (Waigani Convention).

Background

2.   There is a real threat to human health and the environment posed by the increasing generation of hazardous wastes. There are also threats associated with unsound methods of their disposal as well as potential disposal of radioactive waste. The shortage of land areas and the risadverse environmental effects of wastes make the option of landfill disposal unsustainable in the long term and implies the need to develop recycling and recovery schemes as well as minimize the generation of hazardous wastes. Pacific Island Developing Countries, will have to export hazardous wastes, as they lack the domestic capacity to manage such hazardous wastes in an environmentally sound manner. No less important is the crucial threat to a number of Pacific Islands Developing Countries which have already been approached by unscrupulous foreign waste dealers trying to import and dispose hazardous wastes within the Region.

3.   As a result of these concerns, the Waigani Convention was adopted within the framework of Article 11 of the Basel on the 16 September 1995.

4.   The Convention has been so far ratified by only five countries *(Australia, Federated States of Micronesia, Fiji, Papua New Guinea and Solomon Islands)* and will enter into force upon the deposit of the tenth instrument of acceptance.

5.   The Secretariat of the Waigani Convention will be SPREP when the Convention enters into force and the Depositary is the [Secretary-General for] Forum Secretariat.

6.   **The main objectives of the Convention are:**

> ➤ To prohibit the importation of hazardous wastes into Pacific Island Developing Parties as well as to regulate and facilitate the environmentally sound management of such wastes generated within the Convention Area;

> ➤ To prohibit the importation of all radioactive wastes into Pacific Island Developing Countries;

> ➤ To reduce transboundary movements of hazardous wastes to a minimum consistent with their environmentally sound management;

> ➤ To treat and dispose of hazardous wastes as close as possible to their source of generation in an environmentally sound way;

> ➤ To minimize the generation of hazardous wastes (quantity-potential hazard).

Provision of the Waigani Convention:

7.   The Waigani Convention provides for a strict control system on the transboundary movement of hazardous wastes, based on the **Prior Written Notification Procedure**. A movement can take place only after the State of Import and Transit have given its express written consent to the State of Export.

8.   The Convention strictly **prohibits illegal traffic** *(Movement without notification, without the consent of a country concerned consent obtained from country through falsification; consent does not conform with the supporting documentation; deliberate disposal of hazardous wastes; movement in contradiction with the import-export ban.)*

9.   There are also a number of **technical requirements** under the Convention for the strict safety of transboundary movements including the movement documents, packaging and labeling of the hazardous wastes.

10.   Another fundamental element which is of direct implication for the Pacific islands countries is the adoption on 10 December 1999 of the **Basel Convention's Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal** which will enter into force upon the deposit of the 20th instrument of ratification. It establishes a system of strict and limited liability as well as of compulsory insurance for accidents and illegal traffic involving hazardous wastes. It also recognizes the special status of Small Island Developing States which will be able, as transit States, to benefit from the advantages of the Protocol before becoming a Party to the Basel Convention. However, as a prerequisite, they must have already acceded to a regional or global instrument on the transboundary movement of hazardous wastes which is in force. So, the effectiveness of such a Protocol for the Region requires the Waigani Convention to be in force.

The main advantages of becoming Party to the Waigani and Basel Conventions

11.   The Waigani Convention provides, at the Regional level, a similar scope to the Basel Convention while taking into account the specific situation and needs of Pacific islands countries. They are of mutually supported in their implementation and have the potential to also support the upcoming Persistent Organic Pollutants (POPs) Treaty. When becoming Party to the Waigani Convention, there is no additional obligation to become Party to the Basel Convention. Consequently, it should be of best interest for a country, when becoming Party to the Waigani Convention to also become a Party to the Basel Convention.

12.   It is recognized that the response to issues related to the environmentally sound management of hazardous wastes can be done only through cooperation based on an understanding of the specific needs and capacities of all Parties. Therefore, being a Party to the Waigani and Basel Conventions is the key to eligibility for cooperative activities as well as for the facilitation of providing:

> ➢ Legal assistance including adoption of legislation, institutional arrangements and preparation of administrative procedures and enforcement;

> ➢ Technical assistance for the environmentally sound management of hazardous wastes;

> ➢ Access to information and sharing of expertise available at the Secretariat of the Basel Convention (SBC) / SPREP;

> ➢ Financial support for representatives of Pacific Island Developing Parties to attend meetings;

> ➢ Improved public health and reduced risk for the population and the environment, and

> ➢ Access to technical Centres for Training and Technology transfer.

Cooperation between the Secretariat of SPREP and the Secretariat of the Basel Convention.

13.   With the objective of avoiding any duplication of efforts and making the best use of developments which have occurred under the Basel Convention, the Secretariat of SPREP is cooperating closely with the Secretariat of the Basel Convention.

14.   In light of this, formal-working relations between the Secretariat of the Basel Convention and the SPREP Secretariat has been developed through:

> An MOU signed on 12 February 1996 between the two Secretariats which fully agreed on mutual representation at appropriates meetings; strengthening and expansion of activities of mutual concern to the Pacific; development in two years cooperative programmes for activities of mutual interest and concern to the South Pacific Region; consultation on policy matters; information to the respective member countries on any cooperative activities undertaken; and cooperation in providing technical and legal assistance in order to fully implement both the Basel and Waigani Conventions (subject to availability of funds).

> Another MOU signed between UNEP and SPREP on the occasion of the visit by the Executive Director of UNEP to SPREP, 3 March, 2000 which contains a specific provision stipulating that both Organisations agreed "To fully implement the Waigani and the Basel Conventions through the strengthening of cooperation between the Secretariat of the Basel Convention and the SPREP Secretariat".

15. As a means of implementing these MOUs, the following has been done:

> Assessment and advice to SPREP by Basel Secretariat of SPREP's role as the Secretariat of the Waigani Convention made in August 1999 which also identified a number of areas of cooperation with the objective of assisting Pacific Island Developing Countries with the implementation of the Waigani/Basel Conventions. These are mainly information systems; joint training material and activities; illegal traffic awareness; adaptation of existing tools and documents including Annual Reporting Form; Technical Guidelines; Notification document, Movement document; Model legislation; Model of instrument of accession.

> Request to the Executive Director of UNEP, for a firm commitment of UNEP to assist SPREP with the implementation of the Waigani and the Basel Conventions.

> Visit of the Head of the Secretariat of the Basel Convention to the South Pacific Region with the objective of promoting the implementation of both Conventions.

> A Sub-regional Awareness Raising Workshop on the Prior Informed Consent (PIC) Procedure, Persistent Organic Pollutants (POPs) and the Waigani-Basel Conventions (planned for May 2000 in Fiji but cancelled due to political events.

> A planned training Seminar for Small Islands Developing States (SIDS) of Asia-Pacific in November 2000.

16.   It should be noted, (and as required also by the Waigani Convention), that the Secretariat of SPREP, under its South Pacific Regional Pollution Prevention, Waste Minimization and Management Programme has already identified a number of waste chemicals covered by the Waigani Convention as well as possible facilities for their disposal.

Recommendations

17.   The meeting is invited:

> ➢ to **recall** the importance of the Waigani Convention as the regional mechanism to address the critical issue of importation into Forum Island Countries of Hazardous and Radioactive Wastes and to establish a strict control over transboundary movement and management of Hazardous wastes;

> ➢ to **recognize** the Waigani Convention as the vehicle to facilitate the regional implementation of the Basel Convention;

> ➢ to **note** with concern the slow process of ratification of the Waigani Convention;

> ➢ to **request countries** to investigate and report to the Secretariat of SPREP, no later than February 2001, on any national barriers to becoming Party to the Waigani Convention;

> ➢ to **request SPREP** for assistance in overcoming the barriers to becoming Party to the Waigani Convention;

> ➢ to **affirm** the respective MOUs with the Basel Secretariat and UNEP and request the SPREP Secretariat , jointly with the Basel Secretariat to prepare a detailed paper on collaborative arrangements between both Secretariats, consistent with the MOUs to be circulated to the Governments in the year 2001;

> ➢ to **request countries** to commit themselves to establishing close working relations with the Secretariat of SPREP toward the entry into force of the Waigani Convention as soon as possible, and

> ➢ to **note** the work being undertaken under the SPREP Waste Management, Pollution Prevention and Emergencies Programme and identify activities which can facilitate the implementation of the Waigani Convention.

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam,
10-12 October 2000

Agenda Item 7.3.2.8: Regional Framework for Climate Change, Climate Variability and Sea-Level Rise.

Purpose of Paper

1.   To inform SPREP Members of progress to date with the development of the Pacific Islands Framework for Climate Change, Climate Variability, and Sea-Level Rise.

2.   To seek endorsement of the process to further improve the Framework, and ensure its components meet the needs and priorities of Pacific island countries in an open and transparent manner with all relevant stakeholders.

3.   To seek endorsement of the Framework as regional policy guidance on climate change, climate variability, and sea-level rise.

Background

4.   At the Pacific Islands Conference on Climate Change, Climate Variability, and Sea-Level Rise, held from 4-7 April 2000, in Rarotonga, Cook Islands, participants agreed to the development of a regional policy framework for climate change, climate variability, and sea-level rise. The aim of the framework is to assist Pacific island countries and relevant stakeholders to improve their coordination and collaboration to meet Pacific island countries' priorities and needs in the area of climate change, climate variability, and sea-level rise.

5.   The Conference participants also agreed that the establishment of a Round-Table process as a mechanism to improve and implement the Framework was an appropriate method for all relevant stakeholders to take ownership of the Framework and the consultative process needed to eventually implement the Framework.

Progress to Date

6.   Since the April Conference, comments have been received by the Secretariat from a wide range of stakeholders. These include: The Marine Sector Working Group; CROP Heads; participants attending the Climate Change and Health workshop; participants at the Alliance of Small Island States (AOSIS) Consultative Meeting; Directors of the Regional Meteorological Services, Kiribati, Fiji, and Australia.

7.   During the holding of the United Nations Framework Convention on Climate Change (UNFCCC) Subsidiary Bodies Meetings, held in Bonn, Germany from 5-17 June, 2000 the Government of Australia, AOSIS made separate submissions on the Framework to the Secretariat for distribution and notation for Parties and other organisations, leading towards the Sixth Conference of the Parties (COP6) of the Convention.

8.   During the AOSIS Consultations on Climate Change Negotiations, Management and Strategy, held in Apia, Samoa from 27 July to 4 August 2000, Pacific island country representatives asked the SPREP Secretariat to continue with further improvement of the Framework. The Framework is intended to be submitted to the SPREP Ministerial Meeting for endorsement and for transmission to the 27th South Pacific Forum Leaders Meeting, for their respective endorsement.

Recommendation

9.   The Meeting is invited to:

- **note** the progress to develop and further improve the Framework;

- **recognise** the importance of the Framework in building partnerships and assisting Pacific island countries understand and respond to climate change, climate variability, and sea-level rise;

- **call** on the Secretariat, with the assistance of development partners, to facilitate the Round-Table process to further strengthen partnerships, improve coordination and focus on the implementation of the Framework; and

- **endorse** the principles of the Framework, and transmit the Framework to the Environment Ministers' Forum, Guam, 13 October 2000 and the Pacific Island Forum Leaders Meeting in Kiribati, during October 2000.

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25 August 2000

DRAFT PACIFIC ISLANDS' FRAMEWORK FOR ACTION ON CLIMATE CHANGE, CLIMATE VARIABILITY AND SEA LEVEL RISE

Table of Contents

Preamble

Pacific Island Countries (PICs) have long been concerned about the serious impacts of human-induced climate change, natural climate variability and sea level rise in the region. It is clear that they are extremely vulnerable to variations in weather, climate and sea level rise, and will be among the first to suffer the impacts of climate change and among the first to be forced to adapt or abandon or relocate from their islands.

Over the last decade, PICs have continually urged the international community to reduce greenhouse gas emissions. They have conveyed their concerns over impacts of a changing climate internationally and have given their strong support to a broad range of international agreements, such as, Agenda 21, the Barbados Programme of Action (BPoA) and its recent review, and the United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol. PICs, however, remain seriously concerned that global emissions of greenhouse gases continue to grow. While the Kyoto Protocol is a first step towards cutting back on these emission trends, the targets contained in the Kyoto Protocol are considered to be inadequate to fully meet the objectives of the UNFCCC.

Given their vulnerability, the PICs need to improve their understanding of and strengthen their capacities to respond to human-induced climate change, natural climate variability and sea level rise. This has been reflected in numerous statements by the region's leaders and continues to be a priority for PICs at all levels.

In response, support has been received from the international community to assist the region with programmes of research, technical studies, capacity building, planning and the development of policy relevant advice. PICs have also committed significant resources of their own to address problems of climate change, variability, and sea-level rise.

This Framework builds upon these **initiatives**. It outlines urgent action required within the Pacific region to enable PICs understand and respond to human-induced climate change, natural climate variability and sea level rise. It represents the national interests and priorities of PICs. It has been developed through broad consultations between PICs, their development and other collaborating partners, regional and international organisations, the scientific community, and non-governmental organisations (NGOs).

Basis for Action

Internationally, the Barbados Programme of Action (BPoA) recognised the special situation of Small Island Developing States (SIDS) and their vulnerability to global climate change, climate variability and sea-level rise. The BPoA provides for international support to SIDS across a number of sectors to assist them in adapting to climate change. The 22nd Special Session of the United Nations General Assembly (UNGA) reaffirmed the commitment of the international community to the BPoA and sought to accelerate programmes of assistance.

PICs are continuing to experience the impacts of a changing and variable climate. Many of these are consistent with the anticipated impacts of global human-induced climate change. A growing body of quantitative and qualitative information and strong anecdotal evidence from across the pacific region supports these. Collaborative efforts among regional and international scientific and technical organisations are providing valuable information that are being used to better predict human-induced climate change and natural climate variability and establish the magnitude of climate change and likely impacts in this region more conclusively.

The balance of evidence suggests the need for [**precautionary and "no/low regrets"**][1] action to be taken at [**national, regional and international levels**] [**at all levels**]. It is in this context that Pacific island policymakers require answers to critical questions relating to their vulnerability and their sustainable development – a future that is intimately linked to the continuum of weather, climate variability and longer term climate change. This will require stronger linkages between science and policy and a well co-ordinated effort among all stakeholders.

Some capacity has been built in this region over the last decade that will facilitate these efforts. This is reflected in the considerable efforts by PICs in recent years to prepare national technical studies and the development of policy relevant guidance for key sectors. Significant challenges for policy development have been identified in relation to a range of likely impacts, including:

- The loss of revenue across productive sectors
- Agricultural production;

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[1] Texts in square bracket were not resolved in Rarotonga. This needs to be resolved at the Highest Level.

- The shifting of fishing fish grounds and impact on total stocks;
- Bleaching and ultimately death of coral reefs;
- Damage to coastal infrastructure and accelerated coastal erosion;
- Availability and quality of water resources for local communities and tourism;
- The need for economic diversification to improve resilience;
- Social and cultural disruption, including, displacement and adverse effects on traditional systems; and
- Human health.

There is a need to focus on the continued improvement of both the technical studies and policy development as science-based understanding increases, and their inter-relationships and complexities become clearer. Effort should not focus solely on studies, but rather the end-point or implementation of the developed policies and plans, and on identifying the ways and means to ensure that these efforts are harmonized and mainstreamed with each PICs National Development Plans (NDP).

Understanding climate change, climate variability and sea level rise at the local and national levels will be critical as will the development of appropriate methods and technology, the use and integration of traditional knowledge and the communication of science in ways that can be understood and used by Pacific island policy makers and their constituencies. This includes the need to link scientific analysis to downstream social and economic effects.

This has been demonstrated recently through extreme weather and climate events and changes in sea levels and temperature. For example, in Fiji, drought wiped out some two-thirds of the newly planted sugar crop in 1998, the overall economic impact was equivalent to 3% of GDP. Tonga's squash crop, which produces about half that country's exports by value, was more than halved. In Papua New Guinea, Australia spent more than $A30 million delivering food aid to people in isolated areas in the highlands and low-lying islands, many of whom were close to starvation. The drought substantially reduced Papua New Guinea's important coffee harvest. In the Federated States of Micronesia, crops and water supply were severely affected and national disaster was declared, where food aid and water was delivered to all the affected areas. In the Marshall Islands, the droughts caused a severe water shortage that limited households to seven hours of tap water every 14 days. As a result, the United States brought in desalinization plants to provide water for the population. In Palau, there were severe impacts with a loss of 30% of coral reefs and drought led to the major loss of taro affecting 30% of the population. In Samoa, fires sparked by the unusually dry conditions destroyed large areas of forest on the island of Savai'i. Tuvalu suffered 3 cyclones during this period resulting in the loss of land, inundation of taro pits, destruction of houses, and contamination of freshwater supplies. La Nina events have resulted in a severe drought in both Kiribati and Tuvalu.

Overview of Science and Policy

At the international level, the Intergovernmental Panel on Climate Change (IPCC), concluded in 1995 that, "the balance of evidence suggests there is a discernable human influence on global climate"" PICs have worked with the Intergovernmental Panel on Climate Change (IPCC) on the Second Assessment Report (SAR) on the Regional Assessments, as well as made important contributions to the Third Assessment Report (TAR).

The IPCC/SAR concluded that global surface temperatures increased by $0.4 - 0.6°C$ during the 20th century and would increase by 1 to $3.5°C$ between 1990 and 2100. The SAR also concluded that between 1990 and 2100 global averaged sea level would rise by between 0.13 and 0.94m. It also noted more El Nino's occurred after 1975. With regard to policy, PICs as members of the Alliance of Small Island States (AOSIS) have actively participated and made contributions in the negotiations processes on the UNFCCC and the Kyoto Protocol.

Regionally, there have been numerous studies and conferences on climate change and sea level rise and climate variability. There are a number of significant scientific findings of particular importance to the region. These include:

- impacts of climate change and climate variability are possibly the most critical environment issue facing PICs;

- Regional surface temperatures have increased by 0.5 -0.8 C during the 20th century, with less warming in the north, and largest warming in the south west of the region. Since the mid 1970s it has become wetter in the northeast, and drier in the south west;

- Results for the Pacific region from global climate modelling indicate future warming rates would likely to be similar or higher to the projected global warming rate. Rainfall changes are less certain but the majority of general circulation models (GCMs) show increased rainfall in the northeast of the region. There are some results indicating more frequent El Nino conditions and more intense tropical cyclones;

- [(Observations) **Some papers [studies]**[2] indicate a rise in global sea level of 1 to 2 mm per year over the 20th century. Available evidence suggests that the rate of sea-level rise in the Pacific region is similar to the global average]

- [(there is as yet no evidence that the average observed sea level rise in the region is different to the global average;) **proposed deletion of this paragraph**[3]]

- [**Some papers [studies] suggest**[4] movements of land levels can be of the same order of magnitude as that of sea level change and can vary amongst individual islands complicating local effects of sea level changes];

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[2] Kiribati (need references as this contradicts with scientific measurements in the region)
[3] Kiribati
[4] Kiribati (need references)

[Alternative text suggested by the SPREP Secretariat to replace all the three paragraphs in brackets above: *Over the last 100 years global sea level has risen by about 10 to 25 cm, based on analyses of tide gauge records. A major source of uncertainty in estimating the rate of rise the influence of vertical land movements, which are included in sea level measurements made by tide gauges[5].]*

- Climate and Sea Level Variability are linked with the well documented ENSO phenomenon, but there is new emerging evidence of an ocean basin wide Interdecadal Pacific Oscillation (IPO) which contributes to decadal climate variability;

- Spaceborne measurements are critical, to combine with long term tide gauges, for the determination and prediction of absolute and relative sea level rise (seasonal, ENSO and secular) along with the associated land motion in the Pacific Region;

- Although climate and sea level variations have the most immediate and direct impact on atoll countries, they also can have profound impacts on virtually all PICs in areas such as health, agricultural, fisheries, coastal ecosystems, and damage to infrastructure;

- Recent scientific observations indicate that the upper 1000m of the Pacific Ocean is warming, resulting in thermal expansion equivalent to a rate of about 1mm per year sea level rise**[and from this contribution sea-level rise would accelerate[6]];**

- droughts, tropical cyclones and other extreme climate events cause large impacts on PICs and these are strongly influenced by ENSO event which can be forecasted;

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[5] IPCC Second Assessment Report (SAR), 1995. "Climate Change 1995: The Science of Climate Change. Contribution of Working Group 1 to the Second Assessment Report of the Inter-governmental Panel on Climate Change", Edited by J.T.Houghton, L.G. Meira Fiho, B.A. Callander, N. Harris, A. Kattenberg and K. Maskell, Cambridge University press, First published 1996.
[6] Kiribati

- Absolutely vital to the continued progress in understanding and adapting to climate and sea level change and variability is the maintenance and enhancement of atmospheric oceanographic and geodetic monitoring systems to ensure climate records reach agreed international standards.

Climate change, climate variability, and sea-level rise, being a global concern, now have a well-developed international support infrastructure that ensures international planning and co-ordination of scientific programmes and exchange of scientific information. Of particular relevance are the work of a number of international and regional agencies such as the World Meteorological Organization (WMO), the Inter-governmental Oceanographic Commission (IOC) of UNESCO, UNEP and ICSU, FAO, and all CROP agencies. These organisations have put in place programmes under the Climate Agenda, including the World Weather Watch (WWW), the World Climate Program (WCP), Integrated Global Observing Strategy (IGOS), the Global Climate Observing System (GCOS), Global Ocean Observing System (GOOS), and the Global Terrestrial Observing System (GTOS). The Pacific is well served in these activities through regional counterparts in the South Pacific Regional Environment Programme (SPREP), the Forum Secretariat (FORSEC), South Pacific Geoscience Commission (SOPAC), Secretariat for the Pacific Community (SPC), University of the South Pacific (USP), University of Guam, Forum Fisheries Agency (FFA), Pacific Islands Development Program (PIDP), University of Papua new Guinea (UPNG), the WMO Sub-Regional Office in Apia and the IOC office in Perth.

Climate policies are still in their developmental stages, although some countries developed initial policies when they undertook the National Environmental Management Strategy (NEMS) activities in 1992. Increased focus on national and sector based policy development over the past three years has occurred with the advent of the Pacific Islands Climate Change Assistance Programme (PICCAP). PICCAP's enabling activities has catalysed efforts in the context of implementing the UNFCCC, particularly in terms of developing policy response measures to climate change, climate variability, and sea-level rise. The increased focus on policy development related to climate has taken place within national frameworks such as the National Implementation Strategies (NIS) initiated in 1999 through PICCAP. This framework involves an intensive and focused process over time that highlights:

- **strengthening participation by all stakeholders, nationally and locally;**

- involving those stakeholders in a long term consultative process to develop relevant policies;
- the development and strengthening of sector policies as they relate to climate change, climate variability, and sea-level rise; and
- the development and strengthening of national policies on climate change, climate variability, and sea-level rise as they relate to the negotiation process of the UNFCCC[7].

Goal

To catalyse action and strengthen partnerships at all levels to enable the Pacific Island's region understand and respond to climate change, climate variability and sea level rise.

Priorities for action

The Pacific Island Conference on Climate Change, Climate Variability and Sea level Rise, Rarotonga, 3-7 April 2000, has identified a number of priorities for action under the following major headings. Capacity building is common throughout the priorities identified and is seen as critical to the sustainability of policies and programmes that will enable PICs understand and respond to climate change, climate variability and sea level rise.

1. Capacity building

In considering actions to be taken under each of the general headings outlined in this section, the Conference recognised the urgent need for further capacity building in order to enable PICs to contribute effectively to scientific research relating to climate change, climate variability and sea level rise, conveying that information effectively to policy makers and the public to inform decision making; and implementing programmes of action at the national, regional and international levels.

In the Pacific Islands region, capacity building cuts across all issues related to climate change, climate variability, and sea-level rise. PICs stressed that capacity building:

- **needs to enable implementation, coordination of their priority national needs and human resource requirements;**

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[7] SPREP

- is a long term issue and must be ensured by a programmatic approach rather than a project by project basis;
- cuts across a number of international and regional agreements, such as the Convention on Biological Diversity, and the Apia Convention, and recognise that there needs to be consistency in approaches and actions;
- is one component of a country's goal leading towards sustainable development[8];

2. Understanding the climate system and sea level rise

Understanding the climate system is fundamental to sustainable development in this region. To inform local and regional responses to climate change, climate variability and sea level rise, it will be essential to strengthen the analytical capacity of relevant national and regional institutions.

➤ Strengthen the capacity of National Meteorological Services (NMSs) to collect, exchange, and utilize data and information needed for preparing daily weather forecasting, seasonal climate predictions and longer term climate change scenarios.

- Specific actions will be identified by the Pacific Meteorological Services Needs Analysis Project (PMSNAP)[9] undertaken by SPREP, WMO, the Bureau of Meteorology of Australia, MetService NZ Ltd, Meteo France, US NOAA National Weather Service, Fiji Meteorological Service and all SPREP NMSs

[8] SPREP
[9] The PMSNAP has been completed. Summary of findings and recommendations is reproduced as Appendix I to this Framework.

➤ Reduce the uncertainties in climate prediction and scenarios, with an increased focus on regional variability and changes, particularly extreme weather and climate events. **Cooperative arrangements at the regional and national levels are essential[10].** Specific action includes:

- prediction on all the scales, seasonal, inter-annual, decadal, and longer;
- detection and distribution of human-induced climate change in the region;
- enhancement of capacity for climate observations and monitoring;
- better utilisation of in situ measurements and new instrumentation systems such as satellites and ARGO floats;
- better understanding of extreme events, in particular, the frequency and severity of tropical cyclones, occurrences of ENSO events, and trends in heavy rainfall;
- coupling of observational studies with GCM and ocean forecasting systems;
- retrieving data in paper records into computer form;
- free and unrestricted use and access to data **for agreed purposes between concerned partners[11], and in the context of WMO Resolutions 25 and 40[12];**
- restoration of historical climate monitoring networks;
- improve understanding of the Inter-tropical Convergence Zone, South Pacific Convergence Zone, and Inter-decadal Pacific Oscillation,
- Ongoing support for **measurements of meteorological/atmospheric, oceanographic, and terrestrial variables in Pacific Island settings to provide the essential data for detecting and attributing human-induced climate change, for monitoring understanding and predicting climate change, climate variability and sea level rise, consistent with the resolution[13] concerning the improvement of global climate observing systems in the pacific region, adopted at the Seventh SPREP Meeting of Regional Meteorological Services Directors (7RMSD), held in Samoa, August 16-18, 2000.**

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[10] Fiji
[11] Kiribati
[12] WMO
[13] Reproduced as Appendix II to this Framework.

- Joint climate change, climate variability and sea level rise projects between international organisations and research institutions and PICs.
- Address the land or tectonic movement, including monitoring using GPS technology
- Joint projects between international research organisations, local research organisations and educational institutes.
- Emphasis on improvement in telecommunications capacity across the region.
- Training local people in understanding and analysing data from various monitoring projects.
- Mapping (topographic/hydrographic etc) of atolls in PICs. Proper scale to capture SLR, using base mapping surveying techniques.
- Improvement of educational programmes in the Pacific region. Capacity building in terms of scholarships, attachments, etc.

Sea level rise and sea level variability is of major concern to PICs. The maintenance of existing observational networks and the strategic placement of future facilities, improved techniques for detecting relative and absolute sea level rise and improved models will greatly assist with the formulation of response measures. Specific action required includes:

➢ Continuous long and short term monitoring of sea level at a local spatial scale;
➢ support for the maintenance of meteorological equipment to ensure ongoing reliable data at the national level;
➢ Continuous monitoring **and characterisation**[14] of the impacts of sea level rise and storm surges;
➢ Local spatial information, discrimination utilizing satellite technology;
➢ Calibration of satellite/remote sensing with in-situ monitoring;
➢ Establishment of a regional sea level database in the Pacific;
➢ Utilisation of satellite and altimeter data;
➢ Foster partnerships with big over-arching International Science Programmes e.g. CLIVAR/GOOS/GCOS/GTOS.

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[14] Fiji

3.   Impacts and vulnerability

PICs are continuing to experience the impacts of a changing and variable climate system and related sea level rise and variability. Many of these are consistent with the anticipated impacts of global climate change. A growing body of qualitative information and strong anecdotal evidence from supports this across the Pacific. Specific action includes:

➢ Strengthen and enhance the capacity of PIC and their respective national institutions and regional organisations to undertake the assessments of impacts related to climate change & SLR. In addition collaboration between the PIC and regional organisations with regard to climate change, climate variability and sea level rise need to be further strengthened and maintained.

➢ Improve forecasting and warning for droughts, floods and tropical cyclones particularly related to the ENSO phenomenon. Further emphasis is required to improve our understanding of the natural variability of climate in the region.

➢ Appropriate training of national experts in the science of climate change and sea-level rise should be undertaken in a sustainable manner. The training needs to be strengthened by the provision of appropriate level of resources at a country level and in-country training.

➢ Further research is required to link historical and anecdotal information as evidenced by many communities in the region to climate change, variability and sea-level rise. Climate models used at present are probably not appropriate for understanding local level impacts and therefore relevant local data is particularly critical for enhancing the understanding of impacts.

➢ Enhanced coordination amongst all regional and international agencies to disseminate information on impacts of climate change, climate variability and sea level rise.

➢ Develop new frameworks for analysing impacts and vulnerability that integrate science and local needs, in particular those that will assist with the characterization of vulnerability to climate change, climate variability and sea-level rise on Pacific island communities.

> Increased use of tools to assess economic and social impacts of climate change, climate variability and sea level rise.

> Promote mechanisms to encourage sustained interaction between scientists and policymakers at all levels.

4.   Response Measures

In the last decade, a number of response policies have been identified and in many cases implemented in the region to mitigate and adapt to climate change, climate variability and sea level rise. These policies were identified through a series of international, regional and national conferences and consultations. A number of responses, under specific sectors, which are of particular importance to the region, have been identified. These include but are not limited to:

Coastal Zones

> Formulate and implement Integrated Coastal Management (ICM), **including protection plans**[15]
> [(Formulate and implement coastal zone protection plans) **proposed deletion**[16]]
> Conduct inventory and mapping of coastal and near shore resources and processes (e.g. beaches, soils, bio-diversity), including baseline inventories against changes which can be monitored and coordinated

Vulnerable High-risks areas

> Implement land use planning to limit development in highly risk vulnerable zones and areas

Water Resources

> Assessment of freshwater resources.
> Formulate ground water demand and assessment programs, particularly for smaller outer islands and atolls

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[15] SPREP
[16] SPREP

> Assess salt water intrusion
> Implement water shed management
> Improve rainwater catchment systems
> Implement water conservation programs including public awareness and education
> **Assessment of the effects of plantations such as pine, mahogany, etc, on the hydrology/water cycle[17]**

Marine Ecosystems

> Conduct national coral reef surveys to investigate the health of coral reefs
> Promote sustainable harvesting of in-shore fisheries

National Disaster and Emergency Management Units

> Formulate and improve emergency plans, including external emergency response agreements with appropriate developmental partners
> Enhance the capacity of National Disaster Management Units (DMU) in the region to respond to extreme weather and climate events

Weather and Climate Forecasting and Predictions

> Strengthen the capacity of National Meteorological Services to provide early, accurate, and timely forecasts and warnings, including seasonal forecasting for appropriate planning responses
> Develop and design appropriate adaptation technologies to protect PICs' from storm surges and flooding

Health Issues

There is increasing evidence of linkages between climate change and climate variability on health conditions in the region. In formulating response strategies to address the impacts of climate change, climate variability, and sea-level rise, there is a need for:

> **Better understanding of these linkages through research that will provide a basis for improving response/prevention strategies;**

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[17] SPREP

> Evaluation of links across disease categories, that allow a shift of priorities and emphasis for public health planning and resource management;
> Such climate/health linkages are complex and must be viewed in context of other environment stressors and human activities.[18]

Relocation

> Formulate relocation strategies or plans for highly vulnerable areas

Institutional Strengthening

> Strengthen existing institutions and programs in the region, where needed, to collect data and provide seasonal forecasts and early warnings of weather and climatic events
> Formulate appropriate legislation and regulations to address causes and impacts to climate change, climate variability and sea level rise effects
> Strengthen PICs input into international conferences and meetings such as the UNFCCC and its subsidiary bodies (SBSTA, SBI) and the Kyoto Protocol, to ensure that Policies and Measures (PAMS) implemented in countries outside the region do not negatively impact on PICs
> Enhance or strengthen curricula in tertiary and training institutions[19]
> Promote research and development efforts in regional institutions[20]
> Improve links and collaboration among CROP agencies[21]

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[18] Resolution from the World Health Organization (WHO)/World Meteorological Organization (WMO) Workshop on Climate Change and Health, held in Apia, Samoa, 15-18 August 2000. Full text of the Resolution is reproduced as Appendix III to this Framework.
[19] SPREP
[20] SPREP
[21] SPREP

Forests

> Fire prevention measures
> Strengthen forests protection and reforestation programs at all levels
> Coastal and mangrove protection and replanting programs
> Improving tree species to resist pests and cyclones
> Improve plant genetic make-up to withstand climate change variabilities such as cyclones, diseases, heat etc.
> Establish seed banks to store seeds in times of extreme events.
> **Undertake replanting to prevent erosion**[22]
> **Use of biomass as a sustainable energy source**[23]

Pollution and Waste Disposal

> Pollution and waste disposal programmes to minimise the damage to marine ecosystems and water resources

Energy

> Develop and implement climate friendly renewable energy programs, **such as solar, wind, ocean, geothermal, and small hydro**[24]
> Improve traditional methods of cooking
> Enhance programmes at the national level to promote energy conservation, efficiency including demand side management
> **Enhance energy efficiency of existing generators, and reduce transmission losses from grid systems**
> **Promote biomass based energy systems**
>   - **improve the efficiency of existing systems**
>   - **Use sustainable biomass as a part of integrated forestry/logging operations**
> **Promote the use of biofuels, eg, coconut, alcohol from sugar processing, etc**
> **Use of more efficient appliances, eg, lights, refrigerators, air conditioners, and other industrial equipment**

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[22] SPREP
[23] SPREP
[24] SPREP

> Improve awareness of energy conservation measures through public education, school curriculum, and media[25]
> Advanced technologies such as fuel cells
> Transport sector
> Electricity sector
> Rural energy

Infrastructure

> Environmental Impact Assessments for new infrastructure development be carried out
> Ensure that designs for new infrastructure takes into account climate change and climate variability
> Protection measures for existing infrastructure needs to be developed/implemented.

5.   Linkages between Science and Policy

Improving the linkages between science and policy will be essential for all efforts to improve the region's understanding and the effectiveness of responses to climate change, climate variability and sea level rise. Areas where specific action is required include the following:

Science interpretation

> Improve interpretation and explanation of scientific information for local scientists, policy makers and public
> Increase and enhance country-driven identification of research priorities
> Encourage the translation of technical literature into the vernacular
> Encourage use of Pacific islands expertise

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[25] SPREP

Awareness raising

> ➢ Promote **media**[26] programs to raise the awareness of, and mobilization of stakeholders and interest groups with respect climate change, climate variability and sea-level rise

Data and information dissemination

> ➢ Promote free access and use of data and information **for agreed purposes by concerned parties**[27] across all relevant institutions;
> ➢ **Promote linkages between SIDSNet and existing information networks in the region**[28].

Education and training

> ➢ Design formal and informal education and training programmes for all levels
> ➢ Training of scientists in space-based and ocean based technologies.
> ➢ Encourage students into science and relevant policy areas

Policy development

> ➢ Development and mainstreaming of cross-sectoral (integrated) national policies and plans based on sound information that address issues related to climate change, climate variability and sea-level rise.
> ➢ Encourage coordination among all stakeholders
> ➢ Identification of critical thresholds and prioritization of risks, encompassing a dialogue process between stakeholders and scientists.

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[26] SPREP
[27] Kiribati
[28] SIDSNet recommendation from AOSIS Consultations, 8/00, Samoa

Institutional capacity

> Establish, consolidate, or strengthen the roles of existing country teams and institutions dealing with climate change, climate variability and sea level rise.

Targeted research and development

> Identification and implementation of targeted research and development activities, as identified by PICs, that enhances the capacity of Pacific island government, and relevant national and regional organizations and institutions to understand and respond to climate change and sea-level rise.
> **Closer coordination and collaboration among regional institutions[29]**

Means of Implementation

Over the past three years, in PICs, the Climate Change Country Team approach has worked successfully in enabling coordination and contribution to national priority setting. The multi-sectoral composition of the respective teams has enabled each relevant government ministry or department to contribute to the undertaking of technical studies and sector policy development in the context of climate change, climate variability, and sea-level rise. In addition, access to information and data required for technical studies and held in different archives throughout government agencies has been well coordinated through the Country Teams. The multi-sectoral nature of the teams and sub-committees has also facilitated the development of climate policies in relation to key sectors impacted by a changing climate system. This mechanism may require strengthening and institutionalisation. There is also scope for further cooperation with SIDS experts in other regions, as well as with technical and financial support available through the United Nations systems.

