



Project Proposal:

**Integrated Coastal Zone
Management
in the
Pacific Islands Region**

South Pacific Regional Environment Programme

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List of Acronyms Used

ADB	Asian Development Bank
AIDAB	Australian International Development Assistance Bureau
ASEAN	Association of South East Asian Nations
CZ	coastal zone
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization (UN)
FCCC	Framework Convention on Climate Change
FFA	South Pacific Forum Fisheries Agency
GDP	Gross Domestic Product
GIS	geographic information systems
ICAM	Integrated Coastal & Marine Area Management
ICZM	Integrated Coastal Zone Management
IFREMER	Institut Francais de Recherche Pour l'Exploitation de la Mer
IPCC	Intergovernmental Panel on Climate Change
IUCN	The World Conservation Union
NEMS	National Environmental Management Strategies
NGO	Non-Governmental Organisation
ORSTOM	Institut Francais de Recherche Scientifique Pour le Developpement en Cooperation
PIDC	Pacific Island Developing Countries
PNG	Papua New Guinea
RETA	Regional Environmental Technical Assistance
SIDS	Small Island Developing States
SOE	State of Environment Reports (NEMS/RETA)
SOPAC	South Pacific Applied Geoscience Commission
SPC	South Pacific Commission
SPREP	South Pacific Regional Environment Programme
UNCED	United Nations Conference on Environment and Development
UNDHA-SPPO	United Nations Department of Humanitarian Affairs - South Pacific Programme Office
UNDP	United Nations Development Programme
UNEP OCA/PAC	United Nations Environment Programme Ocean & Coastal Areas Programme Activity Centre
USP	University of the South Pacific

Executive Summary

It is impossible to overstate the importance of coastal areas to the Pacific island peoples, cultures and economies. The coastal areas of all islands in the Pacific are the location of the vast majority of human habitation, the focus of subsistence and commercial agricultural and fisheries activity and the target of most economic development. Increasingly, this combination of factors is resulting in coastal habitats being degraded, natural resources over-exploited and growing conflicts in resource use, especially around the rapidly growing urban centres of the Pacific.

Coastal areas of the Pacific are also subject to the damaging effects of natural hazards. Extreme events such as cyclones (typhoons, hurricanes), high storm waves and abnormally high tides cause extensive damage and destruction. Low elevation islands and the low lying coastal areas of the larger, higher Pacific islands are particularly at risk. Global warming now threatens to exacerbate these hazards through accelerated sea level change, increased frequency and intensity of storms and other changes to climatic and oceanographic conditions.

These coastal management problems are widespread in the region and in some areas require urgent attention. The potential for sustainable development of coastal areas and resources is being permanently lost or compromised. Coastal management needs are particularly pressing in the very small islands, especially low elevation islands, and the coastal urban areas of the Pacific. However, much of the degradation of coastal habitats, depletion of resources and destruction of coastal areas could be avoided, reduced or mitigated through integrated coastal zone management and planning.

Among the region's unique characteristics are significant opportunities for the introduction of a workable process of Integrated Coastal Zone Management (ICZM). Opportunities include a high level of customary land tenure, strongly institutionalised decision-making for local resource usage, a high level of subsistence dependence on natural resources from the coastal zone, and a significant degree of social status attached to the provision of resources - especially coastal resources.

Together these characteristics require a special approach for ICZM in this region. This is necessary in order to translate ICZM into a form appropriate to the "Pacific way". In addition, these characteristics combine to significantly increase the potential to meet the needs of Pacific cultures and provide for sustainable development by applying an ICZM approach that suits this region.

Statement of Purpose: Promote the sustainability of coastal areas and resources for Pacific islands through Integrated Coastal Zone Management, by integrating all human activities and natural processes that affect coastal systems and recognising that these do not conform to administrative boundaries.

Principles: The following principles have been based upon those declared by the regional leaders in "The Pacific Way" (SPREP, 1992:34) as being important in guiding sustainable development in the region. SPREP believes it is important that the linkages between the regionally identified principles for sustainable development and those for integrated coastal zone management be made. The principles upon which this integrated coastal zone management project proposal is based, are:

- The needs of present generations must be met in a sustainable manner without compromising the ability of future generations to meet their own needs.
- Equity in participation must be promoted in sustainable development.
- Adverse environmental impacts of economic development must be minimised.
- The precautionary principle must be taken into account.
- Policies relating to resource use and development planning must integrate environmental, economic and social considerations.
- Pacific island governments need to uphold their international responsibilities, as should the international community towards the Pacific islands region.
- The culture and traditions of the region must be taken into consideration.

Goals: Integrated Coastal Zone Management for the Pacific islands region should:

- Sustain natural systems by ensuring sustainability of coastal resources, protecting critical systems and biodiversity, and recognising the inter-relationships between natural, social, economic and cultural systems.
- Be determined by locally identified needs and be appropriate to local social, cultural, political, economic and ecological systems.
- Balance local, provincial, regional and national goals.
- Provide for the social, cultural and economic needs and aspirations of communities within resource constraints.
- Encourage integrated coastal management and strategies at appropriate levels of decision-making.
- Incorporate measures for capacity building, including training and education at all levels, strengthening institutional capacity, improving information and data bases, and improving the exchange of information, experience and expertise.

Specific Objectives: To address the Statement of Purpose, the specific objectives of the regional integrated coastal zone management project are:

- To develop greater coordination and cooperation between regional organisations and also between Pacific island governments on coastal management related issues and problems.
- To develop the capacity to coordinate short-term, issue-targeted projects to immediately address coastal management problems that require attention on time scales too short for standard funding and programme development cycles.
- To develop approaches to integrated coastal zone management appropriate to the Pacific islands region.
- To generate awareness of the needs and benefits of integrated coastal zone management in the Pacific island countries, in both the general public (especially at the community level) and in the decision makers. To develop ICZM training for national planners and managers whose responsibilities impact on coastal areas.
- To minimise or mitigate the impacts of coastal hazards (including accelerated sea level changes) in the coastal zone in both the long-term and short-term, through improved capabilities to mitigate natural disasters as part of integrated coastal zone management.
- To establish national integrated coastal zone management programmes in Pacific island countries.

Project Components: The five proposed project components correspond to the specific objectives noted above. They are:

A. Regional Coordination of Integrated Coastal Zone Management Activities, Including Urgent Coastal Management Needs.

The large number of countries and territories, limited expertise and the urgency to resolve coastal management issues, will necessitate greater regional coordination. This will include sharing of experiences and expertise within the region; information networking; and greater coordination of regional and international agencies active in coastal related activities.

In addition, coordinated action for urgent coastal management issues requiring responses on a time scale which is not possible within normal programme development cycles is needed. There is an important regional function in coordinating the application of ICZM for such issues.

B. Integrated Coastal Zone Management Approach Development for Pacific Islands.

To provide a critical review of coastal zone management needs and develop a support tool which will enable appropriate regional approaches to be developed and implemented. This component is seen as underlying much of the other work.

C. Integrated Coastal Zone Management - Education and Awareness Programme.

For ICZM to be successfully implemented in this region it will be essential that the decision makers - at the national as well as the village level - understand the need for and benefits of integrated coastal management. This will only be achieved through extensive education and awareness programmes. This component will also include a specific training sub-component for coastal managers. This whole component is inextricably linked with the other components.

D. Coastal Hazards Management Planning and Coordination within ICZM.

To address, in the context of ICZM, the management of extreme events arising from climatic, oceanographic and tectonic events and which have major physical, social, or ecological impacts. This includes accelerated sea level change as it represents a coastal hazard, albeit on a longer time frame.

E. National Integrated Coastal Zone Management Programme Development.

The long-term goal of this project is to establish effective national integrated coastal zone management programmes within the countries of the Pacific islands region.

The flow chart on page 15 shows the interrelationship of the above project components. Although this ICZM project proposal is broken up into distinct components, during implementation the components will be fully integrated.

Indicative 3 Year Budget: The following budget is *indicative only*, and is based upon SPREP's experiences with other regional projects. This indicative budget is for three years only, and includes funding for five pilot ICZM projects. It is envisaged that some further funding will be required after the initial three years to facilitate the development of ICZM programmes in additional Pacific island countries.

	Project Components and Objectives	Amount (US\$) Over 3 Years
A.	<i>Regional Coordination of Integrated Coastal Zone Management Activities, Including Urgent Coastal Management Needs</i>	
1.	To develop greater coordination and cooperation between regional organisations and also between Pacific island governments on coastal management related issues and problems.	1,388,000
2.	To develop the capacity to coordinate short-term, issue-targeted projects to immediately address coastal management problems that require attention on time scales too short for standard funding and programme development cycles.	170,000
B.	<i>Integrated Coastal Zone Management Approach Development for Pacific Islands.</i>	
3.	To develop approaches to integrated coastal zone management appropriate to the Pacific islands region.	151,000

C. <i>Integrated Coastal Zone Management - Education and Awareness Programme.</i>		
4.	To generate awareness of the needs and benefits of integrated coastal zone management in the Pacific island countries, in both the general public (especially at the community level) and in the decision makers. To develop ICZM training for national planners and managers whose responsibilities impact on coastal areas	692,500
D. <i>Coastal Hazards Management Planning and Coordination within ICZM.</i>		
5.	To minimise or mitigate the impacts of coastal hazards (including accelerated sea level changes) in the coastal zone in both the long-term and short-term, through improved capabilities to mitigate natural disasters as part of integrated coastal zone management.	665,000
E. <i>National Integrated Coastal Zone Management Programme Development.</i>		
6.	To establish national integrated coastal zone management programmes in Pacific island countries.	210,000
Integrated Coastal Zone Management Project Costs Over 3 Years:		US\$ 3,306,500

1. Introduction

It is impossible to over state the importance of coastal areas to the Pacific island peoples, cultures and economies. The coastal areas of all islands in the Pacific are the location of the vast majority of human habitation, the focus of subsistence and commercial agricultural and fisheries activity and the target of most economic development. Increasingly, this combination of factors is resulting in coastal habitats being degraded, natural resources over-exploited and growing conflicts in resource use, especially around the rapidly growing urban centres of the Pacific.

Coastal areas of the Pacific are also subject to the damaging effects of natural hazards. Extreme events such as cyclones (typhoons, hurricanes), high storm waves and abnormally high tides cause extensive damage and destruction. Low elevation islands and the low lying coastal areas of the larger, higher Pacific islands are particularly at risk. Global warming now threatens to exacerbate these hazards through accelerated sea level change, increased frequency and intensity of storms and other changes to climatic and oceanographic conditions.

These coastal management problems are widespread in the region and in some areas require urgent attention. The potential for sustainable development of coastal areas and resources is being permanently lost or compromised. Coastal management needs are particularly pressing in the very small islands, especially low elevation islands, and the coastal urban areas of the Pacific. However, much of the degradation of coastal habitats, depletion of resources and destruction of coastal areas could be avoided, reduced or mitigated through integrated coastal zone management and planning.

Among the region's unique characteristics are significant opportunities for the introduction of a workable process of Integrated Coastal Zone Management (ICZM). Opportunities include a high level of customary land tenure, strongly institutionalised decision-making for local resource usage, a high level of subsistence dependence on natural resources from the coastal zone, and a significant degree of social status attached to the provision of resources - especially coastal resources.

Together these characteristics require a special approach for ICZM in this region. This is necessary in order to translate ICZM into a form appropriate to the "Pacific way". In addition, these characteristics combine to significantly increase the potential to meet the needs of Pacific cultures and provide for sustainable development by applying an ICZM approach that suits this region.

