National Centre for Development Studies
The Australian National University

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Environment, aid and regionalism in the South Pacific

Jeremy Carew-Reid

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Environment, aid and regionalism in the South Pacific

Jeremy Carew-Reid

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National Centre for Development Studies
Research School of Pacific Studies
The Australian National University

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Abstract

THE island countries of the South Pacific are in rapid transition. After hundreds of years of essentially subsistence economy, the vigorous industrial and commercial developments of recent decades have placed new demands on the island environment; demands which cannot be sustained without strict controls. This development, with economies of scale often requiring that resource use, populations and their wastes be locally concentrated, does not sit well with traditional decentralized social structures. South Pacific countries are seeking new approaches to harness development effectively before it causes irreversible damage to social and natural systems. Yet, localized damage is already widespread due to hasty, ill-planned exploitation and processing of limited island resources. Pollution incidents which are becoming more common are frequently of a type or dimension never before experienced by island communities. Complex chemicals, sewage, solid wastes and an increased rate of soil erosion, for example, are creating new problems which force local communities to look beyond traditional responses.

Countries have acknowledged their shared environmental problems and limited resources by pooling their effort through the South Pacific Regional Environment Program (SPREP). The Program is facilitating moves by governments to manage their own activities and those of outsiders by adopting international legal agreements which define responsibilities and set environmental management guidelines and procedures. Some island countries are introducing environment protection legislation and assessment procedures, even though local skills required for effective implementation remain inadequate. The need for regular monitoring of coastal and inland waters and for realistic standards to be applied to new developments is recognized and widely accepted. The experience gained by those island countries leading in these fields can now be shared with others through the framework of the regional environment program. The transfer of ideas and technologies tested in island conditions, with co-ordinated assistance from outside organizations, holds the key to advancement in environmental management in the region.

The work of SPREP has stimulated some aid organizations to rethink the nature and focus of their assistance and the extent to which they accept responsibility for the environmental implications of aid projects. Yet, much greater initiative from the aid community is required in helping countries to take on the burdens of environmental assessment and management.

This book aims to record some of the important advances made by South Pacific governments and the aid community in environmental management, while suggesting co-operative approaches to sustainable development which might be applied in the region to build upon past successes. The potential threats posed by the global-scale, human-induced 'greenhouse effect', although very real for many island communities, are beyond the scope of the work.

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Abbreviations

ACIAR	Australian Centre for International Agricultural Research
ADB	Asian Development Bank
AIDAB	Australian International Development Assistance Bureau
ASEAN	Association of South-East Asian Nations
ASEP	ASEAN Environment Program
ASPEI	Association of South Pacific Environment Institutions
CCOP/SOPAC	Committee for Co-ordination of Joint Prospecting for Mineral Resources in South Pacific Offshore Areas
CEQ	United States Council for Environmental Quality
CIDA	Canadian International Development Agency
CIDIE	Committee of International Development Institutions on the Environment
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DAC	OECD Development Assistance Committee
DASETT	Australian Commonwealth Department of the Arts, Sport, the Environment, Tourism and Territories
DSIR	New Zealand Department of Scientific and Industrial Research
EEC	European Economic Community
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EPA	US Environment Protection Agency
ESCAP	Economic and Social Commission for Asia and the South Pacific
FAO	United Nations Food and Agriculture Organization
FSM	Federated States of Micronesia
GNP	Gross National Product
ICBP	International Council for Bird Preservation
ICLARM	International Centre for Living Aquatic Resources Management
IFREMER	Institut Français pour Recherche de l'Exploration de la Mer
IIED	International Institute for Environment and Development
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
IPF	Indicative Planning Figure
IUCN	International Union for Conservation of Nature and Natural Resources
LDC	London Dumping Convention
LESE	Laboratoires d'Etude et de Surveillance de l'Environment
MDB	Multilateral Development Bank
NCS	National Conservation Strategy

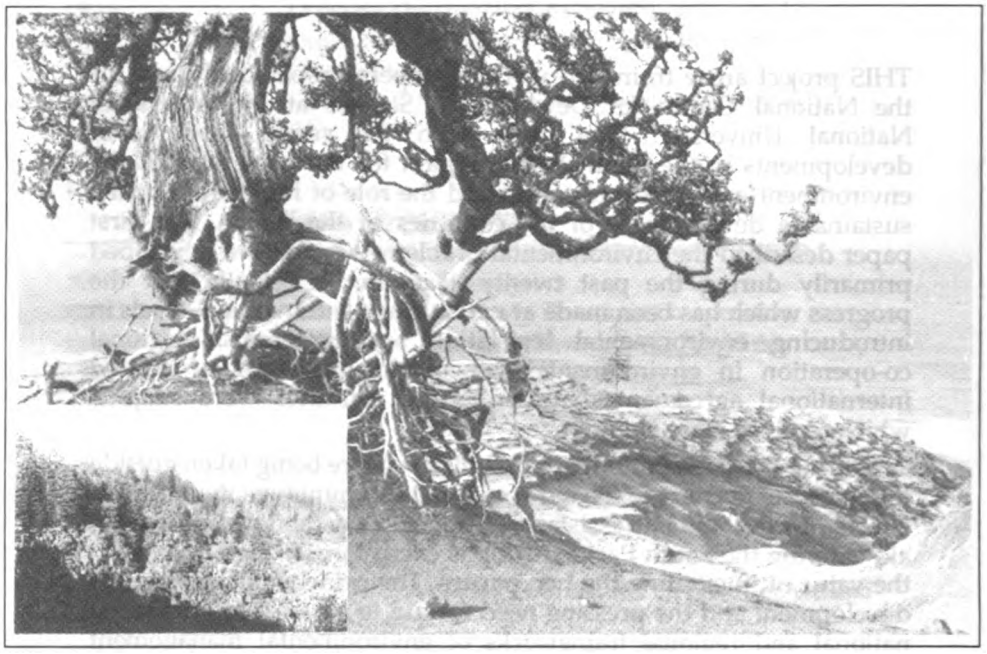
NEPA	US National Environment Policy Act
NFZT	South Pacific Nuclear Free Zone Treaty
NGO	Non-Government Organization
ODA	British Overseas Development Administration
ODA	Overseas Development Assistance
OECD	Organization of Economic Co-operation and Development
ORSTOM	Office de la Recherche Scientifique et Technique d'Outre-Mer
PICs	Pacific Island Countries
RAMSAR	Convention on Wetlands of International Importance Especially as Waterfowl Habitat
SACEP	South Asian Co-operative Environment Program
SPC	South Pacific Commission
SPEC	South Pacific Bureau of Economic Co-operation
SPREP	South Pacific Regional Environment Program
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
US/OTA	United States Congress Office of Technology Assessment
WCED	World Conservation Commission on Environment and Development
WESTPAC	United Nations IOC Western Pacific Task Team on Marine Pollution, Research and Monitoring
WHO	United Nations World Health Organization
WWF	World Wildlife Fund

Preface

THIS project arose from two working papers prepared in draft for the National Centre for Development Studies at the Australian National University. One dealt with the recent institutional developments in the South Pacific region for the protection of the environment and the other considered the role of foreign aid in the sustainable development of the countries of the region. The first paper described the environmental problems which have developed primarily during the past twenty years in the islands and the progress which has been made at national and international levels in introducing environmental legislation and programs. Regional co-operation in environmental issues and the value of related international agreements between island countries were subjects which received close attention.

During the same period, important steps were being taken outside the region to encourage the aid community to minimize the negative effects of development assistance. The fact that the level of foreign aid entering the South Pacific region is exceptionally high pointed to the value of integrating the two papers. The principle of sustainable development and the pressing need for aid to be applied within the national and regional frameworks of environmental management provided the common threads. The aim of this book is to record some of the important advances of South Pacific governments and of the aid community towards these goals, while suggesting co-operative approaches to sustainable development which might be applied in the region to build upon past successes. I have published material from several chapters of this book in two articles; one, 'Marine pollution: the institutional response in Oceania', *Marine Pollution Bulletin*, 19(8): 356–65, 1988; and the other, 'Conservation had protected areas in South Pacific islands: the importance of tradition', in a forthcoming issue of *Environmental Conservation*.

I am indebted to a number of my friends working on development problems in the South Pacific for stimulating discussions and for relevant information. In particular, I would like to thank Dr Stephen Henningham, who provided detailed comment on an earlier version of the book, and Dr Anne Dunbar-Nobes whose work on the manuscript, as editor to the National Centre for Development Studies, was meticulous and provided constant stimulus and guidance in revising the text. I am greatly indebted to my mother, Joyce Carew-Reid, who also applied a sharp editorial eye in her tireless word processing of the draft manuscript and to my father, Peter, for his editorial comments. This project was very much an 'extra-curricular' activity, and my wife, Nicole, was a constant support to me, sacrificing her own research to feed mine during long hours of writing.



Phillip Island reduced nearly to a moonscape by rabbits, goats and other introduced animals. The vegetation cover was similar to that found on nearby Norfolk Island (inset). Photo: J. Hicks

Introduction

South Pacific Islands — Fragile Environments in Decline

Nowhere are the limits to the resource base more acutely felt than on an island. Island systems in their natural state tend to be finely tuned, with a delicate balance maintained between their various parts. This ecological refinement makes them more vulnerable to rapid and irreversible change resulting from natural disasters, such as cyclones, and from human activities. If a resource is removed or subjected to new competing uses, then island systems can be brutally inflexible in rejecting species they once harboured. Worldwide, for example, 93 per cent of all bird extinctions since 1600 have been island species, and the majority of endangered taxa are island endemics (King 1981). Currently, there are more endangered species per head of population and per unit of land in the islands of the South Pacific than anywhere else in the world (Dahl 1986).