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[29] SPREP

The establishment, strengthening and use of information networks at national levels, such as a clearing-house mechanism within a government ministry, a climate web-site, and other forms of both hard copy and electronic archiving will assist governments in disseminating their data and information. At both regional and international levels those dissemination mechanisms exist, such as SIDSNet and USPNet, and PICs and their partners need to be encouraged to utilise these networks to exchange and share information. SIDSNet in particular should be strengthened in accordance with relevant UN decisions, and donor support should be encouraged. With such strengthening, SIDSNet will be able to greatly improve information flow between and among the SIDS regions, and with donor agencies. Co-ordination through the UN-DESA SIDS Unit may also be of assistance in the longer term.

All efforts to undertake national technical studies and sector policy development in the context of climate change, climate variability, and sea-level rise must be consistent with each respective country's national development planning processes. Mainstreaming those sector policies into the national development processes can be undertaken with the assistance of the Climate Change Country Teams and through the National Implementation Strategy process both initiated under the Pacific Islands Climate Change Assistance Programme (PICCAP).

Support from regional and international institutions

PICs received significant support from a wide range of regional and international institutions. These have included a number of development partners, such as, Australia, New Zealand, France, the United States, Denmark, Japan, and, SPREP, SOPAC, Forum Secretariat, Secretariat for the Pacific Community (SPC), University of the South Pacific (USP), University of Papua New Guinea (UPNG), University of Hawaii, Pacific Islands Development Program (PIDP), World Meteorological Organization (WMO), UNEP, WHO, UNESCO, FAO, UNDP, IOC, IRD, and particularly through the UNDP/GEF funded Pacific Islands Climate Change Assistance Program (PICCAP).

Financing implementation

The Conference recognised that for the effective implementation of the action programmes, it will be necessary for national governments to commit their own financial and other resources.

At the same time, given the magnitude and the global nature of the issues involved, activities required to be undertaken the resources of PICs alone would be insufficient. Consultations will be undertaken both bilaterally and through appropriate institutions to establish partnerships for the purpose of financing and implementing the actions to be undertaken.

The first priority in this regard will be to secure funds between PICCAP and its next phase. These funds will be used by the country teams for particularly important tasks as identified by the individual countries, within the overall regional process. A second priority will be to develop a proposal for the next stage of PICCAP. A further priority will be to develop the international dimension of the work. Information flow to the international community and responses to needs arising could be facilitated through the United Nations System, in particular UN-DESA, UNDP, UNEP, WMO and GEF, and CROP agencies.

Monitoring and review

Effective monitoring and review will be essential to the success of this framework. This will, wherever possible, utilise existing reporting mechanisms.

Annual monitoring by Countries

The Framework provides a specific focus on PICs' priorities and needs and how to address these in a coordinated and complimentary manner. Each Pacific Island country, in endorsing this framework, also agrees that on an annual basis utilising existing reporting mechanisms, where appropriate, will assist with the monitoring and review of the framework, established at the Conference, through the Round-Table process.

Annual monitoring by donor/agency/organisation

The Framework provides for specific focus of activities to enable PICs to implement the priorities for action. The framework outlines the approach as coordinated and complimentary. In this respect each Stakeholder as a member of the Round-Table agrees that it shall provide to the Round-Table a brief summary of activities implemented, including costs as outlined in the Framework, or potential activities, and where those activities compliment the Framework.

Framework Review Every 4 Years

The Framework shall be reviewed after four years, taking into account the annual monitoring processes, Round-Table meetings, and reports related to implementation of the Framework. The Monitoring and Review of the framework and the Round-Table process was established at the Pacific Island Conference on Climate Change, Climate Variability and Sea Level Rise, held in Rarotonga, Cook Islands.

Appendix I: Summary of Findings and Recommendations from the PMSNAP.

PACIFIC METEOROLOGICAL SERVICES: *Meeting the Challenges*[30]

EXECUTIVE SUMMARY

Introduction

This report was commissioned by the South Pacific Regional Environment Programs (SPREP) in early 2000, and forms part of SPREP's initiative to identify the requirements of the NMSs of twenty Pacific Island SPREP members, package the requirements for aid consideration, and further, to co-ordinate and administer any consequential aid projects.

To identify the requirements, SPREP engaged an Expert Team representing the World Meteorological Organization (WMO), SPREP, the NMSs of developed countries (Australia, USA, France and New Zealand) in the region, and the Fiji Meteorological Service (FMS), including experts in specialist areas. The PMSNAP team members are listed in Appendix 4. The PMSNAP is funded by the Australian Agency for International Development (*Aus*AID), and the Team Leader is Mr Ram Krishna from the Australian Bureau of Meteorology (ABM).

The goal of the PMSNAP Project is to:

"Support continued strengthening of the capability of NMSs in the Pacific region to meet growing public demand for improved weather and climate services and products to ensure the safety, security and general well-being of the people, to contribute to achieving sustainable development and to fulfil SPREP members' commitments and obligations under regional and international agreements and conventions."[31]

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[30] Krishna. R, Lefale. F.P, Sullivan. M, Young. E, Pilon. J, Schulz. C, Clarke. G, Prasad. R, Veitch. T, Turner. K, Shea. E, "Pacific Meteorological Services: Meeting the Challenges", An AusAID project, June 2000, SPREP publication (in print)

[31] Strategic Action Plan for the Development of Meteorology in the Pacific region, 2000-2009, Bureau of Meteorology, December 1999.

This report completes a series of twenty-one reports under the PMSNAP. It synthesises the common needs and strategic directions identified by each of the twenty national country reports (NCRs), and focuses on the common needs of NMSs of Pacific Island SPREP member countries that could be addressed on a regional level. The NCRs provide in detail the specific needs of each of the countries and territories.

The report is divided into three parts but there is some cross over between the parts. Part One provides the project overview. Part Two describes common needs of NMSs and of users across the countries and territories. Part Three details development projects identified by the PMSNAP team.

Assistance Programs

Prioritisation and regional commonality of the needs of users and of NMSs, which emerged from the analysis, provide the basis for the assistance programs recommended. Two clear common priority areas of need that emerged for all countries were: -

a) improved severe weather warning services; and
b) Seasonal and climate prediction services especially droughts.

These are also areas investment in which is expected to provide the greatest returns. Improvement in the provision of these services requires the strengthening of support structures, specifically:

c) weather and climate observational networks;
d) telecommunication networks; and
e) Physical infrastructure and institutional strengthening.

Regional development assistance programs have been assembled around these five themes. These programs are intended to build on past efforts by national governments and assistance programs funded by development partners (primarily Australia, France, the European Union, Japan, UNDP, United Kingdom, U S A, and WMO) in the region, and are intended reverse the decline in the capacity of NMSs in the last two or three decades. In recent year some other countries e.g. Finland, Denmark and Italy have shown an interest in supporting meteorological development in the region. Co-ordinated and integrated implementation of these programs should see significant improvement in most weather and climate services in the region. However significant financial assistance will be required to implement these programs.

Recommended Projects

The projects below, packaged as regional projects, are recommended for implementation. Several small projects have been packaged together in to each of the major regional projects. These small component subprojects may in many instances be implemented without affecting other projects.

LIST OF PROJECTS		Indicative budget ($US000)
Project 1	**STRENGTHENING OBSERVING SYSTEMS**	
Project 1.1	Restore and upgrade the human-operated surface observational network.	750
Project 1.2	Provision of Data Collection Platforms (DCP)/Automatic Weather **Stations (AWS)**	3,160
Project 1.3	Marine meteorological data reporting, collection, dissemination, and. training	530
Project 1.4	Basic meteorological observer training	110
Project 1.5	Restore and upgrade the regional upper air observation network	2,600
Project 1.6	Provision of high resolution satellite imaging systems	430
Project 1.7	Lightning detection systems for Pacific Islands national Meteorological Services	670
Project 1.8	Pacific states radar network	10,200
Project 1.9	Technical maintenance back up	500
Project 2	**STRENGTHENING TELECOMMUNICATION NETWORKS**	
Project 2.1	Provision of high frequency radio transceivers for the collection of weather reports from outstations.	1,200
Project 2.2	Provision of Local Area Networks (LAN) for national Meteorological Services	700
Project 2.3	Provision of Small EMWIN (Emergency Managers Weather Information Network) Receiving Terminals	650
Project 2.4	Regional Pacific Intranet (RPI)	3,600

Project 3   **IMPROVE SEVERE WEATHER WARNINGS**

Project 3.1	Human resources development	
Project 3.1.1	Professional meteorological training	250
Project 3.1.2	Training of support forecasters to assist the professional meteorologist	240
Project 3.1.3	Training in specialised tropical cyclone analysis, forecasting and warning	150
Project 3.1.4	Training workshops and attachments in tropical cyclone forecasting and warning centres	600
Project 3.1.5	Training of meteorological personnel on aviation awareness, and safety and economy sensitivity of aviation operations	120
Project 3.1.6	Public education and awareness on severe weather (including tropical cyclones, drought, floods) and the role of climate variability	500
Project 3.1.7	Awareness and education of small craft (boats) operators	500
Project 3.2	Storm surge prediction models	120
Project 3.3	High resolution numerical weather forecasts for Pacific Islands	120

Project 4   **CLIMATE DATA MANAGEMENT, ANALYSIS AND APPLICATION**

Project 4.1	Climate analysis and applications	100
Project 4.2	Climatology training	250
Project 4.3	Pacific Regional Climate Bulletin	300
Project 4.4	Expanding and enhancing the prudent use of climate predictions	620

Project 5   **INSTITUTIONAL STRENGTHENING, INCLUDING INFRASTRUCTURE SUPPORT**

Project 5.1	SPREP Meteorology/Climatology Officer (MCO)	360
Project 5.2	SPREP Meeting of Regional Meteorological Service Directors (RMSD)	320
Project 5.3	Buildings and accommodation	6,000

TOTAL   **35,640**

The projects are aimed at assisting NMSs to further strengthen their capacity to fulfil national, regional and international obligations. The projects have been designed based on the requirements of NMSs and the needs of users consulted during the course of this project. Some projects were originally identified by previous studies, and had either been funded but discontinued, or had not been funded. The proposed projects (as detailed in Part 3 of this report and summarised in Appendix 8) can be broadly divided into two categories, short term and long term.

- Short-term projects are designed to assist in developing technical support structures to ensure basic operations are sustained. The projects will address areas such as basic observing systems, telecommunications and on-going maintenance of existing equipment.

- Long-term projects are designed to reinforce and develop the benefits obtained from short-term assistance. Areas addressed include technical staffing levels, training, general co-ordination between all NMSs and a pooling of resources and technical capacity.

This approach has been adopted to ensure continuity and the sustainability of proposed projects. Most countries recognise that there is a cost to infrastructure donated through external assistance, and this is manifested in depreciation costs (where accrual accounting is used) and perhaps-other operational costs such as electricity, maintenance and telecommunications. Consequently, the position of most countries regarding aid is that they must be sustainable within the approved in-country Meteorological Service budgets, and that assistance may be required with ongoing costs.

Conclusion

The team found two consistent and recurrent themes. Firstly, the majority of NMSs in the region are struggling, and often failing, to provide basic services for the citizens and industries of their countries. Secondly, the position of most countries regarding development programs is that they must be sustainable within the approved in-country NMS budgets, and that assistance may be required with ongoing costs. This poses a dilemma to development partners who prefer not to be committed to any on-going costs that may be associated with the provision of technical infrastructure.

The projects proposed in this report are , in the team's view, the minimum level required to effect any significant short-term improvements in weather and climate services provided in the region. At the same time they lay the foundation for sustainable and longer term commitments by governments and development partners alike, to meet the needs and aspirations of Meteorological Services, set out in the Strategic Action Plan for the Development of Meteorology in the Pacific Region, 2000-2009.

Appendix II: Resolution Concerning the Improvement of Global Climate Observing Systems in the Pacific Region, adopted at the Seventh SPREP Meeting of RMSD, 16-18 August 2000.

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GLOBAL
CLIMATE
OBSERVING
SYSTEM

of UNESCO   WMO   UNEP   ICSU

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Resolution Concerning the Improvement of Global Climate Observing Systems in the Pacific Region

The participants[32] in the GCOS Pacific Island Regional Implementation Workshop on Improving Global Climate Observing Systems,

Welcome:

The opportunity provided by the GCOS Secretariat in partnership with SPREP, and with the support of WMO, UNEP, IOC, ICSU, to identify ways to improve observing systems for climate and in other activities related to climate observing systems in the Pacific region

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[32] American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Tonga, Tuvalu, USA, Vanuatu, Solomon Islands, World Meteorological Organization (WMO), Intergovernmental Oceanic Commission (IOC) Perth Office, Food and Agriculture Organization (FAO), Forum Secretariat (FORSEC), South Pacific Geoscience Commission (SOPAC), South Pacific Regional Environment Programme (SPREP), Global Climate Observing System (GCOS) Secretariat, East West Center, Hawaii, National Tidal Facility (NTF), Flinders University, Australia.

Recalling:

(1) That the Conference of the Parties (COP) to the UN Framework Convention on Climate Change (UNFCCC) has encouraged Parties to actively support capacity-building in developing countries to enable them to collect, exchange, and utilize data to meet local, national, regional, and international needs (Decision 14/CP.4), and has recognized the need to identify priority capacity-building needs related to participation in systematic observation (Decision 5/CP.5);

(2) That the COP to the UNFCCC has determined that the Global Environment Facility (GEF) should provide funding to developing countries to build capacity for participation in systematic observational networks to reduce scientific uncertainties (Decision 2/CP.4);

(3) That Decision 5/CP.5 urges Parties to address deficiencies in the climate observing networks and to bring forward specific proposals for that purpose and to identify the capacity-building needs and funding required in developing countries to enable them to collect, exchange, and utilize data on a continuing basis in pursuance of the UNFCCC;

(4) The role and importance of the Global Climate Observing System (GCOS) to facilitate systematic observation regionally;

Recognizing:

(1) That Pacific Island Countries are considered among the most vulnerable to the consequences of human-induced climate change, in particular, global warming and the potential threats associated with extreme weather events and sea level rise;

(2) That improved observations of climate will enable provision of information and forecasts which will greatly assist the governments and national communities of member countries to prepare for the season to season and year to year variations of climate associated with El Nino and other natural phenomenon, as well as to detect and better prepared for long term human-induced climate change

(3) That Pacific Island Countries currently face significant challenges associated with natural climate variability, including droughts, tropical cyclones, floods, sea level variations, and changes in ocean temperature

(4) That oceanic and atmospheric circulation patterns and ocean-atmosphere interactions in the Pacific play dominant roles in determining global patterns of climate change and climate variability;

(5) That measurements of meteorological/atmospheric, oceanographic, and terrestrial variables in Pacific Island settings provide essential data for detecting and attributing climate change; for monitoring, understanding and predicting climate change and climate variability; for developing strategies to ameliorate the potential harmful effects of climate change and climate variability; and for advancing sustainable development globally;

(6) That the basic observation networks of National Meteorological and Hydrological Services (NMHSs) provide the foundation on which the strengthening of GCOS must be built;

Encourage:

(1) The countries of the region to support their NMHSs to prepare national reports on activities related to systematic observation, as invited by the Parties to the UNFCCC in Decision 5/CP.5;

Urge:

(1) That a regional Action Plan be prepared to form the basis for the preparation of proposal(s) for funding improvements in observing systems for climate and in other activities related to climate observing systems in the Pacific region;

(2) That the Action Plan be prepared in accordance with the following program:

　　a) Within the next 3 to 4 months, SPREP members will develop initial reports on national requirements and priorities for improving observing systems for climate. These reports should be developed through coordination between NMHSs and PICCAP country teams, where appropriate, and could take advantage of the current opportunity associated with the incremental funding recently provided by GEF to continue PICCAP programs in participating countries. *All* SPREP members should strive to develop these reports in the context of national implementation programmes pursuant to the UNFCCC guidelines and making use of the "elements" paper prepared by the workshop, as well as guidelines contained in the FCCC/CP/1999/L4/Add.1 and submitted them to SPREP.

b) Upon receipt of these reports, SPREP will develop a consolidated report on regional requirements and priorities and for improving observing systems for climate. This report will be submitted to SPREP members for approval.

c) In cooperation with the Council of Regional Organizations in the Pacific (CROP) and the co-sponsors of GCOS, SPREP will facilitate the development of a Pacific GCOS Action Plan that will incorporate the priorities raised in the country reports, such as those in the initial National Communications, the SPREP-led Pacific Meteorological Services Needs Analysis Project (PMSNAP), and the outcomes of the Pacific Islands Conference on Climate Change, Climate Variability and Sea Level Rise held in Rarotonga, Cook Islands, April 3-7 2000 and the findings of the Pacific Islands GCOS workshop held in Apia, Samoa, August 14-15, 2000. In order to take advantage of opportunities to report to the UNFCCC, this regional Action Plan should be completed no later than June 2001 and, if possible, presented to the Seventh Conference of the Parties (COP7) to the UNFCCC deliberations in July 2001. To facilitate this process, the workshop participants recommend the creation of a core drafting team comprised of 4-6 people from SPREP members.

Requests that:

(1) SPREP and GCOS Secretariat ensure that this resolution is widely distributed within the Pacific region and with appropriate collaborating partners;

(2) SPREP on behalf of SPREP Pacific Island Country members source PDF A and other resources to assist with the development of the Action Plan and related GEF proposal

(3) SPREP, representing its member countries, in consultation with other CROP organizations, use the information developed in the Action Plan to prepare a Full Project proposal to potential donors, including GEF, to fund improvements in observing systems for climate and in other activities related to climate observing systems in the Pacific region; and

(4)   Development partners consider financing appropriate elements of the Action Plan

(5)   Parties to the UNFCCC in the region and the GCOS Secretariat bring this resolution to the attention of the COP and its Subsidiary Bodies.

(6)   NMHSs become actively involved in the preparation of their National reports on activities related to systematic observation, as invited by the parties to the UNFCCC in Decision 5/CP.5.

**Appendix III: Resolution from the WHO/WMO Climate Change and Health
Workshop, held in Apia, Samoa from 15-18 August 2000.**

There is increasing evidence of linkages between climate change and climate
variability on health conditions in the region. In formulating response strategies to
address the impacts of climate change, climate variability, and sea-level rise, there is a
need for:

> ➤ Better understanding of these linkages through research that will provide a
>   basis for improving response/prevention strategies;
> ➤ Evaluation of links across disease categories, that allow a shift of priorities
>   and emphasis for public health planning and resource management;
> ➤ Such climate/health linkages are complex and must be viewed in context of
>   other environment stressors and human activities.

Climate forecasting is one of several tools for responding to hazardous conditions
relevant to health. Effective utilisation of such tools need:

> ➤ Strengthened national and regional forecasting capacity
> ➤ Strengthened temperature, rainfall, tropical cyclones, and sea-level variability,
>   data, should also be included in current forecasts available to PICs, and the
>   region as a whole;
> ➤ Improved communication between the medical/public health sector and
>   national meteorological and hydrological services should be facilitated;
> ➤ Consolidated forecasts, eg, "indices" are needed for improved application,
>   including cross-sector coordination;
> ➤ Work to develop disease control and health protection strategies (e.g. vector
>   control programs, environmental health, sanitation and water supply).

Policy Needs:

> ▪ National policy development should address the direct and indirect climate
>   change impacts on public health as a high priority;
> ▪ There is a need to coordinate through a regional mechanism the exchange of
>   information and services between national Ministries of Health, other relevant
>   agencies, and end-users.

Research Needs:

- Basic entomological research, including the distribution of vector species, their responses to climate variability, habitats and biting habits, and the effectiveness of control measures, needs to be developed and undertaken;
- The social, cultural, and economic aspects of linkages between climate and health, including important modifiable factors contributing to vulnerability and adaptation should be developed;
- The development of an index of health risk, that incorporates linkages between the environment and the human dimension should be developed;
- The effectiveness of response strategies and policies developed related to climate and health needs to be evaluated;
- Consolidate and improve access (including via the internet) of regionally relevant information, including water quality, air quality, climate data, GIS and remote sensing data, health outcome data, and applied research and response strategies;
- Initiate new studies on specific climate-sensitive diseases, such as skin, respiratory, and waterborne diseases.

Training and Technical Assistance:
Health information systems:

Establish integrated health surveillance and environmental monitoring, including laboratory testing and clinical diagnosis methods;

Enhance communication skills, including coordination between clinical, laboratory, and public health staff.

Services:

Train health professionals in environmental monitoring methods, such as vector monitoring and water quality tests. In addition, inter-sectoral training is a high priority.

Improve understanding and expertise in the use of tools, such as software tools, available to assess vulnerability of and adaptation to climate change, climate variability, and sea-level rise;

Provide user-friendly climate forecasts and applications information at both national and regional levels. The information translated into "simple" language should include information about floods and droughts, tropical cyclones, temperature and sea level variability;

Provide seasonal temperature and rainfall forecasts and historical graphs and trends for each island/locality.

Community attributes: Develop strategies and plans to ensure social cohesiveness, networking for wider support systems, including community response and participation.

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials

Guam

10 – 12 October, 2000

Agenda Item 7.3.2.8.1: Strategic Action Plan for the Development of Meteorology in the Pacific Region (SDMP), 2000-2009

Purpose of Paper

1.   To report on progress of the joint efforts by SPREP and the World Meteorological Organization (WMO) to strengthen the capacity of National Meteorological Services (NMSs).

2.   To seek endorsement for the Strategic Action Plan for the Development of Meteorology in the Pacific Region (SDMP) 2000-2009 and the Pacific Meteorological Services Needs Analysis Project (PMSNAP) regional synthesis report project proposals, which were endorsed and approved by the Sixth SPREP Meeting of Regional Meteorological Service Directors (6RMSD) held in Tahiti, French Polynesia in July 1999 and the Seventh SPREP Meeting of RMSD (7RMSD) held in Apia, Samoa, 16-18 August 2000.

Background

3.   In 1993, SPREP organised the first SPREP Meeting of Regional Meteorological Service Directors (1RMSD) in Port Vila, Vanuatu. The meeting originated from a recommendation contained in the report "Changing Climate in Paradise", prepared by the Australian Bureau of Meteorology for the WMO in 1991. The aim of the meeting was to provide a forum for Directors of NMSs from SPREP Members to promote the development of regional initiatives to assist members in the formulation and implementation of regional cooperation programmes in climate change activities. Four other meetings followed between 1994 and 1997.

4.   At the fifth SPREP Meeting of RMSD (5RMSD) held in Honolulu, Hawaii in November 1998, the Directors recognised the importance to the Pacific region of providing an integrated programme of weather forecasts, climate predictions and information services which addressed the continuum from weather (daily) to climate variability (seasonal-to-inter annual) to climate change (decadal and inter-decadal).

5.   The Honolulu meeting also recognised the critical role the SPREP Secretariat played in supplementing WMO and national efforts in the areas of weather and climate. The meeting urged the SPREP Secretariat to continue to provide a forum, such as the RMSD, for NMSs in the Pacific region to further promote collaboration amongst NMSs in the region, to develop shared solutions to common problems, to enhance awareness of weather and climate issues and to identify opportunities to improve regional capacity to forecast, understand and address the impacts of weather and climate.

6.   In order to achieve the above objectives, the Honolulu meeting unanimously agreed for the SPREP Secretariat to broaden its scope of work to cover meteorology and climate matters in addition to its climate change programme. The meeting also urged the SPREP Secretariat to develop a long-term strategic plan for the development of meteorology in the Pacific region, taking into account the WMO Fifth Long-term Plan and the priority areas agreed to at the WMO Regional Association V (RA V) meeting held in Bali, Indonesia, in September 1998.

7.   Early in 1999, in response to the recommendation from the Honolulu meeting the SPREP Secretariat began drafting the SDMP with assistance from the Australian Bureau of Meteorology (BOM). The draft SDMP was reviewed and endorsed at the Sixth SPREP Meeting of RMSD in Tahiti in July 1999. The SDMP was published in December 1999 (see Attachment 1 for relevant excerpts from the SDMP. Published copies of the SDMP are available from the Secretariat).

8.   The Tahiti meeting identified steps required to implement the SDMP. It called for the endorsement of the plan (achieved in Tahiti) followed by a significant needs analysis to be undertaken by SPREP and other collaborating partners. The analysis would undertake an extensive review of the needs of all SPREP Pacific island Members' National Meteorological Services (NMSs) in the context of the WMO Fifth Long-term Plan priorities, NMSs obligations under the World Weather Watch (WWW), Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention to Combat Desertification (UNCCD), other international and regional agreements and conventions and their specific local activities in support of government, public weather and climate services and other national activities.

9.   The Pacific Meteorological Services Needs Analysis Project (PMSNAP), funded fully by Australia through AusAID, with technical assistance from US NOAA National Weather Service, MetService New Zealand Ltd., Meteo France, Fiji Meteorological Service, WMO and SPREP was in response to the needs analysis recommendation. The PMSNAP began 1 February, 2000 and was completed 30 May 2000. A total of twenty-three reports[1] came out of the PMSNAP. The proposed development projects (see Attachment 2) identified by the PMSNAP to effect noticeable short-term improvements in the provision of weather and climate services and products by NMSs are presented to this meeting for consideration. It is worth noting a number of development partners had already expressed interest in funding some of the proposed projects in 2001. The indicative budgets can be changed depending on the priorities of SPREP Members. All twenty-three reports were approved and endorsed at the Seventh SPREP Meeting of RMSD (7RMSD) held in Samoa, 16-18 August 2000.

10.   The establishment of the WMO Sub-regional office for the South West Pacific (SWP)[2] within the SPREP Headquarters in April 1999 had consolidated the work of SPREP and WMO in further strengthening the capacity of NMSs in the Pacific Region.

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[1] Twenty National Country Reports (NCRs) covering all SPREP Pacific Island Members (American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, New Caledonia, Niue, Commonwealth of the Northern Mariana Islands, Palau, Papua New Guinea, Solomon Islands, Vanuatu, Tuvalu, Tonga, Tokelau. Wallis and Futuna was combined with New Caledonia report), one regional synthesis report (Pacific Meteorological Services: Meeting the Challenges) and two special reports (Regional Telecommunications and Climate Computing (CLICOM)).

[2] Discussed and approved by this Council in its 9th meeting in Nukualofa, Tonga, in 1996.

Recommendation:

3.   The Meeting is invited to:

> ➢ **consider** and **note** the progress made so far in the development of meteorology in the Pacific Region;

> ➢ **endorse** both the SDMP and development project proposals contained in Attachment 2; and

> ➢ **advise** the Secretariat on options to further the implementation of the SDMP.

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26 August, 2000

Relevant Excerpts from the Strategic Action Plan for the Development of Meteorology in the Pacific Region (SDMP), 2000-2009

The Need for an official National Meteorological Service (NMS)

The NMS is a fundamental component of the national infrastructure of all countries. The original trigger for the establishment of a NMS was to meet governments' responsibilities to contribute to the safety, security and general well being of their citizens, and to ensure the ongoing collection and long term custodianship of a reliable national climate record for use by future generations and to fulfill countries' essential international and regional obligations under various agreements and conventions.

The Purpose of an NMS

The primary purpose of all NMSs is to contribute to the economic and social benefit and welfare of people. The most fundamental function of NMSs on a day-to-day basis is to provide weather and climate information, and to ensure the timely and accurate forecasts and warnings of severe meteorological (e.g. tropical cyclones) and hydrological (flooding, droughts) events.

Missions and Functions

The most integrated NMS, operating within the international framework of the World Meteorological Organization (WMO), has essentially a four-fold mission of weather and climate monitoring, service provision, research and international cooperation. The essential functions of an NMS of a member country can be summarized as follows:

- the planning, implementation, operation and maintenance of surface and upper air observing networks over its territory;
- the provision and maintenance of systems for the collection and quality control of observational data and their processing in support of meteorological research, provision of real time weather and climate services, and assembly of a national climate record;

- the provision of a range of sector-specific operational meteorological services, through the mass media and through other channels, to major user groups such as aviation, agriculture, shipping and national defense;
- the maintenance of a national climate archive and the provision of climate data and climate monitoring and prediction services; and
- the fulfillment of its obligations under regional and international conventions such as the SPREP Convention, UNFCCC, the Convention of the International Civil Aviation Organization (ICAO), the Convention of the WMO, Vienna Convention, Agenda 21, Barbados Programme of Action, and the United Nations Convention to Combat Desertification.

Vision of the SDMP

The vision of the SDMP is for all meteorological services in the Pacific region being able to provide all appropriate meteorological services, including climatological services, to their nations through skilled and fully trained professional, technical and support personnel operating appropriate systems and working from adequate facilities within an appropriate infrastructure. It sees all NMSs in the Pacific contributing fully to the World Weather Watch (WWW) and the World Climate Program (WCP) through appropriate observing systems, telecommunications, data processing and management systems and public weather services. In particular, it is based on the premise that NMSs play a pivotal national role in advising government in the vital areas of climate change and climate variability.

Goals and Objectives

The goal of this strategic action plan is to support continued strengthening of the capability of NMSs in the Pacific region to meet growing public demand for improved weather and climate services and products to ensure the safety, security and general well-being of the people to contribute to achieving sustainable development and to fulfil SPREP Members' commitments and obligations under regional and international agreements and conventions.

The objectives of the plan are to:

- provide the framework for setting short, medium and long term priorities for meteorological services in the region;
- ensure these priorities are based on identified and agreed needs of NMSs;

- make the necessary links and ensure the continuity of effective programmes for strengthening the capabilities of NMSs;
- raise the profile and the importance of the work of NMSs;
- promote the cooperation and coordination of all relevant development assistance agencies; and
- provide guidance to SPREP and WMO in the further support of NMSs in the region.

Strategy

The strategy to ensure the NMSs of the Pacific Region meet the obligations, agreements and conventions and fulfill their roles as national meteorological agencies depends on the capabilities of the Services. The SDMP identifies, in broad terms, the needs of the NMSs to achieve these ends and suggest possible ways to meet these needs. The needs and possible solutions are presented in the areas of:

- meteorological observing systems;
- telecommunication;
- infrastructure;
- climate, climate change and climate variability;
- disaster management;
- applications of meteorology and hydrology; and
- capacity building and technology transfer.

Action Plan

The Strategy calls for a significant needs analysis to be undertaken under the auspices of SPREP in close cooperation with WMO. The needs analysis should undertake an extensive review of the needs of all Pacific island NMSs in the context of the WMO Regional Association V fifth Long-term Plan, their obligations under the World Weather Watch (WWW) and the World Climate Program (WCP), UNFCCC and others. From the review, the needs analysis should propose a developmental assistance programme subdivided into projects that could sensibly be undertaken by individual donors, The projects should be prioritised, and the linkages between the projects carefully drawn out so that the consequences and interactions are clearly appreciated by donors.

Implementation Arrangements

The progress of the strategy will be coordinated, monitored and assisted through SPREP's Meteorological and Climate Change Programme and the WMO Regional Association V Sub-regional office.

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Summary of Proposed Development Projects from the PMSNAP
2000-2009

Project Number	Name of Project	Indicative Budget ($US000)
Project 1	Strengthening Observing Systems	
1.1	Restore and Upgrade the human-operated surface observational network	750
1.2	Provision of Data Collection Platforms (DCP)/Automatic Weather Stations (AWS)	3,160
1.3	Marine Meteorological data reporting, collection, dissemination and basic training	530
1.4	Basic meteorological observer training	110
1.5	Restore and upgrade the regional upper air observation network	2,600
1.6	Provision of high resolution satellite imaging systems	430
1.7	Lightning detection systems for Pacific island NMSs	670
1.8	Pacific states radar network	10,200
1.9	Technical maintenance back-up	500

Project 2	Strengthening Telecommunication network	
2.1	Provision of high frequency radio transceivers for the collection of weather reports from outer stations	1,200
2.2	Provision of Local Area Networks (LAN) for NMSs	700
2.3	Provision of Small Emergency Manager's Weather Information Network (EMWIN) Receiving terminals	650
2.4	Regional Pacific Intranet (RPI)	3,600
Project 3	Improve Severe Weather Warnings	
3.1	Human Resource Development	
3.1.1	Professional meteorological training	250
3.1.2	Training of support forecasters to assist the professional meteorologist	240
3.1.3	Training in specialised tropical cyclone analysis, forecasting and warning	150
3.1.4	Training workshops and attachments in tropical cyclone forecasting centres	600

3.1.5	Training of meteorological personnel on aviation awareness, and safety and economic sensitivity of aviation operations	120
3.1.6	Public education, awareness on severe weather (tropical cyclones, droughts, flooding)	500
3.1.7	Awareness and education of small crafts (boats) operators	500
3.2	Storm Surge prediction models	120
3.3	High resolution numerical weather forecasts for Pacific islands	120
Project 4	**Climate Data Management, Analysis and Application**	
4.1	Climate analysis and application	100
4.2	Climatology Training	250
4.3	Pacific regional climate bulletin	300
4.4	Expanding and Enhancing the prudent use of climate predictions	620
Project 5	**Institutional Strengthening, including Infrastructure Support**	
5.1	SPREP Climatology/Meteorology Officer	360
5.2	SPREP Meeting of Regional Meteorological Service Directors (RMSD)	320
5.3	Buildings and Accommodation	3,000

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South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam,
10-12 October 2000

Agenda Item 7.3.2.9: Pacific Islands Climate Change Assistance Programme (PICCAP) : Phase III

Purpose of the Paper

1. To inform SPREP Members of the progress in further developing the Pacific islands Climate Change Assistance Programme (PICCAP) Phase III.

Background

2. PICCAP has been implemented as a regional climate change enabling activity involving ten Pacific island countries[1]. Four other Pacific island countries have similar enabling activities, but at the time of project inception were not eligible to participate, given the Global Environment Facility (GEF) criteria.

3. Through Country Coordinators and Country Teams established under PICCAP, countries have produced Greenhouse Gas Inventories, Mitigation and Vulnerability and Adaptation Studies, and initial national communications to the UNFCCC. These have helped fulfill their obligations as Parties to that Convention. A number of other initiatives commenced as a result of PICCAP. These have included: a "Removing Barriers to the Adoption of Renewable Energies" proposal; the draft Pacific Islands Framework on Climate Change, Climate Variability and Sea-Level Rise; the transfer of a Vulnerability and Adaptation Training Course to the University of the South Pacific, Suva, Fiji from the University of Waikato, New Zealand; and a regional integrated assessment model called PACCLIM.

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[1] Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Samoa, Solomon Islands, Tuvalu, Vanuatu.

4.   PICCAP Phase I (the enabling activity above) was completed in June 2000. PICCAP Phase II has been approved by the Global Environment Facility (GEF) through UNDP for US$1 million over 12 months. This provides for continuity of the capacity building effort to assist Pacific island countries implement the UNFCCC.

Progress to Date

5.   A number of consultations have been undertaken primarily with Pacific island countries on what a further Phase of PICCAP might contain. It is understood that the next phase of PICCAP would address a wide range of capacity building challenges and involve a wider range of stakeholders, build upon the successes, and promote a programmatic and longer term approach.

6.   During late 1999 and early 2000 the Government of Japan initiated and financed a scoping study to identify what areas of activities under PICCAP, and specifically PICCAP Phase III, could involve co-financing from Japan. The initiative considered utilising, and strengthening existing cooperation, as well as developing new cooperative activities. The scoping study began with consultations and discussions at a PICCAP Regional Meeting involving Pacific island countries, regional organisations and expertise, and experts from Japan, held from 31 January – 4 February 2000 in Nadi, Fiji. The completed study, based upon responses and PICCAP outputs, including initial National Communications, is currently being considered by the Government of Japan, in the context of PICCAP Phase III development.

7.   Given the time taken to develop projects for consideration and approval by the GEF, a more detailed consideration would be required. To facilitate this effort the following steps are proposed:

- Seek approval for a project development fund, where a wide consultative process would be undertaken with all stakeholders;

- Develop a full project proposal based upon the consultative process and identified country priorities and needs; and

- Seek endorsement of Pacific island countries prior to submission of the full project to the GEF and potential co-sponsors.

Recommendation

8.   The Meeting is invited to:

- **note** the information and current progress to date on PICCAP Phase III development; and

- **endorse** the steps outlined for the SPREP Secretariat to continue to undertake a wide consultative process and project development in time for consideration by the GEF in April 2001, in order to improve the current draft proposal for PICCAP Phase III.

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26 August 2000

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item: 7.3.2.10: GEF Project – Removing Barriers to Renewable Energy

Purpose of the Paper

1.   To inform SPREP Members of the progress and development to date of the Removing Barriers to the Adoption of Renewable Energies Initiative.

Background

2.   Under the Pacific Islands Climate Change Assistance Programme (PICCAP) a Mitigation Analysis (an assessment of options to reduce greenhouse gas emissions) was undertaken in collaboration with the South Pacific Applied Geoscience Commission (SOPAC).

3.   An outcome of the regional analysis was a recommendation to develop a proposal to the Global Environment Facility (GEF), specifically in the areas of removing the barriers for the adoption of renewable energies in the region.

4.   An initial draft was developed by SPC in collaboration with SPREP and SOPAC, and forwarded to Pacific island countries for their input and contributions. The draft paves the way for a step-by-step project development process, that emphasizes wide consultation among all stakeholders.

5.   Consultations were undertaken at the Pacific Islands Climate Conference, held in April 2000, in Rarotonga, and through communications by fax and e-mail with Members and the CROP Energy Working Group.

Progress to Date

6.   An improved draft proposal was developed by SPC in close consultation with SPREP and SOPAC. Further contributions were made by Pacific island countries and by the CROP Energy Working Group. The proposal was modified to ensure the GEF operational criteria were met.