1.1 UNCED, Agenda 21 and Follow-up Conferences

The coastal zone management needs of the Pacific islands are critical and they constitute a global priority which may be viewed in the international context of Section 17.5 of the Rio declaration (UNCED, 1992:236):

"Coastal states commit themselves to integrated management and sustainable development of coastal areas and the marine environment under their national jurisdiction. To this end, it is necessary to, inter alia: provide for an integrated policy and decision-making process, including all involved sectors, to promote compatibility and a balance of uses;..."

The United Nations Conference on Environment and Development (UNCED) published Agenda 21 - setting out action priorities for environment and development. This project proposal has been developed to give effect to Chapter 17 of Agenda 21 which addresses island, coastal and marine environments (see Annex 4).

The Global Conference on the Sustainable Development of Small Island Developing States (to be held in Barbados, 1994) will address the special challenges faced by small island developing states, as called for in Agenda 21. The Preparatory Committee has under consideration a draft Action

Programme for the Sustainable Development of Small Island Developing States. Some of the regional approaches identified for Coastal and Marine Resources, and of relevance to this proposal, include (see Annex 4 for full text):

- "Develop and/or strengthen the capacity of regional organizations to undertake activities in the coastal and marine areas...;
- Develop methodology for Integrated Coastal Zone Management (ICZM) appropriate to SIDS [Small Island Developing States], particularly very small, low elevation and coral islands;
- Develop and/or strengthen regional clearing-houses for coastal and marine environmental information to facilitate the collection, synthesis and sharing of relevant information, knowledge and experience among SIDS in a structured and systematic way;..."

The World Coast Conference (held in The Netherlands, November 1993), in its Conference Statement, recognised that ICZM is the most appropriate process to address current and long-term coastal management issues, including habitat loss, degradation of water quality, changes in hydrological cycles, depletion of coastal resources, and adaptation to sea level rise and other impacts of global climate change. The Conference also noted that "...There is an urgent need for coastal states to strengthen their capabilities for integrated coastal zone management, working towards the development of appropriate strategies and programmes by the year 2000" (Conference Statement, 1993:3).

1.2 Regional Approach

The particular combination and linkage of geographical, social, cultural and economic conditions found in the Pacific islands region necessitates a fresh approach to integrated coastal zone management. Integrated coastal management guidelines and programmes that have been prepared or have been enacted around the world, are either too general in nature, or are inappropriate for the conditions found in our region. The internationally recognised concept of ICZM needs to be translated into the regional context. It is therefore essential that appropriate approaches for integrated coastal zone management be developed for the Pacific islands region, while taking into account the experiences of other regions of the world.

In addition to SPREP, a number of agencies within the Pacific region have been intimately involved with coastal management related activities, albeit on a sectoral basis. These include, but are not limited to:

- The South Pacific Applied Geoscience Commission (SOPAC) which assists its member countries to survey, manage and develop the physical coastal environment and to develop the mineral and ocean energy potential of coastal areas;
- The South Pacific Forum Fisheries Agency (FFA) which is responsible for the management of the region's fisheries resources;
- The South Pacific Commission (SPC), especially the Coastal Fisheries Programme, which involves, amongst other activities, inshore resource assessment, fisheries training, and information dissemination;
- The University of the South Pacific (USP) provides a range of services to the region relevant to coastal management, including education and training, research, information dissemination and consultancy services.

There are also a number of US and French Government programmes assisting specific parts of the region. These include: the US Pacific Island Network (PIN) - which is a consortium of US federal agencies that provide the US-affiliated Pacific islands access to marine and coastal resources management assistance; and the French Institut Francais de Recherche Scientifique Pour le Developpement en Cooperation (ORSTOM) and Institut Francais de Recherche Pour l'Exploitation de la Mer (IFREMER).

As this project is regionally based, a key initiative is to make use of the considerable knowledge and experience in coastal management related areas existing in the regional and national agencies and institutions (for example, the University of Papua New Guinea). The cooperation and assistance of many of these agencies and institutions have already been provided during the development process for this proposal. Their offers of assistance and cooperation are currently being formalised.

1.3 Definitions

Integrated Coastal Zone Management (ICZM) is a comprehensive, multi-sectoral, integrated approach to the planning and management of coastal areas. This encompasses a process of assessment, planning and management for the sustainable development, multiple use and conservation of coastal areas, resources and ecosystems. Natural hazards preparedness and response planning in coastal areas is also an important part of ICZM, which now must be expanded to include planning for the impacts of climate change - especially accelerated sea level change - in the coastal zone.

It needs to be clearly recognised that there is no single correct way to organise, plan and develop ICZM programmes. It is a *process* that must be tailored to fit into the institutional and organisational environments of the countries involved, including political and administrative structures, cultural patterns and social traditions (Scura, *et al*, 1992). With the Pacific region's diversity of environmental, social, cultural and economic conditions the ICZM process will, by necessity, differ from country to country.

The notion of the "coastal zone" is often interpreted differently by planners, resource managers, lawyers, decision makers and the general public. This definitional issue is briefly discussed in Annex 3. The definition of the coastal zone for legal and administrative purposes will be the responsibility of each country, and be relevant to its own particular circumstances and needs. For the purposes of this regional proposal the following *description* of the coastal zone is used for the Pacific islands region.

The coastal zone is a region of indeterminate and variable width. It extends from and includes, the wholly marine (i.e. the sea-bed, the overlying waters and their resources) to the wholly terrestrial (i.e. beyond the limits of marine incursion and the reach of salt-spray). Linking these two environments is the tidal area which forms a transition between the land and the sea. This coastal zone, so described, is characterised by a steep ecological and environmental gradient (from the wholly marine to the wholly terrestrial) and is consequently rich and diverse in natural resources. Because of this, the coastal zone is the focus of subsistence and commercial agriculture, fisheries activity and the location of intense economic development and settlement.

The environments of the land and sea are strongly linked at the coast. Events on land are reflected in coastal waters while storm events also have a substantial impact on coastal lands and seas. The extent and effect of such linkages varies seasonally, year-by-year and in response to occasional catastrophic events. Superimposed on all this is human activity. Managing coastal activities is normally approached sector by sector (i.e. fisheries, agriculture) and site by site, which is inappropriate. Rarely is the coastal zone viewed as an entity. The challenge of integrated coastal zone management is to do this.

1.4 Basis for Action

The South Pacific Regional Environment Programme (SPREP) has been designated by the governments of the region as the leading environmental agency for the Pacific islands region (see Annex 2). The goal of the Coastal Management and Planning component of the SPREP Action Plan (SPREP, 1993a) instructs SPREP to assist member governments "...to manage and plan for the multiple-use, ecologically sustainable development and conservation of coastal areas habitats and resources". Additionally, the goal of the Global Change component of the SPREP Action Plan mandates SPREP "...to develop and implement a regional programme to assist members to understand and avoid or mitigate the potential adverse impacts of climate change". The more detailed SPREP Climate Change Work Programme, formulated by the Second SPREP Meeting on Climate Change and Sea Level Rise in the South Pacific Region, instructs SPREP to "...develop and implement integrated coastal zone management programmes and plans in all Pacific Island countries, with particular emphasis on very small and vulnerable islands".

Other regional agencies also have responsibilities within the coastal area that are complimentary to SPREP's programme areas. For instance, SOPAC has been carrying out surveys in the coastal zone since the mid-1970s, their Governing Council has instructed them to assist member countries to manage and develop the physical coastal environment and to develop the mineral and ocean energy potential of coastal areas. FFA's functions, in part, include collecting, analysing, evaluating and disseminating statistical and biological information; focusing on management procedures and legislation, and providing technical assistance in the development of fisheries policies. SPC's Marine Resources Programme covers two main areas, the tuna and billfish assessment programme, and the coastal fisheries programme. The latter programme includes fisheries development, post-harvest assistance, training, inshore resource assessment and management, and an information section.

The United Nations Department of Humanitarian Affairs is the UN focal point for disaster mitigation, preparedness and emergency response after disasters. It set up the South Pacific Programme Office (UNDHA-SPPO) in Suva in 1990 to specifically address these aspects in the South Pacific. UNDHA-SPPO provides technical assistance to Pacific island countries to prepare for and respond to natural disasters. The office is the implementing agency for the "South Pacific Disaster Reduction Programme", a regional four year programme aimed at strengthening disaster management capabilities and institutions in the South Pacific. The ICZM project will be closely linked to this UN programme.

Developing and implementing an Integrated Coastal Zone Management Project for the Pacific islands region would be a major step towards fulfilling the national, regional and global requirements to address coastal environment and development issues in Pacific island countries. At the national level, a regional project would support the sustainable development of the coastal zone, as called for in the various National Environmental Management Strategies (NEMS) and national development plans. Regionally, the mandate of the SPREP Action Plan and the major elements of the SPREP Work Programmes on Coastal Management and Planning and Climate Change, as well as the mandates of other regional agencies, would be addressed. Internationally, a regional integrated coastal zone management project would implement portions of Agenda 21, the Climate Change Convention and the Inter-Governmental Panel on Climate Change recommendations (see Annex 4).

2. Objectives of an ICZM Project for the Pacific Region

2.1 Statement of Purpose

Promote the sustainability of coastal areas and resources for Pacific islands through Integrated Coastal Zone Management, by integrating all human activities and natural processes that affect coastal systems and recognising that these do not conform to administrative boundaries.

2.2 Principles

The following principles have been based upon those declared by the regional leaders in "The Pacific Way" (SPREP, 1992:34) as being important in guiding sustainable development in the region. SPREP believes it is important that the linkages between the regionally identified principles for sustainable development and those for integrated coastal zone management be made. The principles upon which this integrated coastal zone management project proposal is based, are:

- The needs of present generations must be met in a sustainable manner without compromising the ability of future generations to meet their own needs.
- Equity in participation must be promoted in sustainable development.
- Adverse environmental impacts of economic development must be minimised.
- The precautionary principle must be taken into account.
- Policies relating to resource use and development planning must integrate environmental, economic and social considerations.
- Pacific island governments need to uphold their international responsibilities, as should the international community towards the Pacific islands region.
- The culture and traditions of the region must be taken into consideration.

2.3 Goals

Integrated Coastal Zone Management for the Pacific islands region should:

- Sustain natural systems by ensuring sustainability of coastal resources, protecting critical systems and biodiversity, and recognising the inter-relationships between natural, social, economic and cultural systems.
- Be determined by locally identified needs and be appropriate to local social, cultural, political, economic and ecological systems.
- Balance local, provincial, regional and national goals.
- Provide for the social, cultural and economic needs and aspirations of communities within resource constraints.
- Encourage integrated coastal management and strategies at appropriate levels of decision-making.
- Incorporate measures for capacity building, including training and education at all levels, strengthening institutional capacity, improving information and data bases, and improving the exchange of information, experience and expertise.

2.4 Specific Objectives

To address the Statement of Purpose, the specific objectives of the regional integrated coastal zone management project are:

1. To develop greater coordination and cooperation between regional organisations and also between Pacific island governments on coastal management related issues and problems.

2. To develop the capacity to coordinate short-term projects to immediately address coastal management problems that require attention on time scales too short for standard funding and programme development cycles.
3. To develop approaches to integrated coastal zone management appropriate to the Pacific islands region.
4. To generate awareness of the needs and benefits of integrated coastal zone management in the Pacific island countries, in both the general public (especially at the community level) and in the decision makers. To develop ICZM training for national planners and managers whose responsibilities impact on coastal areas.
5. To minimise or mitigate the impacts of coastal hazards (including accelerated sea level changes) in both the long-term and short-term, through improved capabilities to mitigate natural disasters as part of integrated coastal zone management.
6. To establish national integrated coastal zone management programmes in Pacific island countries.