Within Australian waters there are some 2000 islands, some remote and isolated but most close enough to the Australian continent to have always been under the overwhelming influence of its ecology through the migration back and forth of plants and animals. The more remote islands, such as Norfolk and Lord Howe, have not had the same opportunity for genetic mixing and enrichment. As a result, their biota is more distinctive having evolved in isolation under severe environmental constraints.

As one moves eastward from Australian waters across the band of thousands of islands which stand even more isolated in the vast expanse of the world's largest ocean, the story is the same; very high rates of species endemism bound together in fragile natural systems in which people are becoming the dominant influence, particularly since colonial contacts with traditional communities. Population growth has intensified demands on island resources to a point where, literally, there appears to be no room for the preservation of species and habitats.

Planning for the 1982 Conference on the Human Environment in the South Pacific included the preparation of country reports which showed that more than 60 per cent of countries were already concerned that they were approaching their carrying capacity. A similar number of countries reported serious soil erosion problems, while 70 per cent suffered significant forest loss. A wide range of coastal zone management problems were identified. Seventy-five per cent of countries experienced reef pollution, often through sedimentation and smothering of corals by land erosion and dredging. More than 60 per cent of the countries reported problems in disposing of solid wastes and 90 per cent in disposing of liquid wastes, particularly human sewage. More than half of the countries reported problems with toxic chemicals and most were concerned about the threat of oil spills (Dahl and Baumgart 1982).

This distress of island natural systems is reflected in the dire economic state of most South Pacific countries. The decline in natural, economic and social resources has continued despite the region having one of the highest inputs of foreign aid per unit land area and per capita in the world. That anomaly and its reparation is the subject of this book.

Development Aid

Prior to European contact, the inhabited Pacific islands were self-supporting. Indeed, the South Pacific region is unusual in the developing world for the quality of its traditional life and its subsistence affluence, factors which are seldom adequately reflected in economic evaluations. Communities subsisted on the available natural marine and terrestrial resources and maintained traditional systems which generally ensured an equitable distribution of those resources. However, colonial influences brought fundamental changes to these systems in the form of cash economies, new technologies, military occupation and larger scale and more specialized forms of resource exploitation. These changes came through pursuit of the strategic and economic interests of foreign nations.

Following the Second World War, and particularly in the past two decades, Australia, the United States, France and other donors have committed high levels of financial help in a bid to foster self-sufficient island economies within the context of the international financial system. These aid policies have failed. Rather than nurturing self-sufficiency, they have brought greater dependence on outside funds for jobs, public welfare and imported goods and services. At the same time, there is a steady deterioration in the traditional environmental values of island communities.

Foreign aid is a major influence in setting the pace and direction of development in the region. The volume of aid is increasing and comes from a confusing and expanding array of national and international sources (OECD 1987b). Indeed, aid is often offered for competing or even conflicting purposes. The current level of development assistance to the South Pacific is about US$2500 million each year, including funds from France and the United States to affiliated islands. As dependence upon capital and technical assistance grows, so too does interest in the region from developed countries, and aid recipients feel able to set more ambitious development goals. A cycle is gaining momentum wherein foreign aid supports development which triggers unexpected changes in social and natural systems. These changes then eventually require further aid treatment.

Factors which have contributed to increased dependency are:

- a lack of independent political status and the benefits of statehood;
- scant natural resources and large distances between islands and sources of inputs, products, or markets;
- rapidly growing populations;
- tropical resource characteristics with generally high natural productivity but extreme vulnerability to disruption; and
- common histories of resource degradation (US/OTA 1987a).

Aid has not been sufficiently sensitive to the environmental imperatives reflected in these factors and, accordingly, has accentuated the trend to greater dependency. In other words, the nature of development promoted by aid tends not to be sustainable in terms of its use of and effects on the renewable resources of islands.

A Fresh Approach to Island Development

The Brundtland Commission (see Chapter 3) defined sustainable development as 'a process of change in which the exploitation of resources, the direction of

investments, the orientation of technological development, and institutional change meet the needs of the present without compromising the ability of future generations to meet their own needs' (WCED 1987).

The concepts of sustainability and self-reliance are intimately related when applied to islands. A reorientation of aid policy to assert the principle of sustainable use is vital if donors are to continue to espouse the fostering of self-reliance as a goal of development assistance. This shift requires a much greater knowledge of and sensitivity to the absorbtive capacity for development of the island environments (including all their social and biophysical parameters). Sustainable use is not attainable without proper understanding of the environment and of the total resource base in which development proceeds. It must be recognized that islands have severe limits to growth. The necessary adjustment in development assistance thinking needs to occur within both host countries and aid agencies.

The United States Office for Technology Assessment (US/OTA) has defined economic self-reliance as 'an economy's capacity to produce to meet as many domestic needs as is economically feasible and to gain the revenue, through exports, to pay for imports required to support an acceptable standard of living'. In those terms, island development is sustainable if it does not:

- reduce the long term productivity of the resources involved;
- degrade nearby or 'downstream' environments, be they terrestrial, riverine or marine;
- irrevocably reduce future development options; and
- unacceptably conflict with local cultures and customs (US/OTA 1987a).

These criteria for sustainability, when applied to planning decisions, will preclude certain types of economic development. Economic growth which fails to satisfy these conditions cannot be sustained and cannot form the basis of a self-reliant economy. Sustainable development of islands seeks to maintain the resource base, redirect use to under-used resources and to restore and enhance the renewable resource base. Underlying those maxims is the need for training of island resource managers. A simple mnemonic which might usefully be adopted by aid organizations with interests in the Pacific is the 'three Ss': Self-sufficiency through Sustainable and Skilled use of resources.

The guiding principle for sustainable development is that it does not concern open-ended growth — 'by its nature it imposes limits, seeking a balance within the resilience of a system' (UCN 1988). The need for a revision in development theory and practice, including the notion of economic growth, is pressing in the South Pacific.

Plan of the Book

Such a redefinition is by no means a simple matter, as becomes clear in the first part of this book which sets down a portrait of the region in all its diversity. In biological terms, each island in the South Pacific is unique, having evolved its own peculiar assemblage of natural resources and systems depending on its size, shape and degree of isolation. The cultural and political characteristics of the region's human population are no less diverse, having developed under different natural and social influences. Yet, in this diversity, there exists a strong unity of purpose in tackling shared constraints to sustainable development and shared problems of degrading natural environments. These unifying constraints are

introduced in the second chapter which also includes a review of difficulties experienced by selected countries in reforming (or establishing) their national environmental strategies.

Appropriate aid holds the key to confronting many of the problems facing South Pacific islands, as it does in other less developed areas of the world. Part II of the book shifts the focus of our attention from the region to the wider international arena by examining the pressures mounting over the past two decades on the aid community for much greater investment in the care and protection of the environment. Initially, this initiative from groups in developed countries, particularly USA and Europe, met with resistance and suspicion from government leaders in the less-developed world. They saw the initiative as another restraint to economic growth. Donor countries had achieved industrial development and attended to the environment later — why should not the less developed countries do the same? In the early stages of economic growth, the maintenance of environmental quality and the sustainable use of resources is a luxury which poor developing nations can ill afford (Dixon *et al.* 1986). This is still the view held by certain sections of Pacific island administrations. However, this situation is changing rapidly. At recent meetings organized by the Organization of Economic Co-operation and Development (OECD), the World Bank and United Nations Environment Program (UNEP), for example, it was delegations from the less developed countries who were the most vocal in demands for greater attention in international aid programs to environmental planning and management.

In Chapter 4 of Part II, the rapidly expanding support for reform of this kind and the resultant need for a fresh approach to economic development is discussed. New tools are also required if aid agencies are to quantify and assess impacts on the environment in economic terms. Environmental measures can then be fully integrated within the process of project appraisal.

Part III of the book brings the focus of attention back to the South Pacific and to important initiatives by island countries to co-operate in applying greater national and international resources to the environment. The institutional developments at regional level have provided the legal framework for increasing amounts of aid to meet the shared conservation and environment protection goals of island governments.