7.   All 14 Pacific island countries have endorsed the development of the proposal for submission to the GEF through UNDP. The endorsement was made through each Pacific island countries GEF Focal Point.

8.   UNDP has received the submission and are currently assessing the proposal in terms of its viability under the GEF criteria. If approved, UNDP/GEF will process funds of approximately US$400,000 under a project development window, which would allow for the detailed development of a full project for the region.

9.   Once approved by UNDP/GEF, the project development process will take at least 12 months with a wide range of national and regional activities and consultations.

Recommendation

The Meeting is invited to:

- take **note** of the consultative process used to develop the proposal and the information and current progress to date on the "Removing Barriers to the Adoption of Renewable Energies" Initiative;

- **note** the Secretariat's efforts in catalyzing the initiative on behalf of Pacific island Members; and

- **provide further encouragement** to the efforts associated with UNDP/GEF approval of the proposal and the subsequent project development process.

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25 August 2000

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials

Guam

10 – 12 October, 2000

Agenda Item 7.3.2.11: Rio +10

Purpose of Paper

1.   To update the Meeting on preparations for the 10-year review of the decisions of the Earth Summit, Rio de Janeiro, 1992 (Rio+10).

Background

2.   In 1992, the United Nations Conference on Environment and Development (the Earth Summit) brought together heads of government in Rio de Janeiro to agree on a new global blueprint for sustainable development. This blueprint, Agenda 21, recognizes that environmental protection and development are inseparable.

3.   In 1997, the General Assembly of the United Nations held a special session to review the implementation of Agenda 21 (Rio + 5). This review found that some progress had been made at local levels and in relation to global legal frameworks but that, overall, progress to implement Agenda 21 had been inadequate. The state of the global environment continues to deteriorate and patterns of consumption and exploitation of natural resources continue at unsustainable levels, as noted in the *Global Environment Outlook*[1] and the *Pacific Islands Environment Outlook*[2].

4.   In 2002, the General Assembly will conduct a special session for a 10-year review of the outcome of the United Nations Conference on Environment and Development, held at Rio de Janeiro, Brazil in 1992. There has been considerable discussion on the focus for Rio+10. Based on the outcome of discussions during the 8th session on the Commission on Sustainable Development and the UNEP Global Ministerial Environment Forum, the 10-year review will *provide a further opportunity for the international community to take action to implement its commitments and to strengthen international cooperation urgently required to address the challenges of sustainable development in the twenty-first century*[3].

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[1]   Oxford, Oxford University Press, 1997.

[2]   UNEP/SPREP/EU, Earthscan Publications, 1999.

[3]   Malmo Ministerial Declaration, Global Ministerial Environment Forum, Sixth Special Session of the UNEP Governing Council.

5.   Reviews and assessments are expected to be carried out at all levels, including local, national, regional and international, by governments and all other stakeholders. These reviews will identify areas where progress has been made; areas where further efforts are needed; and, new challenges and opportunities that have emerged since the Rio Conference. Rio+10 is also expected to include an evaluation of the results achieved in the implementation of environment-related conventions and protocols as well as the effectiveness and adequacy of international financial institutions and mechanisms such as the Global Environment Facility.

Preparations for Rio+10

6.   The Commission on Sustainable Development at its eighth session (CSD8) held in New York, in April 2000, stressed the importance of early and effective preparations for Rio+10. UNEP and the regional Commissions have been directly engaged in preparations to date. The ESCAP Ministerial Conference on Environment and Development, 31 August – 5 September 2000, will agree to a regional message for Rio +10. This will be made available to SPREP Members when it becomes available.

7.   According to a meeting convened by the UN Department of Environment and Social Development, future preparatory activities could include a regional preparatory meeting, sub-regional consultations and regional Agenda 21 roundtables involving eminent experts from the region and representatives of all key sectors of society. To this end the UN Secretary General has also asked for input from relevant intergovernmental organisations such as SPREP and the Forum Secretariat.

8.   The preparatory process for Rio+10 should allow for a comprehensive assessment of the United Nations Conference on Environment and Development outcomes. Governments are expected to work with relevant stakeholders to identify achievements, principle constraints and new initiatives.

9.   In terms of preparations within the Pacific region, countries have already contributed to the identification of environmental achievements and priorities through the review of activities 1997-2000 and the development of the Action Plan for Managing the Environment of the Pacific Islands Region (2001-2004). Input has also been provided to the ESCAP process through the Pacific sub-regional meeting, 12-14 April, Vanuatu.

10.   Other environment related initiatives that will assist the region prepare for Rio+10 include:

- Pacific input to the third Global Environment Outlook (GEO3); and,
- participation in the Global International Waters Assessment (GIWA).

CROP support

11.   At the last CROP Meeting, the heads of regional orgainsations agreed to establishing a working group to assist with the development of regional priorities. This working group will be convened at senior management level and draw upon regionally agreed priorities relevant to the sustainable development of Pacific island countries. Based on SPREP's experience in this area, the Secretariat has been asked to consider chairing this working group.

12.   The CROP Marine Sector Working Group has briefly discussed how marine sector priorities may be reflected in regional preparations for Rio+10. It was agreed that there would be clear linkages between the development of a Regional Ocean Policy and marine sector priorities for Rio+10. As part of this process, a range of stakeholder groups will need to be consulted.

Secretariat view

13.   Considerable commitment was made in 1992 by Pacific island countries and their development partners to prepare for the Earth Summit in 1992. Coordinated input by this region prior to and at the Earth Summit certainly assisted in identifying the special needs and circumstances of the Pacific. It assisted the region's efforts to attract funding over the subsequent years in environmental management and conservation and raised the profile of the region and that of all small island States. This led to the Global Conference on the Sustainable Development of Small Island States, Barbados, 1994, and subsequent international attention to the concerns of island States.

14.   Rio+10 provides an important opportunity to consolidate the work of Pacific island States at the international level. It will enable this region to:

- influence the sustainable development agenda for the international community over the next ten years;
- provide input to a number of specific initiatives that may be considered;
- further guide the development of financial mechanisms such as the GEF; and
- influence the development of any future global agreements or institutions.

15.   Coordination and partnering between SPREP Members, the SPREP Secretariat and other Pacific inter-government coordination agencies (CROP agencies) will again be needed to continue these efforts. This partnering should aim for a uniform presence and message at 'R10 + 10" to ensure the continued understanding of the unique issues within the Pacific and the need for continued funding to address these.

Recommendations

16.   The Meeting is invited:

  ➢ to **recognise** the importance of the 10-year review of the Earth Summit outcomes (Rio+10);

  ➢ to **note** progress to identify environmental achievements and priorities within the region and the related CROP process; and

  ➢ to **guide** the Secretariat in its efforts to assist countries further prepare for response to this initiative.

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31 August 2000

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 7.3.2.12: Strategic Action Programme for International Waters

Purpose of Paper

1.   To advise the Meeting on progress with implementation of the Strategic Action Programme (SAP) for the International Waters of the Pacific Small Island Developing States[1].

Background

2.   The 8th SPREP meeting, in October 1995, endorsed the preparation of a SAP addressing issues associated with international waters. Subsequently, the South Pacific Forum, at its Session in September 1996, requested SPREP to coordinate development of the project.

3.   The project to prepare the SAP was funded by the Global Environment Facility (GEF) through project development funds (PDF Block-B). Formulation was commenced in April 1997 under the guidance of a Regional Task Force (RTF)[2]. The SAP was to combine the following activity areas:

- Integrated conservation and sustainable management of coastal resources, including fresh water resources
- Integrated conservation and sustainable management of oceanic resources
- Prevention of pollution through the integrated management of land- or marine-based wastes
- Monitoring and analysis of shore and near-shore environments to determine vulnerability to environmental degradation

4.   The SAP defines international waters to include oceans, large marine ecosystems, enclosed or semi-enclosed seas and estuaries as well as rivers, lakes, groundwater systems, and wetlands with transboundary drainage basins or common borders. The water-related ecosystems and critical habitats associated with these waters are integral parts of the system. International Waters extend far inland and far out to sea.

5.   Work undertaken during the SAP formulation process resulted in the identification of three priority transboundary concerns related to International Waters:

- Degradation of their quality
- Degradation of their associated critical habitats
- Unsustainable use of their living and non-living resources

6.   The SAP is designed to assist Pacific island countries improve regional capacity for management of transboundary water resources and create improved management structures to address environmental degradation and ensure the long term sustainability of ocean fisheries in the Western Pacific. The SAP also intends to promote improved integration of environmental concerns into local, national and regional policy, and improved water quality and the conservation of key coastal and ocean ecological areas.

7.   The SAP was reviewed and subsequently endorsed by the Heads of Government of the South Pacific Forum at its Session in Rarotonga, 15-19 September 1997.

8.   The SAP was formally approved by the GEF in August 1999. Implementation did not commence until February 2000 when administrative arrangements for the establishment of the Project Co-ordination Unit (PCU) at SPREP and the Forum Fisheries Agency (FFA) and Secretariat of the Pacific Community (SPC) components were commenced. Linkages and opportunities for collaboration with activities of the South Pacific Applied Geoscience Commission (SOPAC) will also be explored during the early stages of implementation of the Programme. The SAP is a 5-year Programme with total GEF funding support of US$12 million. There are four principal objectives of the SAP:

Objective I.   To enhance transboundary management mechanisms

9.   This involves the establishment of a Project Co-ordination Unit (PCU) at SPREP, recruitment of two professional staff (a Resource Economist and a Community Assessment and Participation Specialist), implementation of FFA and the SPC components (concerning the regional oceanic tuna fishery; includes recruitment of 4 professional staff, see para. 10) and re-establishment of consultative processes established during the formulation phase.

Objective II.   To enable the conservation and sustainable use of coastal and watershed resources

10.   To address issues associated with integrated coastal and watershed management (ICWM) through up to 12 demonstration or pilot projects. Activities under this objective are to focus on demonstrating methodologies and best practices for conserving and sustainably managing:

- freshwater resources,
- coastal fisheries,
- effective Marine Protected Areas, and
- waste reduction initiatives (that address problems that have a demonstrable, negative effect on coastal living resources).

11. Available resources necessitate prioritisation of the proposals and selection of specific initiatives for the GEF project. Selection criteria are yet to be refined, but are likely to include:

- maximum replication potential,
- adequate community participation and support,
- consistency with the SAP,
- representation among the three island types (high islands, low islands and atolls), among the three lineal systems in the region (matrilineal, patrilineal, and mixed), and the three ethnic separations (Melanesia, Polynesia, and Micronesia),
- previously stated country interest (as included in SAP related country project submissions), and
- further analysis of the most appropriate sites for specific demonstration activities

12. Each demonstration project will have a Demonstration Project Advisory Committee (DPAC) comprised of country representatives, personnel from regional organisations, and the PCU.

Objective III. To enable the conservation and sustainable yield of ocean living resources

13. Implemented by FFA and SPC, this component will assist the 14 Pacific island countries improve national and regional arrangements for the management and conservation of oceanic fisheries resources within exclusive economic zones. It will also provide technical and policy advice in relation to the establishment of an international arrangement for the management and conservation of pelagic resources taken by tuna fishing vessels operating in the Western and Central Pacific.

Objective IV. To maximise regional benefits from lessons learned through community-based participation and to catalyse donor participation

14. This component involves the establishment of mechanisms to improve community participation in local, national and regional resource management and conservation programmes. This will be promoted through an improved understanding

of the design and application of management and conservation strategies, from both an economic and social perspective. The lessons learned from these activities will be applied to new initiatives and approaches, including in education and awareness raising, for promoting opportunities for the successful integration of conservation-related activities in communities.

15.   Activities will be guided by regular meetings of a Community Assessment and Participation Advisory Committee (CAPAC) - a sub-committee of the RTF, and will focus on facilitating and catalysing full and active involvement of local communities in pilot projects.   In addition, workshops to review project elements and define appropriate community assessment, participation and education strategies to assure effective levels of community-based participation in the work of the project will be arranged.

16.   In addition to successful projects being established in the form of demonstration projects, the SAP will review and prepare a report describing the current state of best practices and lessons learned in relation to available community assessment work.   It will include an assessment of past public participation activities of this nature, currently available community education materials, and will update listings of all relevant community-based NGOs throughout the region and their functions.

Recommendation

17.   The meeting is invited to **note** progress in relation to the implementation of this Programme.

End Notes:

1.   A project of the Governments of Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

2.   Responsibility for the development of the SAP was assigned to a RTF composed of one representative from Fiji, Marshall Islands, Samoa, Tonga, and Vanuatu, with additional members from SPC, Forum Secretariat, SPREP, the three GEF Implementing Agencies (United Nations Development Programme, United Nations Environment Programme and The World Bank), two non-governmetal organisations (International Union for the Conservation of Nature and The Nature Conservancy), and one private sector representative (Fiji Dive Operators Association, recommended by TCSP).   The Asian Development Bank and the Economic and Social Commission for Asia and the Pacific also participated.

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting

Guam

10 – 12 October, 2000

Agenda Item 7.3.2.13: Environmental Education Strategy

Purpose of Paper

1.   To inform the Meeting on progress with implementation of the *Action Strategy for Environmental Education and Training in the Pacific Region, 1999 – 2003.*

Background

2.   The 10th SPREP Meeting (Apia, 1998) considered and endorsed the resolutions of the Pacific Regional Conference for Environmental Education and Training and endorsed the *Action Strategy for Environmental Education and Training in the Pacific Region, 1999 – 2003.*

Progress

3.   The Action Strategy has provided direction in regional and national activities conducted by the Secretariat and Members. Particular attention has been paid to Target Areas 1, 3 and 4 of the Strategy with emphasis on (i) providing adequate training for teachers; (ii) funding at the national level for public awareness-raising activities; and (iii) the development of a network of educators in the region.

4.   Key activities conducted in 1999 and 2000 have included:

> short-term country attachment from American Samoa for training in resource material production and attachment from Kiribati for media-related training;

> SOPAC/SPREP collaboration in production of World Water Day material for 2000;

> pilot environmental module developed and trialed for SPC's Community Education and Training Centre (CETC);

> ➤ initiation of country-to-country attachment programme between the Cook Islands and the Republic of Nauru as part of capacity building efforts in environmental education;

> ➤ production of Waste Awareness Video under the European Union Pacific Regional Waste Awareness and Education Programme;

> ➤ National Environment Week support to several members (Niue, Nauru, Fiji and Tuvalu); and

> ➤ two Sub-regional Primary Teacher Training Workshops on environmental education in collaboration with the University of the South Pacific (USP).

Challenges

5.   It is recognised that limited staffing in environment departments and increasing workloads tend to make commitment to ongoing public awareness campaigning difficult. Members are urged to consider the need for increased national support to environmental consciousness-raising efforts and to consider delegation of these tasks (and associated funding) to non-governmental organisations or to other government departments (such as Health Departments and Rural Authorities) wherever possible.

6.   A second challenge for environmental education is the need to encourage positive attitudes and behavioural changes for environmental protection and management. While there has been a marked increase in the level of environmental awareness in the region, it is recognised that practical changes are yet to take place in the majority of cases. Public awareness and education at both the regional and the national level cannot stop at merely providing information. The eventual aim must be to encourage active participation at all levels of the community in environmental protection. This could be encouraged at the national level through practical environmental protection and conservation schemes (such as water and energy conservation, tree planting, adopt-a-beach and similar programmes). Such schemes require commitment from all levels of the community and members may wish to consider involvement of the private sector as well as government departments in such ventures. The Secretariat also wishes to encourage this participatory community action through the conferring of a Pacific Environmental Citizenship Award to individuals or non-corporate organisations that make a significant contribution to environmental protection. The proposed Award would be a Regional Award and nominations would be accepted from governments and from members of the community. Sponsorship will be sought from donor and regional organisations to support this Award.

Support

7.   The Secretariat wishes to acknowledge the ongoing support for SPREP's Environmental Education activities from the Australian Agency for International Development (AusAID) and the United Nations Environment Programme (UNEP). UNEP has also, in line with the priorities identified in the Action Strategy, provided funding support for the development of an Education Kit on Water Conservation. The Asian Development Bank (ADB) and the United Kingdom's Department for International Development (DFID) Pacific have also recently pledged their support for environmental education activities in the region. Funding for the development of Environmental Education story books/readers in three member countries has been provided by the DFID, while the ADB has approved a Technical Assistance project in another three countries for education and awareness raising activities that target the integration of traditional knowledge into national environmental management policies and practices.

8.   In addition to funding support for specific projects, the Secretariat has taken steps to ensure better co-ordination amongst all SPREP programmes for environmental education activities. This has ensured a more efficient use of funds for environmental education and awareness-raising activities and helped to reduce duplication of similar activities.

Recommendation

9.   The Meeting is invited to:

> **Note** the progress in implementation of the Environmental Education Action Strategy;
> **Urge** donors to give greater priority to environmental education and consciousness raising programmes; and
> **Support** the Secretariat's efforts towards establishment of a Pacific Environmental Citizenship Award.

27 July, 2000

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 7.3.2.14: Training Needs Assessment Report

Purpose of Paper

1   To report on the findings of the Environmental Training Needs Assessment (TNA) carried out for eight Members (American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Papua New Guinea, Tonga, and Vanuatu)

Background

2.   SPREP's mandate is to build and strengthen its Members by developing people's skills so they can manage and use their natural resources and environment in a more effective and sustainable manner. Capacity building is a major focus of SPREP's work, and two of SPREP's key capacity-building tools are environmental education and training.

3.   Members have consistently requested and received training in all work programme areas covered by the SPREP Action Plan. An average of 16 workshops and training programmes are conducted each year under the following five work programme areas:

1. Biodiversity and Natural Resource Conservation
2. Climate Change and Integrated Coastal Management
3. Waste Management, Pollution Prevention and Emergencies
4. Environmental Management, Planning and Institutional Strengthening
5. Environmental Education, Information/Awareness Raising and Training

4.   Over the years that SPREP has carried out training, several issues have arisen that reinforced the need to review SPREP training activities. Some of these were: lack of co-ordination of training in-country and region-wide; lack of relevance of the training content, particularly of overseas training in meeting local conditions and situations; lack of feedback on the effectiveness of training; lack of follow-up action after training; and, inappropriate participants attending training despite established selection criteria and processes;

5.   These are some of the key issues that SPREP aims to address through having a Training Officer on board and through the findings of the TNA.

Goal of the Training Needs Assessment

6.   *The purpose of this TNA is to promote and ensure results-oriented training will occur that is driven by Member needs.* The underlying concept behind the design of the TNA is described in further detail under Section 3.1 of the attachment.

Objectives of the Training Needs Assessment

7.   i)   Identify the knowledge and skills Members need <u>to have</u>, to carry out their jobs more effectively under the various environmental fields
     ii)   Determine which training needs Members see as priorities
     iii)   Identify and assess the types, amount and frequency of environmental training provided by SPREP and other organisations/institutions in the region to address the priority needs
     v)   Identify additional opportunities for training
     vi)   Identify constraints to adequate and effective training

8   The <u>Expected Outcomes</u> of the TNA and the <u>Methodology</u> adopted in carrying out the assessment are described in more detail under **Section 3** of the Attachment.

Findings of the Training Needs Assessment

9.   The findings of the TNA are based on four aspects:

First, was the need to identify what <u>skills and knowledge Members needed to have</u>, to effectively carry out work in environmental areas - the first step before determining the priority training needs. Thus, in consultation with SPREP Programme Staff, a list of required tasks was developed for each environmental area providing the 'standard' that Members were assessed against to determine the current level of knowledge and skills they possessed to carry out the tasks identified, and to determine priority training needs.

Second, based on the list of required knowledge and skills, which formed the basis of Part B of the TNA questionnaire, respondents identified the following *technical areas* as "<u>high priority</u>" for further training and support in their respective jobs. The term "high priority" does not refer to programmes that are more important than others, rather it signifies that respondents do not have adequate knowledge and skills to perform the tasks identified.

Biodiversity and Conservation of Natural Resources:
- ➤ Applying wildlife management techniques, which include monitoring, survey, planning (mitigating disasters in the early stages)
- ➤ Promoting and marketing Conservation Areas (CAs)
- ➤ Identifying, establishing and managing income generating activities on a sustainable basis
- ➤ Accessing other resources in support of CA management

Climate Change, Sea Level and Climate Monitoring, International Negotiations and Meteorology:
- ➤ Geodetic surveying (under sea level rise and climate monitoring)
- ➤ Meteorological equipment operation and maintenance
- ➤ Climate data management
- ➤ Climate prediction and forecasting
- ➤ Data analysis and interpretation under meteorological services
- ➤ Using field sampling techniques

Coastal Management
- ➤ Environmental monitoring
- ➤ Sustainable tourism
- ➤ Enforcement and prosecution
- ➤ Integrated resource management

Waste and Chemical Management
- ➤ Storing and transporting chemicals with their different requirements
- ➤ Understanding and applying poison treatment
- ➤ Public awareness raising

Marine Pollution
- ➤ Conducting an introduced marine species (IMS) risk assessment and survey
- ➤ Developing a media strategy
- ➤ Knowledge of Marine Pollution Legislation

Environmental Management, Planning and Institutional Strengthening
- ➤ Data management
- ➤ Developing key environmental indicators

Environmental Education, Information and Training
- ➤ Working knowledge of MS Office tools eg. Word, Excel
- ➤ Designing and developing databases
- ➤ Using information sharing processes for the Pacific Environmental Information Network (PEIN)

> Imparting environmental awareness to students
> Awareness of key environmental issues and involved in environmental education on a 'hands-on' basis
> Developing and tailoring public awareness programmes on specific environmental issues of the country
> Working knowledge of desktop publishing
> Communicating environmental issues to media and the public
> Using the media to raise awareness of environmental issues
> Collecting and interpreting information on traditional resource use

Generic knowledge and skills

Respondents were sufficiently knowledgeable and skilled across the range of tasks listed, but indicated the need for continued training and support in finance and business management, as well as negotiation. These were assessed to be 'medium priority'.

Third, was the need to assess current as well as potential training opportunities that could address the priority training needs identified. Current training sources critical to the acquisition of knowledge/skills of Members were formal training, on-the-job, and in-service training. Potential training opportunities included untapped sources in-country such as business schools and vocational institutes that could help develop business skills like accounting, personnel management, marketing, etc. Potential overseas training opportunities through fellowships, training awards and cross-country exchanges with Pacific Island Territories have not been fully accessed as well, and are already being explored.

Fourth, to meet Member needs more fully and to ensure sustainability of SPREP's training efforts, it was necessary to identify constraints to the effectiveness of training that need to be addressed by both the Members and SPREP to fully realise and maximise the impact of training in-country and in the region. The majority of problems and constraints to the effectiveness of training were usually caused by a combination of factors e.g. people who did not have the skills or confidence to perform, as well as working environment conditions that make it difficult or impossible to perform. As Rummler (1983) said, "you pit a good performer against a bad system and the system wins every time."

10.   The problems were identified under three main categories. The first category relates to constraints of the *learning experience* or training received, such as the lack of local content and applicability to local conditions and situations of training received. Respondents also highlighted the need to minimize classroom formats with emphasis on fieldwork and the use of vernacular during in-country training whenever possible.

11.   The second category relates to the *working environment* that trainees return to which affects their ability to apply the skills acquired from training. The major constraints in this category in all countries, for both government and non-governmental organisations, was the lack of funding and staff, and the lack of government priority to environment - a situation further exacerbated by the effects of Public Sector Reform programmes. The third category involves *SPREP* in its role as training provider. All Members cited the need for SPREP to better coordinate its training activities, to follow-up on its training, as well as to use more local resource personnel to reinforce capacity building in-country.

Conclusions

12.   The development of a 'standard' list of required knowledge and skills was extremely useful not only in enabling data gathering and comparison but also in serving as a training tool in and of itself, because it enlightened Member participants on the range of tasks involved in the different environmental fields. Most importantly it highlighted that most jobs held a diverse array of knowledge and skills that current SPREP training does not adequately fulfil, particularly those of conservation practitioners and meteorological staff.

13.   It was also reassuring to note that whilst the list of knowledge/skills developed were tailored towards SPREP programmes, they were broad and encompassing enough to be relevant to field practitioners across all sectors, including NGOs.

14.   It was also evident from the priority training needs identified that Members have not acquired the necessary knowledge/skills levels in a number of key areas where SPREP has provided lots of training. E.g. under Environmental Management and Planning, high priority areas for training are in data management and developing key environmental indicators which is the basis for conducting Environmental Impact Assessment (EIA) – an area in which SPREP has provided training since 1992.

15.   This has implications on the number and quality of training SPREP has provided, as well as the working environment to which trainees have returned that may not have enabled the transfer of the skills acquired. Feedback clearly indicated the need for SPREP to better coordinate its training, with consistent follow-up after training, as well as developing a means of regularly assessing the effectiveness of training in-country.

16.   Most importantly, is the responsibility SPREP has in ensuring that an enabling environment exists in-country to facilitate the implementation of training BEFORE it is conducted. This includes ensuring that training is tied to the business needs of organisations, and that it is planned, managed and recorded properly. This entails

strengthening the human resource development (HRD) function of key environmental organisations so that the return on SPREP training is maximized and realized. It also involves closer consultations between SPREP and recipient departments/organisations of training, not just the SPREP National Focal Points.

17.   The continued need for training was clearly expressed and with funding constraints affecting the amount and type of training Members can receive, SPREP has a critical role not only as a training provider (directly), but also as an advisor on how to access quality environmental training programmes and funding avenues.

Preliminary Recommendations

18.   The following recommendations are categorised according to actions to be taken by Members, and those by SPREP, bearing in mind that the purpose of this TNA is to ensure results-oriented training will occur that is driven by Member needs.

<u>Measures to be taken by Members</u>

Working Environment
 ➢ Develop training plans – as the first step to establishing training as a long-term process. A key tool is a training plan, which takes into account short/medium-term skills building as well as long-term human resource development objectives. Training plans should be linked to an ongoing process of identifying training needs, and should include a way to monitor and evaluate all training programmes.
 The training plans should be linked to <u>job descriptions</u>, and where they do not exist, they should be developed. There should also be, if possible, <u>a Training Officer</u> to implement the plan and maintain the <u>training record</u>. With these plans in place, it is possible to transform on-the-job training to in-service training programmes using experienced personnel
 ➢ Ensure there is a local resource person working alongside any external trainer to promote continuity and transfer to others
 ➢ Ensure mandatory reporting by the learner to his or her organisation and community, including verbal reporting
 ➢ Develop a reward system in the community or organisation following transfer of knowledge/skills

<u>Measures to be taken by SPREP</u>

Ensure an enabling work environment exists before any training
 ➢ Identify the <u>client</u> as well as the learner for any training - SPREP has much control over the "learning experience" side of the equation, whereas the client (usually two levels above the learner) controls the work environment

> side of the equation. If training is to have an impact on-the-job, those who have control over the learning experience and whose who can change the work environment must work together as partners i.e. SPREP and its clients in Member organisations

> Help strengthen the Human Resource (HR) function of key environmental organisations in Members particularly with regards to developing Training Plans that are tied to business needs, and training records to keep track of training activities in-country

Better management of the training process

> Identify the short-term and long-term follow-up, as well as who will fund it, to be done prior to the training.

> Ensure the participants selected have the necessary skills to not only implement what was learned, but also to pass on their knowledge and skills to others

> Develop a monitoring and evaluation mechanism that would help gauge the impact of training in SPREP Members.

> Standardize training forms and processes within SPREP – to give a coherent and professional portrayal of SPREP training. Training documentation (forms and even reports) would become recognizable as SPREP "products" and contribute to the "branding" of SPREP in its role as training provider.

Improve the learning experience

> The need to compile a directory of case studies across environmental areas, to be used in training. Member countries have repeatedly called for case studies with more local content. Although there is a considerable amount available under Biodiversity and Conservation, Waste Management etc., there needs to be a central source that can be easily accessed and available.

> Ensure gender issues and group values are incorporated into training.

19.   The Meeting is invited to:

> **note** the Secretariat's efforts to determine Members' priority training needs; and

> **endorse** the Secretariat's recommendations in its effort to promote a results-oriented training approach that is sustainable in the long term.

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19 August, 2000

ENVIRONMENTAL MANAGEMENT REGIONAL TRAINING NEEDS ASSESSMENT (TNA)

EXECUTIVE SUMMARY
(Excerpt from Report)

1   SPREP's Mandate

In the early 1990s, most independent Pacific Island Countries (PICs) with technical support from SPREP, carried out a major consultative planning exercise that culminated in the production of 12 National Environmental Management Strategies (NEMS) aimed at integrating environmental concerns into national development plans.   The environmental concerns identified in the NEMS form the basis of the five Strategic Outputs in SPREP's current 1997-2000 Action Plan, which do not vary significantly from the issues reflected in the Key Result Areas (KRAs) and associated processes/interventions identified by Members during the consultation process in the development of the 2001-2004 Action Plan.

SPREP's mandate is to build and strengthen its Members by developing people's skills so they can manage and use their natural resources and environment in a more effective and sustainable manner.   Capacity building is a major focus of SPREP's work, and two of SPREP's key capacity building tools are environmental education and training.

The term 'Members' is used throughout this report, to refer to the 22 Pacific Island Countries and Territories of SPREP's membership i.e. those for whom the TNA is relevant, rather than the four developed country members, the United States (US), France, Australia, and New Zealand.

Members have consistently requested and received training in all work programme areas covered by the SPREP Action Plan.   The five work programme areas are:

1   Biodiversity and Natural Resource Conservation
2   Climate Change and Integrated Coastal Management
3   Waste Management, Pollution Prevention and Emergencies
4   Environmental Management, Planning and Institutional Strengthening
5   Environmental Education, Information/Awareness Raising and Training

2   SPREP Training

All SPREP programmes under these five environmental areas have an information, legal, education and training component. The strong support of all stakeholders from policy makers to the local community is needed at various phases of the development and implementation of SPREP projects/programmes. Therefore, the training required ranges from dissemination of basic principles through schools and mass media, to formal courses for professionals and technicians involved in implementing projects.

Some examples of the type of training SPREP provides are:
- ➤ Teacher training on integrating environmental management in classroom teaching for secondary school teachers under the Environmental Education programme
- ➤ Municipal Solid Waste Management Workshop for Health Inspectors
- ➤ Regional Workshop for lawmakers, managers, policy-makers on the implementation of the Convention on Biological Diversity in the Pacific Islands Region
- ➤ Conservation Area Managers training in income generation through nature conservation
- ➤ Sea Level Climate Monitoring Project training at National Tidal Facility (NTF), Australia aimed at graduates in general science, coastal management, environmental science etc.
- ➤ On-site training of meteorological technicians and observers on how to maintain, repair and operate equipment by regional maintenance team visits.

With the considerable amount of resources spent on training activities, steps were taken to try to coordinate SPREP's training, and to ensure that the training provided addressed priority environmental training needs of Members.

These steps included the creation of a new staff position of Training Officer in 1998 that was filled in February 1999, and funded by New Zealand Overseas Development Assistance (NZODA). One of the initial tasks of the Training Officer was to conduct an environmental training needs assessment (TNA) for SPREP Members.

NZODA also contributed some funding to the Pacific Regional Conference for Environmental Education and Training held at USP in Suva, Fiji in 1998, the result of which was the Action Strategy for Environmental Education and Training in the Pacific Region 1999-2003. This TNA falls under Target Area 1: Formal and Non-Formal Education of the Action Strategy which looks at developing environmental education and training material for various audiences and monitoring, evaluating and refining training materials and practices as part of an ongoing quality control process.

2.1   Constraints to adequate and effective training provided by SPREP

Several issues have arisen over the years that reinforced the need to review SPREP
training activities. Some of these were:

i)   Lack of co-ordination
A lack of co-ordination of training (and other activities) within and across SPREP's work
programme areas and insufficient follow-up and continuity of training provided

ii)   Lack of relevance
Some training provided directly, or in collaboration with advanced countries, has not
fully catered to the conditions and situations peculiar to small island nations

iii)   Lack of feedback on effectiveness of training
Some training requests have been received year after year from the same countries. This
raised questions of the effectiveness of the training provided, and whether those trained
had implemented or transferred to others anything that they had learned – the challenge
of any training programme

iv)   Lack of follow-up action after training
One of the reasons for the lack of feedback on the impact of training, was the lack of
follow-up after workshops.   Some participants have not been able to use the
knowledge/skills they acquired due to lack of equipment and further support assured to
them by training providers

iv)   Inappropriate participants attending training
Another concern is participants who do not fulfil the selection requirements of training
provided by SPREP, usually discovered too late. SPREP sets the selection criteria while
the selection process usually rests with National Focal Points, but these measures do not
always ensure the attendance of suitable candidates

These are some of the key issues that SPREP aims to address through having a Training
Officer on board and through the findings of the TNA.

3   The Environmental Training Needs Assessment (TNA)

3.1   Goal of the TNA

*The purpose of this TNA is to promote and ensure results-oriented training will occur
that is driven by Member needs.*

Under this overriding goal, the TNA was designed along the fundamental concept that can be summarised with the formula:

$$\text{Learning Experience} \times \text{Work Environment} = \text{Business Results}$$

In this formula, "business results" means on-the-job skill transfer and/or end-result improvement.

Business results (in-country) occur when skills taught in a training programme are applied on the job yielding improved performance. For this to happen, SPREP in its training role, needs to provide well-designed and skillfully delivered training in which participants learn what was intended; thus the learning experience side of the results may be 100%. The learning by itself is obviously not enough to produce on-the-job results. What must be present is a work environment that reinforces the use of skills gained and by coaching those skills (with follow-up support) when people need additional guidance. If this supportive environment is lacking, then there will be a zero on the ''work environment'' side of the equation. Recalling basic arithmetic, 100 multiplied by zero will yield 0 in terms of organisational or on-the-job results. The inverse can also apply whereby training did not provide the appropriate learning experience, while the working environment was supportive.

Any training provider, such as SPREP, acting alone without the assurance of an enabling work environment, will experience limited results from training efforts.

In most cases, SPREP concentrates on the "learning experience" side of the equation with often insufficient effort given to ensuring that the work environment can or will support new or improved skills.

The basic formula outlined above is referred to throughout the report forming the basis of the assessment and linking the different sections of the report together.

3.2   Objectives of the TNA

i)   Identify the knowledge and skills Members need to have, to carry out their jobs more effectively under the various environmental fields

ii)   Determine which training needs Members see as priorities

iii)   Identify and assess the types, amount and frequency of environmental training provided by SPREP and other organisations/institutions in the region to address the priority needs

iv)   Identify additional opportunities for training

v)   Identify constraints to adequate and effective training

3.3 Expected Outcomes of the TNA

i) Ensure that training provided by SPREP *meets the priority needs* of Members
ii) Develop mechanisms to monitor and evaluate the *impact* of SPREP training
iii) Ensure that existing *training opportunities* are utilized and potential training opportunities are identified
iv) Co-ordinate efforts to address long-term *human resource development issues*
v) Monitor and evaluate the *amount and frequency* of environmental training provided by SPREP to Members

3.4 Methodology

The TNA exercise followed a logical sequence of steps in six major phases:

Phase 1: Desktop research involving document reviews and interviews with relevant stakeholders.

Phase 2: Developing the TNA Questionnaire, which served as a practical and appropriate tool with which to gather and compare information. Vanuatu kindly agreed to be the pilot country for the TNA.

Phase 3: In-country visits, which were as participatory as possible combining questionnaires with face-to-face meetings.

Phase 4: Processing and analysing the TNA questionnaire was done mainly with the assistance of a local consultant.

Phase 5: Compiling the TNA Report included pulling together the Questionnaire responses with document reviews and personal interviews to form a regional report.

Phase 6: Circulating and Finalising the TNA Report involves circulating it to all those involved in the exercise, before the report is finalised.

4 The Findings

4.1 Identification of the knowledge and skills necessary to manage various aspects of the environment

Before determining the priority training needs, it was necessary to first identify what skills and knowledge Members needed to have, to effectively carry out work in environmental areas. In consultation with SPREP Programme Staff, a 'standard' list of technical knowledge and skills requirements was developed for each environmental area, that formed the basis of Part B of the TNA questionnaire and enabled comparison of findings across countries. A 'standard list' of generic knowledge and skills was also developed that cut across all environmental areas.