3. Opportunities and Constraints

The general environment and development issues and constraints for the Pacific island region were clearly identified in "The Pacific Way" report (SPREP, 1992) prepared for UNCED, and have been further elaborated in preparatory documents for the Global Conference on the Sustainable Development of Small Island Developing States to be held in 1994 (eg SPREP, 1993b). Many of those constraints also relate to implementing national integrated coastal zone management programmes. The key constraints relevant to the implementation of this project are outlined in this section and are based on those in "The Pacific Way" (SPREP, 1992:13-32). To these are added the key *opportunities* relevant to this project.

3.1 Environment

The small size and narrow resource base of many Pacific islands make them particularly vulnerable to inappropriate development and mismanagement, the effects of which usually manifest themselves in the coastal areas. For some countries, the ocean is a major part of that resource base, with very high ratios of sea to land (Kiribati has a ratio of over 4,000:1). Similarly, the ratio of coastline to land area is extremely high. With the possible exception of the larger Melanesian islands, the Pacific islands are entirely coastal in nature. The small size of most of the islands will, however, help facilitate integrated management of coastal areas.

The generally small size of Pacific islands means that the natural disasters (cyclones, flooding, drought) have a relatively greater impact on the environment, and the tremendous distances involved places heavy burdens on disaster management and response.

The dispersed archipelagic nature of the Pacific islands is both a blessing and a cause of difficulty. The broad distribution of the islands through the world's largest ocean has endowed many Pacific island countries with large Exclusive Economic Zones (EEZ) and access to the resources within them. However, the great distances within and between countries places a considerable cost burden on transportation. This cost is reflected in most coastal related management and training activities being concentrated in the easily accessible centres.

It is the islands' marine and terrestrial environments that are the region's main assets for sustainable development. The region tends to have a high degree of endemism and levels of biodiversity, but the relatively small numbers of the various species carry high risks of extinction. The region's biodiversity has potential genetic resource value. Relative to most other regions of the world, most Pacific islands suffer minimally from pollution - a key factor for ecotourism development - but *localised* levels of pollution, and effects from sedimentation, can be quite high.

3.2 Population

Many of the coastal management concerns are affected by high population densities and the continuing high rate of population growth. The net population growth of the region is high with natural rates of population increase well over two per cent, in some countries over three per cent and even reaching five per cent in Wallis and Futuna. Population can therefore be expected to at least double over the next 20 years.

Population problems are generally highly localised and often associated with urbanisation and growth in established population centres. In the capitals of many atoll nations the population densities are extremely high. Throughout the region there is a movement of people into the urban areas. Apart from the social effects of this movement, the environmental effects can be considerable - amplified by the smallness and limited land areas. There is usually a loss of valuable agricultural land to housing developments, the disposal of liquid and solid wastes is posing an almost

insurmountable problem, and overfishing of coastal resources, all combine to degrade the coastal areas.

Only in those smaller countries where special emigration arrangements with metropolitan countries exist, such as American Samoa, Cook Islands, Niue and Tokelau, are some of these problems avoided or mitigated. However, for a few countries, a substantial loss of population through emigration to metropolitan countries has created a severe human resource shortage. Often it is the skilled and highly qualified workers that have been enticed away.

3.3 Education

There are many concerns about the quality of formal education and a frequently expressed need for greatly increased effort in vocational training, apprenticeship programmes and other on-the-job, skill-learning opportunities. Environmental education is one facet of the broader education process and throughout the region there is some emphasis on education about environmental issues, both within the formal education system and for the general public. The subject area, although it remains a low priority, is gaining in recognition. Limited resources, relatively low standards, and, in some areas, out-dated teaching techniques, have all contributed to the problem.

On the positive side, education systems within the region have remained flexible and are able to accommodate the incorporation of appropriate and relevant environmental material. Environmental issues are becoming a popular subject with the media, community and students, as the issues are of immediate relevance to them. Of considerable importance to this proposal is the current effectiveness of non-formal education within the region. A number of groups are using innovative approaches for community level non-formal education. There has also been a resurgence of cultural pride within many parts of the region, resulting in the recognition of the need to pass on traditional knowledge.

3.4 Economies

The economic characteristics of the Pacific island countries vary largely according to resource endowments, consumption patterns, the institutional capacity to support such development, and the political structures. Compared with the rest of the region, the Melanesian countries tend to be resource-rich. At the other extreme, the atoll nations are relatively poor in natural resources, their sole major economic development opportunity being confined to the marine resources of their EEZs. In some instances the economic prospects may be brightened by some increase in tourism, but the difficulty and high cost of access to most of the atolls for international tourists may limit their prospects.

Pacific island economies, like their physical environment, are extremely fragile and vulnerable to external and domestic factors, most of which are beyond their control. This vulnerability stems, in part, from their narrowly-based economies. They rely upon a narrow range of commodities, the prices of which fluctuate with wide amplitudes in the world markets. The level of consumption is high, domestic savings are low or negative and domestic expenditures typically exceed GDP by wide margins. These are reflected in large current account deficits in the balance of payments which are financed largely through aid and, in a number of cases, remittances.

The strongly subsistence-based economies, when considered in conjunction with customary tenure and resource management, provide a significant opportunity for ICZM through the close dependence communities have on successful resource management. In addition, the management mechanisms are largely in place to carry through implementation. The challenge will be more on integrating customary authority, while maintaining a planned approach.

3.5 Culture

Within the past few years awareness of the importance of local knowledge and management systems has grown rapidly within international development and conservation agencies. The potential for these systems to be applied to the management of coastal areas in the region is high. The value of local knowledge and the expressed interest of islanders in having it recorded and used in natural resource management is, unfortunately, not always reflected in the attention being given it by governments and some natural resource professionals in the region. There has also been some interest in building traditional customs and management controls into modern legislation to reconcile legal precision with customary practice.

Local knowledge is eroding at an accelerating rate as a consequence of westernisation, industrialisation, urbanisation and the accompanying alienation of the young from their traditions. The educated elite whose formal education is often obtained far from their own communities frequently know little about local subjects. It is these very people who will be most responsible for influencing patterns of natural resource use and management in their communities in future years. Their technical and political sophistication cannot be put to best use without consideration of the traditional knowledge and practices of their elders.

Of significance to this project are the long histories of successful village and community level management systems, especially since most settlements were, and still are, along the coastal fringes of the islands. In many parts of the region these traditional management systems remain the only systems in force. These village level systems more often than not already use an integrated approach to management through their elders' intimate knowledge of their environment and resources. This experience and knowledge will be utilised wherever possible with this project.

3.6 Coastal Management

A number of constraints limit the effectiveness of coastal management in the Pacific region. The key structural impediment is the current *ad hoc*, sectoral approach to coastal management related activities by most governments in the region. Rarely is there a single or lead agency responsible for overseeing coastal management. Where there is, the scope of responsibilities is usually quite limited, or narrowly defined. This has been exacerbated by the general lack of a planning ethic in the Pacific.

Communication or coordination between departments on government initiated projects is minimal or cursory at best. For example, how often would a Public Works Department consult or coordinate its activities with the Fisheries and/or Environment Units when initiating work adjacent to the shoreline? This problem is being partly addressed by governments slowly adopting Environmental Impact Assessment (EIA) procedures for development projects, and through the process of developing National Environmental Management Strategies.

There is often a failure to recognise the interconnectedness of island and marine ecosystems, resulting in the non-recognition of problems, causes and effects. The limited number of qualified personnel with experience in coastal management related areas is a major problem throughout the region. This is exacerbated by a lack of financial support and an overload of work. One of the negative effects of this situation is that what coastal management related activities do occur, tend to be centralised on the main islands (political/government centres) and rarely extend to the outlying areas and islands.

On the positive side, the opportunity to implement national integrated coastal zone management programmes has never been better. There has been a considerable change in attitude by leaders in the region concerning the need to ensure that development activities are sustainable, and that sound environmental practices and policies need to be incorporated into national strategic plans. The

United Nations Conference on Environment and Development (UNCED) in 1992 not only illuminated the problems of small islands on the international stage, but also raised the level of awareness within the region. The current development of National Environment Management Strategies (NEMS; see Annex 5) in the independent Pacific island countries indicates that the political will is there. What is needed for coastal management is positive action to support that developing political will.

As mentioned above, in most of the Pacific, especially away from the urban centres, the traditional systems of management are currently operating - the day to day existence of many communities relies upon their continuing success. What is required is support for these systems to allow them to continue functioning in the face of introduced technology and development pressures. Integrating such mechanisms into government planning and management is essential for successful community level management of the coastal areas.

4. Strategies

4.1 *Coordination*

Due to the constraints currently affecting coastal management within the region, and as the project is regionally based, there will be considerable emphasis on coordinating activities within the region. This would include, but not be limited to, the coordination of management effort, information, programmes, expertise and training. The key to the success of the project will be accessing, coordinating and using the considerable experience within the regional agencies and institutions associated with coastal activities. This will also minimise the chance of overlap of effort between agencies. Considerable cooperation has already occurred during the development of this project proposal. The relations already established will be further developed. In a similar manner, another project strategy will be to encourage greater coordination of the activities of international organisations with respect to ICZM within the region. At the national level, the sharing of information, and where possible, personnel, between countries and between the countries and the regional agencies involved will be facilitated.

Within SPREP, this project will be closely associated with our other programme areas - especially the climate change, biodiversity, pollution, population and environment, and environmental education programmes.

4.2 *"Bottom-up"*

This project proposes to adopt strategies which encompass a "bottom-up" approach to management. The success or failure of any national integrated coastal zone management programmes in the region will depend upon how involved the local communities are in any decision making. This is particularly important in the Pacific islands due to the degree to which customary practices and local communities are presently involved in the decision making process. Even at the government level a very high value has been placed on the traditional process of cooperation and the consensus approach to problem resolution. In integrating coastal management activities, SPREP and its member governments also place a high priority on ensuring the inclusion of Non-Governmental Organisations (NGOs), particularly women's groups, in any decision making process.

In the Pacific islands region, there is a greater degree of independence of local communities from central government. This is a key aspect of the special requirements for implementing ICZM in the region. The considerable opportunities this offers must, however, be balanced by appropriate sanctions for the process from the highest level of central government. It is, however, recognised that each country will need to adopt the approach that best suits their particular circumstances. It may, or may not be deemed necessary to obtain the highest possible political approval and authorisation, to facilitate working at the community level.

4.3 *Structure and Policies*

This ICZM project is structured in such a way as to allow both the short-term and long-term issues and needs of coastal management in the Pacific islands region to be identified and addressed. In addressing the short-term issues, integrated coastal zone management methods will be encouraged.

This ICZM project proposes, whenever possible, to be proactive rather than reactive. But as noted in the World Bank's ICZM Guidelines, "...ICZM is meant to be a dynamic process – one that is designed to be as proactive as possible within the limits of the data and information available at the time the program is developed. But, unanticipated events inevitably occur. ...ICZM, fundamentally, is a process and as such it can deal on a reactive basis as well." (The World Bank, 1993:8).

A number of regional and in-country workshops are proposed during this project. Although they are included separately under the various project components, it *must be understood* that wherever feasible, they will be conducted jointly, in an integrated manner. This will especially be the case with the pilot projects.

Wherever the use of consultants becomes necessary during this project, the policy will be to use local consultants (including local NGOs, Pacific universities, etc) wherever practical and appropriate. Consultants from outside the region will only be used where the necessary expertise does not exist within the region.

4.4 Implementation at the National Level

All of the independent countries of the Pacific island region are in various stages of developing National Environmental Management Strategies (NEMS) or similar. These provide a broad national institutional framework for integrated environmental management and planning, within which the development and implementation of integrated coastal zone management can be incorporated. The NEMS which have already been developed have identified the need for ICZM and have identified priority areas for ICZM action. Wherever possible, this project will utilise the NEMS task forces already set up in countries to facilitate the *initial* implementation of ICZM programmes. In countries that do not have NEMS task forces, sustainable development commissions, or similar set-up, a similar multi-sectoral mechanism will be suggested as the preferred means to initiate the ICZM process.