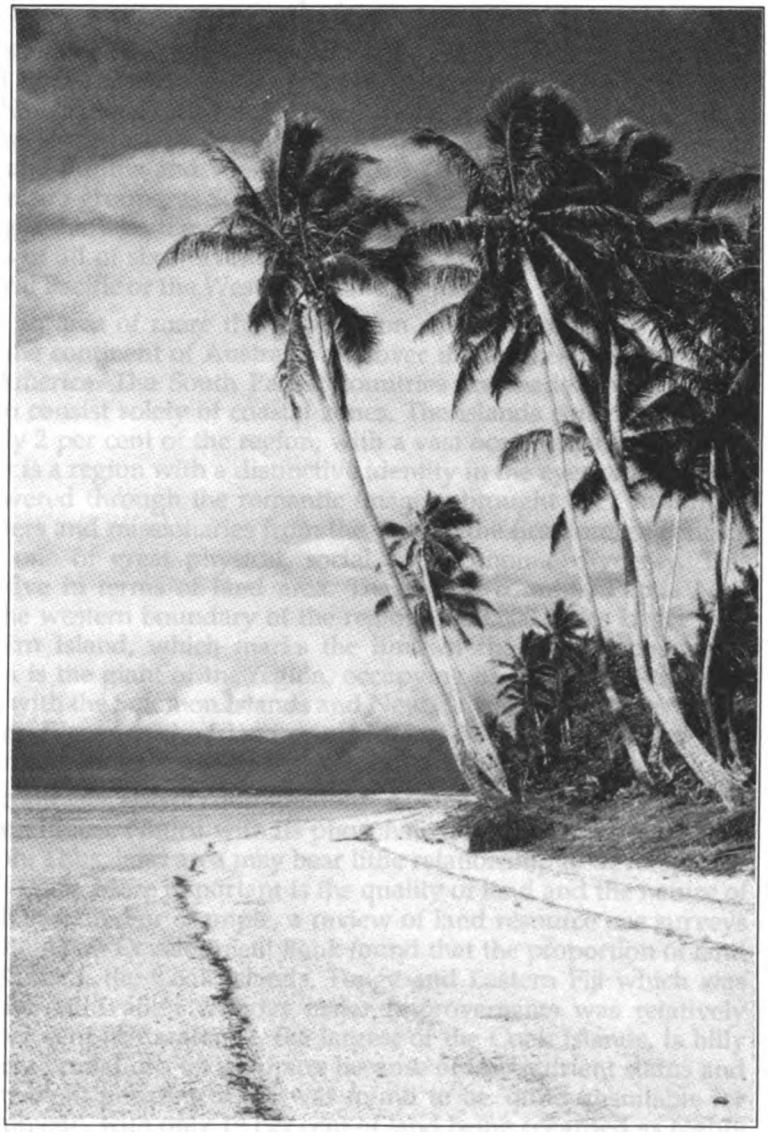
The nature and extent of aid entering the region is addressed in Part IV, with special emphasis being given to the role of Australia as a major donor. Long before the awakening of environmental awareness, international aid had a profound and far-reaching influence on the shape of development in island countries, reflecting as much the policies and attitudes of donors as development priorities of recipients. The two have been inextricably linked since the first foreign experts and technologies arrived in the islands to assist in development. This pervasive and perhaps unavoidable influence over the direction of development has to be matched by a concern and sharing of responsibility for its environmental implications.

Several points need to be made in response to the argument that donors must at all times respect the sovereignty of recipient countries and that to apply environmental strings to aid amounts to paternalism or even imperialism. First, in recent years, Pacific island countries have made their views quite clear on the environment and sustainable development, many through provisions within their constitutions, laws and national policies and all, through their political support and commitment to the South Pacific Regional Environment Program (SPREP). Aid which is applied in an environmentally sensitive manner through donor or

recipient initiative reinforces these policy commitments. Second, Pacific island countries collectively have set the environmental agenda for donors through the SPREP Action Plan and associated Conventions. These instruments provide specific direction and endorsement for initiative from the aid community on environmental issues. Finally, for those donors who still hesitate to embrace their role in the quality control of aid, Ralph Buckley argues that, while the less developed countries have sovereign rights to exploit their natural resources according to their own development priorities, donor countries are under no obligation to fund those projects where adequate environmental safeguards are lacking. Equally, less developed countries are under no obligation to accept aid which has environmental conditions. Humanitarian arguments for providing aid without environmental strings tend to prevail only in emergency relief situations. It has been shown that many major aid projects and programs have worsened the state of the recipient's poor while benefitting small local elites and the international companies involved (Buckley 1988 and in press). The poor are hardest hit by the real socio-economic cost resulting from environmental and natural resource degradation.

A difficulty, both for donors and recipients, is the practical application of the notion of sustainable development. It is becoming clear that terms like 'sustainable' or 'carrying capacity' are heavily value-laden and their meaning will vary with the different characteristics and needs of an island or even regions within an island. The values to be reflected in a specific sustainable development strategy must be those of the local community involved in implementing it. But even within a small island community views differ on what constitutes appropriate development. Inevitably, the process of definition is slow and incremental. Much more aid needs to go to nurture this time consuming and 'unproductive' early phase of community debate.

PART I
The South Pacific region



CHAPTER 1

Regional Identity and Diversity

Geography

THE twenty-two island countries of the South Pacific are American Samoa, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn Islands, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallace and Futuna and Western Samoa.[1] These countries are referred to, collectively or in sub-groups, as South Pacific island countries or Pacific island countries. The geographic area they cover is variously termed as the South Pacific (even though parts of all of six Micronesian countries fall north of the Equator), Oceania, the Tropical Pacific or the Western Pacific (Figure 1.1).

The region has an area of more than 30 million square kilometres, which is four times that of the continent of Australia and over three times the area of the United States of America. The South Pacific countries are made up of islands, most so small as to consist solely of coastal zones. The islands constitute a land area occupying only 2 per cent of the region, with a vast ocean expanse unifying them in isolation. It is a region with a distinctive identity in the eyes of the world, one which has flowered through the romantic imagery brought back to Europe and Asia by explorers and missionaries from the time of the first foreign contact. But the region is one of great physical, social and economic diversity. This contrast is impressive in terms of land area. The largest country, Papua New Guinea, marking the western boundary of the region, is 93,000 times larger than the smallest, Pitcairn Island, which marks the limit of the eastern boundary. Papua New Guinea is the giant of the region, occupying 83 per cent of the land area, and, together with the Solomon Islands and New Caledonia, occupies 93 per cent of the land area. Eleven of the island countries have a land area of less than 500 square kilometres and four have less than 30 square kilometres (Table 1.1).

It is a region of contrasts; also of contradictions. Among the four smallest countries are both the wealthiest, Nauru with its phosphate deposits, and some of the poorest in the region. Thus, land area may bear little relationship to development potential (Fairbairn 1985). More important is the quality of land and the nature of development it will sustain. For example, a review of land resource use surveys commissioned by the Asian Development Bank found that the proportion of land on the islands of Kiribati, the Cook Islands, Tonga and Eastern Fiji which was suitable for intensive cultivation without major improvements was relatively small. Sixty-eight per cent of Raratonga, the largest of the Cook Islands, is hilly and steep with severe limitations for cropping because of low nutrient status and erosion risks. Thirty-eight per cent of Fiji was found to be 'quite unsuitable for agricultural development', with only 19 per cent of land being regarded as highly suitable for this purpose. In Western Samoa, 86 per cent of the land area has been

[1] The term 'countries' is used here without inference to political status to include all independent states, territories, departments and dependencies of the South Pacific region.

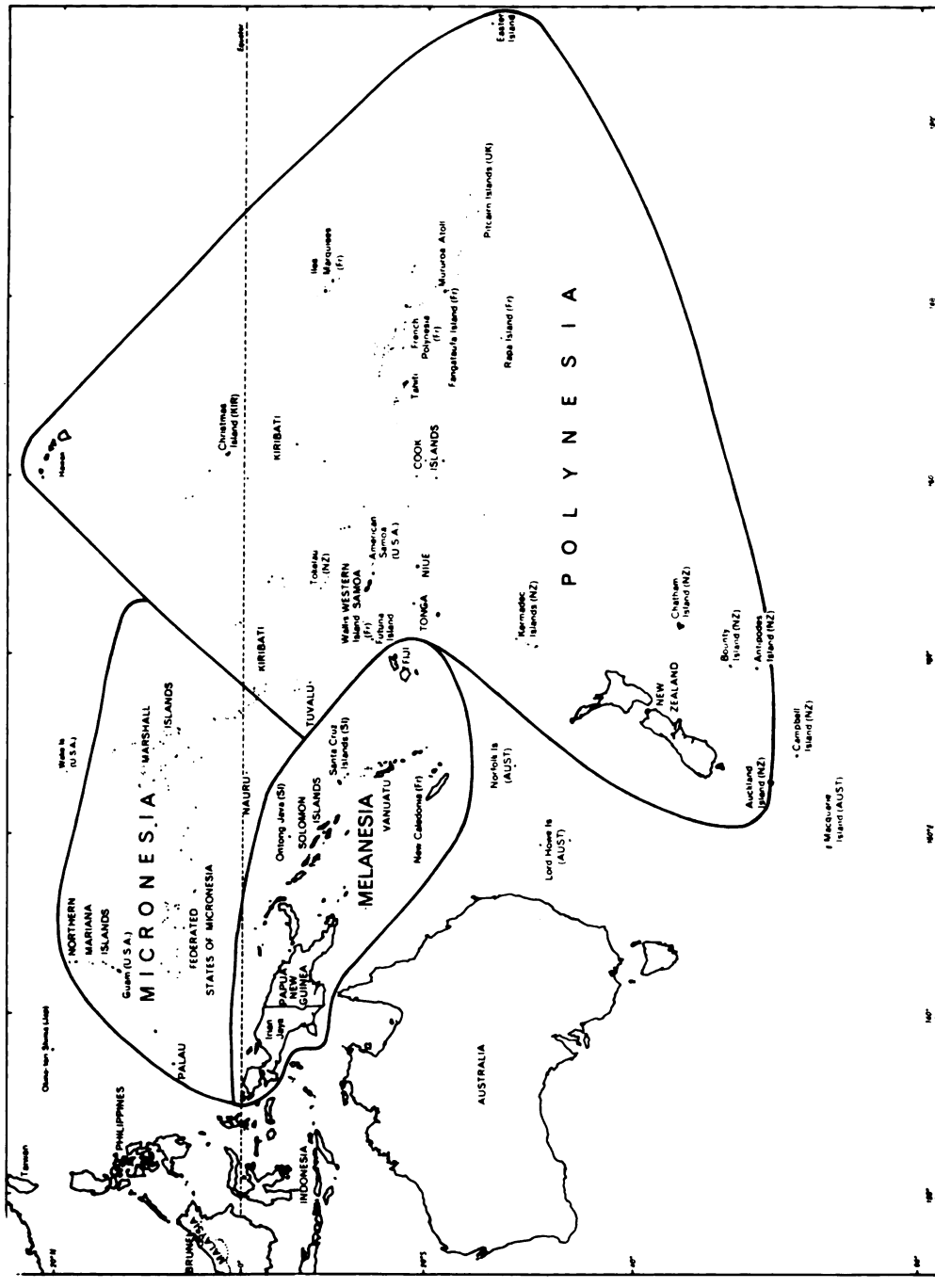


Fig. 1.1 The South Pacific region and its broad cultural divisions.