4.2   Priority training needs for each environmental area

Most respondents identified the following technical areas as ' *'high priority'* ' for further training and support in their respective jobs. The term ''high priority'' does not refer to *programmes* that are more important than others, rather it signifies that respondents do not have adequate knowledge and skills to perform the tasks identified.

i)   Biodiversity and Conservation of Natural Resources:
  ➢ Applying wildlife management techniques, which include monitoring, survey, planning (mitigating disasters in the early stages)
  ➢ Promoting and marketing Conservation Areas (CAs)
  ➢ Identifying, establishing and managing income generating activities on a sustainable basis
  ➢ Accessing other resources in support of CA management

ii) Climate Change, Sea Level and Climate Monitoring, International Negotiations and Meteorology:
  ➢ Geodetic surveying (under sea level rise and climate monitoring)
  ➢ Meteorological equipment operation and maintenance
  ➢ Climate data management
  ➢ Climate prediction and forecasting
  ➢ Data analysis and interpretation under meteorological services
  ➢ Using field sampling techniques

iii) Coastal Management
  ➢ Environmental monitoring
  ➢ Sustainable tourism
  ➢ Enforcement and prosecution
  ➢ Integrated resource management

iv) Waste and Chemical Management
  ➢ Storing and transporting chemicals with their different requirements
  ➢ Understanding and applying poison treatment
  ➢ Public awareness raising

vi) Marine Pollution
  ➢ Conducting an introduced marine species (IMS) risk assessment and survey
  ➢ Developing a media strategy
  ➢ Knowledge of Marine Pollution Legislation

vi) <u>Environmental Management, Planning and Institutional Strengthening</u>
  - ➤ Data management
  - ➤ Developing key environmental indicators

vii) <u>Environmental Education, Information and Training</u>
  - ➤ Working knowledge of MS Office tools eg. Word, Excel
  - ➤ Designing and developing databases
  - ➤ Using information sharing processes for the Pacific Environmental Information Network (PEIN)
  - ➤ Imparting environmental awareness to students
  - ➤ Awareness of key environmental issues and involved in environmental education on a 'hands-on' basis
  - ➤ Developing and tailoring public awareness programmes on specific environmental issues of the country
  - ➤ Working knowledge of desktop publishing
  - ➤ Communicating environmental issues to media and the public
  - ➤ Using the media to raise awareness of environmental issues
  - ➤ Collecting and interpreting information on traditional resource use

Generic knowledge and skills

Respondents were sufficiently knowledgeable and skilled across the range of tasks listed, but indicated the need for continued training and support in finance and business management, as well as negotiation. These were assessed to be '*medium priority*'.

It is well recognised that generic knowledge/skills are needed to complement the technical knowledge/skills requirements. In fact, some projects which have technically competent personnel have run into problems because of lack of basic project management skills such as time management, problem solving and decision making, book keeping etc.

4.3   Training Opportunities

The usual pattern for government officials is to join the public service with some form of formal qualification at a tertiary or vocational institution, followed by on-the-job training. When formal training occurs after recruitment, it typically takes place at one of the regional universities e.g. University of the South Pacific (USP) or University of Papua New Guinea (UPNG) or at a universities outside the region through scholarships under bilateral aid programmes. The following are brief descriptions of the types of training usually received by respondents (both government and NGO).

Sources of Training

i)   Formal Training

Generally in member countries and territories, training that is ''certified'', or ensures a promotion is looked upon highly. Carrying prestige and value, a degree or diploma also makes recipients eligible for positions that were previously unavailable, therefore, there is a premium on formal training because of the opportunities it provides.

Regional universities include:
> University of the South Pacific
> University of Guam
> University of PNG
> University of Technology, Lae, PNG
> The French Polynesia University Centre

Formal institutes in adjacent countries include the University of Waikato in Hamilton, New Zealand which provides Climate training under PICCAP. Increasingly, over the years, Members have sought, where possible, formal training in adjacent countries like New Zealand and Australia because of the prestige associated with getting a diploma or degree from more developed countries.

ii)   On-the-job Training

On-the-job training includes both trial-and-error learning, advice, recommendations and instructions from colleagues and superiors. Although on-the-job training is unstructured and informal, it is a critical source of skill acquisition for both government officials as well as community workers.

iii)   In-Service Training (External)

Environmental Training under SPREP

Over half of the respondents have received environmental training from SPREP under the various programmes. The training listed below is from the period 1992-2000 e.g.

> Conservation Area Management Workshop for Conservation Area Support Officers (CASOs) in 1994-2000)
> South Pacific Sea Level and Climate Monitoring Project training at National Tidal Facility (NTF) at Flinders University in Adelaide, Australia (1994-2000)

➢ In-country training and assistance of meteorological staff in the region
➢ Coral Reef Monitoring Workshops (1996-200)
➢ Global Programme of Action (GPA)/Hazardous Waste Management Workshop (1999)
➢ Annual Pacific Ocean Pollution Prevention Programme (PACPOL) Workshop (1999-2000)
➢ Environmental Impact Assessment (EIA) Workshops (1992-1998)
➢ Environmental Education Workshops for Teachers and Community Workers (1992-1999)
➢ Training of Environment and Conservation Department staff in Library Software and Management Skills (1996-2000)
➢ Country Attachment Scheme in Information Technology (IT) and Digital Clearinghouse for Environmental Information (1999-2000)

Most of these training programmes and workshops will continue to be offered under the relevant programmes e.g. Training of Environment and Conservation Department staff in Library Software and Management Skills will continue for another three years under European Union (EU) funding and will help fulfil the priority training needs identified in that area.

Similarly, the in-country training and assistance of meteorological staff in the region will continue to be the cornerstone of the *Strategic Action Plan for the Development of Meteorology in the Pacific Region 2000-2009*. This should also address the priority training needs identified in this climate area.

Environmental-related training by other organisations

Regional organisations such as the South Pacific Geoscience Commission (SOPAC), the Secretariat of the Pacific Community (SPC) and Forum Fisheries Agency (FFA) also provide environment-related training e.g. SPC as part of its mandate carries out training in pesticide management, which complements SPREP work.

In-service Training (Internal)

In-service training can help consolidate job experience and provides an opportunity to train staff in skills needed in the future. Although the premium is on formal training, given the competition involved, most respondents try to take advantage of workshops, seminars, conferences and other forms of in-service training, such as that provided by SPREP.

These are just some examples of sources of ongoing training opportunities that will help address the priority training needs identified.

Potential Sources of Training

There are still many untapped sources of training in the Members assessed. Some of the untapped sources are categorised below, and this is not an exhaustive list.

In-country training (internal and external)

Training does not necessarily involve huge amounts of time or money e.g. in-service training upgrades and reinforces skills over the course of a career. There are still untapped sources of in-country training within some of the Members. E.g.

> The Public Service Commissions (PSCs) of several members such as the Cook Islands, Vanuatu and Fiji have a training division that conducts training for the whole public service usually in supervisory and management subjects. Environmental Awareness raising sessions could be incorporated in PSC training sessions such as that done for other cross-cutting issues like Gender in Fiji's PSC.
> For improvement of business skills such as accounting, personnel management, etc., there are business schools and management consulting firms that can provide such training at a much lower cost in-country, than that provided by overseas training providers.

Overseas training

Some untapped sources include:

> *Fellowship Programmes* e.g. the Ross Trust Fellowship Programme that is aimed at people who do not have formal education qualifications but are in a position to influence others e.g. trainers, community educators. The skills upgrading components are in the areas of environmental science, horticulture, etc.
> *Training Awards* eg. The Ecosystem Approaches to Human Health Training Awards, which encourages graduate students to achieve a holistic understanding of the relationships between environment, health, and development.
> *Cross-country exchange with Pacific Island Territories* ie. U.S. and French Territories, such as Guam, American Samoa, French Polynesia and others, have not received much assistance or input from SPREP until recently. This was due partly to them having easier and more direct access to opportunities of training, financial assistance etc., from their more developed patron countries. Therefore, the Territories visited for this study (Guam, American Samoa and French Polynesia) were generally more skilled and knowledgeable across all environmental areas and were very receptive to providing assistance through exchange of personnel and expertise with their independent Pacific Island neighbours.

These are just some existing and potential training opportunities identified. There are other sources that will be the subject of further investigation.

4.4 Problems and constraints to the effectiveness of training

The majority of problems and constraints to the effectiveness of training are usually caused by a combination of factors i.e. People may not have the skills to perform, but there are also other environmental reasons that make it difficult or impossible to perform. As Rummler (1983) said, "you pit a good performer against a bad system and the system wins every time."

This section addresses both sides of the "results formula" raised earlier:

> Learning Experience x Work Experience = Business Results

The problems identified fall conveniently into three main categories.

4.4.1 The Learning experience (training received)

1 Need for more local content and applicability to local conditions and situations
2 Different levels of knowledge and skills of participants meant the need to bridge a substantial gap during training
3 Need to have a previously trained local counterpart from the host nation to provide supervisory and teaching assistance to the trainer, particularly with a large group
4 Need for training to be conducted in the field and to minimise classroom formats with maximum use of case studies and the use of vernacular during in-country training whenever possible
5 Need for more short courses tailored to the specific needs of relevant agencies, preferably in-country
6 Trainers are not always sufficiently qualified
7 Uninteresting methods of training

4.4.2 The Working Environment (function of the organisation e.g. organisational structure, systems, values and norms)

Lack of Resources
1 Lack of funds
2 Lack of human resources, especially trained and qualified staff
3 Lack of infrastructure and equipment to apply skills acquired from training

Lack of proper management

4   Poor planning in general
5   Turnover of staff
6   Difficulty in recruiting and retaining graduates
7   A high workload which means it is difficult to release people for any length of time (for training)
8   Need for more commitment eg. the Environment Unit in Vanuatu is largely externally funded, which in part reflects the need for more commitment to the environmental area by national governments
9   The importance of having environmental legislation in place to give 'teeth' to environmental issues
10 Environmental issues not a priority of government
11 After training, consultants are still asked to carry out tasks in which country participants have been trained
12 The availability of training but the difficulty in getting time off work
13 Lack of communication between organisations (including governments and NGOs) regarding training opportunities

Public Sector Reform Programmes

14 Downsizing' under Reform initiatives in Members has led to redundancies in most government departments leading to serious staff shortages right across the public service, making it difficult for departments to meet their goals
15 In addition to reduction in staff is the reduction in budgets which has seriously affected achievement of outputs as well
16 The corporatisation of departments and the accompanying laying off of workers has further contributed to the low morale of the existing workforce

Human Resource Development Issues

17 Lack of training plans in almost all the organisations surveyed – leading to an ad hoc approach to training
18 Lack of training budgets – external funding is usually sought for training
19 Need for more high level consultations with Heads of Departments (HODs) to encourage dissemination of information and skills gained by participants amongst their colleagues (e.g. distribution of training completion reports, presentation of seminars etc)
20 The diversity and complexity of skills which current training cannot fulfil
21 Rapidly changing technology means regular training and refresher courses are needed
22 The dependency on one or two people in-country meant the same person(s) attended most of the training under the various programmes. In some cases, there is no-one deemed appropriate enough to which that person can transfer the knowledge/skills

23 Inappropriate participants attending training
24 Some National Focal Points do not ensure that information on training offers are disseminated widely, resulting in the same people attending training programmes
25 Political interference with selection of participants
26 Training is generally viewed as a "reward" and the competition for training opportunities can be quite intense due to the lack of incentives for civil servants in general. Thus those "in the loop" are not willing to let others equally eligible, have a chance to attend training
27 Lack of implementation of training objectives upon return to the workplace due to lack of time, heavy workload, other priorities, etc.
28 Lack of support to enable and facilitate the transfer of learning on-the-job
29 Difficulties in practical implementation of overseas training
30 The need for full information to be passed on to either the organisation or participant regarding the training
31 The need to keep a record of those who attend training to see whether or not they have implemented the training or have transferred the knowledge and skills gained
32 The need to annually assess the training needs of each organisation
33 The need to have a clear idea of specialised versus non-specialised training

4.4.3 SPREP as a Training Provider

1 Better co-ordination of training activities (regional/international) to reduce current high levels of overlap and duplication and to ensure training activities match recipients' ability to undertake and implement skills gained. This would help minimise time spent by trainees overseas
2 Resources for follow-ups need to be clarified
3 Insufficient notice of timing of workshops
4 Lack of coordination and overlapping of workshops
5 Lack of follow-up after training leading to reduced interest
6 SPREP and its Members should draw more on existing expertise of locals in-country
7 Need for SPREP projects to be better coordinated and managed so that they do not come to Members mid-year when agencies have already planned their activities for that year. The time lag is an important consideration in project planning.
8 SPREP also needs to coordinate and organise its training better so that:
   ▪ last minute notice given for training programmes can be avoided
   ▪ lack of follow-up by SPREP on training outcomes can be avoided
   ▪ some SPREP training programmes need to be reviewed. E.g. some programmes require from Members, different nominee each time. Sometimes this is difficult or impossible for countries to take on because there are not enough 'appropriate' people to send each time. As a result one or two people have been sent mainly because of their availability, rather than the appropriateness of the training to their job. An alternative proposal is suggested that it may be more effective, if instead of sending someone different each time, to structure the training in such a

way that the same people can attend training at a progressively higher level so that the existing pool is strengthened/developed further.

- training is not undertaken that cannot be followed-up in-country due to lack of resources (people, equipment, money)
- Donors do not propose training which may not be appropriate or possible for countries to carry out - given existing capacity and REAL needs
- SPREP has more say over selection of participants
- Coordinators/facilitators of training session should be empowered to evaluate participants, and this information to be passed to the relevant authorities

These were key problems and constraints identified by Members, as well as training providers, which can only be effectively resolved if all parties, including donors, work together.

5   CONCLUSIONS

The assessment supported many commonly held views about the problems and constraints to the effectiveness of training. The assessment findings and the specific concrete recommendations they lead to are articulated below:

5.1   Identification of the knowledge and skills required

The assessment, through the contribution of SPREP Programme Staff and Management, was able to develop a 'standard list' of technical knowledge and skill requirements for each environmental area, as well as generic knowledge and skill requirement that cuts across all environmental fields. It was found that a few jobs held a diverse array of knowledge and skills e.g. conservation practitioners and meteorological staff, whilst there were those with a more specific focus such as those working in areas like marine pollution.

Whilst the list of tasks developed were tailored towards SPREP programmes, they were broad and encompassing enough to be relevant to field practitioners across all sectors, including NGOs. Furthermore, development of the 'tasks list' not only enabled data gathering and comparison, but was also a training tool in and of itself, because it enlightened Member participants on the range of tasks involved in the different environmental fields.

5.2   Training Needs

The assessment based primarily on the TNA questionnaire found that Members have not acquired necessary knowledge/skills levels in a number of key areas. E.g. in Environmental Management and Planning, the high priority areas for training are in; data management and, developing key environmental indicators. This is the basis for Environmental Impact Assessment (EIA) which was regularly raised in meetings and interviews as a critical area to be strengthened.

Similarly Meteorology was the climate area considered "high priority" for training and support due to the diversity and complexity of the skills required of Meteorology staff in general which were borne out in interviews and group meetings.

General patterns that emerged included the US and French Territories (e.g. American Samoa, French Polynesia and Guam) being more adequately skilled and knowledgeable across all environmental areas. There was also more need for further training and support in Tonga and Vanuatu compared to the other independent Members surveyed (i.e. Fiji and PNG).

5.3   Current Training Opportunities

The assessment found that the present trend of short courses provided by SPREP cannot adequately fulfill the needs expressed. Unless a more coordinated approach is taken, the current trend of short courses will not be sustainable in the long term for various reasons:

➢ They cannot keep pace with the increasing demands of the requirements of the various jobs responsible for the different environmental areas
➢ For effective follow-up after training to occur, the geographic dispersion of the island states means that one's physical presence if required, can be cost-intensive and difficult to sustain over time
➢ There are limits on the capacity of small island countries and territories to absorb multiple training activities, hence the need to co-ordinate training efforts for maximum effect (time, money and results)

The current sources of training are ongoing, but there will be a need to strengthen regional universities that may play an increasing role in providing environmental training.

5.4 Potential Training Opportunities

There are new training sources available to be tapped. In most of the countries, there is a continuing trend to train more professionals at universities, whilst taking advantage of the short courses, seminars and meetings offered through various sponsors. The assessment found that there are numerous other untapped sources, which include local industries, other government departments, local experts in specific fields, and other overseas programmes.

6 Recommendations

The trend in most countries follows a basic pattern of formal training, followed by very informal on-the-job-training. The ethic of training as a process that occurs throughout one's career has yet to take firm hold within most sectors in the Members surveyed. Formal training cannot possibly cover everything that conservationists, meteorologists or educators etc. need to know throughout their careers. As their career develops, they will need different skills at different levels and there must be a way for Members to recognise and address these evolving needs. The following recommendations are categorised according to actions to be taken by Members, and those by SPREP bearing in mind the "results formula".

6.1 Measures to be taken by Members

Working Environment

i) Develop training plans – as the first step to establishing training as a long-term process. A key tool is a training plan, which takes into account short/medium-term skills building as well as long-term human resource development objectives. Training plans should be linked to an ongoing process of identifying training needs, and should include a way to monitor and evaluate all training programmes.

Two organisations who had developed clear training plans and were actually implementing them regularly were the Meteorology Services in French Polynesia and the Department of Environment, Planning and Conservation (EPAC) in Tonga. E.g. The Meteorological Services in French Polynesia has a Training Co-ordinator, whose responsibility is to develop an annual training plan based on a needs assessment that matches individual needs to sectional and organisation needs. It also has an annual training budget for the provision of specialised and unspecialised training with continued upgrading of peoples' skills and knowledge in Toulouse, France.

The *training plans* should be linked to job descriptions, and where they do not exist, they should be developed. There should also be, if possible, a Training Officer to implement the plan and maintain the training record. With these plans in place, it is possible to transform on-the-job training to in-serve training programmes using experienced personnel.

ii)   Ensure there is a local resource person working alongside any external trainer to ensure continuity and transfer to others

iii)   Ensure mandatory reporting by the learner to his or her organisation and community, including verbal reporting

iv)   Develop a reward system in the community or organisation following transfer of knowledge/skills

6.2   Measures to be taken by SPREP

These measures are to be taken for any SPREP Programme

Learning Experience and Work Environment

i)   Identifying the client as well as the learner for any training

Revisiting the "results formula," for training to yield results on-the-job, it must be linked to a business need. SPREP has much control over the "learning experience" side of the equation, whereas the client (usually two levels above the learner) controls the work environment side of the equation.

> Learning Experience x Work Experience = Business Results

If training is to have an impact on-the-job, those who have control over the learning experience and whose who can change the work environment must work together as partners i.e. SPREP and its clients in Member organisations.

ii)   Ensuring gender issues and group values are incorporated into training.

iii)   Identifying the short-term and long-term follow-up, as well as who will fund it, should be done prior to the training.

iv)   Ensuring the participant selected has the necessary skills to enable them to pass on their knowledge and skills

v)   Help strengthen the Human Resource (HR) function of key organisations in Members particularly with regards to developing Training Plans that are tied to business needs, and training records to keep track of training activities in-country

vi)   Developing a <u>monitoring and evaluation mechanism</u> that would help gauge the impact of training in SPREP Members. E.g. when announcing a training programme or workshop, the Circular could stipulate that:

> ➢ applicants must advise SPREP of how they aim to implement the training and the type of support they may require to facilitate implementation

> ➢ One of the criteria for selection of a participant is for them to be prepared to return after their training and implement an activity or project within a timeframe as well as transfer to others some of the knowledge and skills acquired

> ➢ applicants will be expected to write a report within one month upon return to their workplace showing how they have made a presentation to others on what they have learned on the course

> ➢ applicants will be sent a Post-Training Evaluation Form within three months after returning to work. The Form is to be filled out by the trainees and their supervisors on how useful the training has been and whether there has been any change in the trainee's performance

> ➢ applicants will not be considered for any future training if they do not fulfill any of the above requirements

> ➢ for the selection process, applications are to be forwarded to SPREP for screening and selection, with the endorsement of National Focal Points

Effect
The effect of this measure would be to:
- discourage those who attend training when it doesn't necessarily fit in with their work
- spread the training net wider because applicants who can't commit to the requirements will pass the offer on to others who may
- make the first little step towards developing a "learning organisation" by ensuring that country participants transfer or impart some of what they have learned to others and not keep it all to themselves
- provide SPREP with some formal measure of whether the knowledge and skills acquired is shared or implemented in-country

vii)   Developing and standardizing training forms and processes. Training is all about setting standards that enable us to measure the effectiveness of any programme. Such actions would include:

> documenting the training process from start to finish and having it easily accessible to SPREP Programme Staff for their reference

> developing a standard SPREP Pre-Training Questionnaire, Training Evaluation Form and Post-Training Evaluation Form that can be customised to meet the needs of any event, including meetings. This has been done already but feedback from Programme Staff has been slow. Perhaps this message can be reinforced through open discussion and with management support

> Developing standard Training Announcement Circulars, Nomination Forms and Course Programme Formats that can also be customized

Effect
▪ SPREP Programme Staff would be better informed about the requirements of a good programme. A lot of resources (funds, time, effort and people) go into running training programmes and workshops and should be seen as an investment, and like any investment, careful planning is mandatory

▪ Developing standard forms gives a comprehensive, unified and professional portrayal of SPREP training. Training documentation (forms and even reports) become recognisable as SPREP "products" and contributes to the "branding" of SPREP in its role as training provider.

v)   The need to compile a directory of case studies across environmental areas, to be used in training. Member countries have repeatedly called for case studies with more local content. Although there is a considerable amount available under Biodiversity and Conservation, Waste Management etc., there needs to be a central source that can be easily accessed and available.

These are some of the key recommendations arising out of the report, with a few of them e.g. developing standard training evaluation forms at SPREP, already developed and ready for implementation following further discussions and expressions of commitment.

Closing remarks

The assessment provides some baseline data about environmental training in the region that can be the basis of more in-depth studies across the different environmental fields. The role of the Training Officer will include working closely with the different work programme areas in SPREP to implement some of the recommendations outlined above.

Purpose of the Questionnaire and Completion Guidelines

The purpose of this environmental Training Needs Assessment (TNA) is to review past environmental training sponsored/conducted by SPREP for your country, and to determine future training requirements to better meet your country's needs and priorities.

We would appreciate it very much if you could take time to fill in the questionnaire and return it to Audrey Dropsy while she is in-country. She will be available to provide advice and assistance during the week to facilitate the information gathering process.

If there is more than one person in your department/organisation who will fill out Part B of this questionnaire please provide his or her name and designation.

Thank you for taking time to respond.

PART A. TRAINING IN GENERAL

Name _____

Title _____

Department/Organisation _____

Address (include email if available) _____

_____

Total Number of staff by gender Men: _____(6/7) Women: _____(7/8) Total _____ (9-11)

Number of years working in the Department/Organisation _____ (12/13)

Briefly, how would you describe the main **Goals of your Department/Organisation?**

_____ (14)

_____ (15)

_____ (16)

_____ (17)

_____ (18)

1. The areas identified below are SPREP's Work Programme Areas under the SPREP Action Plan. Please indicate with a tick(s), the environment-related area(s) for which your department/organisation is responsible:

Bio-diversity and Natural Resource Conservation

(19)
❑1 Conservation Area Management
❑2 Development and implementation of regional strategies, national plans and NGO and local community initiatives for endangered, threatened or vulnerable native species
❑3 Prevention, eradication or control of non-indigenous species which threaten ecosystems, habitats and species
❑4 Implementation of conventions, agreements and strategies relevant to the conservation and sustainable use of biological diversity
❑5 Increased political support and national/local capacity for Coral Reef and Wetland Ecosystem Conservation

Climate Change and Integrated Coastal Management

❑6 South Pacific Sea Level & Climate Monitoring Project
❑7 Pacific Island Climate Change Assistance Programme (PICCAP)
❑8 Development of Greenhouse Gas Inventories, Mitigation, Vulnerability and Adaptation
Strategies in response to Climate Change, Climate Variability & Sea Level Rise by National Expertise
❑9 Evaluation of Methodologies, Models & their Results
❑0 Development of Curriculums for schools with the support of the SPSLCMP & Atmospheric Radiation Measurement (ARM) Project
❑x Cooperation amongst regional Meteorological organisations and commitment to international standards and procedures
❑v Coastal Management

Waste Management, Pollution Prevention and Emergencies

(20)
❑1 Waste and Chemical Management
❑2 Marine Pollution

Environmental Management, Planning and Institutional Strengthening

❑3 Planning, Managing and Regulating Development in an environmentally sustainable manner
❑4 Integrating NEMS into national and sectoral plans and programmes
❑5 Environmental Impact Assessment (EIA)
❑6 Environmental Reporting (State of Environment project)
❑7 Development and implementation of environmental legislation
❑8 Effective participation in regional and international environmental negotiations and agreements
❑9 General Environmental Management capacity building

Environmental Education, Information and Capacity Building

(21)
❑1 Formal environmental education/curriculum development
❑2 Public awareness raising
❑3 Coordination of environmental training
❑4 Development of clearinghouse mechanisms for environmental information (e.g. Web site, Database, and Library)
❑5 Media Liaison and Publications
❑6 Information technology infrastructure

Other areas (please specify)

❑7 ——————————————————————————————

Institutional issues

2. What are three main difficulties your department/organisation experiences in carrying out its responsibilities? Please indicate their importance using the following rating code;

    1 =very important, 2 = quite important, 3 = not very important

Difficulty		Importance	
	(22)		(25)
	(23)		(26)
	(24)		(27)

3(a) Does your department/organisation have an annual Training or Staff Development Plan?

Yes   1   - go to Q5   No   2   (29)

4. If your department/organisation <u>does not</u> have a Training or Staff Development Plan, please tick beside the reasons why it may not have one. Tick as many as you wish.

(30) _____ Training is not in the mandate of your organisation

(31) _____ No need to develop a Training or Staff Development Plan

(32) _____ No time to develop a Training or Staff Development Plan

(33) _____ Don't know how to develop a Training or Staff Development Plan

(34) _____ The idea of a Training or Staff Development Plan has never arisen

(35) _____ Other (please specify)

5 (a) Does your department/organisation have an annual training budget?

Yes ☐ 1   No ☐ 2 - go to Q5(c)   (37)

(b) If it does, please indicate the amount in your currency (approximate): _____(38-43)

(c) If it does not, which agency is most likely to meet the cost of training?

_____(44)

_____(45)

_____(46)

6 (a)   Is information on training programmes disseminated throughout the whole department/ organisation?

Yes ☐ 1   No ☐ 2 - go to Q7   (48)

(b)   If it is, by what means is it disseminated throughout the department/organisation? Tick as many as you wish.

Circulars or memo   ☐1   (49)

Staff meetings   ☐2

Notice board   ☐3

Other (please specify)   ☐4

_____

7.   Can you please provide a brief explanation of how nominees from your department/organisation. are selected for local or overseas training programmes.

(50) _____

(51) _____

(52) _____

(53) _____

8 (a)   Does your department/organisation conduct training?

Yes ☐ 1 - go to Q9   ☐No   2   (54)

(b)   If it does not, please indicate why by ticking off one or more of the options. Please put more than one tick beside what you consider the most relevant reasons.

(55/56)   ☐1 ☐1   We do not have enough knowledge of the subject to give training in it.

☐2 ☐2   We do not have enough knowledge of how to deliver training

☐3 ☐3   There is a shortage of resources (staff, money, equipment and time) to deliver training

☐4 ☐4   There is no demand for training from the staff

☐5 ☐5   There is no demand for training from other organisations/community, etc.

☐6 ☐6   There is no need for training in the organisation/department

(57/58) ☐1 ☐1   There is no need for training in the other organisations/community, etc.

☐2 ☐2   We have tried training the staff before but without success

☐3 ☐3   We have tried training other organisations/community, etc., before without success

☐4 ☐4   Training is not in the mandate of our organisation

☐5 ☐5   Other (Please explain)

_____

9. If your department/organisation conducts training, does it collaborate with other local, regional or international agencies/organizations, such as NGOs, churches, to deliver training or information to your staff, other departments/communities, etc?

Yes ■ 1   No ■ 2 - go to Q10   (60)

If it does, please name those collaborating organizations.

_____ (61)

_____ (62)

10.   What is the single biggest training need in your department/organisation?

_____(63)

_____(64)

11 (a)   Is there a training programme you have experience of, which would be useful as a model for future training.   ■ es   1   ■ o   2   - go to Q12   (66)

(b)   If so, please say what the training programme was and why it would be a useful model.

Programme: Why useful as a model:

_____   _____ (67/68)

_____   _____ (69/70)

_____   _____ (71/72)

_____   _____ (73/74)

ENVIRONMENTAL TRAINING

Environmental education and awareness raising

12. What kind of tools do you think would be most appropriate for environmental awareness raising in your country? Please indicate X) the most appropriate tool in the column using the following scale, and indicate with a tick if there's a need to translate material into the vernacular (indigenous language).

1 = very appropriate, 2=quite appropriate, 3=not very appropriate

Awareness tools	1	2	3	Need to translate into vernacular?
Brochures in libraries, appropriate govt. depts., NGOs, communities				
Curriculum aids in schools				
Videos for use by departmental staff and community groups				
Posters				
Radio programmes				
TV advertisements				
Theatre				
Web site on the internet				
Interactive CD (Compact Disc)				
Other (Please provide other ideas)				

Access to information

13. Please indicate the availability/accessibility of information in-country that can be incorporated into environmental training. Tick in the appropriate column.

Type of information/ resource	Readily available/ Accessible (within 48 hours)	Available/ accessible, but not easily	Unavailable/ inaccessible
Environmental Strategies/Plans			
Other related Reports			
Case studies			
Sites which could be visited			
Speakers			
Videos			
Internet			
Geographic Information Systems (GIS)			
Databases			
Results of university or other studies			
Traditional knowledge			
Other (please specify)			

PART B. QUESTIONNAIRE - SPECIFIC AREAS

THE QUESTIONS IN PART B, RELATE TO THE FOLLOWING SPECIFIC ENVIRONMENTAL AREAS AS OUTLINED UNDER SPREP'S ACTION PLAN;

B1 Bio-diversity and Natural Resource Conservation
_____ Conservation Area Management
_____ Development and implementation of regional strategies, national plans and NGO and local community initiatives for endangered, threatened or vulnerable native species
_____ Prevention, eradication or control of non-indigenous species which threaten ecosystems, habitats and species
_____ Implementation of conventions, agreements and strategies relevant to the conservation and sustainable use of biological diversity
_____ Increased political support and national/local capacity for Coral Reef and Wetland Ecosystem Conservation

B2 Climate Change and Integrated Coastal Management
_____ South Pacific Sea Level & Climate Monitoring Project
_____ Pacific Island Climate Change Assistance Programme (PICCAP)
_____ Development of Greenhouse Gas Inventories, Mitigation, Vulnerability and Adaptation Strategies in response to Climate Change, Climate Variability & Sea Level Rise by National Expertise
_____ Evaluation of Methodologies, Models & their Results
_____ Development of Curriculums for schools with the support of the SPSLCMP & Atmospheric Radiation Measurement (ARM) Project
_____ Cooperation amongst regional Meteorological organisations and commitment to international standards and procedures
_____ Coastal Management

B3 Waste Management, Pollution Prevention and Emergencies
_____ Waste and Chemical Management
_____ Marine Pollution

B4 Environmental Management, Planning and Institutional Strengthening
_____ Planning, Managing and Regulating Development in an environmentally sustainable manner
_____ Integrating NEMS into national and sectoral plans and programmes
_____ Environmental Impact Assessment (EIA)
_____ Environmental Reporting (State of Environment project)
_____ Developing and implementing environmental legislation
_____ Effective participation in regional and international environmental negotiations and agreements
_____ General Environmental Management capacity building

B5 Environmental Education, Information and Capacity Building
_____ Formal environmental education/curriculum development
_____ Public awareness raising
_____ Coordinating Environmental training
_____ Development of clearinghouse mechanisms for environmental information (e.g. Web site, Database, and Library)
_____ Media Liaison and Publications
_____ Information technology infrastructure

(If you DID NOT answer PART A of the Questionnaire please provide your name/title, responsibilities and department/organisation)

Name_____Title_____

Responsibilities _____

Department/Organisation _____

B1 - BIODIVERSITY & NATURAL RESOURCE CONSERVATION

BIODIVERSITY & NATURAL RESOURCE CONSERVATION is SPREP's Action Plan Area One (1). It covers the following programmes:

- Conservation Area Management
- Development and implementation of regional strategies, national plans and NGO and local community initiatives for endangered, threatened or vulnerable native species
- Prevention, eradication or control of non-indigenous species which threaten ecosystems, habitats and species
- Implementation of conventions, agreements and strategies relevant to the conservation and sustainable use of biological diversity
- Increased political support and national/local capacity for Coral Reef and Wetland Ecosystem Conservation

Biodiversity & Natural Resource Conservation projects

14.   Apart from the following projects, please identify any other Biodiversity & Natural Resource Conservation projects currently operating in your country, or in association with your department/organisation or Conservation Area (CA). This is not limited to SPREP projects.

Project	Executing agency
South Pacific Biodiversity Conservation Programme (SPBCP)	SPREP
Regional Marine Turtle Conservation Programme (RMTCP)	SPREP
Regional Avifauna Conservation Management Programme (RACMP)	SPREP
Regional Marine Mammal Conservation Programme (RMMCP)	SPREP
Regional Invasive Species Project (RISP)	SPREP/IUCN

Biodiversity & Natural Resource Conservation problems

15.   What is a current Biodiversity & Natural Resource Conservation problem/pressure in your country? If there is more than one, please identify them IN ORDER OF IMPORTANCE, with (1) indicating very important, etc.

Current Biodiversity & Natural Resource Conservation problem/problem	Importance
	1
	2
	3
	4

Past Training on Biodiversity & Natural Resource Conservation

16.   How many in your department/organisation or Conservation Area (CA) have undergone training in Biodiversity & Natural Resource Conservation over the past 3 years? Please fill in the table attached at the back as Annex A indicating the following;

- name and designation of the trainee
- name of the workshop attended
- where the training took place
- duration of training attended (date/month/year)
- sponsor of the training
- whether or not the person conducts any training himself or herself.

What are the training needs for Biodiversity & Natural Resource Conservation

17.   Technical knowledge and skill requirements.

Please indicate with an (X) your level of confidence for each of the knowledge, skill and ability areas described in Annex B.

18.   Generic knowledge and skills requirements.

Please indicate with an (X) your level of confidence for each of the knowledge, skill and ability areas described in Annex C. (If you are filling out any other environmental areas under Part B, please fill this section out only once.)

19. If training and education in Biodiversity & Natural Resource Conservation is needed, who do you think should receive this training? Please identify the most important group by ticking in the appropriate column.

Group	Essential	Very important	Quite important	Not very important
National government staff (please indicate appropriate department)				
Local government				
Non government organisations e.g. churches, community groups				
Community members (e.g. women, children and youths)				
People employed in Conservation Areas (CAs)				
Private enterprises				
Teachers				
School children				
Universities/Colleges				
Others (please specify)				

20. Do you have any other comment or ideas of ways in which **Biodiversity & Natural Resource Conservation training** could be improved in your country? If the space provided is not enough, please feel free to use the back of this page for your comments.

THANK YOU VERY MUCH FOR TAKING TIME TO FILL THIS IN. PLEASE RETURN IT TO ME BEFORE I LEAVE, AS I AM VISITING IN-COUNTRY SPECIFICALLY TO ASSIST YOU IN COMPLETING THE QUESTIONNAIRES.

I MAY BE FOLLOWING UP WITH A PHONE CALL SO THAT YOU CAN EXPLAIN YOUR IDEAS AND PRIORITIES MORE FULLY. THANK YOU.

B1

Question 17 : Please identify those who have undergone Biodiversity & Natural Resource Conservation training, filling in the table as accurately as possible from 1992 to the present.

Name of trainee and designation	Name of Course or W/shop attended. Please indicate if its (N) national; (R) regional; or (I)international	Where training took place	Date/Year	Sponsor(s)	Does the person conduct/organise any training? Yes/No. If so in what areas.

INSTRUCTIONS FOR ANNEXES B AND C

Listed under the column with the heading of each environmental area e.g. Coastal Management, there are items that you need to rate your skills and knowledge on that your job requires. If something that you feel is important is not listed – please write it in the blanks provided.

The Rating Scale - The scale and defining 'indicators' below will help you to rate your **ABILITY LEVEL** for each item listed. Enter your number rating in the spaces provided against the knowledge/skill item being assessed.

ABILITY LEVEL: Rate your level in each skill/knowledge area using scale and "indicators" below.

High Priority

Low Priority

LOW ABILITY	MODERATE ABILITY		HIGH ABILITY
1	**2 3**	**5**	
(Currently unable to do it; lack basic knowledge of it)	**4** (Able to do it with some help; have some knowledge of it)	**6** (Able to do it without further help or support; have sufficient knowledge of it)	(Able to help others; highly satisfied with self skill/knowledge)
• Seen by others as a learner/trainee	• Seen by others as adequately skilled	• Seen by others as competent	• Seen by others as an expert and could train others
• Require constant support and supervision; always asking others for help	• Require some supervision and support but becoming increasingly independent	• Requires no supervision but still seeks some support	• Require no supervision
• Feel anxious, highly dissatisfied, frustrated with self skill/knowledge	• Feel ok but not terrific about self skill/knowledge	• Feel confident about self skill/knowledge but needs assurance of others' advice and support	• Highly satisfied with self skill/knowledge
• Work returned frequently for correction/improvement	• Revisions required are generally minor	• Revisions are rare and far between	• Work usually accepted with no revision required

B1 BIODIVERSITY & NATURAL RESOURCE CONSERVATION (Technical knowledge and skills requirements)

Question 17: Please indicate with an (X) your level of confidence for each of the following knowledge, skill and ability areas.