Learning from the ASEAN experiences of integrated coastal area management, it is apparent "...that effective management must embody two essential mechanisms: integration and coordination; that is, the planning process must be multidisciplinary and integrate all relevant issues. However, existing political and administrative realities make integrated implementation difficult, if not practically infeasible in some cases. Realistically, management actions will have to be implemented by various sectoral agencies. Therefore, coordination of these sectorally oriented agencies is essential to maintain the overall integrity of the management plan" (Scura, *et al*, 1992:11).

4.5 Pilot ICZM Projects

Due to the varying levels of coastal management and planning between countries and territories within the region, it will neither be practical, nor appropriate, for this project to propose to implement full ICZM programmes in all island states within the time frame suggested. It is therefore proposed to use pilot ICZM projects to demonstrate the needs and benefits of ICZM to the region.

A total of five pilot projects are proposed during the three year period. Two of those projects would involve the development of full national integrated coastal zone management programmes, and the other three would be more limited, and be at the community level, and/or for special priority areas.

It will be essential to develop the criteria or rationale by which to judge the proposals from member countries for pilot projects. Identification of the selection criteria would be one aspect of the review process in project component B. However, pilot projects will need to reflect, amongst other factors:

- Political will: A vital key to implementing national ICZM programmes within the region, especially the pilot projects, will be the political will or sanction to do so. This factor will play a prime role in determining where the pilot ICZM projects are initiated.

- **Representativeness:** The environmental variability of the region will need to be taken into consideration.
- **Other programmes:** Other existing programmes, both national and regional, will need to be considered, for example, biodiversity and sustainable development projects.

5. Project Components

The five proposed project components correspond to the specific objectives noted above. They are:

A. **Regional Coordination of Integrated Coastal Zone Management Activities, Including Urgent Coastal Management Needs.**

The large number of countries and territories, limited expertise and the urgency to resolve coastal management issues, will necessitate greater regional coordination. This will include sharing of experiences and expertise within the region; information networking; and greater coordination of regional and international agencies active in coastal related activities.

In addition, coordinated action for urgent coastal management issues requiring responses on a time scale which is not possible within normal programme development cycles is needed. There is an important regional function in coordinating the application of ICZM to such issues.

B. **Integrated Coastal Zone Management Approach Development for Pacific Islands.**

To provide a critical review of coastal zone management needs and develop a support tool which will enable appropriate regional approaches to be developed and implemented. This component is seen as underlying much of the other work.

C. **Integrated Coastal Zone Management - Education and Awareness Programme.**

For ICZM to be successfully implemented in this region it will be essential that the decision makers - at the national as well as the village level - understand the need for and benefits of integrated coastal management. This will only be achieved through extensive education and awareness programmes. This component will also include a specific training sub-component for coastal managers. This whole component is inextricably linked with the other components.

D. **Coastal Hazards Management Planning and Coordination within ICZM.**

To address, in the context of ICZM, the management of extreme events arising from climatic, oceanographic and tectonic events and which have major physical, social, or ecological impacts. This includes accelerated sea level change as it represents a coastal hazard, albeit on a longer time frame.

E. **National Integrated Coastal Zone Management Programme Development.**

The long-term goal of this project is to establish effective national integrated coastal zone management programmes within the countries of the Pacific islands region.

The flow chart in Figure 1 shows the interrelationship of the above project components. It is essential to realise that although this ICZM project proposal is broken up into distinct components, during implementation the components will be fully integrated. Each component is dependent upon the other for success.

Indicative Work Plan

An indicative work plan has been prepared based on funding for three years, and is presented in Annex 6.

Indicative 3 Year Budget

The following budget is *indicative only*, and is based upon SPREP's experiences with other regional projects. This indicative budget is for three years only, and includes funding for five pilot ICZM projects. It is envisaged that some further funding will be required after the initial three years to facilitate the development of ICZM programmes in additional Pacific island countries.

	Project Components and Objectives	Amount (US\$) Over 3 Years
A.	<i>Regional Coordination of Integrated Coastal Zone Management Activities, Including Urgent Coastal Management Needs</i>	
1.	To develop greater coordination and cooperation between regional organisations and also between Pacific island governments on coastal management related issues and problems.	1,388,000
2.	To develop the capacity to coordinate short-term, issue-targeted projects to immediately address coastal management problems that require attention on time scales too short for standard funding and programme development cycles.	170,000
B.	<i>Integrated Coastal Zone Management Approach Development for Pacific Islands.</i>	
3.	To develop approaches to integrated coastal zone management appropriate to the Pacific islands region.	151,000
C.	<i>Integrated Coastal Zone Management - Education and Awareness Programme.</i>	
4.	To generate awareness of the needs and benefits of integrated coastal zone management in the Pacific island countries, in both the general public (especially at the community level) and in the decision makers. To develop ICZM training for national planners and managers whose responsibilities impact on coastal areas	692,500
D.	<i>Coastal Hazards Management Planning and Coordination within ICZM.</i>	
5.	To minimise or mitigate the impacts of coastal hazards (including accelerated sea level changes) in the coastal zone in both the long-term and short-term, through improved capabilities to mitigate natural disasters as part of integrated coastal zone management.	665,000
E.	<i>National Integrated Coastal Zone Management Programme Development.</i>	
6.	To establish national integrated coastal zone management programmes in Pacific island countries.	210,000
Integrated Coastal Zone Management Project Costs Over 3 Years:		US\$ 3,306,500

Project Component A: *Regional Coordination of Integrated Coastal Zone Management Activities, Including Urgent Coastal Management Needs.*

Overview

With the nature of the Pacific islands region it will be essential that information and experience be shared not only between countries, but also between regional organisations. Coupled with this is the need to coordinate coastal management related activities around the region. This would include, but not be limited to, the coordination of management efforts, information, programmes, expertise and training. A further aim is to achieve greater coordination of the activities of international organisations with respect to ICZM within the region. The region should also provide a united front in international fora relating to coastal management. Collective, coordinated action will be more effective in the international arena.

In addition, there are currently coastal management problems within the region which need to be addressed urgently and immediately. These problems cannot wait for longer-term development of fully integrated national coastal zone management programmes. Most countries lack the technical expertise required to assess these urgent projects, especially in relation to ICZM. National Environmental Management Strategies have identified a number of these problems, or are in the process of identifying them. Some are prevalent throughout the region, such as the increasing degradation of coastal habitats, fisheries areas and resources adjacent to the rapidly expanding urban areas. One benefit of greater coordination and cooperation between regional agencies will be an improved ability to address such urgent projects under the umbrella of ICZM. In responding to these urgent coastal management concerns the overall concept of integrated management will be incorporated. These urgent response projects should form the foundation for the more longer-term national ICZM programmes. It is important that these urgent cases be attended to within an ICZM context. There is an important regional function in coordinating the application of ICZM to these projects.

Problems

Coordination:

- Lack of coordination, especially at the inter-sectoral/inter-disciplinary technical level (both at the regional and national levels).
- Occasional sensitivity of international organisations to the role of independent regional organisations.
- Obtaining agreement from regional and national organisations and agencies to SPREP adopting the coordinating role in coastal management related activities.
- Establishing acceptance of a "new" concept such as ICZM within the region and regional agencies.

Urgent coastal management needs:

- Coastal management related issues and problems which require immediate attention.
- The time lag between problem identification and funding delivery - typically 18 to 36 months - means that growing problems can get considerably worse between problem identification and the implementation of solutions.
- The lack of contingency funds to respond within a time-frame shorter than the usual funding cycles.
- Limited availability of experienced personnel able to respond on short-term notice.

Opportunities

Coordination:

- Coordination is a vital component of effective implementation of ICZM. Very few SPREP member countries have the resources to carry out these functions. This has been recognised and such a service would be welcomed by member countries.

Urgent coastal management needs:

- The ability to respond to such problems from a multi-disciplinary perspective, in an efficient manner through cooperative regional agencies.

Strategies

Coordination:

- Further develop SPREP's role as the coordinating agency for regional ICZM.
- Establish SPREP as a regional "directory service" for integrated coastal zone management information and activities, in collaboration with other information sources within the region.
- Encourage a more cooperative approach to addressing coastal management related issues within and between international, regional and national agencies.
- Establish a regional advisory team for ICZM composed of the expertise available within the region, especially other regional agencies and institutions.

Urgent coastal management needs:

- To match existing funds and expertise with identified problems and country requests.
- To assist with rapid preparation of technical studies and recommendations targeted at specific problems.
- To assist with rapid assessment, project design and implementation.
- To direct existing relevant information and educational materials to specific problems.

Objective 1

To develop greater coordination and cooperation between regional organisations and also between Pacific island governments on coastal management related issues and problems.

Evaluation criteria

- Greater cooperation between regional organisations and agencies on coastal management related issues; partly indicated by more joint projects and formal cooperation agreements.
- Effective coordination of the dissemination of coastal management related information within the region.
- More effective use of resources (financial and human) in managing coastal areas.

Output 1.1

Coordinate regional activities related to coastal management at the international, regional and national levels.

Activities for Output 1.1 [with indicative costs]

- 1.1.1 Strengthen SPREP as the coordinating agency for integrated coastal management activities. Staff requirements would be two full time project officers and one assistant project officer (the latter position by successive 12 month secondments from national governments - see 1.2.3 below), and associated operational support needs. [\$297,000 per year]
- 1.1.2 Establish an annual regional coastal management meeting to encourage the exchange of information, coordinate activities, and provide a regional forum for discussing coastal management issues, problems, and ways to address them. The advisory team would be developed from such meetings. [\$100,000 per meeting]
- 1.1.3 Pacific island countries use SPREP's coordinating role in coastal management to help present a collective front in international fora. [\$30,000 over 3 years]

Responsible parties: SPREP; with assistance and cooperation from other regional agencies and national governments.

Output 1.2

Establish networks to improve and promote the efficient sharing of information, experience and expertise.

Activities for Output 1.2

- 1.2.1 Improve access and dissemination of information through the development and maintenance of a database to allow for the rapid matching of resources to problems. This database should contain:
- relevant individuals in the region and their areas of expertise;
 - relevant institutions/agencies and their capabilities;
 - information on other relevant databases, both within and outside the region;
 - information on small grants and contingency funds available for urgent response needs;
 - funding agencies with their priorities, proposal procedures and timing, size of grants, etc;
 - scientific/technical database;
 - existing educational materials.
- [\$20,000]
- 1.2.2 Develop a coastal management "peer group" network within the region. [\$20,000 per year]
- 1.2.3 Establish training secondments between national governments and regional agencies, as well as between national government agencies. [\$87,000]

Responsible parties: SPREP, with the assistance and cooperation of other regional agencies and national governments.

Objective 2

To develop the capacity to coordinate short-term, issue-targeted projects to immediately address coastal management problems that require attention on time scales too short for standard funding and programme development cycles. These may be problems that are already identified as requiring urgent attention or problems that arise prior to the implementation of national ICZM programmes.

Evaluation criteria

- The existence of a coastal management "task team", the core of which would consist of officers from relevant regional and national agencies and institutions able to respond to urgent problems.
- "Task team" capability to assist with rapid assessment, project design and planning, implementation and the preparation of technical studies and recommendations targeted at specific problems.
- Ability to prepare and disseminate coastal management related information quickly.

Output 2.1

Development of a regional "task team" approach to permit rapid response to urgent coastal management problems identified by Pacific island countries.