classified as being either of little use for agriculture because of poor drainage and steep slopes or too stoney for mechanized agriculture. Even in Papua New Guinea, which has the largest areas of alluvial plains in the region, only 24 per cent of land area is suitable for arable crops and only 10 per cent highly suitable. More than 50 per cent of the country has little or no agricultural or forestry potential, being either too steep, poorly drained, irregular or eroded and lacking in topsoil. The situation in the neighbouring Solomon Islands is similar, with only about 12 per cent of land being categorized as having above average agricultural potential (Ward and Proctor 1979; Fairbairn 1985).

Population

The South Pacific islands are also difficult to classify according to population figures. Once again, Papua New Guinea is the giant with 61 per cent of the region's five million people. Papua New Guinea, Fiji and the Solomon Islands

Table 1.1 Pacific island countries: their population, land and sea areas

Country	Land area (km^2)	Sea area ('000 km^2)	Population[a]	Population density (persons per km^2)	Estimated annual population growth rate
American Samoa	199	380	36,700	184	1.9
Belau (Palau)	497	615	14,000	28	0.3
Cook Islands	240	1830	17,100	71	-1.8
Federated States of Micronesia	703	3051	100,000	142	3.4
Fiji	18,272	1290	725,500	40	2.0
French Polynesia	3,265	5030	176,800	54	2.2
Guam	541	218	119,800	221	2.0
Kiribati	690	3550	67,700	98	2.2
Marshall Islands	181	2061	43,000	238	4.0
Nauru	21	320	8,800	419	2.8
New Caledonia	19,103	1704	153,500	8	1.3
Niue	259	390	2,000	8	-3.5
Northern Mariana Islands	471	1869	20,600	44	4.4
Papua New Guinea	462,243	3120	3,463,000	8	2.5
Pitcairn Island	5	800	58	12	-5.0
Solomon Islands	28,530	1340	272,000	10	3.4
Tokelau	10	290	1,700	170	0.1
Tonga	699	700	94,800	136	0.2
Tuvalu	26	900	8,500	327	2.0
Vanuatu	11,880	680	145,000	12	3.7
Wallis and Futuna	255	300	14,700	58	5.0
Western Samoa	2935	120	162,000	55	0.7
Total/Average	551,025	30,558	5,647,258	10	1.5[b]

[a] Projections by the South Pacific Commission for 1987 except for the Marshall Islands and Federated States of Micronesia which are 1988 figures.
[b] Average annual population growth rate is 2.3 when Cook Islands, Niue and Pitcairn Island are excluded.
Source: Adapted from Staley, D., *South Pacific Handbook*, 4th edition, Chico California, Moon Publications, 1989.

together support almost 80 per cent of the region's population. Yet, three of the smallest countries, Guam, Tokelau and Tuvalu, have the highest population density in the region, while Papua New Guinea one of the lowest at eight persons per square kilometre (Table 1.1). Papua New Guinea is one of the few countries in the region which does not yet suffer a shortage of potentially productive land.

Dominance of the Marine World

All South Pacific countries share an intimate association with the marine environment. Most island communities depend on the sea for sustenance and cultural inspiration. The Solomon Islands, for example, extends over more than one million square kilometres of sea as a scattered archipelago of some 150 islands. The coat of arms includes a turtle, crocodile and frigate birds, reflecting the ties between the culture and its marine world. The main islands are rugged and mountainous while many outer islands are coral atolls and raised coral reefs. Fiji, with 320 islands, is similar; the vitality of the traditional relationship of her people to the sea was described by the Fijian delegates to the 1974 Law of the Sea negotiations in this way:

> The sea and the land of Fiji were interdependent. The sea was regarded as an essential link between the islands of the archipelago; it was not only a roadway but a source of sustenance for many Fijians. Archipelagic peoples were farmers of the seas and the sea-bed; the control of the sea was as important to them as control of the land was to continental states (Broder and Van Dyke 1982: 9).

Most South Pacific countries have very high land to sea ratios. Kiribati, for example, extends over 3.5 million square kilometres of sea and embraces thirty-three islands, all of which are atolls. Its land to sea ratio is one to 5000. The Pitcairn Island group has a land-to-sea ratio of one to 160,000. The populations of Pacific island countries are undoubtedly among the most widely dispersed in the world (Ward 1985). Some countries, such as New Caledonia and Western Samoa, comprise more compact groups of islands, while others, such as Niue and Nauru, are solitary islands. The economic importance of these large sea areas is emphasized by the concept of Exclusive Economic Zones (EEZs) wherein an island state has sovereign rights over the exploitation and exploration of all resources within that zone. The 200-mile zones in the Pacific (Figure 1.2) amply illustrate the dominance of the marine world.

Island Types

The type of island will determine not only the nature of its natural resources and the ecosystems present, but also its productivity and its ability to sustain human populations. It also determines island vulnerability to disruption and over-exploitation. The four main types of islands are:

- *low-lying atolls:* composed of coraline reef limestone enclosing a lagoon;
- *raised limestone islands:* primarily coraline limestone, originally formed in waters surrounding older volcanic islands and now raised above sea level by upward moving volcanic substrata or by lowering of the sea level;
- *volcanic islands:* peaks of undersea volcanoes (both active and dormant), often surrounded by fringing reefs;
- *continental islands:* geological extensions of continents or parts of certain under-sea mountain ranges (US/ OTA 1987a).

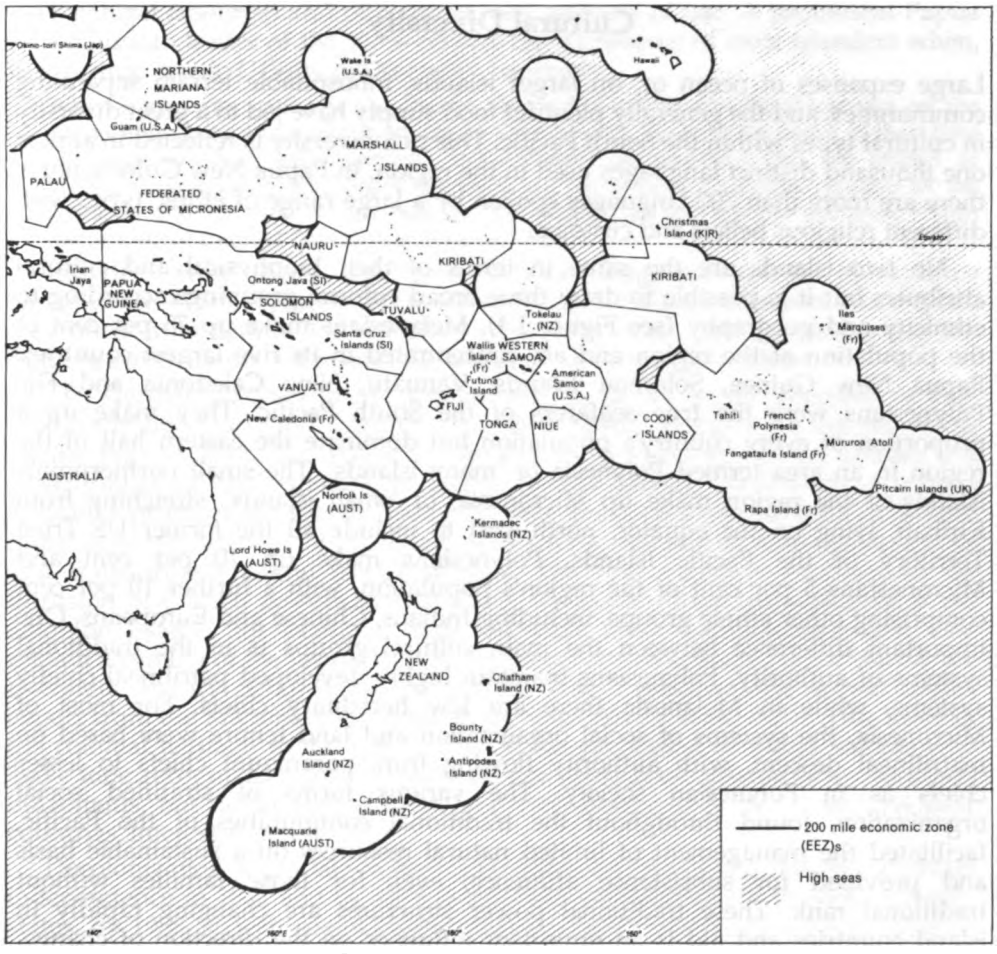


Figure 1.2. Exclusive Economic Zones of the South Pacifc island countries.