High Priority →   ← Low Priority

Biodiversity & Natural Resource Conservation	Not applicable	Currently unable to do it; lack basic knowledge of it	Able to do it with help; have some knowledge of it	Able to do it without further help or support; have sufficient knowledge of it	Able to help others; highly satisfied with self skill/ knowledge
Plan for Conservation Areas (CAs) through consultation with relevant parties					
Incorporate gender related concerns/issues in biodiversity & natural resource conservation plans					
Develop effective tools for community-based resource management and conservation.					
Develop and identify appropriate links between species conservation and CA management					
Apply wildlife management techniques, which include, monitoring, survey, planning, EIA and contingency planning (mitigating early disasters in the early stages) .					
Promote and market Conservation Areas (CA)					
Assess, identify, establish and manage income generating activities on a sustainable basis					
Evaluate and monitor CAs on a regular basis					
Raise public awareness using appropriate tools					
Access other resources in support of CA management					
Build capacity to network with others in and outside the CA site					
Coordinate and conduct training programmes for different groups in the community					
Understand National Biodiversity Action Plans & apply lessons learned from the CA in the implementation of such plans					
Operate computers and MS Office tools e.g. MS Word, Excel					
Other (please specify)					

GENERIC KNOWLEDGE AND SKILL REQUIREMENTS FOR ALL ENVIRONMENTAL AREAS

QUESTION 18: Please indicate with an (X) your level of confidence for each of the following knowledge, skill and ability areas.

High Priority ◄——► Low Priority

Generic knowledge and skill requirements	Not applicable	Currently unable to do it; lack basic knowledge of it	Able to do it with help; have some knowledge of it	Able to do it without further help or support; have sufficient knowledge of it	Able to help others; highly satisfied with self skill/ knowledge
Development of management plans					
Finance and business management					
Meeting management including Facilitation					
Conflict Management					
Negotiations					
Communication - Making Presentations					
Communication - Interviewing					
Human resource management					
Supervision and personnel management					
Developing and supporting teamwork					
Leadership skills					
Time management					
Information Management					
Other (please specify)					

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials

Guam
10 – 12 October, 2000

Agenda Item 7.3.2.15: Information Strategy

Purpose of Paper

1.   To advise the Meeting of the Secretariat's new Information Strategy: the Corporate Data Management (CDM) Initiative, and to seek guidance and support regarding IT Technical Support and Capacity Building needs of Member countries.

Background

2.   The capability to respond quickly to change, through the implementation of a business vision (or action plan), depends partly on the capability of Information Technology (IT) to rapidly support such change. Effectively, IT should have a strategy that will deliver consistent, reliable and flexible services to the business of SPREP in a cost-effective manner.

3.   It has been recognized by SPREP that the availability of quality and timely information on all aspects of SPREP's work is vital to achieving the Action Plan objectives. In addition, there is an increasing requirement by Members to access and effectively use environmental information, held by SPREP or channeled through the organisation from various sources and via a variety of mechanisms. This requires SPREP to undertake an increasing clearinghouse role.

4.   Recognising the need for better information management and dissemination, SPREP commissioned a review of the Organisation's Data and Information Management and production of a strategic document for overall management of SPREP's information resources.

Findings of the Review

5.   The independent review of the Secretariat's data handling and information management capability, undertaken in 1999, revealed weaknesses in responding adequately to business user needs for reasons such as incorrect or inadequate information and poor control of data flows. It was a significant achievement to recognize these weaknesses and develop a strategy to address them. The Recommendations are outlined in Attachment 1 (WP.7.3.2.15/Att.1). The solution recognizes that:

    i.   information is an essential corporate asset to SPREP and its Members; and

    ii.   the strategies for system development and data management must be based on recognized standards, appropriate technology and integrated views of business data.

Corporate Data Management (CDM) Initiative

6.   The reviewer produced a strategic document, 'SPREP CDM Initiative,' (WP.7.3.2.15/Att.2) which provides a unified perspective of SPREP data and information requirements, across key outputs (business areas). As such, it serves as a high-level plan for the further development and integration of the SPREP corporate database and the wider SPREP clearinghouse mandate.

7.   The aim of this Framework is to recognize and establish Information Management at SPREP as a Business Process that is well founded and based on a defined methodology and standards.

8.   *SPREP CDM Initiative* can essentially be described as a set of related projects and activities undertaken to achieve the following:

- Recognise data and information as one of SPREP's key corporate resources;
- Introduce and establish appropriate techniques and practices for proper management of this essential resource; and
- Design, develop, implement and maintain required application systems and databases.

9.   The outcome of the SPREP CDM Initiative is expected to be a well organised and managed business process and technology environment capable of providing quality, timely, adequate and useable data and information for the organisation itself and for all Members and other stakeholders involved in managing the environment of the Region. We refer to this outcome of the CDM Initiative as the 'CDM Facility', a vehicle for achieving the business goal and comprising:

- Data Management Framework (processes, methods/techniques, tools).

- Technology (computers, networks, software development tools, etc.).

- A portfolio of integrated databases and application systems that ultimately make the data and information resource available to business users.

Full details of the CDM are contained in WP.7.3.2.15/Att.2

Member Country IT technical support and assistance

10.   Through informal consultation with various stakeholders involved in the region and consistent with the findings of the Regional Environmental Management Training Needs Assessment (TNA), there seems to be a growing demand and need for technical support in the area of IT.

11.   Priority IT needs could be addressed in a basic manner through tasks such as:

- Providing Technical Assistance to SPREP Focal Points in existing IT-related development programmes;
- Advocating IT and Communication infrastructure development;
- Independent IT evaluations; and
- Supporting more directly the IT and information component of SPREP and local environment programmes.

12.   Activities could include:

- In-country visits by SPREP's IT staff to provide technical support;
- Sub-regional Workshops using SPREP Computer laboratory;
- Regional IT conference; and
- IT Country Attachments to SPREP.

Country Attachment – IT: Member Country Capacity Building

13.   In 1999 SPREP started an IT Country Attachment Scheme whereby Information Technology (IT) staff from Members are hosted for 8 to 10 weeks in SPREP to develop their IT skills.   This is on-the-job training through a very pragmatic and practical approach.   This scheme has received very positive feedback from the 2 Attachments in 1999, (Niue and Solomon Islands). Year 2000 Attachments are from Papua New Guinea and Vanuatu. With the new facility, SPREP will endeavour to augment the number of IT Country Attachments, funding permitting. In reporting on the scheme, a participant has recommended that additional IT Human Resources within the SPREP Secretariat would be required to strengthen this programme.

SPREP Training Centre Computer Laboratory

14.   The proposed new SPREP Education and Training Centre should be completed towards the end of 2001 and will include a computer laboratory of 15 computers for both Members and SPREP staff IT training needs. It should be noted that in the current staffing situation there is little IT Human Resource capacity to carry out training, or even coordinating IT training.

Resources

15.   With the current IT staffing and funding level in the Secretariat, there are insufficient resources to undertake these activities and to implement a programme of technical support, training and expert assistance to ensure greater uptake of appropriate IT and communication solutions by Members. The capacity of the IT Section is currently designed to cater primarily for the IT needs of the Secretariat and, even then, available resources are severely stretched. Additional resources would have to be sought in order to support more directly Members' needs in this area, noting that IT is not one of the KRAs *per se*.

16.   The Meeting is requested to discuss these IT capacity building initiatives and indicate whether SPREP should endeavour to find donor support to provide additional resources (staff and operational budget) for IT training and IT technical in-country support.

Recommendation

17. The Meeting is invited to:

- **note** the strategic direction in Information Management taken by the Secretariat with the CDM Initiative and **support** its further development; and

- **discuss** and **provide guidance** on the related strengthening of the IT unit, especially with regard to SPREP's provision of Technical Support in-country and IT capacity building for Members.

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22 August 2000

Information Management at SPREP
Review Findings

Interviews with business area specialists, management and other staff, and the analysis of relevant documents have provided an understanding of the business information needs and have also identified certain issues and problems.

As a general conclusion the current level of Information Management at SPREP can not be categorised as adequate given the size, and more importantly, the nature and role of the organisation. There are of course aspects of the IT requirements that are currently well covered by the use of appropriate systems and technology. These include: desktop office applications (word processing, spreadsheet, desktop publishing, e-mail), financial system, library system and, to a certain degree, Internet and Web requirements. Hardware and networking is also kept at adequate levels. Notwithstanding this, information management issues exist at practically all levels of the organisation: operational, tactical and strategic.

The main issues and problems identified for SPREP information management can be classified into the following groups:

- There is no defined methodology and standards in place and no overall plan for the development of databases and applications. To use an analogy, what is missing is something comparable to the Action Plan and Work Programme defined for SPREP as an organisation - in other words, a guiding framework and a long term plan.

- Inadequate or non-existent integration of data and applications. This often leads to uncontrolled redundancy of data, potential data inconsistency, and overheads in using both human and machine resources. To use another parallel, like the co-operation that is promoted in the South Pacific region in order to protect and improve the environment, a co-operation and integration must be established between the little "islands of data and applications".

- Insufficient applications support for some SPREP business processes (for example Strategic Planning and Work Programme Management, Operations and Administration, and various specific areas such as Training, etc.).

- No clear definition and understanding of information flows and information use. The roles of "data owners" (those that are responsible for the timeliness and quality of information) and "data users" are not defined. One of the implications is under-utilisation of existing applications and decreased process efficiency.

- The staffing of the IT section is inadequate considering the magnitude and diversity of information management requirements.

Information Management at SPREP
Recommendations

There are seven key recommendations resulting from the findings. The attempt was made to make the recommendations as specific as possible, and to estimate the required effort where appropriate. However, it should be noted that this is intended only as a rough guide. An indication of priorities is also provided.

Recommendation 1: Develop an Information Management Strategy and Foundation

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This recommendation aims at recognising and establishing Information Management at SPREP as a business process that is well founded and based on a defined methodology and standards. One of the key tasks in building this foundation is to define an overall plan for understanding the information needs and for designing required databases. This plan is called a "Data Model" and equates, for example, to an architect's plan for a building. The more complex the building is, the more important the architect's plan is (and we have already mentioned how complex data and information needs at SPREP are).

This recommendation should be addressed as a project with the highest priority since it is a prerequisite for all other information management initiatives. The estimated effort for the project is around six weeks and the deliverables should include: Data Naming Standard, Corporate Data Model and Data Ownership Model.

> **Recommendation 2: Integrate the SPREP Clearinghouse role into the overall Information Management Strategy**

The Information Clearinghouse mandate is one of the key IT requirements at SPREP. It is also a complex one, both in terms of its definition, design and implementation. The aim of this recommendation is to emphasise the following:

- In designing the Clearinghouse mechanism (or system), special attention must be paid to defining a detailed model for data, processes and technology components of the system.

- The Clearinghouse model should incorporate the requirements from all Strategic Outputs. The architecture should be structured in such a way to include a common element and specific modules for different Outputs.

- The Clearinghouse model should be developed under the umbrella of the overall information management strategy, in other words, using the same standards and methodology.

Design and implementation of the Clearinghouse System is likely to involve several related projects: (i) Modelling and Design, (ii) Common Module Implementation, (iii) Specific Module(s) Implementation. The effort can not be estimated at this stage (six to eight weeks is a rough guide for project (i)). The priority can be regarded as high and is also influenced by the Global Programme of Action (GPA) Clearinghouse requirements. It is worth repeating though, that this recommendation needs to be addressed in close connection with Recommendation 1.

> **Recommendation 3: Develop a system to support the "Performance and Output" based business model**

To provide support for strategic and tactical business planning, implementation of outputs and projects, performance monitoring and internal/external reporting requirements, an application called "Work Programme Management System" is required.

This recommendation can be regarded as a high priority, given that virtually all professional staff have identified the need for such a system. It should be targeted for implementation as early as possible. The estimated time required to develop this is approximately 12 weeks.

Recommendation 4: Re-develop the Operations and Administration System ("Corporate Database")

This is another recommendation that targets a specific application system. This system is currently not being utilised. It needs to be re-developed and put into production so that benefits identified can be achieved. The system should be reduced to its core and common functionality, the current favourable features retained and all identified issues addressed. One of the issues relates to the effort required for the data entry. This can be resolved by engaging a part time data-entry person for the initial population of the database, after which the Administration Section should take over this task.

This recommendation can be regarded as a medium level priority, but probably slightly higher than recommendation 3 (in terms of timing). The estimated time required to develop this is approximately 6 weeks.

Recommendation 5: Perform a detailed review of all "subject area" databases and re-develop or re-integrate them as appropriate

"Subject area databases" are the specific systems that reflect information requirements for topics such as: Conservation Areas, Turtles, Solid Waste Pollution Statistics, Environmental Laws, Agreements and Conventions, etc. Some of these databases already exist but are faced with problems. Resolving these issues, integrating the existing and developing new subject area databases can be addressed as a series of small projects. This can be regarded as a third level priority (but must not be viewed as insignificant).

Recommendation 6: Address IT staffing issue for adequate systems development and end-user computing support

One of the findings indicated in the previous section is that the current staffing numbers of SPREP's IT section are not adequate, which seriously undermines its ability to bring the IT systems to a new level required by the increased organisational and regional information needs.

The type of skills necessary for SPREP's IT Section in performing its role and supporting the "CDM" objective are:

- IT planning and management
- Database design and systems development
- Web, Internet and Intranet development
- Support (user support, hardware, communications)

At the minimum, SPREP's IT Section should have one experienced specialist (covering Database and Web development). This is in addition to the IT Manager and one or two support people. (As a benchmark, the IT team of another similar CROP agency includes a Manager at the HOD level and three specialists at the Project Officer level).

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24 August 2000

SPREP

South Pacific Regional Environment Programme

Corporate Data Management (CDM) Initiative

Data and Information Management Framework

(Draft)

Prepared by Nesh Petrovic

June, 2000

Document Version Information

Version 1.0

Version 1.0 of *Data and Information Management Framework* document is the initial version prepared as part of the first phase of Corporate Data Management Initiative for South Pacific Regional Environment Programme, completed during May - June 2000.

This document may be amended as appropriate during subsequent phases of the CDM Initiative.

CONTENTS

1. Introduction

1.1 Purpose and Scope of the Document

Data and Information Management Framework is the main document for the first phase of SPREP's CDM Initiative. The document essentially describes this initiative and the rationale behind it, and defines the overall framework for developing SPREP Corporate Data and Information Management Facility (CDM).

This document, in its initial version, is addressing the following aspects of SPREP's data and information management framework:

- Background on SPREP CDM Initiative (section 2.1).

- Definition of SPREP's data management framework (main principles and components that are pertinent to data management at SPREP - sections 2.2 and 2.3).

- Description of individual components of the data management framework. These include: processes, methods and techniques, people and tools (sections 3, 4, 5 and 6).

- Prerequisites and constraints for the successful implementation of the CDM Facility (section 7).

1.2 Target Audience

The intended audience for this document are:

- SPREP business area specialists as well as Corporate Services staff,

- SPREP IT staff and other professionals that will be involved in data and information management and systems development,

- SPREP Management,

- Other interested parties in member countries and associated institutions and organisations.

1.3   Reference Materials

The following is a list of related documents:

[1] *SPREP Information Management Requirements (Evaluation and Recommendations)* - Document that discusses the requirements for data and information management at SPREP (N. Petrovic, November, 1999). This document covers the initial stage ('needs evaluation') of the SPREP CDM Initiative

[2] *SPREP Corporate Data Model (V1.0)* - A companion document that defines the first version of SPREP corporate data model (N. Petrovic, June, 2000).

[3] *SPREP Data Stewardship Model* - A companion document that defines the model for managing data stewardship (N. Petrovic, June, 2000).

[4] *SPREP Logical Data Naming Standard* - A companion document that defines the standard for naming logical data objects (N. Petrovic, June, 2000).

[5] *SPREP Applications Portfolio (V1.0)* - A companion document that defines the initial set of proposed application systems for managing SPREP data and information (N. Petrovic, June, 2000).

[6] *Terms of Reference* - These are defined as part of the contract for the phase 1 of CDM-2000 Initiative.

1.4   Abbreviations, Acronyms and Definitions

Application System - A software system and underlying database(s) that support specific segment of a business.

Business User - A SPREP staff or any person within the member countries or other related institutions that is the final user of application systems.

CD*cat* - Corporate Data Catalogue, a system that supports SPREP data management.

CDM - Corporate Data Management.

CDM-2000 - SPREP Corporate Data Management Initiative (commenced 2000).

DFD - Data Flow Diagram.

E-R - Entity-Relationship Modelling.

IT - Information Technology.
SPREP- South Pacific Regional Environment Programme.

2.   SPREP Corporate Data Management

2.1   About SPREP CDM Initiative

SPREP CDM Initiative can essentially be described a set of related projects and activities undertaken to achieve the following:

- Recognise data and information as one of SPREP's key corporate resources. (NB. At the time this document is being written, this aspect of the CDM Initiative has already been addressed and hopefully by now, there should be no doubts in anyone's mind about the relevance and significance of this resource. Please refer also to reference document [1]).

- Introduce and establish appropriate techniques and practices for a proper management of this essential resource.

- Design, develop, implement and maintain required application systems and databases.

The outcome of SPREP CDM Initiative is therefore expected to be a well organised and managed business process and technology environment capable of providing quality, timely, adequate and useable data and information for the organisation itself and for all member countries and other stakeholders involved in managing the environment of the South Pacific Region. We will refer to this outcome of the CDM Initiative as the '*CDM Facility*' - a vehicle for achieving the business goal of:

> *"Maximising the availability, timeliness, quality and useability of the data and information resource in order to generate and share knowledge, therefore supporting more effective decision making, awareness and capacity building."*

CDM Facility is basically comprised of:

- Data Management Framework (processes, methods and techniques, tools). This component is described in detail in subsequent sections of the document.

- Technology (computers, networks, software development tools, etc.).

- A portfolio of integrated databases and application systems that ultimately make the data and information resource available to business users.

The next figure (Figure 1) is a high level representation of SPREP's CDM Initiative and its outcome - the CDM Facility.

Figure 1 - CDM Facility as the outcome of CDM Initiative

The three main phases of the CDM Initiative, and their timeframes are illustrated in more detail in Figure 2. The figure shows that the foundation of the CDM Facility is being built over two phases which follow the initial establishment of business needs and requirements for having the CDM Facility in place. Once the foundation is completed, the portfolio of application systems and databases can be developed over time, as building blocks that will for fall neatly into the overall picture. This will be the phase 3 of CDM Initiative.

A transition from current ad-hoc and largely inadequate data management practices to the new environment where data and information is managed as a critical business resource is expected to occur in the second half of year 2000, by which time the foundation of the CDM Facility will be in place.

Figure 2 - CDM Initiative (main phases and timeframes)

2.2 Data Management Principles

Before we look at the details of CDM framework, it is important to briefly explain several principles pertinent to proper data management practices, which will be built into the framework. These principles are:

- **Re-useability and sharing of business data** - Effective sharing of business data (in a controlled manner) between application systems and between data users is essential for maximising the value of the data and information resource.

- **Minimising and controlling data redundancy** - Redundant data is not just an overhead on computing and people resources, but more importantly, a potential cause of confusion and wrong business decisions. Redundancy can create 'garbage' data that can never be turned into information.

- **Central control over data organisation and documentation** - Observing this principle provides for quick and easy way to locate relevant data and turn it into management and decision support information.

- **Definition of data stewardship (ownership)** - All users of application systems (and the data managed by these systems) need to be identified with their respective roles. Data stewards are those users with the responsibility for data quality and accuracy. Other users with read only requirements for accessing data should also be identified.

- **Re-useability and sharing of systems data** - The benefits are in greatly improved productivity of IT staff and in the quality of application systems implemented. Consistent data definitions improve impact analysis capabilities in relation to system changes and / or new systems development.

It should be pointed out however, that these principles can not be applied successfully if an organisation does not maintain or does not have readily available information on:

- What business data is available,
- Where is this data stored,
- How can data be accessed,
- Who is responsible for data quality,
- What data definitions (entities, relationships, attributes) exist and where, etc.

A concept that provides a practical solution to this prerequisites for proper data management is described in section 5 of this document (CDM - Tools).

2.3   CDM Framework

The framework for managing data and information at SPREP consists of the following main components:

- Processes for managing data and information, including standard management activities such as planning, monitoring and review, as well as data management specific activities such as business modelling, definition and implementation of standards, data stewardship, database and application design and development, etc.

- Methods, techniques and standards defined to implement best practices, ensure consistency and overall quality of databases and applications, reduce development time, etc.

- Data management specific tools that provide support for processes and activities.

By putting all these elements into appropriate place and ensuring that the interaction between them is established and maintained, the overall objective of the CDM Initiative can be achieved. Of course, this will only be possible if the full support and active involvement of individuals at all levels of organisation is maintained during all phases of the initiative.

Figure 3 illustrates data management framework components, while the detailed description is provided in sections 3 - 6 of this document.

Figure 3 - Components of the Data Management Framework

3. Overview of CDM Processes

3.1 CDM as a Common and Integral Business Process

As much as data and information represent a corporate business resource used and shared by the entire organisation, the process of managing this resource is not a mere IT responsibility - it is a common and integral business process that spans 'departmental boundaries' and involves all SPREP Programmes and Strategic Outputs. It is essential that this is understood and accepted by business users, much like the place and role of other common business functions, such as finance for example.

Figure 4 is a graphical representation of how data management, finance, and other corporate business functions are positioned in relation to specific environmental issues (key result areas or strategic outputs).

Figure 4 - Common and specific business processes at SPREP

3.2 CDM Process Diagram

The overall CDM function can be broken down into more specific processes as illustrated in Figure 5.

Figure 5 - Data Management process overview

4. CDM Methods, Techniques and Standards

In addition to standard management methods for planning, monitoring and review of business processes, data management involves various specific methods and techniques. The following sections briefly explains some of these methods while more detailed definitions and descriptions can be found in the related reference documents.

4.1 Data Modelling

Data Modelling is one of the key underlying disciplines of data management and database and applications development. This technique is used for defining the information requirements of a business organisation. Its primary purpose is to specify what data is to be managed and how it should be structured ie. organised. The output of the data modelling task - the data model - is effectively a plan for the development of computerised databases. As such, data modelling is an essential and critical part of the overall data management and systems development activities.

There are several different techniques of data modelling The most widely used one is called Entity-Relationship Modelling (E-R). *SPREP Corporate Data Model* is the main reference document that provides detailed definitions of E-R technique, as well as the actual result of applying this technique - the SPREP Corporate Data Model.

4.2 Process Modelling

Another important discipline of data management is Process Modelling. Its main purpose is to represent business processes and functions at various levels of organisation, and to identify how business data and information flows between these processes. It identifies the source (or origin) of particular data as well as the destination (or users) of this data.

One of the well established process modelling techniques is known as Data Flow Diagram (DFD) technique. A process model created using this technique is comprised of a set of 'networked' diagrams where business processes are gradually decomposed from high level functions to detailed functions that can be 'automated', ie. supported by an application system. *SPREP Applications Portfolio* is the main reference document that describes DFD process modelling and provides the results of applying this technique in defining the set of proposed SPREP application systems.

4.3 Data Dictionaries

Data Dictionary is mechanism for recording and managing 'meta-data', ie. 'data about data'. The key issue is that business data and information need to be accurately defined and described in the first place, before it can be stored and managed by computerised databases. These definitions are essential for understanding business data requirements, for effective communication between different groups of business users and between business users and IT professionals. Section 5 provides additional details of the Data Dictionary concept.

4.4 Standards and Guidelines

A number of specific standards and guidelines are normally developed and used in data management to make this process more formalised and structured, to improve the quality of outputs and reduce or eliminate the need to 're-invent the wheel'. One of these standards, which is essential for data and process modelling tasks as well as the implementation of the data dictionary is described in the reference document *SPREP Logical Data Naming Standard*. Other standards and guidelines will be developed as required for use in database and applications development activities.

4.5 Applications Development Methods and Techniques

Methods and techniques discussed in the previous sections (4.1 - 4.4) are pertinent to all main component processes of data and information management. Process number 6 represented in Figure 5 (section 3.2) defines the framework for specific applications design and development activities. This process and these activities require and use various other methods and techniques, standards and guidelines which are outside the scope of this document but will be addressed as part of the subsequent phases of the CDM Initiative (see Figure 2, section 2.1).

5. CDM Tools

As an intrinsic business process common to all SPREP Strategic Outputs, data and information management can be best implemented and managed if it is supported by an appropriate software tool (ie. application system) that is made available to all CDM stakeholders identified in the next section (section 6) of this document. The following sections (5.1 - 5.3) describe one possible solution for a tool of this type.

5.1 About Corporate Data Catalogue (CDcat)

CDcat, which stands for Corporate Data Catalogue, is an approach and a tool for supporting implementation of data management infrastructure and various data management practices. It is essentially a Data Dictionary mechanism (see section 4.3).

The approach, as described here, was developed by the consultant N. Petrovic and is intended to be made available to SPREP for use in the CDM-2000 Initiative and after.

5.2 CDcat Structure

The following diagram shows the CDcat structure ('building blocks') (*):

CDcat DS	CDcat AS	CDcat DD
CDcat BT	CDcat DT	CDcat LP

- **CDcat DS** - Data Stewardship component of the CDcat database.

- **CDcat AS** - Application Systems inventory (portfolio).

- **CDcat DD** - Data Definitions for entities, attributes, relationships, etc.

- **CDcat BT** - Business Terminology ie. glossary of business terms and authorised words and phrases that can be used to compose names of data objects.

- **CDcat DT** - Inventory of Databases and Data Transfers.

- **CDcat LP** - Mapping of Logical (conceptual) level definitions to Physical (implementation) database objects.

As a flexible and 'user friendly' concept, CD*cat* is expected to be an agent of change, integration and awareness. Through its use, data sharing and other data management objectives will become more visible, more present in the minds and everyday practices of SPREP IT staff, business users and managers.

(*) Various CD*cat* components may be introduced at various stages of the CDM-2000 Initiative.

5.3 CD*cat* Functionality

CD*cat* is comprised of a database that stores relevant data management information, and an application system that has the following key features:

- It is widely and easily accessible both by IT staff and business users,

- It is of a pragmatic nature - simple, useful, and easy to use.

CD*cat* will satisfy a number of data management needs of IT staff and business users alike. In particular, it will provide answers to questions like:

- What databases are in place, what are their types, locations, etc.,

- What data does a particular database host,

- What application systems are in place and who are their primary users,

- Which application systems use a particular database and in what way,

- What is the definition of Conservation Area, Training Event, or any other entity,

- What data interfaces (data transfers) are in place and between which databases,

- What are the relationships (ie. business rules) for the Conservation Area, or any other entity,

- What are the attributes of the Conservation Area, or any other entity,

- Who is the business owner (data steward) of the Conservation Area, or any other entity, etc.

From the technical perspective CD*cat* will have the following characteristics:

- Client-server architecture with familiar windows GUI,
- Easy to implement on the existing computer network,
- Multi-user, with virtually unlimited number of users,
- Based on a relational database.

6. CDM Human Factor - People Roles

In section 2.3 we stated that the central role in managing the data and information resource is played not by technology or methods or techniques, but by people, by the individuals within an organisation that have a crucial interest in this key resource. And who these individuals are? Well, the simple fact that essentially every employee within every organisation (and SPREP is no exception here) both **generates** and **makes use** of data and information provides the obvious answer to the previous question: the CDM Facility is a concern of, a responsibility of and indeed, an important business instrument for practically every individual within SPREP. Of course, it has to be acknowledged and understood that the roles and degree of involvement can vary significantly from one employee, or group of employees, to another.

The following sections (6.1 - 6.4) discuss the roles in the CDM Facility of the main groups of stakeholders.

6.1 Business Users

SPREP business users within core business areas (environmental issues), corporate services and other common corporate functions (eg. training) are really the main 'beneficiaries' of the CDM Facility and must therefore assume the primary responsibility for the objectives of data and information management. The different levels of contribution and accountability in respect of CDM are described in the reference document *SPREP Data Stewardship Model*.

6.2 IT Professionals

The role of SPREP IT staff and other professionals that may be involved in the CDM Initiative, is to provide specialised services and skills for data management, applications development and day-to-day operations of computer facilities and networks. It is, for example, their responsibility to design a database, to write and test a computer program, or to make sure that e-mail is operational. They may also be involved in various data management tasks as facilitators. However, it must be stated clearly that IT department is definitely **not** the owner nor the primary driver of the CDM Facility - it is the business user.

6.3 SPREP Management

The role of SPREP management is slightly different to that of other business users. In addition to what is said in section 6.1, managers are expected to actively promote and enforce the need for proper data and information management with the view that achieving SPREP goals, objectives and outputs is highly dependent on the three key resources: financial, people and data / information.

6.4 Other Stakeholders

The role of SPREP as a regional environmental organisation that has a very special relationship with its member countries and collaborating organisations implies that SPREP CDM Facility will naturally have various other stakeholders that are external to SPREP. Data and information to be managed by the CDM Facility is primarily aimed at supporting environmental objectives for the region and is therefore of utmost importance to member countries and collaborating organisations.

As 'data users', these external stakeholders should expect nothing less than timely, quality and relevant data and information that can support more effective decision making, awareness and capacity building. On the other hand, as 'data providers', the external stakeholders can have a significant impact (positive or negative) on the timeliness and quality of the SPREP data and information resource. These two considerations once again emphasise how critical it is for SPREP to carry out the CDM Initiative and establish its CDM Facility.

7. Concluding Remarks

7.1 CDM Constraints and Prerequisites

Several constraints and prerequisites for the successful implementation of the CDM Facility can be identified. These include:

- Awareness - This means the full understanding and appreciation of the business requirement to properly manage data and information across entire organisation.

- Capacity building and education - To implement and successfully use the CDM Facility will require learning and adopting of new skills, techniques and practices. This is equally true for both business users and IT staff, although the skill set required will differ to a certain degree between these two groups.

- Taking ownership and responsibility - Managing data and information must not be seen as 'someone else's business', and business users must not think that this is just another IT issue. As we mentioned before, this is essentially a business issue for which IT must provide a strong support. It is fair to say therefore, that almost every individual at SPREP needs to adopt CDM as part of his or her job and work practices in some 'shape or form'.

- Full management support - Last, but not the least, is the role of SPREP management which is expected to actively promote and enforce the whole CDM Initiative.

7.2 Introducing the CDM Task Group

Notwithstanding the fact that 'everyone' at SPREP will have a certain role in CDM, it can not be expected that things will happen on 'their own accord'. Someone clearly has to assume the leadership role and responsibility for the CDM Initiative. For this reason, we recommend here that a 'CDM Task Group' be established and assigned the following 'charter':

Act as a 'focal point' and coordinator of all CDM activities to ensure that activities conform to the defined objectives, methods, standards and practices of data management. In other words, every requirement or task that relates to data management (from putting in place a 'little standalone' database to building a system for the whole organisation) must be firstly referred to the CDM Task Group so that it knows 'what is happening or is proposed to happen and why'. This will enable the group to:

Determine the relevance and priorities of certain projects and tasks,

- Ensure that resources needed for projects and tasks are identified and are available timely,

- Resolve or assist in resolving issues, etc.

In addition, the CDM Task Group will be the main facilitator charged with implementing prerequisites and eliminating constraints identified in section 7.1.

The suggested composition of this group is 4-5 members, where at least two of them are 'prominent' business users with the necessary clout to implement the group's charter. The remaining members should include a representative of SPREP management, the IT manager and the manager of the Information Resource Centre. The 'chair person' of the group should be one of the business users. It should also be noted that business users could (and probably should) take turns in participating in the group, however, for obvious reasons, the membership should not change very often (a six months period is probably the minimum).

The way the CDM Task Group will operate can be determined once the group is formed. Regular monthly meetings can be seen as the initial operational requirement.

Finally, it is highly recommended that the CDM Task Group be established immediately as it should become the 'sponsor' and key stakeholder of the CDM Initiative.

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 7.3.2.16: Global Environment Outlook No. 3 (GEO-3)

Purpose of Paper

1.   To provide information on the Global Environment Outlook No 3 (GEO-3) activities.

Background

2.   The Global Environment Outlook or GEO series is (currently) a biennial production by UNEP of a worldwide State of the Environment (SoE) report.

3.   GEO-1 was produced in 1997 with GEO-2 (GEO-2000) in September 1999. In 1998 and 1999 Members assisted the Secretariat with inputs to GEO-2. This work was enhanced by the concurrent production of the Pacific Islands Environment Outlook (PIEO), a form of 'GEO' particular to our region. This was released in late 1999, presented to the Pacific Island Leaders Forum in Palau, October 1999, and circulated to Members in early 2000.

4.   The intention of UNEP is for GEO-3 to be one of the key documents presented and used at the next Earth Summit, Rio+10 in 2002. This has a number of implications for the Secretariat and Members. Firstly, the timeframe for report production for RIO+10 is such that initial inputs will have to be completed by the end of September 2000. This will restrict the ability for aggregation of new data and the full participatory processes used in the GEO-2 production. Secondly, as a key RIO+10 document it will be in the interest of the region that clear, strong messages are broadcast on the unique characteristics and on-going needs of the Pacific for environmental protection, monitoring and sustainable development.

Discussion

Outputs

5.   Given the possible shortcomings of a restrictive production timeframe, GEO-3 will build on GEO-1 and GEO-2, and not be repetitive. GEO-3 is to be a process based programme incorporating SoE retrospectives, policy analysis, visionary outlooks and scenario development. The main chapters in the final report will be Chapter Two "SoE/Policy Retrospective: 1972-2002" and Chapter Three "Outlook 2002-2032". Chapter Two will involve looking back over 30 years since the Stockholm Conference, at the linkages between environmental change and policy development. Concentration will be on 'drivers' and 'root causes' of environmental change. Chapter Three will be the visionary work using 'vulnerability' as the key theme. It will involve looking forward over the next 30 years, identifying possible trends based on different scenarios.

6.   Chapter Two draft inputs have to be completed by the end of September 2000. Chapter Three will need to be completed in early 2001 (yet to be confirmed by UNEP-Nairobi). The final Chapter Four of GEO-3 will be the synthesis of findings covering policy effectiveness and recommended actions in terms of policy direction and on-the-ground activities.

7.   In addition to report/s production it is intended to deliver capacity development activities to promote global participation in environmental monitoring. These activities will extend from late 2000 till the Earth Summit and include the setup of networks using the Internet and regional training in policy analysis.

Process

8.   Planning for the start-up of GEO-3 commenced in November 1999, with a meeting in Nairobi. Since then there have been a number of 'Start up' and 'Production' meetings to decide on the make-up of the GEO-3 end document and intermediary activities.

9.   To deliver the programme UNEP has set up global Collaborating Centres (CC) and Associated Centres (AC) to work with their regional offices. SPREP has been nominated as the CC for the Pacific region. A Memorandum of Understanding has been signed to give effect to the collaboration.

10. Members will be involved through ongoing communication between the focal points and SPREP's Environmental Assessment and Reporting Officer, and visits to Pacific island countries (PICs).

Recommendation

11. The Meeting is invited to:

> ➢ **consider** and **note** the activities and intended outcomes of the GEO-3 programme.

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8 August, 2000

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10-12 October 2000

Agenda Item 7.3.3.2: Staff Regulations

Purpose of Paper

1. To obtain guidance and approval, if required, from Members on likely amendments to the SPREP Staff Regulations.

Background

2. The Staff Regulations may require amendments to reflect the following matters:

> ➢ the job sizing exercise carried out, in conjunction with other CROP agencies;

> ➢ the implementation of an agreed remuneration strategy for professional contract staff, following the review undertaken by the Secretariat and other CROP agencies;

> ➢ the review of benefits and arrangements, in respect to performance management and salary stabilisation, for professional contract staff, in accordance with the CROP Remuneration Review Working Group Report; and

> ➢ the decision by the Samoan Government to grant a 5% general wage increase, effective from 1 January, 2001.

3. As advised in Working Paper WP.7.3.3.1, no decision had been made by the CROP Remuneration Review Working Group on verification of each other's Job Sizing outcomes and associated harmonisation of terms and conditions of service, by the time this Paper had to be distributed. It is expected that the report and the job sizing verification will be completed prior to the SPREP Meeting and relevant additional information will be presented to Members as soon as possible before the Meeting.

4. Schedule 2B to the Staff Regulations needs to be replaced, in view of the Samoan Government decision to grant a 5% general wage increase. In accordance with Staff Regulation 19(f), only some local contract staff are entitled to all or part of such an increase. The Secretariat is therefore seeking guidance on the appropriate amendments to the Schedule.

5. Amendments to the Staff Regulations will be required to give effect to the issues outlined above. The Secretariat suggests that a Sub-committee on Staff Regulations could be convened to consider and recommend the appropriate amendments to the Meeting.

Recommendation

6. The Meeting is invited:

- to **appoint** a Sub-committee on Staff Regulations; and

- **approve** of any amendments to the Staff Regulations recommended by such Sub-committee.

29 August 2000

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10-12 October 2000

Agenda Item 7.3.5 : Amendments to Financial Regulations

Purpose of Paper

1.   To obtain guidance and approval, if required, from Members on possible amendment to the SPREP Financial Regulations.

Background

2.   The Financial Regulations may require amendment, should the Meeting consider it appropriate, to reflect the following matters:

> ➢   the performance based output budgeting format that has been approved and adopted by Members for the past two years; and

> ➢   the possibility of holding more frequent SPREP Meetings, as is proposed to be discussed under Agenda Item 8.3 (WP.8.3.2).

3.   The present Financial Regulations require the presentation of budgets and accounts to reflect three different functions: Primary Function, Project Management Function and Project Implementation Function. Following the introduction of performance based output budgeting, from 1 January 1999, these functions also had to be reflected within different Strategic and Key Outputs for 1999 and 2000. In line with the proposed Key Result Areas and Processes within the draft Action Plan 2001-2004, further amendment is required. To comply with the Financial Regulations, the annual budget and annual accounts have therefore also had to be presented in a format that is now considered inappropriate to the new budgeting process, or to the reporting needs of Members and the Secretariat.