Activities for Output 2.1

- 2.1.1 SPREP to locate and maintain information on funding sources accessible for urgent response situations. [\$5,000]
- 2.1.2 Identify gaps in existing response capacity and develop projects to fill them in. [\$5,000 per year]
- 2.1.3 Develop and maintain an ability to coordinate the "task team" to prepare, implement and report on projects in a rapid and efficient manner. [\$50,000 per year]

Responsible parties: SPREP to coordinate with assistance from other regional agencies and institutions.

Indicative 3 Year Budget

The following budget is *indicative only*, and is based upon SPREP's experiences with other regional projects.

	<i>Objectives and Outputs - Component A</i>	Amount (US\$)
Objective 1:	To develop greater coordination and cooperation between regional organisations and also between Pacific island governments on coastal management related issues and problems.	
Output 1.1	Coordinate regional activities related to coastal management at the international, regional and national levels.	1,221,000

Output 1.2	Establish networks to improve and promote the efficient sharing of information, experience and expertise.	167,000
Objective 2:	To develop the capacity to coordinate short-term, issue-targeted projects to immediately address coastal management problems that require attention on time scales too short for standard funding and programme development cycles.	
Output 2.1	Development of a regional "task team" approach to permit rapid response to urgent coastal management problems identified by Pacific island countries.	170,000
Total Costs for Component A:		US\$ 1,558,000

Project Component B: *Integrated Coastal Zone Management Approach Development for Pacific Islands.*

Overview

Internationally there are a number of integrated coastal management guidelines and methodologies prepared, or being prepared, largely in response to the directions of Agenda 21. For example, the World Bank is currently preparing general guidelines; and UNEP OCA/PAC has sponsored the preparation of Integrated Coastal and Marine Area Management (ICAM) guidelines for the Mediterranean basin.

The international guidelines prepared to date have a number of inherent problems, limiting their value for the Pacific islands region. They are either too general in nature - doing little more than outlining the concept and its value to sustainable development; or rely too heavily upon levels of technology, economic and social data, and personnel skills which are simply not available or sufficiently developed within this region.

The particular combination of geographical, social, cultural and economic conditions found in the Pacific islands region, as discussed earlier, necessitates the development of appropriate ICZM approaches specifically tailored for this region. This project component directly addresses this need. Due to the variability between countries, and as we are proposing a regionally based project, it will be necessary to identify the *range* of approaches, rather than one single approach.

Problems

- A lack of appropriate ICZM guidelines relevant to this region.
- A lack of information concerning the options available and relevant to ICZM in the region.

Opportunities

- Most of SPREP's member governments have environment officers or units to act as focal points for information gathering, some are also familiar with ICZM concepts.
- Considerable experience and knowledge is available within, or through, regional agencies and institutions.
- There is a growing number of proficient Pacific island consultants within the region.
- There is a growing number of environment NGOs within the region.

Strategies

- Collect regional and national information by working through established mechanisms, such as the NEMS Task Teams (where they exist), and by use of in-country expertise and experience (including NGOs, particularly women's groups).
- To use the experience and knowledge of regional agencies and institutions to collect appropriate information wherever possible.
- To use a multi-disciplinary approach to information collection and assessment.
- Ensure appropriate customary knowledge and practices are included.

Objective 3

To develop approaches to integrated coastal zone management appropriate to the Pacific islands region.

Evaluation criteria

- Identification and documentation of the *range* of possible ICZM approaches appropriate for the region.
- Identification and documentation of key coastal management related issues and problems.
- The production of appropriate guidelines for ICZM as a support tool for the implementation of national ICZM programmes.

Output 3.1

Scoping exercise by SPREP to establish the range and availability of information and resource personnel appropriate to Outputs 3.2 and 3.3 within regional and national agencies, institutions and NGOs.

Activities for Output 3.1

- 3.1.1 Contact and liaise with all relevant agencies, institutions and organisations to assess the information and human resource pool.
- 3.1.2 Plan the most efficient way to coordinate the collection and analysis of information relevant to Outputs 3.2 and 3.3.
(\$15,000 for 3.1.1 and 3.1.2)

Responsible parties: SPREP

Output 3.2

A critical review of past and current coastal zone management projects and programmes within the region - including all relevant management policies, plans and approaches related to coastal management; and other plans, policies and institutional frameworks which affect coastal areas.

Activities for Output 3.2

- 3.2.1 Establish review procedures based on the results of Output 3.1.
- 3.2.2 Review and assess all management policies, plans, approaches and institutional frameworks relevant to the integrated management of coastal areas. This should include the regional, national, and where relevant, the local and international levels. Relevant customary knowledge and practices must also be included in the review.
- 3.2.3 Review and assess currently available information (literature; guidelines; programmes; training; etc) concerning integrated coastal management internationally, and assess their relevance to the region.
- 3.2.4 Identify information gaps from reviews 3.2.2 and 3.2.3.

- 3.2.5 Synthesise the above assessments into a report including identification of where the key coastal management information and institutional gaps exist, and document the range of appropriate approaches to ICZM in the Pacific - their relative advantages and disadvantages, necessary prerequisites and other matters of significance to their adoption.
[\$36,000 for 3.2 and 3.3]

Responsible parties: SPREP to coordinate input from regional and national agencies, institutions and organisations.

Output 3.3

A review of the current coastal management related issues and problems from a multi-disciplinary perspective (to be done in conjunction with Output 3.2).

Activities for Output 3.3

- 3.3.1 Establish review procedures based on the results of Output 3.1.
- 3.3.2 Review and assess the current regional, national and local coastal management related issues and problems which ICZM within the region will need to address.
- 3.3.3 Prepare a report clearly identifying current issues and problems related to coastal management and where possible identify the causal factors.
- 3.3.4 Recommend criteria to guide selection and development of ICZM pilot projects.
(see 3.2 above)

Responsible parties: SPREP to coordinate input from regional and national agencies, institutions and organisations.

Output 3.4

A regional workshop to discuss, review and assess the output from 3.2 and 3.3 above, resulting in the development of appropriate guidelines for ICZM in the Pacific islands region.

Activities for Output 3.4

- 3.4.1 Hold a regional workshop of national planners, coastal managers and policy makers to critically review the documents from outputs 3.1 and 3.2 above.
[\$100,000]
- 3.4.2 Preparation of draft ICZM guidelines appropriate for the Pacific islands region.

Responsible parties: SPREP and key resource personnel identified during outputs 3.1, 3.2 and 3.3 above.

Indicative 3 Year Budget

The following budget is *indicative only*, and is based upon SPREP's experiences with other regional projects.

	<i>Objectives and Outputs - Component B</i>	Amount (US\$)
Objective 3:	To develop approaches to integrated coastal zone management appropriate to the Pacific islands region.	
Output 3.1	Scoping exercise by SPREP to establish the range and availability of information and resource personnel appropriate to Outputs 3.2 and 3.3 within regional and national agencies, institutions and NGOs.	15,000
Output 3.2	A critical review of past and current coastal zone management projects and programmes within the region.	36,000
Output 3.3	A review of the current coastal management related issues and problems from a multi-disciplinary perspective (funded in conjunction with Output 3.2).	
Output 3.4	A regional workshop to discuss, review and assess the output from 3.2 and 3.3 above, resulting in the development of appropriate guidelines for ICZM in the Pacific islands region.	100,000
	Total Costs for Component B:	US\$ 151,000

Project Component C: *Integrated Coastal Zone Management - Education and Awareness Programme.*

Overview

National integrated coastal zone management programmes cannot hope to succeed if the region's decision makers - at all levels - do not understand the interrelated nature of their islands' ecosystems, and the effects their policy decisions and actions have. Similarly, if the general public is unaware of the effects their actions have, an integrated coastal zone management programme will not be accepted. An extensive and directed education and awareness programme concerning the need for and benefits of ICZM is required.

Additionally, specialised training will be required to increase the level of expertise of coastal planners and managers in the region. A number of approaches are proposed including short courses, workshops, conferences, seminars, study tours, fellowship attachments to regional agencies, as well as long-term tertiary level courses.

Problems

- Lack of awareness at many levels of government and decision making of the concept and need for integrated coastal zone management.
- Lack of awareness within the general public of the effects on the environment, and especially the coastal zone, of their everyday activities.
- Insufficient qualified and experienced people within countries to implement national integrated coastal zone management programmes.
- An inadequate number of, and often inappropriate, training opportunities, including both long and short courses.
- Training opportunities going to the wrong people - e.g., to either under- or over-qualified staff.
- Few environmental education oriented curricula in the region; and insufficient teachers with the skills and knowledge to teach such curricula.
- Lack of any coverage of basic environmental or ICZM issues within the training syllabus of economic and engineering decision makers.

Opportunities

- Environment is a popular subject for the media and students.
- The environment is immediately relevant to students' and peoples' circumstances.
- Reasonable level of flexibility in the education system.
- Considerable cultural pride.

Strategies

- Work with SPREP's Information, Education and Training Programmes, SOPAC's training programme and universities in the region to develop programmes specifically aimed at the needs of integrated coastal zone management, with a strong emphasis on institutional capacity building.
- Identify key target groups and messages to be conveyed in the information and education programmes.
- Develop both long- and short-term training and education programmes.
- Ensure decentralisation of national ICZM education programmes.
- Ensure that programmes and materials are Pacific based and orientated.
- Encourage the inclusion of ICZM related subjects in national examinations.

- Close linkage of this component with the other project components, especially A and E, and utilising the information gained from project component B.

Objective 4

To generate awareness of the needs and benefits of integrated coastal zone management in the Pacific island countries, in both the general public (especially at the community level) and in the decision makers. To develop ICZM training for national planners and managers whose responsibilities impact on coastal areas.

Evaluation Criteria

- Greater public awareness of the need to properly manage the coastal zone, and recognition that activities on land will effect coastal areas.
- Recognition by leaders and decision makers at all levels within the Pacific islands region of the interrelated nature of island ecosystems and the need for integrating resources management and development activities.
- The number of trained and experienced coastal managers and planners and experts within the region.

Output 4.1

Develop and implement a general public (especially community level) education programme aimed at raising awareness of the interrelated nature of island ecosystems, and more specifically, the effects their actions have on the coastal zone.

Activities for Output 4.1

- 4.1.1 Hold a regional workshop for coastal managers and education specialists to develop a framework for an ICZM general public/community education programme. Produce "generic" ICZM education materials, adaptable to all Pacific islands. [\$100,000]
- 4.1.2 Hold in-country workshops and seminars for:
- production of country specific materials - using various media;
 - training of trainers;
 - awareness raising activities;
 - networking within country and between countries.
- [5 @ \$20,000]

Responsible parties: SPREP, SOPAC and regional and national education agencies and authorities.

Output 4.2

Develop awareness amongst the region's leaders and decision makers (especially community level) of the need for and benefits of integrated coastal zone management.

Activities for Output 4.2

- 4.2.1 Ensure that the concept of integrated coastal zone management is included on the agendas of regional meetings; especially through its close association with sustainable development and climate change/sea level change. [included under 4.2.2]

- 4.2.2 Development of an information package for distribution at regional conferences for country leaders and decision makers; follow-up with in-country conferences. [\$5,000 per year]
- 4.2.3 Development of special purpose study tours for leaders and decision-makers to demonstrate the need for and benefits of ICZM. [5 @ \$10,000]
- 4.2.4 Involve leaders and decision makers (especially village level) in public awareness programmes. Educate through involvement.

Responsible parties: SPREP and other regional agencies.

Output 4.3

To raise the level of skill, expertise and number of planners and managers whose responsibilities impact on coastal processes in the region.