In general, high volcanic islands will support more habitat types and a wider range of natural resources than low coral islands. With elevation comes variation in rainfall and temperature, encouraging a diversity of habitats and richer, more resilient natural systems. Continental islands are generally large, with complex land forms, and have a greater variety of soil types and hydrological patterns than other island categories. The mix of islands found within a single country determines in large part the extent and nature of development open to it. Atolls, for example, with their simpler natural systems, offer a narrower resource base on which to build and tend to be more affected by natural disasters and slower to recover than volcanic or continental islands. Atoll countries, such as Kiribati, Marshall Islands, Tuvalu and Tokelau, therefore have fewer options for sustainable development than countries consisting primarily of volcanic islands such as Vanuatu and Western Samoa, and fewer still when compared with countries with both volcanic and continental island types, such as Papua New Guinea, Solomon Islands and New Caledonia.

Cultural Diversity

Large expanses of ocean or, on larger islands, inhospitable terrain separating communities, and the generally plentiful food supply have led to a great diversity in cultural types within the South Pacific. This rich diversity is reflected in almost one thousand distinct languages used in the region. In Papua New Guinea alone, there are more than 700 languages spoken by a large range of ethnic types with different religious beliefs and customs.

No two islands are the same in terms of their biophysical and cultural attributes but it is possible to draw three broad cultural groupings according to ethnicity and geography (see Figure 1.1). Melanesians make up 75 per cent of the population of the region and are concentrated in its five largest countries: Papua New Guinea, Solomon Islands, Vanuatu, New Caledonia and Fiji. Polynesians were the true seafarers of the South Pacific. They make up a proportion of every country's population but dominate the eastern half of the region in an area termed Polynesia or 'many islands'. The small northernmost islands of the region make up Micronesia, or 'small islands', stretching from Kiribati, lying on the equator, north-west to include all the former US Trust Territory of the Pacific Islands. Polynesians make up 10 per cent and Micronesians 5 per cent of the region's population, with a further 10 per cent comprising other ethnic groups, including Indians, Chinese and Europeans. One important difference between the main cultural groups is in the traditional systems of authority. Polynesians maintain highly developed patrilineal chiefly systems, while in Melanesia there are few hereditary chiefs. For most of Micronesia, the systems of social organization and land tenure were based on matrilineal descent, with authority flowing from paramount chiefs to lesser chiefs as in Polynesian society. The various forms of stratified social organization, found throughout the traditional communities of the Pacific, facilitated the management of limited natural resources on a sustainable basis and provided for subsistence affluence, even for those families without traditional rank. These traditional power structures are changing rapidly in island countries and aid is an important influence on the direction of change. Aid projects can be 'used' by recipient governments for political purposes, for example, to win more electoral support. Political manipulation of this kind can seriously undermine traditional equalities in access to resources.

Political Status

The political systems of the twenty-two South Pacific island countries and territories are exotic mixes of traditional authority structures and those of the colonial powers with which each has been associated. The result for most countries is a unique and still rapidly evolving political system attempting to cope with the transition from subsistence to cash economies.

European penetration of the South Pacific began early in the sixteenth century. Colonization began in 1565 when Spain annexed the Mariana Islands in Micronesia. Further colonization was spasmodic until the nineteenth century when commercial rivalry between Germany, Britain and France led to more aggressive colonial activity in the region. By the early twentieth century, every major island group was in the possession or under the protection of a European power (Australia 1978). The colonial experience for island communities throughout the South Pacific meant a disintegration of the traditional authority

over natural resources and of controls over patterns of use. A prominent Papua New Guinean leader of the 1970s reflects the sentiments of most islanders when, in an article entitled 'Unity in Diversity', he wrote:

> When Europeans settled in the Pacific, they did not find a political vacuum on the shores and plains and in the mountains of our islands. To meet the needs of their time our ancestors had well-organized, self-sufficient communities. But the impact of Western colonisation has meant dramatic and sometimes traumatic changes in the character and life styles of our peoples. Self-respect and self-government were lost in the process of colonial domination (Momis 1975).

Islanders were given little part in controlling the system of resource exploitation which replaced the traditional ways. Foreign planners and experts controlled from within the direction of development, thereby facilitating the influence of economic forces and the colonial interests from without.

The German colonies in Micronesia were occupied by the Japanese in 1914 who continued to expand their influence in the South Pacific until the end of the Pacific War in 1945. The War was particularly destructive for the islands and communities of the region. One legacy of this period has become a serious pollution problem for islands today, namely the increased numbers of weeds, introduced intentionally or otherwise, which have replaced endemic plant species and transformed natural island systems. The War signified a climax in the intrusion of foreign powers in island life. Dumped munitions, which as in the Solomon Islands, for example, have left some areas uninhabitable, will long remain a symbol of the impact of colonial presence in the South Pacific during the twentieth century. Scrap metal from World War II remained the second largest export from the Micronesian Islands to the mid-1970s (Heine 1973). This irony of the colonial heritage would not be lost on the succession of island leaders who 'have long recognized that foreigners do not bring good tidings of joy to island inhabitants, but rather exploit them and their resources in their own and their countries' interest' (Paeniu 1975).

Decolonization began late in the region. Western Samoa was the first to obtain independence in 1962 and by 1975 there were still only five independent island states. By 1988, sixteen island countries had independent governments, some in close association with the previous colonial powers; for example, the former Micronesian Trust Territories with the USA, and the Cook Islands and Niue with New Zealand. France, New Zealand, the United Kingdom and the USA still maintained dependencies or territories in the region with varying degrees of self-government (Table 1.2).

The political systems which have evolved under colonial influence are diverse. Palau, for example, with some 13,000 people, has sixteen states each represented in the elected national House of Delegates and a council of traditional head chiefs who advise the President on traditional laws and customs. Palau also has an elected Senate and local governments in each state with varying proportions of elected and appointed officers. The electoral process, modelled on the US system, has diminished the significance of the traditional hereditary titles. This is not the case for the Kingdom of Tonga, which is the only country of the region to have retained control over all aspects of government (except foreign affairs) throughout the colonial era. Even so, it was under strong British influence and has a constitutional monarchy based on the British model. It is the region's oldest and only remaining Kingdom and, unlike the British monarch, Tonga's King Taufa'ahau Tupou IV exercises wide and presiding authority over all aspects of Tongan life and government. The King appoints a cabinet of permanent ministers which becomes the privy council when he presides. The ministers are also

members of the Legislative Assembly with seven nobles elected by the thirty-three nobles of Tonga and seven representatives elected by universal suffrage. There is no elected local government system covering the 169 islands of the Kingdom. According to the King, this is the most effective system for Tonga 'because many people who are in the government have very strong traditional ties in various parts

Table 1.2 **Political status of Pacific island countries**

Country	Sovereign status	Year of independence	Previous colonial power(s)
American Samoa	Unincorporated US Territory	..	UN Trust Territory with USA as Trust Power
Cook Islands	Independent State in free-association with New Zealand	1965	New Zealand
Federated States of Micronesia	Federation of States in free-association with USA	1987	UN Trust Territory with USA as Trust Power
Fiji	Independent State	1970	United Kingdom
French Polynesia	Overseas Territory of France	..	France
Guam	Unincorporated US Territory	..	UN Trust Territory with USA as Trust Power
Kiribati	Independent Republic	1979	United Kingdom
Marshall Islands	Republic in free-association with USA	1981	UN Trust Territory with USA as Trust Power
Nauru	Independent Republic	1968	UN Trust Territory with Australia, United Kingdom and New Zealand as Trust Powers
New Caledonia	Overseas Territory of France	..	France
Niue	Independent State in free-association with New Zealand	1974	New Zealand
Northern Mariana Islands	Commonwealth State in association with USA	..	UN Trust Territory with USA as Trust Power
Palau	Republic in free-association with USA	1984	UN Trust Territory with USA as Trust Power
Papua New Guinea	Independent State	1975	Australia
Tokelau	Dependency of New Zealand	..	New Zealand
Solomon Islands	Independent State	1978	United Kingdom
Pitcairn	Dependency of United Kingdom	..	United Kingdom
Tonga	Independent Monarchy	..	(close ties with United Kingdom)
Tuvalu	Independent State	1977	United Kingdom
Vanuatu	Independent State	1980	France and United Kingdom
Wallis and Futuna	Overseas Territory of France	..	France
Western Samoa	Independent State	1962	New Zealand

of the country' (Islands Business 1988). But Tongan society is increasingly divided on the issue of land ownership and power in the hands of the privileged few.

The ni-Vanuatu, who won independence in 1980, have based their political system on a different philosophy, as enshrined in the constitution which emphasizes the 'importance of decentralization to enable the people fully to participate in the government of their regions'. Vanuatu had a unique colonial history as the only territory which, from 1906, was administered jointly as a condominium of two powers, France and Britain. The arrangement was expensive and wasteful, achieving little for the economic or political development of the country. France opposed independence and relations with France remain difficult (Henningham 1988). Some ni-Vanuatu leaders preferred to refer to the condominium arrangement as 'pandemonium' (Kalkoa 1975). The current government structure consists of a freely elected Representative Assembly, regional assemblies on the islands of Espiritu Santo and Tanna and regional councils which provide for the representation of custom chiefs. The constitution also provides for a National Council of Chiefs comprising custom chiefs elected by their peers sitting in District Councils of Chiefs. The Councils advise on matters on custom and tradition with the aim of preserving the ni-Vanuatu culture and languages. Even so, English and French are the principal languages of education, and cultural bi-lingualism is likely to persist.