4.   Agenda Item 8.3 (under WP.8.3.2) raises the issue of a possible change in the organisation and timing of future SPREP Meetings. The Secretariat has therefore flagged the possibility of further changes to the Financial Regulations, to address any decision of the Meeting on this issue, to avoid any oversight.

5.   The Secretariat suggests that a Sub-committee on Financial Regulations could be convened to consider and recommend to the Meeting any appropriate amendments to be made to the Financial Regulations.

Recommendation

6.   The Meeting is invited:

- to **appoint** a Sub-committee on Financial Regulations; and
- to **approve** any amendments to the Financial Regulations recommended by such Sub-committee.

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29 August 2000

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South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
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Agenda Item 8.1: Position of Director

Purpose of Paper

1.   To advise the Meeting of the Director's wish to extend his employment for his second term; to advise of events undertaken by the current SPREP Chair with relation to guidance obtained from Members and to consider the recommendation submitted in accordance with Members' advice.

Background

2.   The incumbent SPREP Director will complete his four years in the position on 16 January, 2001. Under Rule 8 (Term of Appointment) of the *Rules of Procedure for Appointment of the Director,* the Director "shall be appointed for a period of four years in the first instance. Subject to the agreement of the SPREP Meeting, a Director may be reappointed for a further two years. The maximum length of appointment for any individual is six years."

3.   The Director advised the SPREP Chairperson, by letter dated 2 June, 2000 of his wish to seek reappointment for his second term in accordance with Rule 8.

4.   Under Rule 5 (Notices) the SPREP Chairperson is to transmit notice of a pending vacancy to SPREP Members no later than six months prior to the expiry of the term of office of the incumbent. Accordingly, the Chairperson took advantage of the opportunity presented through the assembly of SPREP Member Governments' and Administrations at the Regional Workshop to examine the Initial Draft of SPREP's 2001-2004 Action Plan (Auckland, 14 – 16 June, 2000) to consult on this matter. This meeting provided broad representation, involving delegates from 23 Member Governments and Administrations.

5.   The SPREP Chairperson also consulted with heads of Council of Regional Organisations in the Pacific (CROP) agencies to ascertain current regional practices with regard to whether or not there was a requirement to re-advertise the position after the initial four year term.

Results of Consultative Process

6.   Participants at the Auckland meeting gave clear guidance to the Chairperson that no action should be taken under Rule 5 (Notices) prior to the 11th SPREP Meeting in Guam.   It was noted that, should it be necessary to invoke Rule 5 following decision at the SPREP Meeting, sufficient time would still be available to adhere to provisions under the Rules.

7.   The Chairperson transmitted by letter of 2 July, 2000 to all SPREP Member Governments and Administrations, the outcome of her consultations at the Auckland Meeting.

8.   In response to her request for guidance from the heads of CROP agencies, correspondence was received from two of the CROP heads, namely from the Director-General of the Secretariat of the Pacific Community (SPC) and from the Deputy Secretary-General of the Pacific Islands Forum Secretariat.   They each confirmed that the practice within their respective organisations did not require re-advertisement of the position of the head of the organisation after the initial term.

9.   Clear guidance from SPREP Members and practices of other Regional Organisations was thus provided to the Chairperson.

Recommendation

10.   The Meeting is invited to:

- **note** the wish of the incumbent SPREP Director to seek reappointment for his extended term (provided under Rule 8);
- **note** the consultative process undertaken by the SPREP Chairperson to seek guidance from Members prior to the 11SM;
- **consider** and **recommend** reappointment of the incumbent SPREP Director for the extended term; and
- **transmit** the recommendation for decision by the Ministerial Meeting.

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4 August, 2000

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10–12 October 2000
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South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 7.3.3.1: Job Sizing and Implementation of CROP Remuneration Review

Purpose of Paper

1.   To advise the Meeting of a Job Sizing exercise undertaken by SPREP to develop an approach to remuneration that is consistent across all Council of Regional Organisations in the Pacific (CROP) agencies.

Background

2.   Following decision of the FOC and SPREP Special Session, Fiji, 26 November 1999, Mercer Cullen Egan Dell (MCED) were engaged to assess relative work value of jobs within each CROP agency and to develop a classification structure within which jobs across all CROP agencies would fit. This exercise attempts to develop an approach to remuneration that is referenced to appropriate labour markets, is simple to implement and maintain, and is consistent across all CROP agencies.

Job Sizing Exercise

3.   The SPREP Job Sizing exercise was undertaken between March and April 2000, using MCED, the same consultancy company as the other CROP agencies. The Consultants completed a comprehensive analysis, interviews and subsequent job evaluations for forty (40) benchmark positions within SPREP. Specifically, the Consultants:

- interviewed a stratified sample of positions across SPREP as a benchmark;

- evaluated benchmark positions using the Cullen Egan Dell job evaluation system;

- collected data on the current remuneration level of benchmark positions;

- compared the remuneration of benchmark positions against relevant markets; and

- integrated SPREP positions into the remuneration and grading structure for all CROP agencies.

Comments

4.   No decision has yet been made by the CROP Remuneration Working Group on verification of each other's Job Sizing outcomes and associated harmonisation of terms and contitions of service. Hence it is not the Secretariat's intention to adjust salaries and position classifications at this stage.   The Secretariat, in its subsequent consultations with staff has noted the following which would be taken into account in any future SPREP action with relation to position reclassification:

- Whilst the salary range is stated correctly, the classification for the Information Resource Centre Manager and Administration Officer should be within the Professional range Grade 7 (the equivalent 'professional' category to the currently listed Grade G);

- Local data from the Samoan market should be used as future comparators for local positions;

- To minimise administrative costs and maximise benefits to Members, future Job Sizing will be performed for 'core' rather than 'project' positions; and

- Retention of SDR (mainly based on US$) is recommended as there is little rationale for SPREP staff using the Australian dollar in Samoa. The Consultants' report acknowledges that retaining the SDR would not create difficulties for the harmonisation process.

Recommendation

5.   The Meeting is invited:

- to **note** the Job Sizing exercise undertaken by Mercer Cullen Egan Dell for SPREP as part of the harmonisation process for terms and conditions of all CROP agencies; and

- to **consider** and **advise** the Secretariat about any further action required.

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29 August, 2000

Job Sizing Report

South Pacific Regional Environment Programme

May 2000

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Contents

Framework for Consultant Assignment

The South Pacific Regional Environment Programme (SPREP), in conjunction with the Pacific Islands Forum Secretariat (FORSEC), the Secretariat of the Pacific Community (SPC) and the South Pacific Applied Geoscience Commission (SOPAC) employ expatriate staff from across the Region and nationals of their host countries to undertake their vital research, development and scientific work and advice on behalf of member countries and their communities. The Remuneration Subcommittee of the Forum Officials Committee (FOC), with the support of AusAID and the Ministry of Foreign Affairs and Trade (NZ) has sought advice from Mercer Cullen Egan Dell on the development and implementation of a transparent market-driven remuneration methodology and related systems for each group of staff.

The primary objectives of the assignment were to:

1. Develop a systematic approach to remuneration that was transparent and simple to use
2. Provide the agencies with an effective and common tool to manage remuneration
3. Recommend a system that could integrate all the current remuneration management practices from across the agencies
4. Provide flexibility to allow management responsiveness to constant changes
5. Assist stakeholder understanding of contemporary remuneration management practices.

These objectives were derived from a current environment where various employment and reward practices are utilised by each of the agencies, apparently evolved over time to best suit the needs of those agencies. The objectives also needed to take into consideration the numerous constraints and issues that confront the development of any framework that attempts to span different agencies, operating with different governance structures and complex staffing arrangements.

These constraints and business issues include the:

- Attraction and retention of capable and competent staff
- Relatively short term employment contracts for staff (max 6yrs)
- Geographical isolation of the work environment
- Professional isolation from 'mainstream' peers
- Multiplicity of locations where work is performed
- Reliance on donor funding, and project funding, for work programmes.

After wide consultation with many stakeholders, it is apparent that no one solution may be seen as ideal – and some compromises will be required in order to get the best result for all.

This report focuses on the continuation of the job sizing exercise specifically for SPREP, in order to harmonise the remuneration management arrangements across all Council of Regional Organisations in the Pacific (CROP) agencies.

Mercer Cullen Egan Dell has recommended new employment and remuneration arrangements where all CROP agencies will have a sound, stable, consistent and defensible basis for decision making. The recommended approach will:

- provide a robust and cost effective control over budget blowouts
- give predictability to costs over three years
- provide greater flexibility to compete for high calibre staff when necessary
- reduce staff severances due to pay
- reduce staff complaints
- minimise professional and cultural friction
- improve organisational ability to manage contingencies
- provide an acceptable and transparent system for unions
- reward performance, competence and contribution of individuals.

Summary of Recommendations

Mercer Cullen Egan Dell recommends that:

R1. The agencies adopt the market median of the Australian Public Sector as the comparator remuneration market for its executive and senior professional staff, both expatriate and local

R2. The local remuneration market be used as the comparator market for full time equivalent local staff engaged in support, para professional and trade work

R3. A broadbanded grading and remuneration structure be adopted for the consistent classification and remuneration of all positions based on work value and the contribution of individuals

R4. The current tax free arrangements be retained and offset against other benefits normally provided to contract staff sourced overseas

R5. The current benefit regime be reviewed and rationalised to ensure consistency across all agencies

R6. The Cullen Egan Dell job evaluation system be used for job sizing by all agencies

R7. Adjustments to the remuneration structure for contract staff should occur on the basis of relative exchange rates and Employment Conditions Abroad (ECA)cost of living indices between Australia and the country of employment rather than using Special Drawing Rights (SDR's).

R8. The remuneration levels within the remuneration and grading structure for executive/professional positions be reviewed annually based on remuneration movements in the Australian Public Service and for technical/support staff, movements in the local general market

R9. The remuneration and grading structure as a whole be market tested and reviewed on a triennial basis

R10. The Agencies undertake an annual review of the remuneration all employees using policy and guidelines provided

R11. The Agencies develop and implement a performance management system for all staff, one of the outcomes linked to remuneration review decisions

R12. The agencies move to a 'Total Remuneration Package' approach over the next 2 to 3 years.

The Brief

Background:

During 1999, significant work was undertaken by Mercer Cullen Egan Dell with the Pacific Islands Forum Secretariat (FORSEC), in conjunction with the Secretariat of the Pacific Community (SPC) and the South Pacific Applied Geoscience Commission (SOPAC) to develop an approach to remuneration that was consistent across all CROP agencies, referenced to appropriate labour markets, and was simple to implement and maintain.

Mercer Cullen Egan Dell provided a reliable and proven methodology for the assessment of relative work value of jobs within each agency, and developed a classification structure within which jobs across all CROP agencies would 'fit', and could be grouped based on work value.

It was agreed that as Australia was considered a major source of recruits for professional positions within the agencies studied, the Australian Public Sector market would be an appropriate reference market for remuneration and remuneration review into the future.

As part of the final report to the Forum Secretariat in November 1999, Mercer Cullen Egan Dell recommended that remaining CROP agencies be aligned with the new remuneration structure as soon as possible, in order to have a consistent and coherent remuneration strategy that was understood and used by all agencies.

Objectives and scope

1. Mercer Cullen Egan Dell (MCED) will complete the work value assessment of forty (40) selected positions within the South Pacific Regional Environment Programme (SPREP) agency.

2. MCED will consult with as many of these available roleholders within SPREP to gain a clear understanding of the inputs, processes and outputs required of each role.

3. MCED will validate and allocate all evaluated positions to the appropriate position within the CROP agency remuneration structure.

4. MCED will present market comparisons for SPREP professional staff remuneration against the Australian Public Sector market.

5. MCED will work with SPREP to ascertain the most reliable source of remuneration information for local administrative staff.

6. MCED will provide a written report to SPREP on completion of the study, detailing the outcomes, processes undertaken and personnel involved. This will also provide the basis for subsequent reporting to the SPREP Meeting.

7. SPREP will provide duty statements to MCED for all positions requiring assessment.

Major Findings

The CROP agencies have been grappling for some time with the correct approach for the remuneration of contract and local staff across all the agencies. A number of reviews have highlighted the lack of consistency and practice across the agencies and the immense difficulties in identifying and implementing a coherent strategy.

Notwithstanding the difficulties, the agencies are committed to agreeing and implementing a common course for remuneration and benefit practice, appropriate to their organisational objectives and employment markets.

The major difficulties identified relate to:

- The diversity of agencies and their location of staff across a number of island nations
- The need to recruit high calibre staff from across the region and beyond and retain them through the life of their contracts
- The limitations of short term employment contracts on recruitment and retention
- The international standing of the agencies balanced by real budget constraints
- The choice of systems to manage salary levels in multiple currencies
- The need to stabilise remuneration in the context of currency and cost of living fluctuations
- The need to harmonise pay for similar positions across all agencies
- The need for benefits to be consistent and reflect reasonable market practice, when current practice by local regional and international organisations is inconsistent and quite diverse
- The need to choose a job sizing methodology that is robust and transparent.

Despite these immense difficulties, the agencies have agreed to a common market referenced approach to remuneration and benefits for all staff, and committed themselves to the work of the review team, and its outcomes.

The review determined that the current remuneration levels of CROP agencies were competitive in relation to relevant employment and remuneration markets in the region. Acceptance of the Australian public sector remuneration markets for professional contract staff and the 'local' general remuneration market for local staff is recommended. Greater flexibility is needed in setting remuneration based on competency, qualifications, performance and relevant markets. A broadbanded remuneration and grading structure is recommended to facilitate this approach.

Adopting a common remuneration and benefits strategy and gaining consistency in practice across CROP agencies will improve the management of people. In addition, the implementation of a sound performance planning and management system aligned to a remuneration review and development program is essential to motivate staff, direct effort towards key agency objectives and to recognise, reward and retain key staff.

Work Completed

During March and April 2000, Mercer Cullen Egan Dell consultants completed a comprehensive schedule of analysis, interviews and subsequent job evaluations for forty (40) benchmark positions within SPREP.

People Consulted

We have consulted with:

- Director SPREP
- Heads of Divisions
- Key staff at all levels throughout the agency.

Documents Reviewed

In addition we have reviewed:

- Organisation data on SPREP and its operations
- Historical information relevant to this study
- Organisation remuneration information from SPREP, FORSEC, SOPAC and SPC.

Consultant work

In meeting the consultancy brief, Mercer Cullen Egan Dell has:

- interviewed a stratified sample of positions across SPREP as a benchmark sample
- evaluated benchmark positions using the Cullen Egan Dell job evaluation system
- collected data on the current remuneration level of benchmark positions
- compared the remuneration of benchmark positions against relevant markets
- integrated SPREP positions into the remuneration and grading structure for all CROP agencies.

Background material

Attachment A is a schedule of persons interviewed.

Attachment B is a summary of the evaluation of benchmark positions using the Cullen Egan Dell job evaluation methodology.

Remuneration Strategy in Context

Remuneration systems are one of the tools organisations and managers can use to effectively manage staff. To be effective, remuneration systems need to fit into the total approach to how staff are managed. The following diagram shows how the range of tools for managing people need to contribute to the overall perspective on:

- what we want our organisation to look like
- what sort of people we want to work for our organisation
- how do we manage them effectively to keep them within our organisation, and contributing strongly to the achievement of the organisation's objectives.

Remuneration strategy

Remuneration strategy for organisations consists of policy decisions related to:

- choice of market comparators
- positioning within the chosen market
- the appropriate mix of fixed reward, benefits and variable reward
- the structural arrangements for determining remuneration to align with the business and workforce plans of the enterprise.

Factors Influencing Pay

The major factors influencing pay are:

MARKET FORCES	WORK VALUE
• supply and demand	• knowledge and experience
• industrial agreements	• task complexity
• regional market differentials	• type of problems dealt with
• job family differences	• supervisory responsibility
• different industries	• interpersonal skills
	• size of job
ORGANISATION POLICY	**INDIVIDUAL PERFORMANCE/MERIT**
• what do we want	• bargaining power
• what can we afford to pay	• negotiation skills
• do we provide remuneration by way of benefits	• actual achievements of the individual compared to expectations
• will we have an incentive or bonus scheme	
• other employment entitlements (eg sick leave, superannuation, overtime provisions).	

This report addresses all components of remuneration strategy for executive/professional and technical/support staff for the CROP agencies.

Recommendation 1: Remuneration Market for Professional Staff

The agencies adopt the market median of the Australian Public Sector as the comparator remuneration market for their executive and senior professional staff, both expatriate and local.

The recommended remuneration strategy for executive and senior professional staff, both locally and overseas sourced is based on the need for the CROP agencies to attract and retain highly skilled individuals to meet organisational needs.

Comparator markets

Attracting and retaining competent employees, and motivating them to high levels of performance, can be strongly influenced by remuneration levels. Thus:

* competent employees are less likely to be attracted to the organisation if the level of remuneration being offered is not consistent with levels of remuneration they could obtain working for other organisations requiring their skills and experience
* if people believe they are not being adequately rewarded for their contribution and effort, they are more likely to leave the organisation and seek employment in an organisation where they view the reward levels as appropriate.

Remuneration levels therefore need to be set with a view to matching remuneration levels in those markets, industries, companies and/or job families where:

* the organisation is wishing to attract staff from
* staff leaving the organisation have taken up fresh employment
* similar roles, accountabilities, skill sets and experience are required.

For executive and senior professional staff, we have examined where available:

* the Australian general market
* the Australian public sector market, specifically the Australian Public Service and NSW public service market
* the New Zealand general market
* the New Zealand public service market
* Fiji expatriate market
* International organisations and markets.

Selection of Comparator Market

In selecting a comparator remuneration market, the key criteria are:

1. Relevance as the recruitment source and departure destination of staff
2. Affordability of remuneration levels within budget constraints and funding limitations
3. Robustness of the market
4. Availability of reliable data.

No market meets all criteria completely, our analysis indicates the following matches:

Market	Relevance	Affordability	Robustness	Availability
Australian general	Moderate	Moderate	High	High
Australian Public Sector	High	High	High	High
New Zealand general	Moderate	Moderate	High	High
New Zealand Public Sector	High	Moderate	High	High
Fiji expatriate	Low	Moderate	Low	Low
International	Low	Low	High	Low

Australian Public Sector Market

Our analysis of recruitment and separation trends indicates that Australia and New Zealand remain the major source of competent employees and the employment markets from which senior agency staff, both expatriate and Pacific Island, would normally seek career opportunities. A separate analysis has been provided in this report.

It is often argued that the more the organisation pays the more it is likely to attract staff of higher calibre. In a global economy, due to regional remuneration practices, higher pay rates do not necessarily equate to higher skill levels. Any remuneration strategy adopted should provide sufficient flexibility to meet higher remuneration market levels where it can be clearly demonstrated that superior skills can be acquired.

We consider that for executive and senior professional staff the Australian Public Service remuneration levels are the most appropriate as the base salary comparator market.

This rationale is based on:

- the emerging trend of New Zealand, Pacific Island and other regional professional staff seeking employment within Australia as the immediate Asia-Pacific regional centre
- our analysis of recruitment and separation data showing that in the last 4 years some 81% of executive and senior staff of FORSEC were sourced from government or semi-government agencies in the region. Other than Fiji and other island nations, the majority of recruits came from Australia
- the majority of the roles and work undertaken by the staff of CROP agencies is public sector work. Similar roles are undertaken by staff in public services across the Region and internationally
- the Australian Public Service is a strong enduring market and source of capable people in disciplines relevant to the agencies
- the public availability of data on Australian Public Service remuneration levels
- the relative economic stability of Australia provides a stable remuneration environment.

The remuneration levels offered by the agencies should align with the Australian Public Service remuneration levels, and the remuneration ranges for the agencies should extend across the Australian and New Zealand remuneration markets including public service and scientific industries. This enables the agencies' remuneration practice to be competitive for people sourced across the region.

The use of fixed term employment contracts by the agencies necessitates the provision of market competitive remuneration levels and scope.

Other markets

Australian and New Zealand general market remuneration levels approximately match that of the public sectors in their countries at the lower to middle levels but exceed public sector levels at the higher grades. We do not consider that these markets are appropriate as they are not the major employment markets for agency employees.

The local expatriate market has not been considered as the contract employees of CROP agencies are not employed under expatriate conditions and as data are not readily available. In addition, the Pacific Island governments are encouraging the replacement of expatriates with local employees. These factors demonstrate low levels of relevance and robustness of the expatriate market. However, in forming our total recommendations we have examined remuneration and benefit practice generally for the Asia-Pacific region through the Mercer Cullen Egan Dell survey of expatriate practice.

The international organisation's remuneration market is not considered appropriate as employees for the agencies are not widely sourced from these markets. Despite some international funding from outside the region for specific programs, the majority of program staff are recruited from the region on affordability grounds. For ongoing management of the new remuneration arrangements, we consider that market data needs to be readily available. Remuneration levels for international development agencies are not readily available. We also understand that remuneration levels in agencies such as the UN, UN agencies, the World Bank and similar organisations are set at levels in excess of European and US markets and are considerably higher than that paid in Australia, New Zealand and the region. Clearly, those levels are unaffordable.

Despite a lack of publicly available data on remuneration levels for international development agencies, we consider that our judgement in the above table is fair and reasonable.

Remuneration comparisons

Mercer Cullen Egan Dell has collected remuneration information from each of the CROP agencies using the existing grading structure and benchmark positions. Remuneration levels and practice vary across the agencies.

For four agencies (FORSEC, SPREP, SPC and SOPAC) we have compared the base salary remuneration levels for professional staff against market median levels for the:

- Australian Public Service Market

We have compared Base Salary primarily because this is a constant between all comparator markets. The only other component normally included in the concept of Total Remuneration available in this instance is Superannuation, valued at 8%.

The other benefits received by contract employees, eg, home leave, housing and subsidies, are not normally considered within the boundaries of Total Remuneration and are primarily considered conditions of employment.

Therefore, any further analysis based on Total Remuneration would show little difference with the exception of increasing both markets by 8%, and thus be academic.

The market analysis shows that:

- against the Australian Public Service remuneration market, the FORSEC and SOPAC agencies are paying a little **below** the market at the lower grades while SPC was a little **above** the market at these grades
- at the higher grades, all agencies were paying close or slightly above the Australian Public Service remuneration market
- SPREP mid level positions are paid below the market and may need to be redressed.

Recommendation 2: Remuneration Market for Technical/Support Staff

The local remuneration market be used as the comparator market for full time equivalent local staff engaged in support, para professional and trade work.

In reviewing grading and pay level for CROP agencies, we have noted considerable diversity in practice. For similar positions in the same city, adverse comparisons can be made by management and staff. A consistent approach is needed.

Consistent with our recommended approach for professional staff, we have developed a remuneration strategy for technical and support staff that is appropriate to the organisation's needs and competitive. It consists of a:

- choice of comparator market
- positioning within the chosen market
- remuneration and grading structure
- approach to benefits.

Comparator Market

We recommend that for technical and support staff, the general market for the country concerned should be used as the comparator market. This is the source of the great majority of technical and support staff and would be a market for career development. We recommend that the third quartile or 75th percentile of the local general remuneration market should be used for positioning to ensure that:

- the best and most competent employees are attracted and retained by the agencies
- provide the competency and levels of performance required for an international organisation
- provide the competency and levels of performance required by professional staff many of whom are sourced from other countries.

Market Comparison

For all agencies together we have compared the base salary remuneration for technical and support staff against the local general market using our grading structure.

The market analysis shows that in Fiji:

- at the lower levels, the Suva based agencies are paying close to the **third quartile** of the Fiji general remuneration market
- at the higher levels of technical and support staff, the agencies are paying **well above** the Fiji general remuneration market for its staff, possibly due to the long periods of service of these employees who receive annual pay increments.

We are unable to analyse the local Samoan market due to lack of data at this stage.

Benefits

Our analysis shows that benefits for technical and support staff are competitive and appropriate. However, we note minor differences in benefit levels and arrangements across the agencies. Such benefits should be reviewed and rationalised across all the agencies to ensure consistency.

Remuneration flexibility

Our analysis of current practice shows that remuneration for technical and support staff follows public service practice with a starting salary and annual increments. Thus, there is little flexibility for remuneration levels to reflect the qualifications, competence, performance and contribution of contract staff. In addition, there is little opportunity to meet competitor levels either in the recruitment process or through the contract period.

We recommend that the agencies adopt a remuneration range for each grade. This enables the agencies to:

- attract competent employees
- retain qualified and competent employees
- provide motivation for performance and/or development
- graduate salary rates in accordance with the difficulty and importance of jobs
- provide for stability and certainty in remuneration
- provide for not only fairness **but** employee conviction of fairness in remuneration structure.

Recommendation 3: Remuneration and Grading Structure

A broadbanded grading and remuneration structure be adopted for the consistent classification and remuneration of all positions based on work value and the contribution of individuals.

Grading structure

To create a consistent and coherent approach to classification across the agencies, we recommend the enhancement of the existing grading structure to a broadbanded grading structure. A broadbanded grading structure provides:

- capacity for positions of a similar type and work value to be clustered in the same grade
- enhanced flexibility in work allocations without necessarily changing the grade
- transparency in grading decisions
- ease of maintenance of grades based on work value assessment
- enables staff to see their career aspirations reflected in grading practice
- a sound basis for remuneration decisions.

Our recommendations align with the existing structure for executive and senior professionals and include a complementary structure for technical and support staff.

To assist in the understanding and application of the recommended grading structure, we have developed grading standards and descriptions. These can be found as Attachment F. Both job evaluation and grading standards form the basis for sound grading decisions.

Remuneration flexibility

Our analysis of current practice shows that there is little flexibility for remuneration levels to reflect the qualifications, competence, performance and contribution of contract staff. In addition, there is little opportunity to meet competitor levels either in the recruit process or through the contract period.

Our recommended remuneration and grading structure includes a remuneration range for each grade. This enables the agencies to:

- attract competent employees from regional and where required, international markets
- retain qualified and competent employees in the face of competitive pressures
- provide motivation for performance and/or development
- graduate salary rates in accordance with the difficulty and importance of jobs
- provide for stability and certainty in remuneration
- provide for not only fairness **but** employee conviction of fairness in remuneration structure.

The flexibility suggested above will impact on the budgetary process. However, the budgetary constraints will limit the extent of flexibility available.

Remuneration and Grading Structure

Attachment D contains our recommended remuneration and grading structure for both contract executive/professional and permanent local technical/support staff. For executive/professional staff, the remuneration levels are provided in both Australian and Fiji dollars currently, although the Australian dollar is the base. For technical/support positions, Fiji dollars only are used. Once local remuneration levels are ascertained in Samoa and Noumea, these can be inserted accordingly.

The midpoint of the remuneration range for each grade is set at the recommended market positioning. A market referenced and competitive remuneration range has been provided for each grade.

An important feature of the recommended remuneration and grading structure is the overlapping pay ranges between adjacent grades. This feature allows the agency, where warranted, to pay a high performing staff member in one grade higher than a new/less effective or poorly performing staff member in the next higher grade.

A second important feature of the recommended remuneration and grading structure is the overlap between the structure for contract executive/professional staff and permanent local technical/support staff. Based on job evaluation and work value outcomes, it is possible to grade some locals in professional and para professional positions within either the contract grading/pay structure or local grading/pay structure depending upon whether a contract or permanent employment is offered.

This also allows greater flexibility for agencies during recruitment of staff. If, for instance, the local labour market can provide suitable talent to fill a particular position, there is the opportunity to reference this position in a para-professional grade against local market remuneration rates. We recommend each agency clearly identify which positions in these overlapping grades may fall into this category.

Compa-ratio Reports

Within Attachment D we have included "Compa-ratio Reports" for each agency.
These reports compare the current remuneration levels of benchmark positions with the
selected Australian Public Sector remuneration market. Some of the data are based on
the remuneration levels for grades rather than for individuals and will need further
development before finalisation. However they are illustrative of market comparisons.

Recommendation 4: Tax Free Status

The current tax free arrangements be retained and offset against other benefits normally provided to contract staff sourced overseas.

Tax Free Environment

Throughout this report and particularly in this chapter we have used the term "contract staff sourced overseas" rather than "expatriate". The differences are marked. Expatriate staff are relocated by their employer to meet a business need and remunerated to reduce cost of living, tax, schooling and housing differential and recognise employment and lifestyle risk. On the other hand, contract staff are employed directly, are free to choose the position and contract terms and move from one employment situation to another on their merit.

The current tax-free environment for contracted professional staff has been the focus for robust discussion. It is important to note that while contracted employees sourced overseas are seen to be gaining an advantage from this arrangement, they do not have access to all the rights and range of services as either Pacific Island nationals or nationals resident in their home country.

Thus these services need to be acquired normally at significant cost to the individual reducing the potential advantage of the tax-free environment.

In addition, remuneration comparisons, perceived advantage and measurable benefit are complicated by each individual's employment and taxation arrangements at home and abroad.

In the employment market, the tax-free status has less impact on the value of the pay offer than is commonly perceived. In reality, the point is moot as potential recruits consider the quantum of the total package offering in their employment decision making.

We note that unlike expatriate employers of overseas sourced personnel, the agencies do not provide Quality of Living[1] allowances or Overseas Premiums[2] for taking up a contract position in Fiji or other South Pacific locations.

These allowances are often substantial, in the order of 20 – 30% as indicated by the Mercer Cullen Egan Dell survey of expatriate remuneration practice.

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[1] *Quality of Living allowances are used to compensate expatriate employees on overseas assignments for arduous, physical difficulties or unhealthy environment.*

[2] *Overseas Premium may be used by some organisations to encourage expatriate staff to take up and stay in an overseas position and accept some risk of employment setback while overseas and/or on return.*

For some agencies, the tax free status applies also to local staff. However, where this occurs the remuneration levels are reduced by an equivalent amount. This is an appropriate approach.

However, the consultants note that the current tax free arrangements for Suva based agencies are under review by the Fiji government. Should the current arrangements change, a review of remuneration levels would be required along with major impacts on agency budgets.

Recommendation 5: Benefits Regime

The current benefit regime be reviewed and rationalised to ensure consistency across all agencies.

Our analysis indicates that the benefit practice used by the agencies for professional staff varies across the agencies. The arrangements need to be reviewed and rationalised across all agencies to ensure consistency. A future working party should be tasked to complete this development as a matter of urgency. An over-riding objective should be cost neutrality.

Benefit practice

Attachment C contains a schedule comparing the remuneration and benefit practice across the Pacific Islands Forum Secretariat/CROP agencies prepared by FORSEC. The schedule has two parts, one for expatriate staff and the other for local staff. This attachment demonstrates that a large suite of benefits are provided to contract staff and significant variations in practice occurs across the agencies, particularly in regard to job sizing and use of cost of living adjustments.

We have compared current practice across the agencies against that for organisations employing expatriates in the region evidenced by Mercer Cullen Egan Dell surveys in Australia and Mercer surveys in Asia. For local Fiji staff we have relied on a survey prepared by Price Waterhouse Coopers. Our comments on key issues are:

Item	CROP practice	Mercer Cullen Egan Dell comments
Salary specification	Denominated in SDR's by FORSEC, SPREP and SOPAC and local currencies by SPC.	Diverse practice in the Asia Pacific region. SDR's rarely used. $US or local currency used more often.
Commencement Salary	Usually at the starting level of the range.	Current practice mirrors that of most public services. The private sector sets commencement salary taking into account the qualification, experience and competency of the employee, and related remuneration markets.
Taxation	Agencies provide tax exemption for all overseas sourced professional staff. Local staff pays income tax through wage deductions or reduction of gross salary levels.	For expatriates, market practice is to use a 'balance sheet' approach to the treatment of income tax. The expectation is that expatriate staff would pay income tax in the local country.

Salary adjustments and increments	Reviewed and usually increased on renewal of contract after 3 years. For support staff annual increments are provided.	On an annual basis. Current agency practice is not competitive and makes no provision to recognise and reward higher levels of competence, performance and contribution.
COLA/COLDA	No cost of living adjustment across the 3 agencies although an adjustment in SPREP and FFA.	Adjustments are usually made where significant change in COLA/COLDA occurs, usually in conjunction with the annual pay review.
Overseas Premium	Not paid.	A 10 – 15% overseas premium usually paid to encourage staff to take up and remain in overseas position.
Quality of Living allowance	Not paid.	A Quality of Living Allowance of 10 – 15% would be paid for expatriate staff located in Fiji. QOL allowances would be justified for agency staff located in difficult environment.
Superannuation	8% for Suva based staff and 6% for all staff in New Caledonia. 7% in Samoa for SPREP.	Agency practice it at the lower end of market practice internationally. Statutory Australian practice is 7% rising to 10% over the next 3 years while New Zealand practice is in a state of flux as commitment to compulsory superannuation contributions has been scaled down by the Government. Market practice for senior staff in Australia is to pay above statutory levels.
Leave	5 weeks annual leave, 30 – 36 days paid sick leave and other leave Minor variations across agencies.	Generally consistent with market practice.
Home Leave	Practice varies enormously across agencies with paid return airfares at end of year, eighteen months or 3 year contract period.	Market practice is to provide return airfares annually when recreation leave is taken.
Health	Mixed practice across agencies. FORSEC and SOPAC provide free health insurance, SPC requires staff to contribute 1.5% of salary.	Free health insurance is common for expatriates. Market practice on health insurance for local employees varies.
Education allowance	Various levels of assistance.	Market practice is for employers to meet the cost of education in an international or private school for school aged dependants.
Life insurance	Life insurance provided to all staff.	Market practice on life insurance varies with approximately half of survey firms providing insurance for expatriates and local staff.

Housing	Rental assistance provided to contract staff. No assistance provided for local staff except in Noumea.	Mixed market practice for expatriates. Best practice is a 'balance sheet' approach where housing costs at home and abroad are equalised to ensure the expatriate is no better or worse off in regard to housing costs. However, despite a commitment to this approach, provision of housing or housing subsidies is common.
Establishment Grant	Paid by FORSEC and SOPAC for contract staff outside the Suva area pays this grant to all contract staff. SPREP also pays this grant.	Provision of establishment grant is very common for both expatriates and local staff relocated.

Overseas Sourced Contract Staff

In summary, the picture on benefits for our overseas sourced contract staff is:

Ahead of market practice	Behind market practice
• tax free status • life insurance	• overseas premium • quality of living allowance • annual remuneration reviews • superannuation • salaries set in SDR's • cost of living adjustments • home leave

The above situation should be taken into account when determining whether to retain the tax-free status for professional staff.

In addition, for overseas sourced contract staff, consistency is needed across the agencies on:

• housing
• leave, all types
• health insurance
• life insurance
• establishment grant
• accommodation on arrival
• education allowance.

Technical/Support Staff

For technical/support staff, the agencies are competitive in regard to provisions and benefits compared to the Fiji market. Consistency is needed across the agencies on:

• use of employment contracts or 'permanent' employment

• leave, all types

• working hours

• health insurance

• life insurance

• access to vehicles.

No information is currently available for comparison in the local Samoa market.

Recommendation 6: Job Sizing

The Cullen Egan Dell job evaluation system be used for job sizing by all agencies.

The Cullen Egan Dell Job evaluation methodology is a proven, systematic and defensible tool for establishing the relative work value of jobs within organisations. It has been used extensively by many hundreds of public and private sector organisations in Australia and New Zealand over the last 30 years, as the basis for contemporary and coherent remuneration management systems.

We have used the Cullen Egan Dell job evaluation methodology to establish the work value, and position within the grading structure, of many positions within SPREP, FORSEC and the other CROP agencies. This exercise guided market comparisons and development of a recommended remuneration and grading structure. However, although representative of positions across all agencies, further validation is required and application to all positions using job evaluation, grading standards and position matching.

We are confident that the methodology is capable of providing accurate work value assessments for all jobs across the relevant CROP agencies.

The methodology has been used to underpin the broadbanded grading structure for both executive/professional staff and technical and local staff, and we foresee its continued use on a periodic basis to review jobs as the agencies, and the jobs within them, change.

A summary of the factors and further background information on the Cullen Egan Dell job evaluation methodology is provided in Attachment E.

Recommendation 7: Salary Stabilisation

Adjustments to the remuneration structure for contract staff should occur on the basis of relative exchange rates and Employment Conditions Abroad (ECA) cost of living indices between the source country and the country of employment rather than using SDR's.

The Terms of Reference expressly seeks:

The Consultant to provide advice on whether the current system of stabilising salaries against the Special Drawing Rights (SDR) would be appropriate once a market-based system is implemented, and, if it is judged no longer appropriate, recommend an appropriate alternative budgetary system or current basket for stabilising salaries and outgoings.

We have considered the existing arrangements of using SDR's as a method of stabilising salaries and outgoings and recommend that future practice should be benchmarked against comparison with the Australian dollar.

The rationale for this is based on:

- the Australian economy is a strong and stable regional economy
- Australia is a provider of many recruits (and potential recruits) to the various agencies
- the Australian dollar is the currency familiar to, and used historically by, most recruits
- the Australian Public Sector being used as the comparator market for professional contract staff
- the lack of any credible link between the existing currencies included in the SDR currency basket, and the Pacific region to which it is being applied.

We recommend that an adjustment threshold of 5% variation between the relevant local currency and Australian dollar become the basis for review of the remuneration levels in the recommended remuneration and grading structure.