Activities for Output 4.3

- 4.3.1 Establish short-term specialised training for managers associated with national integrated coastal zone management programmes. Short-term training would involve workshops, seminars, conferences, short courses, study tours, and fellowship or secondment attachments to regional institutions and agencies.
- 4.3.2 Establish long-term, tertiary level training courses at regional educational institutions.
- 4.3.3 Establish a collaborative training network linking regional and other training institutions.
- 4.3.4 Find funding for, and negotiate higher degree opportunities at recognised institutions outside the region with specialised coastal management centres. [\$10,000 seed funds for all 4.3]

Responsible parties: SPREP, other relevant regional agencies, and universities within the region.

Output 4.4

To increase the capacity of coastal zone planners and managers to train other planners and managers.

Activities for Output 4.4

- 4.4.1 Hold in-country workshops organised and run by experienced coastal planners and managers drawn from government agencies within the region. [5 @ \$20,000]
- 4.4.2 Encourage short-term secondment of experienced coastal planners and managers to other countries to help establish ICZM programmes. [5 @ \$3,500]

Responsible parties: SPREP, other relevant regional agencies, and national governments.

Output 4.5

Encourage the incorporation of ICZM related material into the curricula of schools within the region; and encourage the development of appropriate ICZM related courses at the tertiary level.

- 4.5.1 Hold a regional workshop for education specialists, coastal managers to design and develop a regional curriculum framework incorporating ICZM concepts, and identify relevant strategies of implementation. [\$100,000]
- 4.5.2 Hold follow-up in-country writing workshops as well as teacher training. [5 @ \$20,000]
- 4.5.3 Hold a follow-up regional workshop involving tertiary institutions and regional organisations to formulate and design appropriate programmes for tertiary institutions. [\$100,000]

Responsible parties: SPREP, other relevant regional agencies, and universities within the region.

Indicative 3 Year Budget

The following budget is *indicative only*, and is based upon SPREP's experiences with other regional projects.

	<i>Objectives and Outputs - Component C</i>	Amount (US\$)
Objective 4:	To generate awareness of the needs and benefits of integrated coastal zone management in the Pacific island countries, in both the general public and in the decision makers. To develop ICZM training for national planners and managers.	
Output 4.1	Develop and implement a general public education programme aimed at raising awareness of the interrelated nature of island ecosystems, and more specifically, the effects their actions have on the coastal zone.	200,000
Output 4.2	Develop awareness amongst the region's leaders and decision makers of the need for and benefits of integrated coastal zone management.	65,000
Output 4.3	To raise the level of skill, expertise and number of planners and managers whose responsibilities impact on coastal processes in the region.	10,000
Output 4.4	To increase the capacity of coastal zone planners and managers to train other planners and managers.	117,500
Output 4.5	Encourage the incorporation of ICZM related material into the curricula of schools within the region; and encourage the development of appropriate ICZM related courses at the tertiary level.	300,000
	Total Costs for Component C:	US\$ 692,500

Project Component D: *Coastal Hazards Management Planning and Coordination within ICZM.*

Overview

Extreme climatic, oceanographic and tectonic events result in major physical, ecological, social and economic impacts on Pacific island coastal areas. Cyclones (typhoons, hurricanes), tsunamis, strong tropical storms and abnormally high tides all cause extensive damage. A large part of the damage is from high wave run-up and flooding, strong winds and lowland flooding from heavy rains and/or river flooding. These impacts are especially severe on low elevation islands, other very small islands and the low-lying portions of larger islands, where most development activities and population are concentrated.

Accelerated sea level change represents a coastal hazard of a much longer time frame. One of the main effects of sea level rise will be to exacerbate the problems resulting from extreme events which are already occurring. For these reasons, accelerated sea level rise must be considered as a form of coastal hazard and, as with coastal hazards, must be addressed by preparedness and response planning in the context of integrated coastal zone management. Small islands, especially low elevation islands, are extremely vulnerable to the effects of accelerated sea level rise and have been identified internationally as priority action areas for developing adaptive response strategies. The low-lying coastal areas of larger islands are also at risk.

There are already existing national, regional and global programmes and networks concerned with natural disaster forecast and warning and disaster response planning. A programme of improved and strengthened preparedness and response planning for extreme events must be coordinated with these programmes. In addition to strengthening the ability to forecast and warn of impending extreme events, national institutional arrangements and linkages with larger programmes need to be strengthened.

Hazard preparedness can be improved by better baseline information, particularly maps, which indicate areas likely to be flooded by wave run-up and overtopping or inundation due to river flooding. This information will greatly assist long-term development planning by directing development away from high risk areas. Improved building codes and construction guidelines which require that extreme event parameters be taken into account will also reduce property damage and loss of life.

Problems

- Sectoral approach to coastal hazards management.
- Little or no coordination between sectors.
- Lack of information relevant to coastal hazards planning.
- Lack of appropriate "tools" to undertake coastal hazards management.

Opportunities

- Recognition within the region of its vulnerability to natural disasters.
- Strong community level decision-making systems and support mechanisms appropriate for disaster mitigation and management.
- History of cultural resilience to natural disasters.

Strategies

- Coordinate national, regional and international organisations dealing with hazards and emergency planning activities within the region.
- Integrate coastal hazards management and planning into overall development planning and coastal management planning at all levels.
- Ensure this project is compatible with, and complimentary to, the UNDHA-SPPO "South Pacific Disaster Reduction Programme".
- Coordinate activities with SPREP's Climate Change Programme.
- Where appropriate, utilise the results and recommendations of the IPCC World Coast Conference (when available).

Objective 5

To minimise or mitigate the impacts of coastal hazards (including accelerated sea level changes) in the coastal zone in both the long-term and short-term, through improved capabilities to mitigate natural disasters as part of integrated coastal zone management via training and the provision of information, assessments and disaster reduction strategies.

Evaluation criteria

- Production of hazards and risk maps for coastal areas in the region.
- Development of mitigation measures to feed into ICZM plans.
- Development of institutional/management systems for engagement or response for ICZM and planning.

Output 5.1

Production of hazard and risk maps for coastal areas.

Activities for Output 5.1

- 5.1.1 Collect information on past disaster events. {\$10,000 per country}
- 5.1.2 Collect existing information on natural hazards including topographical, geological, hydrological information. {\$10,000 per country}
- 5.1.3 Assess the requirements for additional information and collect additional data and information.
- 5.1.4 Assess the vulnerability of communities and critical facilities.
- 5.1.5 Prepare hazard and risk maps and descriptions.
[\$43,000 per country for 5.1.3, 5.1.4, 5.1.5]

Responsible parties: SPREP, UNDHA-SPPO, and SOPAC.

Output 5.2

Disaster mitigation plans and strategies for coastal areas.

Activities for Output 5.2

- 5.2.1 Coordinate and assist the preparation of disaster mitigation strategies for selected project areas, including high risk and priority areas, on the basis of hazard and risk maps and in close consultation with national government staff.
- 5.2.2 Coordinate and assist in the preparation of guidelines for disaster mitigation in coastal areas, including options for coastal zone management, identification of priority areas and other aspects.
- 5.2.3 In conjunction with the pilot ICZM projects, select high risk communities and prepare, in close cooperation with these communities, local government officials and NGOs, a disaster mitigation strategy as a part of ICZM.
[\$70,000 per country for 5.2 and 5.3]

Responsible parties: SPREP, UNDHA-SPPO, and SOPAC.

Output 5.3

Increased awareness and capability within project countries to mitigate natural disasters as a part of integrated coastal zone management.

Activities for Output 5.3

- 5.3.1 Conduct, in selected (pilot) communities, local level workshops to formulate disaster mitigation plans and disseminate the findings of these workshops.
- 5.3.2 Consult with senior government officials on the importance of disaster mitigation as part of coastal zone management.
- 5.3.3 Organise national level workshops for the dissemination of hazard and risk maps and disaster mitigation plans and strategies.
[included under 5.2]

Responsible Parties: SPREP, UNDHA-SPPO, and SOPAC.

Indicative 3 Year Budget

The following budget is *indicative only*, and is based upon SPREP's experiences with other regional projects.

	<i>Objectives and Outputs - Component D</i>	Amount (US\$)
Objective 5:	To minimise or mitigate the impacts of coastal hazards in the coastal zone in both the long-term and short-term, through improved capabilities to mitigate natural disasters as part of integrated coastal zone management via training and the provision of information, assessments and disaster reduction strategies.	
Output 5.1	Production of hazard and risk maps for coastal areas.	315,000
Output 5.2	Disaster mitigation plans and strategies for coastal areas.	350,000
Output 5.3	Increased awareness and capability within project countries to mitigate natural disasters as a part of integrated coastal zone management. [funded under 5.2]	
	Total Costs for Component D:	US\$ 665,000

Project Component E: *National Integrated Coastal Zone Management Programme Development.*

Overview

The long-term goal of this project is to establish national integrated coastal zone management programmes within the countries of the Pacific island region. Within our countries, almost all planning and environmental management issues are coastal management issues. The current *ad hoc* approach to coastal related management and planning cannot adequately address the issues and problems facing Pacific island countries now or in the future. It will be essential that the need for and benefits of an integrated approach to coastal management are recognised and adopted by the current leaders. The urgency of the need for integrated coastal zone management within the region means that it must be recognised as a top priority. This recognition is, to some degree, already occurring, as shown by its inclusion in the draft Action Programme for the Sustainable Development of Small Island Developing States (see Annex 4).

Due to the varying levels of coastal management and planning between countries and territories within the region, it will neither be practical, nor necessary, for this project to propose to implement full ICZM programmes in all island states. The emphasis will be on developing the awareness of ICZM needs and benefits within the region (component C), identifying approaches to ICZM appropriate to the region (component B), and then to demonstrate its use in varying circumstances through pilot projects (components D and E). Appropriate and relevant assistance can then be provided to those countries requesting help with implementing ICZM programmes (components A and E).

Problems

- Limited recognition of the need for, and benefits of, integrated coastal zone management.
- Sectoral, *ad hoc* approach to coastal related planning and management issues.
- No examples of integrated coastal management within the region.
- Minimal coordination between responsible agencies at the national and sub-national level.
- Limited financial, human, and institutional resources to initiate and maintain ICZM programmes.

Opportunities

- Willingness of regional agencies and institutions to work closer together with each other on national projects.
- Increasing international recognition of the need for ICZM to be implemented at the national and community levels.
- High level of customary land and marine tenure.
- Strongly institutionalised decision-making for local resource usage.

Strategies

- Use the NEMS task force mechanism (or equivalent) to coordinate initial ICZM activities in-country.
- Use public education programmes to generate a recognition and understanding of the ICZM process.
- Build upon the urgent response projects which incorporated ICZM concepts.
- Use pilot ICZM projects in a number of countries, and at a variety of levels (national; community; specific priority areas) as demonstration projects.
- Encourage local level and NGO participation wherever practical.
- Incorporate customary knowledge and practices wherever feasible.

Objective 6

To establish national integrated coastal zone management programmes in Pacific island countries.

Evaluation criteria

- Existence of functioning ICZM programmes within countries.
- Recognition by Pacific islands decision makers of the value and need for ICZM programmes.

Output 6.1

Establish recognition of the need for, and value of, integrated coastal zone management for Pacific islands.

Activities for Output 6.1

- 6.1.1 Use the NEMS task force mechanism (or equivalent) as the initial target for an appropriate education programme on ICZM benefits. [funding included under component C]
- 6.1.2 Extend the education programme to decision makers at the government and local level. [funding included under component C]
- 6.1.3 Develop three pilot projects as examples of ICZM and the possible approaches that can be used. Such pilot projects should include community level projects as well as special priority area projects, and would be in addition to those in 6.2.1 below. [3 @ \$20,000]

Responsible parties: SPREP; national governments; and community groups.

Output 6.2

Establish the mechanism for a national ICZM programme.