Any other three countries of the region would illustrate as well the great contrast in political systems which have evolved in response to the integration in varying degrees, of traditional and colonial forms of government.

Diversity of Island Economies

As might be expected, associations with former and present administering counties have been key factors in shaping trading patterns and economic activities. For example, France remains the chief source of imports for its South Pacific territories and the major client for their exports. The dominance of France as a supplier is maintained through various port and customs levies which give preference to French goods. The Cook Islands still relies on New Zealand for some 80 per cent of imports and a similar proportion of exports. This special relationship is perpetuated through a free trade arrangement between the two countries. A similar relationship exists between New Zealand and Niue and Tokelau. Guam is a free port, yet about 80 per cent of imports come from the USA; the other former Trust Territories, similarly, source their goods from the USA. Changes in world commodity prices, uncertain market outlets and vagaries in shipping and air services are factors which make it difficult to break from colonial economic associations. Maintenance of the historical framework of financial, technical and expert development assistance also acts to bind the relationship and reduce the flexibility of island countries in establishing alternative economic links.

As mentioned previously, the biophysical factors, in particular the size and type of islands, are critical in determining the nature of island economies and their potential for development. The social, political and external influences overlay the biophysical base and determine the manner in which it is used. The traditional subsistence uses of all the island countries have been fisheries, agriculture and forestry. Subsistence activity within these sectors remains an important part of most island economies. For some of the smaller countries, such as Wallace and Futuna, Tokelau and Tuvalu, subsistence agriculture and fishing

remain the only reliable economic activities. All three sectors support some commercial enterprise in most countries and, in a few, mineral deposits have become an important source of national income. This is true primarily of Papua New Guinea, which has major copper, gold and associated mineral mines; of Fiji, which exports gold; and of New Caledonia, which has about 30 per cent of the world's reserves of lateritic nickel and deposits of chromium. The Solomon Islands and Vanuatu have yet untapped mineral resources, such as bauxite, copper and nickel. Phosphate, bauxite and manganese were exploited in the Marianas when the islands were under the Japanese mandate, but these resources are no longer economic. The rich phosphate deposits on Banaba Island in Kiribati have been exhausted and those of Nauru, the source of the country's only revenue earning industry, will be depleted by the end of this century.

Economic activities which have the potential to contribute increasingly to island income include processing of local primary products, more productive use of cultivable land, tourism, manufacturing for export and fisheries management within the 200-mile exclusive economic zones. The Australian International Development Assistance Bureau (AIDAB) has grouped the eleven Pacific island countries which are the primary recipients of Australian aid into five major categories according to their current economic situation, economic prospects and aid requirements (AIDAB 1987, based on Fisk 1982). Expanding and modifying these categories to include all South Pacific countries suggests groupings as follows:

Category One.
Self-sufficiency: Fiji. Fiji is the only island nation to be characterized by relatively high standards of living and incomes, a skilled workforce, good services and infrastructure, and a relatively high level of economic independence and viability. AIDAB considers that Fiji has prospects for further growth in tourism, manufacturing and potential for mineral development.

Category Two.
Potential self-sufficiency: New Caledonia, Papua New Guinea, Solomon Islands and Vanuatu. These nations possess extensive agricultural, forestry, mineral and fisheries resources, and a strong subsistence sector (in Papua New Guinea, for example, traditional farming involves over 60 per cent of the population and utilizes 90 per cent of cultivable land) with good potential for increased tourism.

Category Three.
Micronesian public sector bloat: Guam, Palau, Northern Mariana Islands, Federated States of Micronesia (FSM) and Marshall Islands. These countries suffer the consequences of small size, very limited natural resources and skilled labour, and heavy dependence on imported goods and expertise. The islands are characterized by high population growth rates and increasing emigration to the US mainland. The private commercial sector on most islands is small or non-existent while public sectors are very large. In FSM, for example, about 90 per cent of formal employment is in government and associated services. The combination of relatively high educational standards and aspirations, limited opportunities for private sector employment and the possibility of free movement to the USA will make the development of greater self-sufficiency very difficult to achieve. Potential exists for further development in tourism, fisheries and agriculture, with greater investment in improving the infrastructure. Reducing dependence will require changes in consumption patterns and attitudes.

Category Four.
Subsistence affluence: American Samoa, Western Samoa, Tonga and French Polynesia. Countries in this category have a natural resource endowment adequate to sustain the population well above minimum subsistence but, as for Category Three countries, probably not at the levels to which they aspire. Currently, all are heavily dependent upon the flow of funds from developed countries. Unlike Category Three countries, traditional agriculture and fishing remain relatively strong, particularly in Tonga and Western Samoa, so there are good prospects for increasing productivity and self-sufficiency through appropriate training and technologies in these activities. Prospects for further tourist development are good in French Polynesia and reasonable in the other countries, and there is considerable potential for enhancing manufacturing industry and fisheries. Migration of young, skilled and educated sectors of their populations will continue to limit the ability of these countries to adjust from aid-dependency to self-reliance.

Category Five.
Resource scarcity: Kiribati, Tuvalu, Tokelau, Cook Islands, Niue, Wallace and Futuna, Pitcairn Islands. Very small populations, small land areas, scarce natural resources, dispersal of islands and remoteness from world markets make it difficult for these countries to increase income through domestic production. According to Fisk (1982) they must choose between what is probably an unacceptably low level of incomes and consumption and some substantial level of permanent dependence. Kiribati, Tuvalu, and Tokelau are noted for their extremely poor soils, limited fresh water supply and susceptibility to gales and cyclones. Dependence on foreign aid, coupled with large remittances from overseas workers, have raised living standards to levels not sustainable by domestic production. Unlike the other countries in this category, Kiribati and Tuvalu do not have access to a permanent emigration outlet. In the struggle for self-sufficiency, outward migration of skilled and educated islanders in the long term may place such countries at a disadvantage. Despite limited resources, much can be achieved to increase productivity of agriculture, to manage the vast marine resources to their benefit and to promote tourism. The Kiribati Resource Equalization Revenue Fund and the Tuvalu Trust Fund Treaty provide revenue for covering recurrent budget costs and eliminate the demoralizing dependency associated with this area of aid. Similar trust fund concepts applied to the other countries in this category would assist in promoting a sense of greater self-reliance.

Category Six.
The expiring resource boom: Nauru. If it were not for its phosphate resource Nauru would fall into Category Five. As it is, the mining industry has created one of the richest countries in the world in terms of income per capita but has left four-fifths of the island uninhabitable and its population one of the most culturally and physically debilitated in the region. Although the prospects for alternative industries are poor, given the island's small size and small population, careful management of the assets from phosphate mining and investment in rehabilitation of the island might eventually lead to reduced import dependency.

Grouping countries in this way by assessing their similarities rather than their differences can be a useful tool in helping to identify the forms of development most appropriate for each island. Yet, any categorization of countries according to their potential for economic self-reliance is bound to be highly subjective. Values come into play, particularly when assessments are made of the material standard of living to which island communities aspire. The label of permanent aid

dependency, for example, makes no allowance for the potential for changes in behaviour patterns and consumption rates to achieve national goals of self-reliance. President Ieremia Tabai of Kiribati totally rejects economic assessments which suggest that his country may never rid itself of dependence on aid. He considers that it is possible to reduce budgetary aid to Kiribati while improving the standard of living through small industries, realistic wages and a shared conviction within the community that self-reliance is achievable (Asiaweek 1989). Other island leaders, such as Epeli Hau'ofa of Tonga, do not share this vision. He believes that the aspirations for material goods and for services among the island peoples are already so high, and rising, that 'the smaller countries have to give up narrowly defined notions of independence and acknowledge the likelihood of continued dependence on foreign aid because of their narrow resource base'. He considers that large scale, high technology development is the only realistic answer for the Pacific island countries and that to persist with 'small scale, partly subsistence/partly commercial operations is to progress towards rural depression and to poverty' (Hau'ofa 1979:484). These dramatically differing opinions on the direction of island development and the potential for self-reliance reflect the inherently subjective nature of categories based on economic assessments.

Unity in Diversity

Although obviously diverse in their political, social and economic features, South Pacific countries do exhibit broad similarities in terms of their island origins, their colonial histories and their remoteness from the world economy. On account of this, the island nations have increasingly looked to regional co-operation as a means of overcoming some of their common problems. This union also reflects the growing interest by outside powers in the region's resources and its heightened strategic significance. The view expressed by island countries on such crucial regional concerns as nuclear weapons testing, disposal of radioactive wastes and the management and conservation of fisheries continues to be strongly coloured by what they perceive as continuing colonial and imperial motives of the metropolitan powers. These forces and a recognition of the mutual benefits to be gained by pooling resources have led to a distinctive regional cohesion.

In recent decades, the intensity of regional identity has varied. During the decade to 1960, the regional character was influenced primarily by the colonial powers through the South Pacific Commission (SPC) with a mandate to carry out regional activities '...in matters affecting the economic and social development of the territories within the scope of the Commission and the welfare and advancement of their peoples' (Article IV(6) of the Canberra Agreement 1947 as amended). The SPC is the Secretariat to the annual South Pacific Conference and is based in the French territory of New Caledonia.