This would mean that unless currency fluctuations occurred at a level greater than 5% over the 12 month review period, there would be no adjustment required to salaries. This of course would apply for both positive and negative movements. Any major currency re/devaluation for Fiji, Australia or other South Pacific country would trigger a salary adjustment under this policy.

We also recommend that for contract staff the use of ECA cost of living indices between Australia and the country of employment and between countries in the South Pacific, is appropriate for this purpose as the sole supplier of such data in the region.

However, we note that for some countries and agency sites in the region, the US dollar and French Pacific Franc are used. The current approach may need to be retained for these sites, modified to be consistent with recommended policy.

Recommendation 8 and 9: Remuneration Level Updates

The remuneration levels within the remuneration and grading structure be reviewed annually based on remuneration movements in the Australian Public Service and, for technical/support staff, movements in the local general market.

The remuneration and grading structure as a whole be market tested and reviewed on a triennial basis.

We have previously recommended that the Australian Public Service remuneration levels be the comparator market for executive/professional positions and the local general market be used for technical/support staff.

The CROP agencies will need to maintain and update the remuneration and grading structure for professional and technical/support staff on an annual basis. We recommend the following:

1. Each year, the CROP agencies update the remuneration and grading structure based on annual movements in remuneration levels of comparator markets. These movements can be sourced from Mercer Cullen Egan Dell or other remuneration consultancies and can be managed internally and/or using external advice.

2. Each triennium, the CROP agencies request Mercer Cullen Egan Dell to review and update the remuneration and grading structure to reflect:

   - current business needs of the agencies
   - current employment and remuneration strategy of the agencies remuneration levels and practice in comparator markets.

   This review would be managed by the Remuneration Subcommittee of the Forum Officials Committee.

This approach will be cost effective for the agencies and reflect best practice in the business sector. A complete review of remuneration strategy and levels is not warranted each year unless major shifts in market practice occur.

Remuneration Review Policy and Budget

To manage effectively a remuneration program, organisations usually undertake an Annual Remuneration Review. This Review is normally done as part of the Corporate and Business planning processes and cycle. The purpose of the Annual Remuneration Review is to set the organisation's Remuneration Strategy in the light of business objectives, business imperatives, market positioning and business performance and conditions.

For each annual remuneration review, the agency can establish its remuneration review budget and policy. The head of each agency must ensure that the total increase in remuneration for the agency does not exceed that budget.

The major factors to be considered by the agency is setting its remuneration review budget for the agencies are:

Internal
- corporate strategies, plans and directions
- business conditions and performance expectations
- available funds
- input and feedback from Executives, employees and employee representatives
- the culture of the organisation
- nature of the employment instrument (eg contract).

External
- community, stakeholder and Government obligations
- legislative obligations
- key business trends and indicators (eg interest rates, wage movements, inflation, economic factors)
- supply and demand of critical skills and job families
- current remuneration market positioning of the agencies
- market remuneration movements over the previous years and forecast for the next year in comparator markets
- remuneration policies of major competitors.

The decisions on a remuneration review policy and budget should be primarily driven by organisational performance, but remuneration market referenced. In a year of effective performance the agencies may be authorised to make a remuneration adjustment above market movements. Where less effective performance is evident, the governing council may make no remuneration adjustment or adjust below market movements for the agency.

The implementation of our recommendations, particularly in regard to remuneration ranges and flexibility will impact on the setting of remuneration review budget by governing Councils.

Recommendation 10: Individual Remuneration Reviews

Agencies undertake an annual review of the remuneration of all employees using policy and guidelines provided.

Individual Remuneration Reviews

We have noted that for professional staff, not all CROP agencies are adopting best practice by only reviewing remuneration levels for professional staff on renewal of their contract at the end of 3 years.

This is not competitive and thus leaves the agencies with an unnecessary employment risk.

In the case of technical and support staff, the annual increment process fails to link performance and contribution to the pay increase decision.

A remuneration review for all staff should occur annually.

Use of Remuneration Ranges

For professional and technical/support staff, our recommended remuneration and grading structure provides a remuneration range for each grade and position within the grade. This range should be used where warranted to recognise and reward growth in competency, performance and contribution of individuals.

We have indicated that there are three benchmark levels in the remuneration range for each grade. We expect that these would be adopted as follows:

The **mid point remuneration level** would be used for employees with the required levels of competence and qualifications who are performing to expectations.

Towards the **minimum remuneration levels** would be used for employees who do not possess the required levels of competence and qualifications and/or who are performing below expectations.

Towards the **maximum remuneration levels** would be used for employees who possess and exceed the required levels of competence and qualifications and/or who are performing well above expectations and often delivering contributions over and above their job expectations.

For effective and transparent decisions on remuneration reviews, the availability and use of a performance plan in setting objectives and expectations and reviewing performance and contribution is essential.

Individual remuneration adjustments for staff are usually recommended by the Director to the agency head for decisions within the Remuneration Strategy of the agency and the approved Remuneration Review guidelines and budget. The total remuneration adjustment for the agency should not exceed the agreed budget for that purpose.

Individual Remuneration adjustments are not guaranteed and will be affected by:

- the approved guidelines for Remuneration Review
- the remuneration review budget for the agency
- employees' performance and competencies within the framework
- the individual's current position within the remuneration range for their Grade
- any specific remuneration market factors that may exist relevant to the employee's position or job family
- a judgement about the motivational opportunity and risk related to the employee.

A guideline for individual remuneration decisions is enclosed as Attachment I

Critical Issues

It is important to recognise that remuneration decisions are primarily a 'judgement call' by an executive who weighs up and takes into account all the relevant business issues and our detailed guidelines on the consideration of qualifications and competency, performance and remuneration market issues. For instance, one key variable may be assessed as high within the range, the other variables low. Accordingly, the final decision on remuneration adjustment takes account of the level of each and the balance and weighting of each item within the current business context.

As well as the qualifications, competency, performance and remuneration market issues, judgements on individual remuneration adjustments can consider the extent to which the employee has adopted or contributed to key organisational principles, values or initiatives. These could include:

- quality assurance and improvement
- customer services
- organisational change
- integrity and ethics
- management style.

Timing

Under this approach it is wise to conduct the individual remuneration review for all employees at the same time. For some agencies, this would replace reviews occurring on the anniversary of appointment.

Remuneration Adjustments

To establish whether a remuneration adjustment is appropriate, it is necessary to:

- determine the individual's current position within the remuneration range for their grade
- assess the current level of sustained competency and performance of the individual, relevant employment and remuneration market issues, and other issues
- make a judgement on where within the remuneration range the individual should reside based on competency, performance and market issues
- if the level is determined to be higher than the individual's current position, consider an increase in remuneration to bridge all or part of the gap
- if the level is determined to be lower than the individual's current position, give no remuneration increase and undertake discussions with the individual concerned.

It is not necessary for all employees to receive a remuneration increase each year, nor is it necessary to pay at least the equivalent of consumer price index movements or grade remuneration movements. As any movement in remuneration becomes a fixed cost to the business, such decisions virtually need to be justified on a business case.

Typically, organisations use the remuneration range objectively and wisely to differentiate the contribution of people, motivate and reward effective and contributing employees and give a strong message to those who are not performing.

Approval of Individual Review Recommendations

The individual remuneration review for the head of an agency is undertaken by the Governing Council of the agency.

The individual remuneration review for Directors and equivalent that report to the head of the agency are undertaken by the agency head and approved by the Council.

The individual remuneration review for other staff is undertaken by their respective Director or equivalent and approved by the head of the agency within the remuneration review policy and budgets approved by the Governing Council. Any deviation from the policy and agency remuneration review budgets should be approved by the Governing Council.

Budget Management

As part of the remuneration review process, the Corporate Services Manager should compile a table of the recommended remuneration increases for the agency(ies). The total incremental cost is calculated and adjustments made where necessary to ensure that it does not exceed the remuneration review budget set by the Governing Council.

Communication

Following a decision on a remuneration adjustment, if any, a meeting should be held with the person concerned to explain the basis of the decision and discuss any ramifications for skills and career development.

Documentation

The documentation to increase the remuneration of an employee should be thorough. It should include a:

- documented and agreed performance plan
- appraisal against the performance plan
- assessment of the competency of the person
- comments, if any on market employment and remuneration issues
- remuneration review issues
- remuneration review recommendation.

Recommendation 11: Performance Management

The Agencies develop and implement a performance management system for all staff, one of the outcomes linked to remuneration review decisions.

Some agencies have already explored the design and implementation of a performance management program. Our analysis indicates that all CROP agencies would benefit from an effective performance management program and its link to remuneration decisions. Such programs are increasingly best practice across all sectors, focus the efforts of individuals and groups towards organisational objectives and enable the agencies to position themselves strongly with their stakeholders, donor organisations and staff as an "employer of choice".

An effective remuneration program requires processes to make sound judgements regarding the performance of staff as one of the bases for remuneration movements. For both contract and permanent staff, a performance management program enables:

- an agreement between the agency and employee on job purpose and expectations to be reached and maintained
- job purpose and expectations to be aligned with organisation purpose and business plans
- staff development programs to be aligned with job demands and performance expectations
- regular review and feedback of performance
- remuneration to reflect employee contribution and performance, and competitive pressures
- sound and transparent judgements to be made regarding contract renewal.

Making judgements on performance is a critical element of our recommended annual remuneration review process.

We envisage that:

- there will be a common performance management program across all agencies
- the performance management program will operate on an annual cycle and roll over from year to year

- participation in the performance management program is a contract condition and requirement for pay review
- periodic performance discussion and feedback will occur through the year and a formal review occur at the end of the year
- pay reviews will occur annually and allow employees remuneration to progress through the remuneration range for their grade where warranted
- the annual cycle for performance management will align with the agency business planning and remuneration review cycles
- the program will be supported by training for staff and management.

A future working party should be tasked to complete this development as a matter of urgency.

Recommendation 12: Total Remuneration Package

The agencies move to a 'Total Remuneration Package' approach over the next 2 to 3 years.

Currently the agencies generally adopt the practice of stating and comparing remuneration using base salaries and benefits. We have previously recommended a detailed review and standardisation of benefits. Once complete a total remuneration approach that states and values the total of the salary and benefits would be effective. Such an approach enables the agencies to:

- identify the full cost of employment
- identify the full cost of any increase in salary and benefits
- implement transparent and consistent practices
- communicate full value of the package to employees
- undertake full market comparisons.

We understand that some agencies have begun to adopt this approach.

The agencies should move to a "Total Remuneration Package" approach over the next 2 to 3 years.

A prerequisite for the development of a Total Remuneration Package approach is the standardisation of benefits and their costing to inform employees and to use in market comparisons.

The issues to be addressed include the derivability and practicality of flexible benefits within the total remuneration package. This approach enables an employee to change the mix of cash and benefits they receive provided the total remuneration is not exceeded and legal requirements are met.

Cost Implications

Mercer Cullen Egan Dell has been asked to identify the cost implications of its recommendations. For each recommendation we have identified the key issues impacting on implementation and any costs, much outside the control of the consultants. In essence, our recommendations in themselves carry little cost implications. The extent of cost increases depend upon the application decision on each recommendation by the agencies.

Recommendation	Cost issues/implications
1. Market positioning – contract staff	▪ Increased costs dependent upon grading and individual remuneration decisions by the agencies ▪ Can be restricted to the remuneration review policy of the agency (say 4% increase) ▪ Agencies to assess on completion of position allocations to grades ▪ Over time, increased remuneration ranges could add to salary costs but justified by performance, retention and market issues
2. Market positioning – local staff	▪ Current pay levels are aggressive within the Fiji market (FORSEC) ▪ New remuneration structure could constrain remuneration increases ▪ Increased costs dependent upon grading and individual remuneration decisions by the agencies ▪ Can be restricted to the remuneration review policy of the agency (say 4% increase) ▪ Agencies to assess on completion of position allocations to grades
3. Grading Structure	▪ a method of classifying staff ▪ no cost implications in itself ▪ overgrading of positions restrained through grading standards and job evaluation
4. Tax Free Status	▪ Retention of tax free status has substantial salary cost benefits for agencies ▪ Dependent upon policy decision of the local government

5.	Benefits Regime	• Working party to review and rationalise benefits across all agencies • Consistency of benefits to be achieved • Cost neutrality overall should be a second critical objective
6.	Job Evaluation System	• Job evaluation enhances consistency and equity in grading decisions • Costs involved in training of agency staff in the job evaluation system (<$AUD10,000 including travel costs for 15 staff)
7.	Salary Stabilisation	• Internally managed process • Use of Australian dollars should mirror SDR movements in the main but be less inflationary • nil cost implications
8.	Annual Remuneration Review Policy	• Mirrors current practice • Sets policy, % increase and budget for remuneration review • nil cost implication
9.	Triennial Remuneration Review	• a repeat of current project • typically $AUD20 – 30,000 consulting fees involved every 3 years
10.	Annual Individual Remuneration Reviews	• Agency decisions on remuneration increases for individuals • Annual reviews instead of at end of contract may increase remuneration expenditure for an agency
11.	Performance Management	• Internal project to address • Performance management a key role of managers • no cost implications except where decisions translate into individual remuneration review decisions
12.	Total Remuneration Approach	• to be adopted in 2002 • may increase administration costs to manage remuneration packages • no salary cost implications.

Overall, our assessment is that the recommendations in themselves will have minimal salary cost implications for CROP agencies. The increased flexibility of proposed remuneration structures may result in agency decisions that increase salary costs for the agency.

Implementation

For contract staff, Mercer Cullen Egan Dell recommends a phased implementation process for these new remuneration arrangements, timed to coincide with the individual's employment contract renewal.

Any major change in employment and remuneration arrangements needs to be carefully planned and managed to ensure resources are developed, intentions and designs communicated effectively to staff affected and required decisions made and implemented.

For effective implementation we suggest that:

- an executive be accountable for implementation across all agencies
- an implementation policy, plan and timetable be developed
- the remuneration subcommittee of FOC oversee the implementation process

For executive and professional staff on contract, a change of contract conditions part way through the contract period would be difficult to accept. Conversely, some staff would welcome voluntarily transition to the new arrangements. As a policy the new approach to remuneration should be adopted on commencement and for renewal of the employment contract.

For technical and support staff, the new arrangements should apply from the next pay review date.

We envisage that the implementation policy and plan would be based on the 'harmonisation' of all arrangements across agencies including a common:

- employment policy and contract
- remuneration and grading structure
- benefit regime
- performance management planning and assessment
  across all agencies.

Further, we envisage that the implementation policy and plan would:

- provide information sessions for all staff
- prepare and distribute information on the new arrangements to all managers and staff
- train managers in making remuneration decisions.

Contract Periods

Considerable discussion took place with the Remuneration Subcommittee on the appropriateness on the current 3+3 year contract arrangements for professional staff.

The current arrangements may limit the capacity of agencies to recruit capable people who have a long term interest in the development of the region. They also cause capable people to leave the organisation at the end of the contract period. The Secretariat indicates its preference to retain competent contract staff for the full 3+3 (6years) contract period. However, 3+3 year contracts are in essence two three year contracts and there is no mandate for the incumbent to uplift the second three year period. A key consideration is the very high direct and indirect cost of recruitment of contract staff.

Although outside our terms of reference, it appears that the current approach to contracts should be reviewed. In an increasingly global employment market the capability to renew contracts for longer periods than is currently the case, would be advantageous to meet agency needs. For this to be successful an effective performance management regime is essential.

This would have an immediate impact on direct and indirect costs through decreased frequency of recruitment across all agencies.

Implementation Plan

Recommendation	Actions	Timing
1. Market positioning – contract staff	▪ implement as recommended	▪ immediate for new staff ▪ contract renewal for existing staff
2. Market positioning – local staff	▪ implement as recommended	▪ immediate for new staff ▪ on annual individual remuneration recommendation for existing staff
3. Grading Structure	▪ validate benchmark evaluations ▪ transition all positions to new structure and grade using benchmarks and grading standards ▪ agency head to approve	▪ by June 2000
4. Tax Free Status	▪ consultation with Fiji government	▪ ongoing

5.	Benefits Regime	▪ establish cross-agency working party ▪ require cost neutral outcome	▪ establish working party November 1999 ▪ recommendation to Remuneration Subcommittee by June 2000
6.	Job Evaluation System	▪ develop in house competencies within all agencies ▪ JE training by Mercer Cullen Egan Dell	▪ by December 2000
7.	Salary Stabilisation	▪ internally managed	▪ implement immediately
8.	Annual Remuneration Review Policy	▪ internally managed	▪ commence in September each year ▪ January implementation each year
9.	Triennial Remuneration Review Policy	▪ partnership with external consultancy ▪ reconvene Remuneration Subcommittee	▪ mid 2002
10.	Annual Individual Remuneration Reviews	▪ managed internally ▪ harmonise on single date for all employees	▪ annually in December for all employees ▪ January implementation for employees each year.
11.	Performance Management	▪ establish cross-agency working party	▪ establish working party November 1999 ▪ recommendations to Remuneration Subcommittee by June 2000 ▪ implement 2000/01 financial year
12.	Total Remuneration Approach	▪ include in triennial remuneration review project ▪ requires benefits to be standardised and costed	▪ mid 2002

Attachment A - List of Persons Interviewed

W. Noel Levi CBE	*Pacific Islands Forum Secretariat*
Iosefa Maiava	*Pacific Islands Forum Secretariat*
Alex Nicholson	*Pacific Islands Forum Secretariat*
Albert Blair	*Pacific Islands Forum Secretariat*
Rima Ravusiro	*Pacific Islands Forum Secretariat*
Alan Bartmanovich	*Pacific Islands Forum Secretariat*
Maatia Toala	*Pacific Islands Forum Secretariat*
Donita Simmons	*Pacific Islands Forum Secretariat*
Filipe Tuisawau	*Pacific Islands Forum Secretariat*
Amelia Siamomua	*Pacific Islands Forum Secretariat*
John Low	*Pacific Islands Forum Secretariat*
Alastair Wilkinson	*Pacific Islands Forum Secretariat*
Monique Fienberg	*Pacific Islands Forum Secretariat*
Bernard Bata'anisia	*Pacific Islands Forum Secretariat*
Andie Fong Toy	*Pacific Islands Forum Secretariat*
Ulafala Aivao	*Pacific Islands Forum Secretariat*
Grace Tigarea	*Pacific Islands Forum Secretariat*
Adi Tikomalmeleya	*Pacific Islands Forum Secretariat*
Edweena Sautu	*Pacific Islands Forum Secretariat*
Angela Ricketts	*Pacific Islands Forum Secretariat*
Manoa Kaiyanuyanu	*Pacific Islands Forum Secretariat*
Esther Fisher	*Pacific Islands Forum Secretariat*
Illsapeci Kuruvoli	*Pacific Islands Forum Secretariat*
Sasi Prasad	*Pacific Islands Forum Secretariat*
Sangeeta Lai	*Pacific Islands Forum Secretariat*
May Fong	*Pacific Islands Forum Secretariat*
Jane Singh_Terap	*Pacific Islands Forum Secretariat*
Bodh Shyam	*Pacific Islands Forum Secretariat*
Glynis Miller	*Pacific Islands Forum Secretariat*
Iosefa Vulaca	*Pacific Islands Forum Secretariat*
Eferemo Elder	*Pacific Islands Forum Secretariat*
Luke Ratumanaceva	*Pacific Islands Forum Secretariat*

Alf Simpson	*South Pacific Geoscience Commission*
Russell Howorth	*South Pacific Geoscience Commission*
Laisa Baravilala	*South Pacific Geoscience Commission*
Paul Fairbairn	*South Pacific Geoscience Commission*
Peni Musunamasi	*South Pacific Geoscience Commission*
Joseph Chung	*South Pacific Geoscience Commission*
Nazmeen Whippy	*South Pacific Geoscience Commission*
Graham Shorten	*South Pacific Geoscience Commission*
Robert Smith	*South Pacific Geoscience Commission*
Jackson Lum	*South Pacific Geoscience Commission*

Dr Jimmie Rodgers	*Secretariat of the Pacific Community*
Peter Saville	*Secretariat of the Pacific Community*
Samila Devi	*Secretariat of the Pacific Community*
Reapi Masau	*Secretariat of the Pacific Community*
Param Sivan	*Secretariat of the Pacific Community*
Mick Lloyd	*Secretariat of the Pacific Community*
Kanawi Pouru	*Secretariat of the Pacific Community*
Conrad Mill	*Secretariat of the Pacific Community*
Taoruru Tebana	*Secretariat of the Pacific Community*
Capt Dr Peter Heathcote	*Secretariat of the Pacific Community*
Akosita Bogidrau	*Secretariat of the Pacific Community*
Roderick Kamleshwaran	*Secretariat of the Pacific Community*
James Karakaua	*Secretariat of the Pacific Community*
Aiaz Hamid	*Secretariat of the Pacific Community*
Sereima Lutubula	*Secretariat of the Pacific Community*
Tokoase Ratu	*Secretariat of the Pacific Community*

Tamari'i Tutangata	*South Pacific Regional Environment Programme*
Gerald Miles	*South Pacific Regional Environment Programme*
Neva Wendt	*South Pacific Regional Environment Programme*
Ray Wright	*South Pacific Regional Environment Programme*
Iosefatu Reti	*South Pacific Regional Environment Programme*
Craig Wilson	*South Pacific Regional Environment Programme*
Pisaina Leilua Leisam	*South Pacific Regional Environment Programme*
Bruce Graham	*South Pacific Regional Environment Programme*

Herve Dropsy	*South Pacific Regional Environment Programme*
Greg Sherley	*South Pacific Regional Environment Programme*
Seema Deo	*South Pacific Regional Environment Programme*
Helen NgLam	*South Pacific Regional Environment Programme*
Sina To'a	*South Pacific Regional Environment Programme*
Sefanaia Nawadra	*South Pacific Regional Environment Programme*
Fatu Tauafiafi	*South Pacific Regional Environment Programme*
Samuelu Sesega	*South Pacific Regional Environment Programme*
Francois Martel	*South Pacific Regional Environment Programme*
Lucille Apis-Overhoff	*South Pacific Regional Environment Programme*
Fiu Petelo Ioane	*South Pacific Regional Environment Programme*
Daniel Devoe	*South Pacific Regional Environment Programme*
Andrea Volentras	*South Pacific Regional Environment Programme*
Satui Bentin	*South Pacific Regional Environment Programme*
Malama Masina Hadley	*South Pacific Regional Environment Programme*
Miraneta Williams	*South Pacific Regional Environment Programme*
Juliana Mikaele	*South Pacific Regional Environment Programme*
Lupe Silulu	*South Pacific Regional Environment Programme*
Saunoa Mata'u	*South Pacific Regional Environment Programme*
Apiseta Eti	*South Pacific Regional Environment Programme*
Ruta Tupua-Couper	*South Pacific Regional Environment Programme*
Quandovita Reid-Tuala	*South Pacific Regional Environment Programme*
Puni Chong Wong	*South Pacific Regional Environment Programme*
Oketi Losivale-Maiava	*South Pacific Regional Environment Programme*
Faamanu Fonoti	*South Pacific Regional Environment Programme*
Monica Tupai	*South Pacific Regional Environment Programme*
Mahendra Kumar	*South Pacific Regional Environment Programme*
Luapene Lefau	*South Pacific Regional Environment Programme*
Matilda Meredith-Tapusoa	*South Pacific Regional Environment Programme*

Attachment B - Summary of Evaluations

o *Pacific Islands Forum Secretariat (FORSEC)*

o *Secretariat of the Pacific Community (SPC)*

o *South Pacific Applied Geoscience Commission (SOPAC)*

o *South Pacific Regional Environment Programme (SPREP)*

Evaluation Report
Pacific Islands Forum Secretariat

ID	POSITION	INCUMBENT	LOCATION	EXPERTISE COORDS	PTS.	JUDGEMENT COORDS	PTS.	ACCOUNTABILITY COORDS	PTS.	TOT. PTS.	POSITION IMPACT
	GRADE 11 (1050 - 1310)										
1	Secretary General	Levi, N	Fiji	G-4+e-	356	E5	356	F-3d	409	1121	$20 M OPR/CAP Expenditure
	GRADE 10 (840 - 1049)										
8	Deputy Secretary General	Maiava, I	Fiji	F+4d	309	E-5-	309	E+3c	269	867	$20 M OPR/CAP Expenditure
	GRADE 9 (630 - 839)										
11	Director, Development & Economic	Vandersyp	Fiji	F+4-d	269	E-4+	269	E3d	246	824	ADVICE
13	Director, Polit & Internat Affai	Baaro, M	Fiji	F+4-d	269	E-4+	269	E3d	246	824	ADVICE
17	Director, Trade and Investment	Kumar, J	Fiji	F+4-d	269	E-4+	269	E3d	246	824	ADVICE
2	Director Corporate Services	Nicholson, A	Fiji	F4-d	269	D+4+	269	E2-d	177	649	DIRECT
	GRADE 8 (470 - 629)										
14	International Legal Adviser	Fong Toy, A	Fiji	F3+d-	203	D+4+	203	E-1+d	177	557	ADVICE
4	International Issues Adviser	Fienberg, M	Fiji	F3+d-	203	D+4	203	E-1+d	161	541	ADVICE
5	Social Issues Adviser	Witkinson	Fiji	F3+d-	203	D+4	203	E-1+d	161	541	ADVICE
12	Resources Adviser	Low, J	Fiji	F3+d	203	D+4	203	E-1+d	161	541	ADVICE
15	Political Issues Adviser	Bata'anisia, B	Fiji	F3+d-	203	D+4	203	E-1+d	161	541	ADVICE
18	Petroleum Adviser	Bartmanovich, A	Fiji	F3d-	203	D-4	203	E-1+d	144	524	ADVICE
6	Manager Finance Services	Blair, A	Fiji	F-3c+	177	D-4	177	D+3-c	144	474	$20 M Financial Assets
	GRADE 7 (350 - 469)										
16	Media Adviser	Aiavao, U	Fiji	F-3d-	177	D-4	177	D+1+d	144	455	ADVICE
9	Manager, Information Services	Simmons, D	Fiji	E+3c+	153	D4-	153	D+2-d	134	440	ADVICE
3	Development Co-operation Adviser	Siamomua, A	Fiji	E+3c+	153	D4	153	D+2c+	134	431	ADVICE
10	Manager, Office Services	Tulsawau	Fiji	E+3c+	153	D4-	153	D+1+d	125	412	SERVICE
7	Trade Development Officer	Ravusiro, R	Fiji	E3-c	134	D4-	134	D+2-c	125	375	ADVICE
25	Finance Services Officer	Shyam	Fiji	E3-c	134	D4-	134	D+1c+	125	360	ADVICE

Evaluation Report
Pacific Islands Forum Secretariat

ID	POSITION	INCUMBENT	LOCATION	EXPERTISE COORDS	PTS.	JUDGEMENT COORDS	PTS.	ACCOUNTABILITY COORDS	PTS.	TOT. PTS.	POSITION IMPACT
	GRADE 6 (260 - 349)										
19	Library Services Officer	Kuruvoli	Fiji	E3-c+	134	C+4-	94	D+1+c+	101	329	ADVICE
20	Personnel Services Officer	Rickets	Fiji	E3-c	134	C+4-	94	D1c+	101	329	ADVICE
21	Property Services Officer	Kaiyanuyanu	Fiji	E-3-c	116	C+4-	94	D1d	116	326	$ Staff Budget
26	Trade Commission Liaison Officer	Miller	Fiji	E-3-c	116	C+3+	76	D1c	88	280	SERVICE
	GRADE 5 (200 - 259)										
22	Records Management Assistant	Fisher	Fiji	D3-c	101	C+3+	76	C+1c+	66	243	SERVICE
27	Finance Clerk	Prasad	Fiji	D2+c-	76	C3+	72	C+1c	66	214	SERVICE
28	Finance Clerk	Lai	Fiji	D2+c-	76	C3+	72	C+1c	66	214	SERVICE
29	Finance Clerk	Fong		D2+c-	76	C3+	72	C+1c	66	214	SERVICE
30	Finance Clerk	Singh-Terap	Fiji	D2+c-	76	C3+	72	C+1c	66	214	SERVICE
23	Divisional Assistant, Trade & In	Tikomalmeleya	Fiji	D-2+c	76	C-3	62	C1c+	66	204	SERVICE
24	Div Asst, Policital & Intern'l A	Tigarea	Fiji	D-2+c	76	C-3	62	C1c+	66	204	SERVICE
31	Div Asst, Conference Protocol	Sautu	Fiji	D-2+c	76	C-3	62	C1c+	66	204	SERVICE
	GRADE 3 (110 - 149)										
34	Team Leader, Maintenance	Elder	Fiji	B+2+b+	44	B+3-	41	B+1c	44	129	SERVICE
	GRADE 2 (80 - 109)										
32	Maintenance Assistant	Vulaca	Fiji	B2b+	38	B2+	31	B+1i+	33	102	SERVICE
33	Maintenance Assistant	Ratumanccere	Fiji	B2b+	38	B2+	31	B+1i+	33	102	SERVICE

Mercer Cullen Egan Dell

South Pacific Regional Environment Programme

Evaluation Report
South Pacific Regional Environment Programme

POSITION	INCUMBENT	EXPERTISE COORD	PTS.	JUDGEMENT COORD	PTS.	ACCOUNTABILITY COORD	PTS.	TOT. PTS.	POSITION IMPACT
GRADE 11 (1050 – 1310)									
Director	Tutangata	G-4+e-	356	E5	356	F-3d	409	1121	$20 M Sales/Revenue
GRADE 9 (630 – 839)									
HOD EECB	Wendt	F+4-d	269	E-4+	246	E3d	309	824	ADVICE
HOD EMP	Miles	F+4-d	269	E-4+	246	E3d	309	824	ADVICE
HOD Finance & Administration	Wright	F4-d	269	D+4+	177	E3-c	203	649	$20 M OPR/CAP Expenditure
GRADE 8 (470 – 629)									
Prog Mngr SPBCP	Reti	F3+d	203	D+4+	177	E2d	234	614	ADVICE
Prog Mngr PICCAP	King	F3d-	203	D+4+	177	E1+d	203	583	ADVICE
Coord Waste Mgmt	Graham	F3d-	203	D4	153	E1+d	203	559	ADVICE
Programme Manager CBEMP	Wilson	F3d-	203	D4	153	E1+d	203	559	ADVICE
Legal Officer	Volentras	F3d-	203	D+4+	177	E-1+d	177	557	ADVICE
Scientific Adv PICCAP	Sem	F3-d-	177	D4	153	E1+d	203	533	ADVICE
Exec Off Mgmt	Leilua Lu	F3d-	203	D+4	161	D+2+c	134	498	ADVICE
IT Manager	Dropsy	F3c+	177	D4+	169	D+1+d	134	480	SERVICE
Accountant	Devoe	F-3c+	177	D-4	144	D+3-c	153	474	$20 M OPR/CAP Expenditure
GRADE 7 (350 – 469)									
Information & Publications Offic	Tauafiafi	F-3d-	177	D-4	144	D+1+d	134	455	SERVICE
Int Negotiations Officer	Kumar	F-3d-	177	D-4	144	D+1+d	134	455	ADVICE

Mercer Cullen Egan Dell — South Pacific Regional Environment Programme

Evaluation Report

South Pacific Regional Environment Programme

POSITION	INCUMBENT	EXPERTISE		JUDGEMENT		ACCOUNTABILITY		TOT. PTS.	POSITION IMPACT
		COORD	PTS.	COORD	PTS.	COORD	PTS.		
GRADE 7 (350 - 469) (cont)									
Training Officer	Dropsy, A	F-3c+	177	D4	153	D1d	116	446	ADVICE
Inv Species Officer	Sherley	F-3c+	177	D-4	144	D+1+c+	101	422	ADVICE
Marine Pollution PO	Nawadra	F-3c+	177	D-4	144	D+1+c+	101	422	ADVICE
SocioEconomic PO	Martel	F-3c+	177	D-4	144	D+1+c+	101	422	ADVICE
Resource Management PO	Sesega	F-3c+	177	D-4	144	D+1+c+	101	422	ADVICE
Meteorologist	Lefale	F-3c+	177	D-4	144	D+1+c+	101	422	ADVICE
Climate Change Officer	Kaluwin	F-3c+	177	D-4	144	D+1+c+	101	422	ADVICE
Wetlands Management Officer	Apis-Overh	F-3c+	177	D-4	144	D+1+c+	101	422	ADVICE
Education Officer	Deo	E+3c+	153	D4	153	D1d	116	422	ADVICE
GRADE G (350-469)									
Info Resource Centre Manager	Bentin	E+3c+	153	D4-	134	D+1d	134	421	SERVICE
Administration Officer	Hadley	E+3c+	153	D4-	125	D+1+d	134	412	SERVICE
Assistant Accountant	Lefau	E3-c	134	D4-	125	D+1c+	101	360	ADVICE
GRADE F (260 - 349)									
Asst Geograph IS	Ioane	E3-c	134	C+4-	94	D1c	88	316	SERVICE
Assistant Computer/IT	Meredith-T	E3c	134	C+4-	94	D1c	88	316	SERVICE
Exec Officer SPBCP	Puleaga	E3-c	134	C3+	72	D1c	88	294	SERVICE
GRADE E (200 - 259)									
Sen Accounts Officer	Mikaele	D+2+c	88	C+3+	76	D1c	88	252	ADVICE
Library Asst	Williams	E-3-c-	116	C3	66	C1c	58	240	ADVICE
PA Director	Eti	D+2+c	88	C+3+	76	C1c+	66	230	SERVICE

Mercer Cullen Egan Dell

South Pacific Regional Environment Programme

Evaluation Report

South Pacific Regional Environment Programme

POSITION	INCUMBENT	EXPERTISE COORD	PTS.	JUDGEMENT COORD	PTS.	ACCOUNTABILITY COORD	PTS.	TOT. PTS.	POSITION IMPACT
GRADE E (200 - 259)cont.									
Registry Supervisor	Silulu	D3-c	101	C+3	69	C1c	58	228	SERVICE
Conference &Travel Officer	Matau	D3-c	101	C+3	69	C1c	58	228	SERVICE
Accounts Clerk	Lui	D2+c-	76	C3+	72	C+1c	66	214	SERVICE
Secretary SPBCP	Tupua-Coup	D-2+c	76	C3+	72	C1c+	66	214	SERVICE
Secretary EEIC	Reid-Tuala	D-2+c	76	C3+	72	C1c+	66	214	SERVICE
Accounts clerk	Wong	D2+c-	76	C3+	72	C+1c	66	214	SERVICE
Accounts clerk	Losivale	D2+c-	76	C3+	72	C+1c	66	214	SERVICE
Div Asst EMP	To'a	D-2+c	76	C-3	62	C1c+	66	204	SERVICE
Div Asst CNR	Ng Lam	D-2+c	76	C-3	62	C1c+	66	204	SERVICE
GRADE D (150 - 199)									
Clerk driver	Fonoti	C+2b+	58	B+3-	41	C1c+	66	165	SERVICE
GRADE C (110 - 149)									
Receptionist	Tupai	C1+b+	50	B2+	31	B1c-	33	114	SERVICE

Evaluation Report
Secretariat of the Pacific Community (SPC)

ID	POSITION	INCUMBENT	EXPERTISE COORDS	PTS.	JUDGEMENT COORDS	PTS.	ACCOUNTABILITY COORDS	PTS.	TOT. PTS.	POSITION IMPACT
	GRADE 10 (840 - 1049)									
1	Deputy Director General, Suva	Rodgers	G-4d	309	E-5-	289	E+3-d	309	907	$16 M OPR/CAP Expenditure
	GRADE 9 (630 - 839)									
11	Plant Protection Adviser	Lloyd	F+4-d	269	D+5-	218	E2-d	203	690	$4 M OPR/CAP Expenditure
	GRADE 8 (470 - 629)									
16	Maritime, Legal Adviser	Heathcote	F-3c+	177	D4+	169	E-1+d	177	523	ADVICE
2	Animal Health Adviser	Saville	F-3c+	177	D4	153	E-1+d	177	507	ADVICE
6	Team Leader Tarogen Project	Sivan	F-3-c+	153	D4	144	E-1+d	177	474	ADVICE
10	Finance Manager	Kamleshwaran	F-3c+	177	D-4	144	D+3-c	153	474	$15 M OPR/CAP Expenditure
	GRADE 7 (350 - 469)									
12	Television & Video Specialist	Mill	E3c+	134	D-4-	125	D1d	116	375	SERVICE
13	Forests & Tracks Adviser	Pouru	E+3-c	134	D-4-	125	D1d	116	375	ADVICE
15	Reproductive Health Training Spe	Tebana	E3-c+	134	D-4-	125	D1d	116	375	ADVICE
	GRADE 6 (260 - 349)									
5	Instructor, Community Educ Train	Lutubula	E3-c+	134	C+4-	94	D1c+	101	329	ADVICE
14	Project Officer, Forestry Projec	Ratu	E-3-c+	116	C+4-	94	D1c+	101	311	ADVICE
8	Finance Assistant	Hamid	E2+c	101	C+3+	76	D1c	88	265	SERVICE
9	Network Administrator, IT	Karakaua	D+3-c-	101	C+3+	76	D1c	88	265	SERVICE
	GRADE 5 (200 - 259)									
3	Laboratory Technician, Plant Hea	Devi	D+2+c-	88	C3+	72	C+1c	66	226	SERVICE
7	Senior Administrative Assistant	Bogidrau	D2+c	76	C3	66	C+1c	66	208	SERVICE