Activities for Output 6.2

- 6.2.1 Identify two countries with the political will and an identified need for implementing national ICZM programmes. These countries will form the national level pilot projects and should be used as examples for other countries.
- 6.2.2 For each participating country use the NEMS task force mechanism (or equivalent) as the initial point for implementation and to coordinate ICZM in-country.
- 6.2.3 If appropriate, appoint a full time programme manager (local person, with the appropriate social and political status) to be responsible to the task force, to develop and establish the ICZM programme in close collaboration with the task force.
- 6.2.4 Review and assess the ICZM needs, related activities and relevant institutional arrangements in-country.

- 6.2.5 Use the guidelines developed in Project Component B to identify an appropriate ICZM approach for the country concerned.
[2 @ \$75,000 for 6.2]

Responsible parties: SPREP; national governments; NEMS task forces (or equivalent); programme managers, and community groups.

Indicative 3 Year Budget

The following budget is *indicative only*, and is based upon SPREP's experiences with other regional projects.

	<i>Objectives and Outputs - Component E</i>	Amount (US\$)
Objective 6:	To establish national integrated coastal zone management programmes in Pacific island countries.	
Output 6.1	Establish recognition of the need for, and value of, integrated coastal zone management for Pacific islands.	60,000
Output 6.2	Establish the mechanism for a national ICZM programme.	150,000
	Total Costs for Component E:	US\$ 210,000

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7. Annexes

Annex 1: Project Development Process

In 1992, SPREP prepared a concept document on "Integrated Coastal Zone Management in the South Pacific Region" in response to the increasing pressures being placed on coastal areas in the region. The concept document was widely circulated for comment and received positive feedback. As a result it was decided to seek funds to hold a technical working group meeting to further develop the concept.

The technical working group meeting was held in late May, 1993. Participants included professionals with experience in different coastal management related disciplines (e.g. in marine resources, geoscience, social science, policy, planning, etc) so as to ensure that a multi-sectoral perspective was obtained. The working group participants were drawn from regional institutions/agencies, universities, governments and an NGO. The concept document formed the basis for discussions.

The preliminary draft proposal was prepared based largely on the results of the technical working group. This proposal was sent out to coastal management experts for review. It was also presented to a review meeting of SPREP member government representatives (both technical and policy people - including ministerial level). That meeting, held over two days in late September, 1993, was also attended by representatives of relevant regional agencies, UNDHA, UNDP and UNEP. The current proposal reflects the recommendations of all the reviewers, especially those from SPREP member governments.

Annex 2: South Pacific Regional Environment Programme (SPREP)

The South Pacific Regional Environment Programme is a regional organisation established by the governments of 22 Pacific island countries and territories (American Samoa, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Northern Marianas Islands, Palau, Papua New Guinea, Pitcairn, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna and Western Samoa); and four developed countries (Australia, France, New Zealand and the United States).

SPREP began as a programme within the South Pacific Commission, based in Noumea, New Caledonia, in 1978. SPREP's office and staff moved from Noumea to Apia, Western Samoa, early 1992. In June, 1993, the agreement establishing SPREP as an autonomous intergovernmental organisation was signed.

Aim

SPREP's mission is to assist Pacific island countries and territories protect and improve their shared environment, and to manage their resources to enhance the quality of life for present and future generations.

Objectives

The SPREP Action Plan sets out the mandate for its activities and provides a framework for environmentally sound planning and management for the region. The 1991-95 Action Plan is a regional strategy, identifying many aspects of environmental assessment, management and law. SPREP is responsible to its member governments and administrations for overall technical coordination and supervision in implementing the Plan, which aims to:

- Further assess the Pacific environment, especially where humans influence ecosystems, and the effects on their own environments;
- Improve national and regional capabilities, links and funding to carry out the Action Plan;
- Provide integrated legal, planning and management methods to protect and use natural resources in an ecologically sound way;
- Provide more training, education and public awareness for improving the environment;
- Encourage development that maintains or improves the environment;
- Protect the land and sea ecosystems, and the natural inhabitants that need help;
- Reduce pollution on land, in fresh and sea water, and in the air; and
- Encourage the use of Environmental Impact Assessment and other methods to stop or lessen the effects of humans on the environment.

Programmes

SPREP's Work Programme deals with:

1. Conserving Biological Diversity;
2. Global Climate Change and Sea Level Rise;
3. Environmental Planning and Management;
4. Coastal Management and Planning;
5. Managing Pollution and Pollution Emergencies;
6. Environmental Information, Education and Training; and
7. Regional Environmental Concerns.

Structure

SPREP's controlling body is its annual SPREP Meeting. This comprises representatives of the 26 member states and territories, who meet once a year to review the previous year's activities, approve a Work Programme and Budget for the next financial period, and consider institutional, staffing and other matters affecting the organisation. The Secretariat is responsible for executing the policies and directives of the SPREP Meeting, for formulating and implementing projects under the Action Plan, for providing advice and assistance to member governments and administrations either directly or through consultants, and for securing appropriate donor assistance.

Annex 3: Definitions

"Coastal Zone" versus "Coastal Area"

There has been considerable discussion in the literature whether the term "Integrated Coastal and Marine Area Management" (ICAM) or "Integrated Coastal Zone Management" (ICZM) should be used. The two terms are often used interchangeably, however, the notion of "coastal area" is considered slightly broader, geographically speaking, than "coastal zone". UNEP OCA/PAC in developing guidelines for the Mediterranean Action Plan have opted for ICAM - including the inland areas and outwards to the limit of the EEZs. FAO's Technical Paper on the integrated management of coastal zones uses the term ICZM (Clark, 1992). The IPCC also uses ICZM (IPCC, 1992).

The issue of ICZM versus ICAM is more relevant to countries with larger land masses than occur in the Pacific islands region. As a consequence, the terms are virtually interchangeable in the Pacific islands' context. Therefore, SPREP has opted for the more commonly used "ICZM".

ICZM Boundaries

For this proposal the "coastal zone" is considered to be the interface between the land and the sea and may extend inland and seaward to a variable extent, depending upon the objectives and needs of the coastal issues to be considered (Clark, 1992). As there are a broad array of coastal issues within the Pacific islands region, it can be expected that there will be a broad array of possible ICZM management boundaries. However, as most Pacific island countries, with the possible exception of Papua New Guinea, are virtually entirely coastal in nature, SPREP will advocate to member countries that ICZM should encompass all land and coastal areas.

The delineation of the ICZM boundaries will, however, be determined within the context of each national ICZM programme as they are developed. Those boundaries will depend on the political, administrative, legal, ecological and pragmatic considerations within each country.

As an example, at a regional workshop on coastal processes (Howorth & Shorten, 1992) the SOPAC member countries concluded after much discussion that the coastal zone is largely defined by needs, and for SOPAC purposes is "...a zone defined by coastal processes and related activities such as ocean hydrodynamic processes, sea level change, river processes, sedimentological processes, geohazards related to marine processes, marine and aggregate resource mining, human construction, agricultural and pollution activities and freshwater resource extraction". Further, for most island nations in the Pacific, it was determined that the coastal zone includes entire islands and in many instances there may be no need for a precise definition (Howorth & Shorten, 1992).

Integrated Coastal Zone Management

In addition to the definition of ICZM given in the Introduction, it is worth noting the ICZM process as explained by Chua Thia-Eng in Clark (1992:5):

"ICZM provides the opportunity to allow policy orientation and development of management strategies to address the issue of resource use conflicts and to control the impacts of human intervention on the environment. It provides institutional and legal framework, focuses on environmental planning and management, coordinates various concerned agencies to work together towards a common objective. Sectoral planning and management is still [essential but should] operate within the general framework of ICZM. Maintaining species habitats, natural resource base and management of development processes are part of ICZM programme".

The World Bank Guidelines for ICZM similarly defines ICZM as:

"...a governmental process and consists of the legal and institutional framework necessary to ensure that development and management plans for coastal zones are integrated with environmental (including social) goals and are made with the participation of those affected. The purpose of ICZM is to maximise the benefits provided by the coastal zone and to minimize the conflicts and harmful effects of activities upon each other." (The World Bank, 1993:1).

Annex 4: International Directives:

4.1 UNCED and Agenda 21:

The United Nations Conference on Environment and Development (UNCED) took place in Rio de Janeiro in June 1992. It brought together Heads of State and government officials from 179 governments, and they were joined by officials from United Nations organisations, municipal governments, business, scientific, non-government and other groups. UNCED produced two international agreements, two statements of principles and a major action agenda on world-wide sustainable development.

Agenda 21 is a blueprint on how to make development socially, economically and environmentally sustainable. The key points in Agenda 21 of relevance to integrated coastal zone management in the Pacific islands region are outlined below.

Oceans And Coastal Areas

In Chapter 17 on "Protection of the oceans... and coastal areas", Programme Area A addresses "Integrated management and sustainable development of coastal and marine areas..." (UNCED, 1992, 236). Coastal states commit themselves to integrated management and sustainable development of coastal areas and the marine environment, including to:

- Provide for an integrated policy and decision-making process, including all involved sectors, to promote compatibility and a balance of uses;
- Identify existing and projected uses of coastal areas and their interactions;
- Concentrate on well defined issues concerning coastal management; and
- Apply preventative and precautionary approaches in project planning and implementation.

Agenda 21 calls for coastal States to consider establishing, or where necessary strengthening, coordinating mechanisms for "...integrated management and sustainable development of coastal and marine areas and their resources, at both the local and national levels." (p237). Such mechanisms could provide, *inter alia*, for:

- Implementation of integrated coastal and marine management and sustainable development plans and programmes at appropriate levels;
- Preparation of coastal profiles identifying critical areas, including eroded zones, physical processes, development patterns, user conflicts and specific priorities for management;
- Contingency plans for human induced and natural disasters, including likely effects of potential climate change and sea level rise;
- Improvement of coastal human settlements;
- Conservation and restoration of altered critical habitats;
- Integration of sectoral programmes on sustainable development for settlements, agriculture, tourism, fishing, ports and industries affecting the coastal area;
- Human resource development and training;
- Public education, awareness and information programmes; and
- Measures to maintain biological diversity and productivity".

Agenda 21 states that "...the role of international cooperation and coordination... is to support and supplement national efforts... to promote integrated management and sustainable development of coastal and marine areas." (p238). As the means to implement these objectives and activities, States should transfer "...methodologies for the sustainable development of coastal and marine areas to developing countries" (p239) and "...international organizations... should support coastal States.... in these efforts" (p239). In particular, Agenda 21 calls for "full cooperation... [to] be extended... to coastal States in their capacity building efforts", including, *inter alia*, "Promoting and facilitating human resource development and education" and "supporting pilot demonstration programmes and projects in integrated coastal and marine management" (p240).

Small Islands

Chapter 17 of Agenda 21, in Programme Area G, Sustainable development of small islands (p268), recognises that "...small island developing States... are a special case both for environment and development", noting that they have "...all the environmental problems of the coastal zone concentrated in a limited land area". Agenda

21 thus calls for States to "...commit themselves to addressing the problems of sustainable development of small island developing States", including to:

- Adopt and implement plans and programmes to support the sustainable development and utilisation of their marine and coastal resources; and
- Adopt measures which will enable small island developing states to cope effectively, creatively and sustainably with environmental change and to mitigate impacts and reduce the threats posed to marine and coastal resources.

Agenda 21 calls for "small island developing States, with the assistance... of the international community..." to, *inter alia*, "adapt coastal area management techniques... suitable to the special characteristics of small islands, taking into account the traditional and cultural values of indigenous people of island countries" (p269). The means to implement this include:

- The development and diffusion of scientific information and advice on technical means and technologies appropriate to small island developing States, especially with reference to the management of the coastal zone, should be established or strengthened, as appropriate, on a regional basis;
- Training for integrated coastal management and development should aim to produce cadres of managers or scientists, engineers and coastal planners able to integrate the many factors that need to be considered in integrated coastal management; and
- Restructuring of existing capacity to meet efficiently the immediate needs for sustainable development and integrated management.