During the decade to 1970, nationalism and decolonization were major themes. This was followed by a period of domestic consolidation. In 1972, Senator Lazarus Salii, Chairman of the Joint Committee on Future Status for the Congress of Micronesia, reflected well the mood of the time when commenting on endeavours by the Congress to persuade the USA to form a relationship of free association involving four basic rights:

> These are Micronesia's right to self-determination, to make its own laws, to control its lands, and to end unilaterally any future relationship with the United States. We particularly insisted on the right of unilateral termination as an indispensable

> safeguard for a small state in a relationship with a global superpower. Unilateral termination is a final insurance not only against our being abused or ignored but also against our being embraced to death (Salii 1973).

The establishment in 1971 of the South Pacific Forum as the association of independent countries in the region led to the expression of an independent regional identity as a political force. The Forum, in part through the Forum Secretariat (formerly the South Pacific Bureau of Economic Co-operation established in 1972 and based in Suva, Fiji), is concerned primarily with facilitating the political and economic development of member states. The emergence of independent countries in the region had profound implications for the SPC. In 1976, the Commission underwent a searching examination to make it more responsive to the needs of its island members and to lessen the predominant position of the metropolitan powers. It is now the only regional organization in which each island state or territory, and each metropolitan power, is represented equally.

Many countries of the region remain in political transition, some with uncertain direction. In 1985, the President of Palau was assassinated during a period of heated conflict over US demands that the draft Compact of Free Association include continuing military base rights and options. Three years later, in August 1988, following continued conflict over the nuclear issue, Palau's second President, Lazarus Salii, died of a gunshot wound to the head after twenty-one years of seeking to attain Compact ratification. Fiji, once the region's most stable democracy, underwent two coups in 1987, followed by repression and violence. The same year saw turbulent demonstrations for independence in French Polynesia. The independence movement in New Caledonia led to hostage taking in April 1986, with thirty people killed. Two months later, neighbouring Vanuatu experienced incidents of street rioting by groups hostile to the Lini Government. Parliamentary democracy in Papua New Guinea is also under strain, with internal pressures for regional autonomy resulting in national instability. Despite these examples of internal divisions and the trauma of rapidly evolving political systems at national level, the fraternal relationship between the island countries is strengthening. A new breed of young, more aggressive leaders is emerging throughout the South Pacific; leaders who tend to place regional loyalties above long-standing relationships with former colonial powers.

This brief section on unity in diversity ends with a second poignant quote from Salii, written sixteen years before his death, because it expresses with such clarity the importance of regional cohesion which is a central theme of this book:

> We must concede that thus far in our history, it has always been the threatening presence of foreigners, of conqueror-liberators, which has united us. Fear of what others might do to our islands has united us. And yet, perhaps Micronesians would do well to remember that no matter what status we achieve, our islands will always be small, our numbers will always be limited. Micronesia will always be threatened and, for this reason, we must always remain united. The interests of the great powers swing back and forth like a pendulum over our islands; the pendulum swings from one side to another, moving away and returning, but never ceasing to hang above us, never forgetting our presence down below. In the days and years to come there will be ample reason for our islands to remain together and there is hope, only hope, that in time we may find something more than fear to unite us (Salii 1973).

Salii lived to see that hope realized, in part at least, through the united approach taken to environmental problems by the island governments of the region.

Shared Problems — Shared Solutions

Political developments of the past few decades in the South Pacific have been entwined with growing concerns for environmental matters, and with it has come a strengthening regional cohesion. Ultimately, responsibility for integrating environmental concerns into the development process rests with individual island governments. Yet, the initiative and motivation for such integration has frequently stemmed from co-operative action which has further enhanced regional unity. For example, many island politicians, particularly those from Melanesian and Micronesian countries, view the anti-nuclear movement as synonymous with the independence movement, both leading to the flowering of regional chauvinism (Van Dyke *et al.* 1984). The nuclear debate has been of continuing interest to the South Pacific Forum since its inception fifteen years ago. This has forced discussion of environmental problems in the context of testing nuclear devices, nuclear waste disposal and the need to conserve the island way of life. Opposition to nuclear activity provided the stimulus for co-operative discussions leading to the creation, during the mid-1980s, of a regional environment program and, associated with it, several legal regional agreements on environment protection.

The South Pacific Regional Environment Program (SPREP). This Program is an institutional structure created by island governments to co-ordinate international and national environment protection effort in the region. It will oversee the implementation of two related conventions once they enter into force: the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (the SPREP Convention) and the Convention on Conservation of Nature in the South Pacific (the Apia Convention). A third regional agreement which furthers the objectives of SPREP is the Raratonga South Pacific Nuclear Free Zone Treaty (NFZT). This management framework provides an opportunity for aid organizations to allocate, on a co-ordinated basis, a larger portion of total South Pacific aid to environmentally sound projects and assessment procedures which may promote sustainable development.

SPREP and its legal instruments (see Chapters 5, 6 and 7) are products of a united effort by island countries to address their shared environmental problems. Foreign aid is both a major part of those problems and the key to a successful response to them. Whether appropriate help can be delivered largely depends upon a recognition of the problems by aid organizations and their inclination and capacity to promote sustainable development in the region. Island countries will need to temper their aid expectations according to how far the aid community can itself adapt to meet the world-wide environmental challenge. Within both donor organizations and the recipient governments there remains a wide gap between formal environmental policies and their effective application through the administrative and technical mechanisms available.

CHAPTER 2

Regional Constraints to Sustainable Development

THE axiom embraced by the World Conservation Strategy that the conservation of resources is fundamental to their sustainable development, is acutely relevant to island communities. Their distinctive characteristics place absolute limits on the nature and extent of development (Box 1). These regional constraints are the small size of islands, constraining their capacity for growth; their extreme isolation within the world's largest ocean; their biological instability and vulnerability to disturbance; and the problems of increasing human population placing greater demands on limited natural resources. The relationship between island communities and the natural land and water systems which sustain them is made all the more complicated by the frequency of natural catastrophes such as cyclones.

As well as these physical and biological constraints, there are also political and socio-economic factors which limit the effectiveness of environmental management measures. The lack of scientific data and the inadequate understanding of the region's ecosystems mean that development usually proceeds in ignorance of the consequences and in the absence of measures to counter any negative environmental effects. A shortage of skilled personnel, an overriding focus on short-term political and economic pressures, and the concentration of decision-making and authority in small, centralized bureaucratic elites compounds this limited awareness. Not only do administrations tend to have insufficient contact with the predominantly rural and coastal communities they serve, but the fragmentation of environmental authority and sectoral competition make it difficult to translate environmental policy into effective action. Island governments and donors alike suffer this problem, as well as the lack of an effective institutional or technical framework for integrating environmental considerations continuously into economic development decisions (Horberry 1986). Because these constraining variables are integral to the issues discussed later, they will now be described in more detail.

Islands—Their Limits to Growth

A consequence of island living is that land-use usually occurs close to the sea and can affect marine habitats directly. Environmental disturbance occurring in the coastal and marine environment of islands is frequently a problem of land-use control. It can be associated with port and causeway development, for example, or forestry and agriculture. Coral reefs, durable under natural conditions, have proven highly fragile and easily degraded under man's influence (Dahl 1985). Traditionally, island communities have obtained most of their protein from the sea, in some cases up to 90 per cent (Johannes 1978). Yet land development and modern fishing methods are placing traditional fishing and subsistence gathering areas under pressure. Coral reefs are unable to sustain exploitation on a large scale despite their high rates of productivity (Grigg 1979). In most countries,

Box 1

Island characteristics and their constraints on sustainable development

Ecological characteristics:
- small size;
- narrow range of natural resources;
- little natural organic biological diversity;
- distance from continents and external competition fosters species endemism;
- generally little overall climatic variability, but potential for climatic upsets;
- ecological vulnerability; and
- tendency toward ecologic instability when isolation is breached.

Geographical characteristics:
- relative isolation;
- a completely circumferential sea frontier and EEZ, giving a high ratio of EEZ to island land mass resulting in very high importance of sea versus land resources;
- no internal land transport option to link the islands making up a polity or to link the island to other countries, only air and sea transport; and
- no interior hinterland or central terrestrial core area that is essentially distant from the sea such that coastal resource planning and management is essentially synonymous with national resource planning and management.

Socio-economic characteristics:
- more dependent on foreign trade than large countries and having less influence on the terms in which that trade is carried on;
- a narrow range of resources and, hence, specialized economies;
- heavily dependent on one or more large foreign companies;
- dependent for key services on external institutions such as universities, regional training facilities, banking and marketing arrangements;
- a narrow range of local skills and specific difficulty in matching local skills with jobs;
- difficulty in providing some infrastructure services as there may be costly diseconomies of scale in the provision of such services; and
- a small gross domestic product such that import substitution industries may face special difficulties.

Source: Towle, E. *The Island Microcosm*, prepared for the US National Park Service under contract to the US Agency for International Development, 1983.

islanders cannot turn to the land for adequate alternative sustenance because limited space, poor soil quality and unreliable fresh water supply, particularly on atolls, severely restrict the terrestrial food supply.

Islands have little capacity to absorb disturbance so that degradation, once initiated, is rapid and difficult to control. It is not uncommon for 80 per cent or more of the plant and animal species on an island to be endemic (SPREP 1985) and they are therefore very vulnerable to changes in the ecosystems which support them. Not surprisingly then, the region has the world's highest proportion of endangered species per unit of land area or per inhabitant. There are, for example, approximately seven times more endangered bird species per capita in the South Pacific than in the Caribbean, fifty times more than in South America, and a hundred times more than in North America or Africa (Dahl 1984; Hay 1985). The marine environment of Pacific islands shares similar severe limits

to growth to the land areas. Each system requires sensitive management if its human use is to be sustained.