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Evaluation Report

South Pacific Applied Geoscience Community (SOPAC)

ID	POSITION	INCUMBENT	EXPERTISE COORDS	PTS.	JUDGEMENT COORDS	PTS.	ACCOUNTABILITY COORDS	PTS.	TOT. PTS.	POSITION IMPACT
	GRADE 10 (840 - 1049)									
6	Director, SOPAC	Simpson	G-4d	309	E-5-	289	E+2d	269	867	$6-8m OPR/CAP Expenditure
	GRADE 9 (630 - 839)									
7	Programme Manager	Howorth	F4-d-	234	D+5-	218	E-2-d	203	655	$ OPR/CAP Expenditure
	GRADE 8 (470 - 629)									
8	Marine Geophysicist	Smith	F3+c+	203	D4+	169	E-1+d	177	549	ADVICE
10	Chief Technical Adviser Disaster	Chung	F-3d-	177	D4+	169	E1+d	203	549	ADVICE
2	Marine Geologist	Lum	F-3d-	177	D4	153	E-1+d	177	507	ADVICE
3	Energy Co-ordinator	Fairburn	F-3-d-	177	D4	153	E-1+d	177	507	ADVICE
4	Geological Eng Hazards Assessmen	Shorten	F-3-d-	177	D4	153	E-1+d	177	507	ADVICE
	GRADE 6 (260 - 349)									
9	Electronics Technician	Musunamasi	E-3-c	116	C+4-	94	D1+c+	101	311	SERVICE
5	Admin Asst, Corporate Services U	Whippy	D3-c+	101	C+3+	76	D1c+	101	278	SERVICE
	GRADE 4 (150 - 199)									
1	Program Assistant	Baravilala	D-2+c-	66	C-3	62	C1c+	66	194	SERVICE

Attachment C - Comparison of Remuneration and Benefit Practice

(Note: the E-Mail copy of this attachment is not available – will be included in the hard copy of this report)

Attachment D - Recommended Remuneration and Grading Structure

Recommended Remuneration and Grading Structure

Executive/Professional Staff (contract)

October 1999

| Grade | CED points | | Base salary ($AUD pa) | | | Base salary ($F pa) | | | Range |
	Minimum	Maximum	Minimum	Midpoint	Maximum	Minimum	Midpoint	Maximum	%
11	1050	1310	84,000	105,000	126,000	106,680	133,350	160,020	± 20 %
10	840	1049	72,000	90,000	108,000	91,440	114,300	137,160	± 20 %
9	630	839	59,050	75,000	86,250	80,960	95,250	109,540	± 15 %
8	470	629	55,250	65,000	74,750	70,170	82,550	94,930	± 15 %
7	350	469	49,500	55,000	60,500	62,860	69,850	76,830	± 10 %
6	260	349	43,200	48,000	52,800	54,860	60,960	67,060	± 10 %

Technical/Support Staff (permanent)

October 1999

| Grade | CED points | | Base salary ($F pa) | | | Range |
	Minimum	Maximum	Minimum	Midpoint	Maximum	%
G	350	469	36,000	40,000	44,000	±10%
F	260	349	27,900	31,000	34,100	± 10 %
E	200	259	21,600	24,000	26,400	± 10 %
D	150	199	17,100	19,000	20,900	± 10 %
C	110	149	13,500	15,000	16,500	± 10 %
B	80	109	11,700	13,000	14,300	± 10 %
A	60	79	9,900	11,000	12,100	± 10 %

Remuneration Comparison Report
Pacific Islands Forum Secretariat
Contract Staff

D	POSITION	INCUMBENT	DIVISION	FAMILY	LOCATION	Remuneration Aggregates $AUD		Actual Points 50.00%ILE $AUD	C/RATIO
1	Secretary General	Levi, N				BS		103888	101391	1.025
8	Deputy Secretary General	Maiava, I				BS		90885	88439	1.028
11	Director, Development & Economic	Vandersyp				BS		68512	85688	0.8
13	Director, Polit & Internat Affai	Baaro, M				BS		75788	85688	0.884
17	Director, Trade and Investment	Kumar, J				BS		75788	85688	0.884
2	Director Corporate Services	Nicholson, A				BS		75788	74490	1.017
14	International Legal Adviser	Fong Toy, A				BS		67825	68603	0.989
4	International Issues Adviser	Fienberg, M				BS		55487	67579	0.821
5	Social Issues Adviser	Witkinson				BS		57091	67579	0.845
12	Resources Adviser	Low, J				BS		55487	67579	0.821
15	Political Issues Adviser	Bata'anisia, B				BS		55487	67579	0.821
18	Petroleum Adviser	Bartmanovich, A				BS		55487	66491	0.835
6	Manager Finance Services	Blair, A				BS		59237	63292	0.936
16	Media Adviser	Aiavao, U				BS		55487	58264	0.952
9	Manager, Information Services	Simmons, D				BS		67825	56646	1.197
3	Development Co-operation Adviser	Siamomua, A				BS		52402	55676	0.941
10	Manager, Office Services	Tulsawau				BS		55487	53627	1.035
7	Trade Development Officer	Ravusiro, R				BS		53915	49636	1.086

Remuneration Comparison Report
Pacific Islands Forum Secretariat
Local Staff (permanent)

D	POSITION	INCUMBENT	DIVISION	FAMILY	LOCATION	Remuneration Aggregates $FIJI	Actual Points 75.00%ILE $FIJI	C/RATIO	SPC POINTS
25	Finance Services Officer	Shyam				BS 30177	28568	1.06	46
19	Library Services Officer	Kuruvoli				BS 28813	25688	1.12	42
20	Personnel Services Officer	Rickets				BS 30177	25688	1.17	42
21	Property Services Officer	Kaiyanuyanu				BS 26183	25409	1.03	42
26	Trade Commission Liaison Officer	Miller				BS 26183	21736	1.20	38
22	Records Management Assistant	Fisher				BS 21555	19407	1.11	34
27	Finance Clerk	Prasad				BS 21555	17582	1.23	31
28	Finance Clerk	Lai				BS 21555	17582	1.23	31
29	Finance Clerk	Fong				BS 21555	17582	1.23	31
30	Finance Clerk	Singh-Terap				BS 21555	17582	1.23	31
23	Divisional Assistant, Trade & In	Tikomalmeleya				BS 21555	16953	1.27	30
24	Div Asst, Policital & Intern'l A	Tigarea				BS 24470	16953	1.44	30
31	Div Asst, Conference Protocol	Sautu				BS 21555	16953	1.27	30
34	Team Leader, Maintenance	Elder				BS 10706	12232	0.88	22
32	Maintenance Assistant	Vulaca				BS 9867	10533	0.94	20
33	Maintenance Assistant	Ratumanccere				BS 9867	10533	0.94	20

Remuneration Comparison Report
South Pacific Regional Environment Programme

Position	Incumbent	CED Points	Current Remuneration	Australian Public Sector Median ($A)	C/Ratio
GRADE 11 (1050 - 1310)					
Director	Tutangata	1121	106,652	102,279	104%
GRADE 9 (630 – 839)					
HOD EECB	Wendt	871	85,823	89,505	98%
HOD EMP	Miles	824	85,823	87,104	98%
HOD Finance & Administration	Wright	649	79,711	75,028	106%
GRADE 8 (470 – 629)					
Prog Mngr SPBCP	Reti	614	77,385	72,511	107%
Prog Mngr PICCAP	King	583	63,730	70,283	91%
Coord Waste Mngmnt	Graham	559	53,796	68,557	78%
Programme Manager CBEMP	Wilson	559	53,796	68,557	78%
Legal Officer	Volentras	557	42,258	68,413	62%
Scientific Adv PICCAP	Sem	533	59,191	66,688	89%
Exec Off Mngmnt	Leilua Lu	498	53,796	64,105	84%
IT Manager	Dropsy	480	55,350	62,291	89%
Accountant	Devoe	474	55,350	61,687	90%
GRADE 7 (350 - 469)					
Information & Publications Offic	Tauafiafi	455	46,283	59,773	77%
Int Negotiations Officer	Kumar	455	55,350	59,773	93%

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South Pacific Regional Environment Programme

Remuneration Comparison Report
South Pacific Regional Environment Programme

Position	Incumbent	CED Points	Current Remuneration	Australian Public Sector Median ($A)	C/Ratio
GRADE 7 (350 - 469)					
Training Officer	Dropsy, A	446	50,914	58,866	86%
Inv Species Officer	Sherley	422	50,914	56,448	90%
Marine Pollution PO	Nawadra	422	42,695	56,448	76%
SocioEconomic PO	Martel	422	50,914	56,448	90%
Resource Management PO	Sesega	422	63,730	56,448	113%
Meteorologist	Lefale	422	55,350	56,448	98%
Climate Change Officer	Kaluwin	422	69,630	56,448	123%
Education Officer	Deo	419	50,914	56,146	91%
Wetlands Management Officer	Apis-Overhoff	409	42,695	55,139	77%
GRADE G (350 - 469)					
Info Resource Centre Manager	Bentin	421	46,484	56,347	82%
Administration Officer	Hadley	412	n/a	55,441	
Assistant Accountant	Lefau	360	n/a	50,202	
GRADE F (260 - 349)					
Asst Geograph IS	Ioane	316			
Assistant Computer/IT	Meredith-Tapus	316			
Exec Officer SPBCP	Puleaga	294			

Remuneration Comparison Report
South Pacific Regional Environment Programme

Position	Incumbent	CED Points	Current Remuneration	Australian Public Sector Median ($A)	C/Ratio
GRADE E (200 - 259)					
Sen Accounts Officer	Mikaele	252			
Library Asst	Williams	240			
PA Director	Eti	230			
Registry Supervisor	Silulu	228			
Conference &Travel Officer	Matau	228			
Accounts Clerk	Lui	214			
Secretary SPBCP	Tupua-Coup	214			
Secretary EEIC	Reid-Tuala	214			
Accounts clerk	Wong	214			
Accounts clerk	Losivale	214			
Div Asst EMP	To'a	204			
Div Asst CNR	Ng Lam	204			
GRADE D (150 - 199)					
Clerk driver	Fonoti	165			
GRADE C (110 - 149)					
Receptionist	Tupai	114			

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South Pacific Regional Environment Programme

Remuneration Comparison Report
Secretariat of the Pacific Community

ID	POSITION	INCUMBENT	DIVISION	FAMILY	LOCATION	Remuneration Aggregates		Actual Points 50.00%ILE $	C/RATIO
1	Deputy Director General, Suva	Rodgers				BS	95714	90999	1.052
11	Plant Protection Adviser	Lloyd				BS	59083	77113	0.766
16	Maritime, Legal Adviser	Heathcote				BS	59083	66427	0.889
2	Animal Health Adviser	Saville				BS	64990	65403	0.994
6	Team Leader Tarogen Project	Sivan				BS	55249	63292	0.873
10	Finance Manager	Kamleshwaran				BS	55249	63292	0.873
12	Television & Video Specialist	Mill				BS	50212	49636	1.012
13	Forests & Tracks Adviser	Pouru				BS	59083	49636	1.19
15	Reproductive Health Training Spe	Tebana				BS	36222	49636	0.73
5	Instructor, Community Educ Train	Lutubula				BS	43201	44676	0.967
14	Project Officer, Forestry Projec	Ratu				BS	46966	42735	1.099
8	Finance Assistant	Hamid				BS	17896	37774	0.474
9	Network Administrator, IT	Karakaua				BS	23556	37774	0.624
3	Laboratory Technician, Plant Hea	Devi				BS	23556	36009	0.654
7	Senior Administrative Assistant	Bogidrau				BS	17896	34208	0.523
4	Plant Asst, Plant Protective Ser	Masau				BS	14665	32808	0.447

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Attachment E - Cullen Egan Dell Job Evaluation System

The Cullen Egan Dell Job Evaluation System

What is Job Evaluation?

Job Evaluation is a method of measuring the relative work value of different positions in an organisation. It compares the content and demands of a position against a set of defined job related criteria. Job Evaluation is not concern with judging or comparing people or their performance.

The outcomes of job evaluation enable an organisation to design and consistently apply a job grading and pay structure.

What is Cullen Egan Dell's Job Evaluation System?

Cullen Egan Dell has developed a nationally accepted and widely used job evaluation system specifically for the Australian environment. Since its early design by the Company's founders, the system has been enhanced and applied extensively in both the public and private sectors.

The system used by Cullen Egan Dell is a "points factor" job evaluation system. It requires a comparison of the whole job against defined criteria within a number of "factor" areas. The position is assigned a number of points for each factor. The total points score is calculated by adding together the points for each factor.

The key features of the Cullen Egan Dell job evaluation system are that:
- It is applicable to al job types, levels and industries
- It evaluates positions, not incumbents
- It evaluates the position on the basis that it is being undertaken effectively.
- It takes into account the whole job - the role, its complexities and skill requirements - within its organisational and external framework;
- It provides a systematic and reliable approach to the evaluation and grading of position; and
- It employs relevant and meaningful work value criteria.

What are the "Factors" in the Cullen Egan Dell System?

The three **factors** underpinning the Cullen Egan Dell system are:
- The knowledge, experience and skills needed to do the job (called "EXPERTISE")
- The complexity of the job environment and requirements for reasoning and problem solving (called "JUDGEMENT")
- The independence, influence and impact of the position in the use of resources or the provision of advice, service or support to clients, the organisation or staff (called "ACCOUNTABILITY")

Each of these factors consists of 2 - 3 subfactors. For each subfactor, the Cullen Egan Dell system provides a number of different levels with definitions for each level. The role of the job evaluator is to select at the level that is most representative of the position being evaluated.

What Will the Job Evaluation Results look like?

A typical job evaluation profile for a position may look like this:

Impact	Expertise	Judgement	Accountability	Total Points
Advice	E- 2+ c 101	C 3+ 72	C+ 1 c 66	239

A brief explanation for each item in the above example follows:

Impact refers to the basis of evaluation and is fundamentally linked to the basic purpose, or focus, of the job. The options for Impact are direct management, indirect management, advice and service.

Expertise co-ordinates for this example are "E- 2+ c". These are a series of letters and numbers (or shorthand code) that refer to the levels for the three Cullen Egan Dell subfactors within the Expertise factor chosen by the evaluation panel as best representing the position. "E" relates to Knowledge and Experience, "2" to Breadth and "c" to Interpersonal Skills. A "=" or +-+ may be allocated to indicate the extent to which the position exceeds or falls short of the standard for the subfactor. Using a "look-up" table, the total work value score for Expertise is 101 Cullen Egan Dell points.

Judgement co-ordinates are "C 3+". These refer to the levels within the Judgement factor chosen by the evaluation panel. "C" relates to the Job Environment subfactor and "3" to the Reasoning subfactor. Again "+" or "-" can apply as above. The total work value score for Judgement is 72 Cullen Egan Dell points.

Accountability co-ordinates are "C+ 1 c". These refer to the levels within the Accountability factor chosen by the evaluation panel to best represent the position. "C" refers to Independence and Influence, "1" to the Position Impact and "c" to Involvement. The total work value score for Accountability is 66 Cullen Egan Dell points.

Total Work Value for the position is 230 obtained by adding together the work value score of Expertise, Judgement and Accountability (101 + 72 + 66 = 239). Using points to grade table, the organisation is able to determine the grade of the position.

How Are the Evaluation Outcomes Converted to Grades?

The outcome of the evaluation of a position is a number of Cullen Egan Dell points - the greater the number of points, the greater the relative work value of a position. Cullen Egan Dell analyses the range of evaluation outcomes and develops an appropriate grading structure aligned to natural work clusters in the organisation and consistent with the organisation's reward strategy. For each grade, an evaluation points range is developed, as illustrated in the table below. This is used to determine a position's grade within the organisation's remuneration system.

A points-to-grade table could look like this:

Points Range	Grade
110 - 139	1
140 - 169	2
170 - 199	3
200 - 234	4 etc

The Job Evaluation methodology provides a meaningful, understandable and acceptable methodology for establishing remuneration levels that ensure internal equity within organisations as well as external relativity with the market, and acceptance of outcomes by those whose jobs are evaluated.

Advantages of Using Cullen Egan Dell's Job Evaluation System?

Enhancing remuneration management through use of Cullen Egan Dell's job evaluation methodology has some distinct advantages:-

Equity
The system provides and opportunity to achieve equity in remuneration decisions, given it requires a systematic analysis of the actual work content of positions. It also ensures a better understanding of all position is the organisation and calls attention to features or characteristics of work that may have otherwise been overlooked.

Performance Management
The development of a job evaluation remuneration management system supports the organisation's performance management system. Gaining confidence in remuneration provides a basis for performance pay programs. Clarifying position accountabilities facilitates the identification of job goals, performance measures and competencies as a starting point for performance planning, review and supporting pay strategies. For example,

performance against specific competencies identified as important for success at the individual, team, regional or organisational level can be used as a mechanism to determine an individual's position in a remuneration range.

Annual Remuneration Reviews

When the initial evaluations are completed and a grading structure is established, market remuneration data can be produced for each level reflecting the market as at the organisation's review date. Cullen Egan Dell can provide such market data annually for use in remuneration reviews.

For annual remuneration reviews, managers can be provided with a schedule of current staff remuneration levels in comparison with the market. Managers are typically then asked to determine an appropriate adjustment based on:-

- Where the job holder currently sits in relation to the remuneration midpoint;
- The assessed performance level of the job holder; and
- The available remuneration budget.

Cullen Egan Dell
JOB EVALUATION FACTORS

EXPERTISE FACTOR	JUDGEMENT FACTOR	ACCOUNTABILITY FACTOR
Measures the requirements for education, training and work experience, the diversity of individual tasks as well as interpersonal skills.	Evaluates the reasoning components of a job, focusing on the task definition and complexity, the constraint within which employees need to resolve problems and other thinking challenges of the position.	Evaluates the nature of the position's authority and involvement in managing the organisation's resources. It includes the influence of the position's advice and accountability for results of decisions.

Knowledge & Experience

This subfactor measures the education, training and work experience requirements of the position. As knowledge is the result of education, training and experience, both the nature and extent of knowledge are considered.

When evaluating a position, we consider the training and experience required to do the job. This does not necessarily reflect the training and experience of the current job holder.

Job Environment

Job environment identifies the clarity, objectives, guidelines and policies as well as the nature and variety of tasks, steps, processes, methods or activities in the work performed. It measures the degree to which a position holder must vary the work and develop new techniques.

Impact

This subfactor is measured in terms of the resources for which the position is primarily held accountable or the impact made by the policy advice or service given. It may be measured in monetary terms or on a policy/advice significance scale.

Breadth

This aspect of expertise measures the diversity of functions performed by the position. It considers not only the breadth of knowledge requirements for the position, but also the impact of various environmental influences on the position. Such influences may include geographic considerations or the variety and nature of product/ services and suppliers/clients. The breadth subfactor also considers the need to integrate diverse or related activities.

Reasoning

This facet of judgement focuses on the requirements in the position for reasoning, analysis and creativity. Its emphasis is on the need for analysing and solving problems.

Independence & Influence

This subfactor focuses on the position's level of accountability and independence in the commitment of resources, provision of advice or delivery of services. The requirement for acting as a spokesperson for the organisation is also considered. The extent of accountability is considered in conjunction with the position impact measure chosen.

Interpersonal Skills

This subfactor measures the position's requirement for skill in managing people and in negotiations. It is NOT meant to be a measure of the amount of interpersonal skills possessed by any incumbent, but rather is concerned with the people management, persuasive and negotiating skills required to achieve the position objectives.

Involvement

The involvement subfactor is concerned with the nature of the position's accountability for the management of, or influence over, organisation resources. For example, one consideration might be whether the position has accountability for a particular resource fully delegated to it or shared with other positions.

Attachment F - Grading Standards and Descriptors

Grade	Standard	Example
11	Head of major agency International standing and leader Politically astute Advanced management capabilities	Secretary General, Pacific Islands Forum Secretariat Director, SPREP
10	Head of significant regional agency International respect Politically astute Advanced management capabilities Regional knowledge Experienced in managing a multi-disciplinary professional agency	Deputy Secretary General, FORSEC Director, SOPAC DDG, SPC
9	Major program manager Key discipline leader Politically astute Business acumen Business and budget manager Leverages international programs Strong people management role	Program manager, SOPAC Director, FORSEC Manager of a large/significant project, SPC HOD's SPREP
8	Advanced professional Regional standing Strong relationship role Project managers of key projects Highly qualified in their discipline Extensive experience in their discipline	Senior Advisers, FORSEC Program leaders, SOPAC Project leaders, SPC Program Manager SPREP Finance Manager
7/G	Highly skilled professional Project managers Qualified professionally Mgrs of business critical internal services	Specialist, SPC Project Officer SPREP
6/F	Highly skilled paraprofessional Experienced professional External coordination role Managers of internal services	Officer, FORSEC Electronic Technician, SOPAC Project Officer, SPC Instructor, SPC Adviser, SPREP
E	Skilled support role Process and practice astute Knowledge of organisational systems	Divisional Assistant, FORSEC Laboratory Technician, SPC Divisional Assistant, SPREP Accounts Clerk, SPREP

D	Semi-skilled administrative Use of local systems Performing routine tasks	Program Assistant, SOPAC, SPREP and SPC
C	Team Leader, manual work Coordinate and allocate tasks Perform diverse manual tasks	Team Leader, Maintenance, FORSEC
B	Manual work Diverse tasks	Maintenance Assistant/Driver, FORSEC
A	Unskilled role	Cleaners

Attachment G - Framework for Individual Remuneration Reviews

EXAMPLE - APPLICATION OF REMUNERATION RANGES

	Remuneration ($pa)	Qualifications & Competency Considerations	Performance Considerations	Employment Remuneration Market Considerations
110% **MAXIMUM**	110,000	Highly competent. Leadership skills possessed. Advances knowledge in the field.	Consistently outstanding performance. Person working beyond position requirements.	Highly specialised skills, scarce and critical to the business. High paying market.
105%	105,000	Competent in all respects. Required additional training & qualifications completed.	Consistently superior performance. Meets unusual challenges/demands	
100% **MIDPOINT COMPETITIVE MARKET POSITIONING**	100,000	Required competencies possessed and demonstrated. Fully qualified. Experienced.	Effective performance meeting job requirements	Need to make a pay offer sufficiently attractive to recruit required skills.
95%	95,000	Key competencies developed and demonstrated. Noticeable gap in competencies.	Adequate performance but capable of improvement. Noticeable performance limitations.	Able to compete satisfactorily in the market place.
90% **MINIMUM**	90,000	Meets qualifications requirements only. Inexperienced Unproven	Recent appointee Unproven performance in the position or elsewhere.	

**South Pacific Regional Environment Programme
(SPREP)**

Eleventh SPREP Meeting of Officials
Guam
10-12 October 2000

**Agenda Item 8.2 : Appointment of Auditor
(for 2000 and 2001 Audits)**

Purpose of Paper

1.   To seek Members approval of the appointment of Auditors, in accordance with Financial Regulation 31.

Background

2.   Financial Regulation 31, as amended at the 10th SPREP Meeting in 1998 (10SM), requires the Meeting to "appoint biennially, one or more Auditors in no way connected with the South Pacific Regional Environment Programme, on such terms as it sees fit."

3.   At the 10th SPREP Meeting, Members decided the audit tender should be advertised regionally, including the local market. In accordance with that decision, the Secretariat again called for regional tenders, through Member Governments and Administrations and through all focal points, for both the financial and performance indicator audits to be carried out in 2001 and 2002, for the 2000 and 2001 financial years, respectively.

4.   Tender criteria required the firms to demonstrate that they were associated to, or working in association with, a reputable internationally known accounting firm. This criteria was set to satisfy Members that the SPREP accounts will be audited to international standards.

5.   A total of six inquiries were received. Four tender proposals were received, one each from auditors in Fiji, New Zealand, Samoa and Vanuatu. All four tenders satisfied the required criteria. The firms, and their relevant background, are as follows:

- Betham & Co., Apia, Samoa, originally operated under the name of Coopers & Lybrand and maintain an audit reporting/working relationship with the international chartered accounting firms of Coopers & Lybrand (Australia), Price Waterhouse Coopers (Fiji) and KPMG (Australia);

- Audit New Zealand has a direct association with the Office of the Auditor-General of New Zealand. It has conducted audits for the Governments of Niue and Tokelau and has been directly involved in the financial and non-financial reporting in the Public sector in New Zealand;

- KPMG, Suva, Fiji, is autonomous, but maintains audit links to KPMG throughout the world, with close ties to the Sydney, Australia practice. It has conducted audits to a number of South Pacific independent, intergovernmental and regional organisations;

- KPMG, Port Vila, Vanuatu is also autonomous. It has conducted audits within the Pacific region, particularly in Vanuatu, with clientele including major organisations in Vanuatu and various offshore companies.

6. After careful consideration and analysis of each tender, the Secretariat recommends to Members that the firm of Betham & Co. be appointed to audit the SPREP accounts for the financial years 2000 and 2001 (to be performed in 2001 and 2002, respectively). Betham & Co. have audited SPREP's annual accounts efficiently over the past nine years. They have developed an in-depth understanding of the accounting and financial systems used by the Secretariat and conducted a detailed, extensive performance indicator audit in respect of SPREP's 1999 activities.

7. Betham and Co. was externally appointed to audit specific SPREP project accounts for one of SPREP's donors, which greatly assists them in the conduct of the SPREP audit. Their accessibility, being based in Samoa, has made it very cost-effective for the Secretariat to obtain other audit certificates, required by international donors, at short notice and at various times during the year. They have also provided advice to the Secretariat, on important issue, when required. In addition, their proposed fee was the lowest of the four tenders received.

8. The audit fees proposed by Betham & Co., for each part of the audit, is higher than they charged for prior year audits. For comparison, all quotes have been converted into US dollars at 31 July 2000 exchange rates. The total annual costs proposed by Betham & Co., for both the financial audit and the performance audit, for each of the 2000 and 2001 financial years, is approximately US$12,300. The total annual costs for the other auditors amount to: US$21,340 for Audit New Zealand (increasing to US$21,890 for the 2001 audit); US$22,330 for KPMG Suva; and approximately US$45,800 for KPMG, Vanuatu.

9.   The basic fees for each of the other auditors were higher than for Betham & Co., while the higher total costs can also be attributed to the costs of airfares and accommodation to conduct the audits in Samoa. In the event that they may be required to conduct specific project audits in Samoa, or in-country visits for the performance indicator audit, there would also be added costs of engaging any other firm, as their fee charge out rates all appear to be significantly higher than for Betham & Co., while any extra visit to Samoa would also involve additional airfares and accommodation costs.

Recommendation

10.   Members are invited to:

- **appoint** Betham & Co. as auditors for the 2000 and 2001 SPREP audits, to be performed in 2001 and 2002, respectively.

30 August 2000

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 8.3.1: Rules of Procedure: Appointment of Director

Purpose of the paper

1.　　To advise the Meeting of the need to revise the Rules of Procedure for Appointment of the Director and provide clear guidance for procedures for the appointment of the Director of SPREP.

Background

2.　　Prior to this Meeting and in light of the *Rules of Procedures for Appointment of Director,* the Chairperson of the 10th SPREP Meeting had to decide whether:

- To transmit notices of pending vacancy, advertise the position and convene a Selection Advisory Committee, within the six month timeframe before the end of the incumbent Director's first four-year period ending January 2001; or

- To take no action prior to this Meeting which would decide on the reappointment or not of the Director for a further period of two years.

3.　　Rule 5.1 stipulates that, no later than six months prior to the expiry of the term of office of the incumbent, the Chairperson shall transmit notice of the pending vacancy to all SPREP Member Governments and Administrations. This rule is clear and self-explanatory.

4.　　However, Rule 8: "Term of Appointment" may lead to two interpretations and needs some clarification: Should the *Term* be interpreted as a period of four years, after which the post is to be advertised for the following two years or does the *Term* refer to a full period of six years?

5.   The exact definition of the length of appointment will determine the application of the procedure described in Rule 5 in a timely manner. Therefore, **if the Term of appointment of the Director is defined as a period of four years**, notice of pending vacancy will be transmitted and advertised no later than six months prior to the expiry of the initial period of four years.

6.   This interpretation prevents any confusion arising from the definition of pending vacancy when a sitting Director seeks a two year reappointment. Regardless of the intention of the Director to seek a two-year reappointment, there is *a pending vacancy* and an obligation to advertise the post.

7.   **If the Term of appointment of the Director is defined as a period of six years,** it is understood that the *pending vacancy* situation occurs only within six months before the end of such a period. Therefore, if the Director indicates his/her intention to continue service for another period of two years, there is no pending vacancy situation prior to the end of the initial period of four years and no action should be taken under Rule 5 as well as under Rule 6.

8.   This duality of interpretation meant that the 10th SPREP Meeting Chairperson was given no clear direction by the Rules. Accordingly, the Chairperson undertook extensive consultation with Members and the CROP agencies in order to seek their guidance. As a result of these consultations the Chairperson decided not to transmit notices relating to advertisement of the post, nor to convene a Selection Advisory Committee. Such a procedure would only apply in the event that the Director was not reappointed by the SPREP Meeting.

Recommendation

9.   The Meeting is invited to **examine** and **select** one of the following proposals to replace the current Rule 8 of the Rules of Procedure:

> ➤ The successful applicant shall be appointed for a period of four years in the first instance. A pending vacancy occurs within the six months period prior to the expiry of this initial term of office. The Director wishing to seek a reappointment for a further period of two years must submit an application following the same procedure as new applicants and the SPREP Meeting at its discretion may approve such a reappointment. The maximum length of appointment of any individual is six years.

OR

> ➢ The successful applicant shall be appointed for a period of four years in the first instance. Except, where the SPREP Meeting decides that the Director's service is unsatisfactory for continuation, or where the Director decides not to seek reappointment, the term of office is automatically renewed for a further period of two years. The maximum length of appointment for any individual is six years.

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22 August 2000

South Pacific Regional Environment Programme (SPREP)

Eleventh SPREP Meeting of Officials
Guam
10 – 12 October, 2000

Agenda Item 9.1: Regional Ocean Policy

Purpose of Paper

1.　To present the rationale and decisions related to the proposal to develop a Regional Ocean Policy.

Background

2.　The 30th Pacific Island Leaders' Forum, Koror, Palau, 3-5 October 1999 endorsed the development of a Regional Ocean Policy and integrated national Ocean policies. This endorsement was in response to recommendations from the Pacific Regional Follow-up Workshop on the Implementation of United Nations Convention on the Law of the Sea (UNCLOS), Tonga, 1999.

3.　The term "Ocean Policy" has become a shorthand term for describing a planned system-wide approach to ocean management. It generally involves extensive stakeholder consultation and agreement on a set of common objectives. It can provide benchmarks against which priorities can be set and progress measured. It can also provide mechanisms for audit and review. Whilst many developed countries are beginning to produce national oceans policies, the idea of a regional ocean policy is new and has not been attempted in any other region of the world.

3.　It was agreed within the Council of Regional Organisations in the Pacific (CROP) that it would be necessary to seek the consideration and endorsement from the governing councils of those organisations with a wider membership than the Pacific Island Leaders' Forum.

Potential Advantages of an Ocean Policy

5.   A Regional Ocean Policy in the Pacific would aim to enhance the benefits that have so far accrued to Pacific Island Countries and Territories from their pursuit of marine regionalism. Through existing regional institutions and Conventions, a high degree of regional solidarity and consensus already exists on many ocean issues, including: marine environmental protection; marine pollution; fisheries management; integrated coastal zone management; sea level rise; and shipping. To a large extent, therefore, most of the requirements for what may be covered in a Regional Ocean Policy already exist in the Pacific. The possible benefits from such a policy, over and above what is in place to promote coordination and effective management of the marine environment, include:

- strengthening the current functional task-oriented approach to regional cooperation;
- attracting donor funding because of the policy's coordinated and long-term focus; and
- providing a reference point for developing national ocean policies and relevant regional positions in international fora.

Potential Costs of Developing an Ocean Policy

6.   The financial cost of developing an Ocean Policy will be influenced by a number of factors such as the duration of the process; the level of human resources available from the CROP organisations; the location of meetings; the number of delegates attending and the duration of a regional consultative meeting(s).

7.   Following discussion of these variables by the CROP Marine Sector Working Group, it was estimated that the process could take at least 21 months, as indicated by the following time-line.

Activity	Duration (months)
Preparation of Overview Document	6
Preparation of Draft Policy	6
Regional Consultation	2
Revision of Draft Policy and Consultation	4
Approval Process	3 – 12

Secretariat View

8.   Given the extent of, and ongoing investment in, regional cooperation, as well as competing demands for Secretariat resources, the development of a regional ocean policy would need to be a well managed process and one that reflects national development conditions. It would need to build on existing efforts and provide an overarching set of principles and guidance that will assist regional organisations fulfill their mandates and assist all relevant stakeholders in their own efforts to better manage coastal and oceanic resources. In terms of human resources from within the Secretariat, it may be possible to programme 2 months of staff time over the next 2 years to this intitiative.

Recommendations

9.   The Meeting is invited:

> ➢ to **consider** the rationale and resource implications for the development of a regional ocean policy;

> ➢ to **endorse** the development of an appropriate Regional Ocean Policy and **guide** the Secretariat in its efforts to respond to this initiative.

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28 August 2000

**South Pacific Regional Environment Programme
(SPREP)**

Eleventh SPREP Meeting of Officials

Guam
10 – 12 October, 2000

Agenda Item 9.2 BIONET

Purpose of Paper

1.   To inform the Meeting of the statement arising from the BioNET-INTERATIONAL regional workshop held 27 - 31 March 2000, Nadi Fiji and developments arising from the fifth Conference of the Parties to the Convention on Biological Diversity (CBD), 15 - 26 May 2000.

Background

2.   BioNET is a global network engaged in building taxonomic capacity in developing countries, through the identification and description of national biological resources, so that national strategies can be developed to manage their natural resources and control pests and diseases.

3.   BioNET builds taxonomic capacity through (1) establishment/improvement of information and communication services; (2) training of taxonomists; (3) rehabilitation of existing collections/records and (4) developing the use of computer-aided and automated taxonomic tools.

4.   BioNET proposes to establish a Pacific regional LOOP called PACINET to link with other regional LOOPs including Africa (SAFRINET, WAFRINET, EAFRINET), Asia–Pacific (ASEANET), Carribbean (CARINET), in technical cooperation activities. PACINET will be owned, operated and sustained by the governments who requested and created them.

5.   BioNET's role is mainly one of facilitation. It is a non-profit, non-commercial global organisation that secures funding from the following major donors: Swiss Agency for Development and Cooperation (SDC), UK aid agencies, UNDP, Commonwealth Secretariat (CSC, CFTC), USAID - to assist with operations of the Secretariat and establishment of regional arms such as PACINET. If established, PACINET would raise its own donor funding mainly through BioNET.

6.   At the Nadi 2001 BioNET regional workshop, participants issued a statement, the relevant parts of which are:

"...The meeting reaffirms BioNET-INTERNATIONAL as a means of meeting the biosystematic needs of the Pacific region and has in principle agreed to establish the operation of a Pacific LOOP of BioNET-INTERNATIONAL, to be known as PACINET. Having considered various concerns pertaining to detailed needs assessment studies, safeguard of information, biopiracy and recognition and protection of community property rights, the meeting recommends that:

SPC and SPREP member governments, through the established protocols, be invited to endorse and authorise the establishment and operation of a Pacific LOOP of BioNET-INTERNATIONAL to be known as PACINET, and to pledge their support to sustain this LOOP as a sub-regional technical cooperation network and integral part of their national development programmes."

7.   A similar interest to facilitate and coordinate taxonomic activities and services amongst parties to the CBD underpins Decision V/9 adopted by the Conference of the Parties in Nairobi in May 2000. This decision established a regionally balanced Global Taxonomic Initiative Coordinating Mechanism consisting of 10 members to assist the Executive Secretary to *inter-alia*:

(a) Draft a work programme for the Global Taxonomy Initiative defining timetables, goals, products and pilot projects, emphasising its role in underpinning conservation, for consideration by the Subsidiary Body on Scientific, Technical and Technological Advice;

(b) Initiate short-term activities, including regional meetings of scientists, managers and policy makers to prioritise the most urgent global taxonomic needs and facilitate the formulation of specific regional and national projects to meet the needs identified, and to report thereon to the Conference of the Parties at its sixth meeting; and

(c) Use the Global Taxonomy Initiative as the forum to promote the importance of taxonomy and taxonomic tools in the implementation of the Convention.

8.   The first meeting of the coordination mechanism is scheduled for no later than the 30th November 2000. BioNET INTERNATIONAL has been invited to participate in the work of the coordination mechanism.

Recommendations

9.   The meeting is invited to:

➢   **note** the recommendations of the BioNET INTERNATIONAL workshop held 27-31 March 2000 and the developments arising from the Conference of the Parties to the Convention on Biological Diversity at its fifth Meeting, 15-26 May 2000; and

➢   **consider** acceptance, in principle, of the establishment and operation of a Pacific LOOP of BioNET-INTERNATIONAL to be known as PACINET, subject to:

(i)   the availability of external funding; and

(ii)   its consistency with the outcomes of the November meeting of the coordination mechanism of the Global Taxonomy Initiative.

19 August, 2000