Climate Change and Sea Level Rise

Programme Area E of Chapter 17 (p260), concerning critical uncertainties for the management of the marine environment and climate change, points out that precautionary measures should be taken to minimise the risks and effects of climate change, particularly on small islands and low-lying coastal areas. States should commit themselves to improving the understanding of the marine environment, through promoting the "...exchange of data and information resulting from... research... and from traditional ecological knowledge" (p261). States should consider, *inter alia*:

- Providing improved forecasts of marine conditions for the safety of inhabitants of coastal areas; and
- Cooperating to cope with and adapt to potential climate change and sea level rise, including methodologies for coastal vulnerability assessment, modelling and response strategies particularly for priority areas, such as small islands and low-lying and critical coastal areas.

There are also a number of other chapters of Agenda 21 that would relate to this proposal. For example: Chapter 5 (Demographic Dynamics and Sustainability), programme areas B - Formulating integrated national policies for environment and development, taking into account demographic trends and factors - and C - Implementing integrated, environment and development programmes at the local level; and Chapter 8 on Integrating Environment and Development in Decision-Making.

4.2 United Nations Framework Convention on Climate Change (FCCC):

During UNCED, two major international conventions were negotiated separately from but in parallel with preparations for the Earth Summit and were signed by most governments meeting in Rio. Of significance to this proposal was the United Nations Framework Convention on Climate Change (UNCED, 1992). It aims to stabilise greenhouse gases in the atmosphere at levels that will not dangerously upset the global climate system. The following points are pertinent to this proposal.

Parties to the FCCC have recognised that "...small island countries... are particularly vulnerable to the adverse effects of climate change" and have committed themselves, *inter alia*, to:

- "Promote sustainable management,... conservation and enhancement... of coastal ecosystems"; and
- "Develop and elaborate appropriate and integrated plans for coastal zone management".

The Parties agreed to give full consideration to necessary actions to implement these commitments for developing countries, especially small island countries, countries with low-lying coastal areas and countries with areas prone to natural disasters.

4.3 *Inter-Governmental Panel On Climate Change (IPCC):*

In the IPCC 1990 Report and 1992 Update, the Coastal Zone Management Sub-Group of the IPCC Response Strategies Working Group concluded that, *inter alia*, countries should:

- By the year 2000, develop comprehensive coastal zone management programmes;
- Assess the vulnerability, and identify, coastal areas at risk to accelerated sea level rise impacts;
- Review and strengthen emergency preparedness and coastal zone response measures; and
- Start the Integrated Coastal Zone Management planning process for accelerated sea level rise response strategies.

4.4 *Excerpts from the Draft Action Programme for the Sustainable Development of Small Island Developing States*

The following section of the draft Action Programme for the Sustainable Development of Small Island Developing States (September 1993) is under consideration by the Preparatory Committee for the Global Conference on the Sustainable Development of Small Island Developing States. It is based on the G77/AOSIS Papers: Preamble and Basis for Action, and Basic Elements for an Action Programme (PC/L.5 Rev.1 and PC/L.5/Add 1).

IV. COASTAL AND MARINE RESOURCES

Basis for Action

25. Sustainable development in SIDS depends largely on coastal and marine resources. Their small land area means that SIDS are effectively coastal entities. Population and economic development - both subsistence and cash - are concentrated in the coastal zone. The establishment of the 200 mile EEZ has vastly extended fisheries and other marine resources available to SIDS. The high dependence of SIDS on coastal and marine resources emphasizes the need for appropriate and effective management.

26. The development and management of programmes designed to achieve ecologically and economically sustainable utilization of coastal and marine resources are major challenges for SIDS. The lack of an integrated approach to coastal and marine area management has limited the effectiveness of past and present management measures. This is increasingly resulting in coastal habitats being degraded through pollution, natural resources being over exploited and growing conflicts between competing resource uses. Development patterns have also had an adverse impact on traditional management systems. In many cases these impacts have been exacerbated by the effects of natural hazards and extreme events such as hurricanes / cyclones / typhoons, storm surges and abnormally high tides.

National Action, Policies and Measures

- establish and/or strengthen, where appropriate, institutional, administrative and legislative arrangements for the development of integrated coastal zone management plans and strategies for the coastal watersheds and the EEZ and their implementation, including integration within national development plans;
- design comprehensive monitoring programmes of coastal and marine resources including wetlands to determine shoreline and ecosystem stability, and document and apply traditional knowledge and management practices which are ecologically sound and include the participation of local communities, as a basis for integrated coastal zone planning and decision-making;
- develop and/or strengthen national capabilities for the sustainable harvesting and processing of fisheries resources and provide training and awareness programmes for the managers (government and local communities) of coastal and marine resources;
- ratify and/or adhere to regional and international conventions concerning protection of coastal and marine resources, combat unsustainable fishing and related practices.

Regional Action

- develop and/or strengthen the capacity of regional organizations to undertake activities in the coastal and marine areas, including to research commercial and non-commercial fisheries with a view to sustainable harvesting and utilization, reef, estuary and lagoon resources surveys, and monitor and promote innovative ways to sustainably develop territorial waters and EEZs, including support for aquaculture, mariculture, coral reef and mangrove programmes;
- develop methodology for Integrated Coastal Zone Management (ICZM) appropriate to SIDS, particularly very small, low elevation and coral islands;
- develop and/or strengthen regional clearing-houses for coastal and marine environmental information to facilitate the collection, synthesis and sharing of relevant information, knowledge and experience among SIDS in a structured and systematic way;
- develop programmes to enhance the negotiating and related skills in respect of the management and exploitation of coastal and marine resources, including in negotiation of fisheries agreements;
- develop and/or strengthen regional capabilities for the effective surveillance and monitoring of activities in the EEZs;
- harmonize policies and strategies for coordination of sustainable management and utilization of coastal and marine resources.

International Action

- develop mechanisms for the gathering and sharing of information and expertise, particularly inter-regionally between SIDS, including the Geographic Information Systems (GIS) techniques and facilities for the assessment of coastal and marine resources including UNEP's regional GRID nodes;
- cooperate in facilitating mutually advantageous fishing agreements between SIDS and foreign fishing groups and take account of the concerns and characteristics of SIDS within the UN Inter-Governmental Conference and Straddling and Highly Migratory Fish Stocks and encourage and facilitate the full participation of SIDS in the Conference and in the implementation of the Conference outcomes;
- assist with the establishment and/or strengthening, where necessary, of new institutional and administrative arrangements, where necessary, for the development of integrated coastal zone management plans and their implementation;
- support SIDS in establishing national and regional capabilities for effective surveillance and monitoring of activities within the EEZ, in the setting up of regional and other joint venture fishing enterprises, in developing inventory of main resources, in developing regional approaches to the sustainable management of the EEZ and in the strengthening of regional marine research centres."

4.5 Excerpts from the World Coast 1993 Conference Statement: "World Coast 2000: Preparing to Meet the Coastal Challenges of the 21st Century"

The statement reflected the consensus views of the participants at the World Coast Conference (held in Noordwijk, The Netherlands, 1-5 November 1993) for actions that can be taken to strengthen capabilities for progressive sustainable development and integrated coastal zone management.

***Preamble**

Integrated Coastal Zone Management (ICZM) has been identified as the most appropriate process to address current and long-term coastal management issues, including habitat loss, degradation of water quality, changes in hydrological cycles, depletion of coastal resources, and adaptation to sea level rise and other impacts of global climate change. It also is a means to identify and anticipate future opportunities. Thus, ICZM is a major tool for achieving sustainable development in coastal states, including states with boundaries of inland seas. ICZM is consistent with Principles 1 through 19 contained in the Rio Declaration with attention to Principles 2, 3, 4, 6, 9, 15 and 16 as raised during the conference.

...Participants at the World Coast Conference from more than 90 nations, 20 international organizations and 23 non-governmental organizations discussed actions for coastal states to undertake ICZM as they progress toward the year 2000. The Conference Statement is provided for the consideration of governments, institutions and organizations as they focus their efforts towards meeting the coastal challenges of the 21st Century...

The Urgency and Benefits of ICZM

I. **Urgency:** There is an urgent need for coastal states to strengthen their capabilities for integrated coastal zone management, working towards the development of appropriate strategies and programmes by the year 2000...

II. **Benefits:** Integrated coastal zone management is a most appropriate process to anticipate and respond to long-term concerns and needs while addressing present day challenges and opportunities...

The Elements of and Obstacles for ICZM

III. **Elements:** Integrated coastal zone management involves the comprehensive assessment, setting of objectives, planning and management of coastal systems and resources, taking into account traditional, cultural and historical perspectives and conflicting interests and uses; it is a continuous and evolutionary process for achieving sustainable development...

IV. **Obstacles:** Coastal states that are in the process of defining and implementing a national programme for integrated coastal zone management have encountered obstacles that constrain the effective development of national programmes...

Building ICZM Capabilities

V. **Strengthening National Responses:** Coastal states are urged to identify their priorities for integrated coastal zone management, to identify their most pressing needs to improve their capabilities for integrated coastal zone management, to undertake national measures to increase their capabilities, and to identify their special needs for assistance...

VI. **Strengthening International Responses:** Effective integrated coastal zone management can be achieved by coordination between national, regional and international organizations and institutions. This will help to avoid unnecessary duplication and to develop the concepts, tools and networks needed to facilitate the development and implementation of national programmes..."

Annex 5: National Environmental Management Strategies

The Regional Environmental Technical Assistance (RETA) and National Environmental Management Strategies (NEMS) programmes address basic environmental issues in 12 Pacific island countries. This assistance is largely funded by ADB and UNDP, with extra support from AIDAB and IUCN. RETA began in November 1990 and NEMS in April 1991, and are coordinated through SPREP.

RETA and NEMS aim to develop National Environmental Management Strategies for the Cook Islands, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Solomon Islands, Tokelau, Tuvalu and Western Samoa. Tonga already has an Environment Plan, while similar projects are also underway in Fiji and Vanuatu.

NEMS are a statement of a country's environmental principles, and a detailed plan for realising the country's long-term environmental goals. These strategies are coordinated in-country by a Task Force, comprising senior representatives from government departments, NGOs and the private sector.

Each country is developing its own strategies, unique to its own economic, physical, cultural and social situation. They clearly link environmental protection to the economic development in each country, and outline the priority environmental action programmes that are needed. The existing knowledge on the environment in a number of countries is summarised in State of Environment (SOE) Reports, which outline major environmental issues for key sectors in each country, such as forestry, fisheries, tourism and conservation. SOE reports have been produced for the Federated States of Micronesia, Republic of the Marshall Islands, Solomon Islands and Cook Islands, and are being prepared for Kiribati, Niue, Palau, Tokelau, Tuvalu and Western Samoa.

The NEMS are developed after National Workshops or Seminars are held for interested groups and the wider community, and are then subject to extensive review with wide community consultation. This consultation and review process is vital if the Strategies are to be accepted and successful in their respective countries. Representatives from NGOs, education and media are also actively encouraged to be a part of this review.

Environmental legislation is also being reviewed in each country, and draft reports prepared. These reviews aim to critically assess existing laws, recommend amendments to existing legislation and, where appropriate, recommend new legislation. Studies are also underway to review existing levels of staffing and expertise in environmental agencies, and to recommend appropriate steps to strengthen agencies in each country. Relevant environmental training activities are also implemented by the NEMS and RETA programmes.

Future activities involve reviewing, finalising and adopting National Environmental Management Strategies in each country, and implementing specific, identified programmes. These activities will be closely linked with other SPREP programmes.