'Tyranny of Distance'

The Pacific communities are subject to the 'tyranny of distance' in a way that is often forgotten and rarely appreciated elsewhere. Restrictions imposed by poor telephone services, infrequent transport services and slow mails are prosaic but very real. More tangible in economic terms is the effect of distance on trade. Rising transport costs, larger vessels and containerization, fewer shipping services and ports of entry, and more stringent safety regulations have made it difficult, sometimes impossible, for Pacific island countries to compete in the international market place. Similar problems of distance and economies of scale apply to air transport. Ward (1985) points out that most of the South Pacific countries are at least 2000 kilometres from their nearest significant market, and half the world away from their major copra market. These constraints of transport and communication are far-reaching in determining the most appropriate type and scale of economic development which will lead to eventual self-reliance. Most important to the concerns of this study is the effect of these constraints in seriously reducing the ability of the Pacific island countries to work together to address shared problems, without total dependence on outside assistance.

Another communication problem related to isolation and distance is language. The official languages of the region are French and English, providing the medium for intra-regional and international discussion. However, French or English is rarely the first or second language of islanders. Even within countries, communication is not straightforward since there are often situations where neighbouring villages cannot understand each other's language. There are almost 1000 languages in the South Pacific: one for every 5000 people, not a situation conducive to co-operative action on pressing problems.

Population Pressure

The total population of the region is currently about five million. The recent gradual redistribution of this relatively small number of people, from outlying to more central islands, from rural to urban centres and from the mountains to the coast, is making population pressure one of the primary causes of long-term environmental disturbance in the region.

Some 97 per cent of the Pacific islanders (excluding Papua New Guinea) now live in coastal areas and an estimated 82 per cent remain in the rural sector, although a significant proportion of rural residents are economically dependent on the urban sector. Rural/urban drift continues and towns are expanding rapidly as migrants are attracted by paid jobs in urban centres. The population movement is concentrating human wastes and intensifying the environmental effects of industrial and other developments. Ebeye, a small atoll in the Marshall Islands, supports the highest urban population density in the world with 5000 people in an area of less than 0.26 square kilometres (Connell 1981). Availability of jobs at a US military base on a nearby island is the cause of this squalid conglomeration. These pressures will increase. By the year 2000, the regional population is expected to rise by 77 per cent (ESCAP 1985a). The Solomon Islands and the Northern Marianas, for example, have two of the highest population growth rates in the world — 3.4 per cent and 4.4 per cent per year respectively (Table 1.1; Fairbairn 1985).

An expanding population is tied to a growing demand for jobs and for social services and welfare, a situation which can undermine the growth capacity and potential for self-sufficiency of a developing economy. The capacity to invest in measures for sustainable development is reduced. The US Office of Technology Assessment considers that, unless resident populations on the US affiliated islands of the Pacific are stabilized (through reduction in population growth rates or continued emigration), substantial improvements in self-reliance are unlikely (US/OTA 1987a). Already, the population of some islands is nearing or has exceeded the limit of environmental tolerance. Populations may become too great to be sustained by island resources but, ironically for most South Pacific countries, they may still remain too small to provide the breadth of specialist expertise to cope unaided with the worsening environmental problems so generated. Economic development, migration and population growth are interdependent and together are leading to a disintegration of the traditional systems of management and conservation which have long guided the use of resources in subsistence island communities.

Traditional Practice

As traditional knowledge fades, there is growing evidence that Western approaches to resource management are not always applicable in the tropical Pacific (Gawell 1981; Gomez and Yapp 1985). Certainly, in a modern world, traditional ways are not always appropriate to sustainable use of resources, and it is often difficult to integrate traditional practices, such as systems of collective marine and land tenure, with modern environmental planning and management. But until recently, the approach has been to discard traditional processes as irrelevant to modern resource development methods. However, effective responses to the environmental problems of the region must incorporate the best of both worlds — the traditional and the modern. Traditional practices can indeed hamper properly planned modern development, and are often inadequate to deal with modern pollution problems, but many traditional practices and laws are based on a rich knowledge of natural processes and have ensured sound environmental management over generations. Such wisdom must be carefully preserved.

The people of Vanuatu have a saying: 'The ground is like our roof. If we do not care for it, it will not shelter us and we will die out' (Eaton 1985). This kind of conservation ethic is expressed in customary tenure and taboos and has provided for communal control over the exploitation of natural resources. In the Cook Islands, access to land, crops or fishing areas was controlled through *ra'ui* or customary prohibition by the appropriate chief. A coconut leaf for example, was strapped to a long pole set up on the beach near tabooed reef-pools or tied around a tree on the path to a prohibited area (Crocombe 1964; Eaton 1985). In the Tikopian community of the Solomon Islands, chiefs could impose a closed season on a major food-crop by a declaration at a public meeting; and in the Tuamotus Islands, high priests frequently placed restrictions through religious rites on fishing and bird catching. Regional taboos of this kind on certain activities in sacred areas have long been effective in facilitating sustainable resource use (Chapman 1985).

Developers have not always been able to ignore traditional views. For example, after spending several million kina on feasibility studies for the Lae Harbour redevelopment scheme, in 1984, the Government of Papua New Guinea cancelled its plans following strong opposition from traditional owners concerned about the potential impact of the development on their subsistence fishing grounds. The villagers had not first been consulted about the project. In the Cook

by development from decision-making tends also to exclude the effective representation of environmental interests.

It is not merely the participation of local communities in an environmental assessment process which is important here. There is also the need to investigate alternative strategies to land ownership and conservation appropriate for the region, a fact underlined by Iosefatu Reti:

> Such strategies should be flexible and should be based on recognition and respect for the communal nature of land ownership rather than seeking the alienation of protected areas in separate title. It should also provide for the reality of traditional patterns of resource ownership, use and control and for some economic return to the community (Reti and Thomas 1987).

Scientific information. Uncertainty about the environmental effects of any development indicates a lack of information about the ecosystems of Oceania. Without such information it is not possible to predict what will happen or assess what has happened following development. All stages of the environmental assessment process are impeded. Where it is not possible to evaluate the limits to exploitation of a resource, the principles of sustainable development are difficult to apply.

Natural resource surveys and inventories provide opportunities to promote conservation policies. However, as Iosefatu Reti notes: 'The surveys are expensive and it is beyond both the financial and technical resources of most island countries to undertake them' (Reti and Thomas 1987). Aid has a crucial role in facilitating such baseline surveys. The resource data, for example, need to be supported by information about the changes in the status of local resources and levels of pollution over time. The OECD Group considered this lack of baseline data and monitoring to be one of the most serious obstacles to effective environmental and resource management (OECD 1986). However, in their evaluation of SPREP Country Reports, Dahl and Baumgart (1982) concluded that:

> Overall, assessment of environmental impact of policies and projects in the Pacific region is well behind the basic data available, and the development of assessment skills relevant to these environments is urgent if future development is to be environmentally sound.

It will be some time before the Pacific island countries can expect to manage their natural resources on the basis of rigorous and lengthy scientific research. Establishing accurate tolerances to pollution of island land and marine communities requires decades of complex work. Part of the problem is the accessibility of information and its evaluation once gathered. It must be collated and disseminated in useable form. Some of this information, as described previously, is in the form of traditional environmental practices and knowledge which could make an important contribution to assessment and survey work. People in coastal villages are valuable sources of information for pollution and other kinds of environmental degradation. For example, island fishermen need to be consulted concerning important migration routes and spawning aggregation sites of lagoon food fish before any coastal development occurs. Johannes (1981b) observes that the recording and evaluation of traditional knowledge and controls need not await confirmation by modern research findings for 'allowing it to vanish amounts to throwing away the results of centuries of priceless research'. Island methods cannot replace modern science, but given the limited expertise in the region, and the time and substantial costs involved, current environmental problems need to be tackled through community involvement in survey and assessment work. Simple and cheap methods are needed to gather information for scientists and people without a scientific background. This approach is adopted in

the SPC Coral Reef Monitoring Handbook for Use in the South Pacific (Dahl 1981) and is being tested in a number of SPREP training projects (Birkland 1985).

Skilled personnel for environmental management. The dearth of environmental expertise in the South Pacific is a perennial problem. It evoked serious concern at the SPC 1971 Regional Symposium on Conservation of Nature. The Cook Islands delegate, for example, lamented that excessive amounts of fertilizer, often of the wrong kind, were being applied to farm land due to ignorance, inadequate training or lack of expert staff. He stated that 'practically no scientific tests or observations have been made of the effects on the soils of these fertilizers or of the use of pesticides, because of the lack of qualified staff. With the average wage rate of $NZ2000 per annum regarded as a moderately good salary, there is little incentive for a well trained technical officer to remain in the islands' (SPC 1973).

Eleven years later, the SPREP Country Report Review noted:

> The country reports give a picture of development and change which is taking place at too fast a rate for the number of trained people available and their level of experience. There is a shortage of graduates in the area, and it seems especially difficult to retain them in the environment field...Two areas of special concern which arise from country reports are the lack of skills in environmental assessment, and a lack of comprehensive experience in environmental legislation (Dahl and Baumgart 1982).

Another five years on, Iosefatu Reti reports that:

> Also arising from the generally low priority given to conservation and environmental management, is a relative scarcity of personnel working in these fields. Where these people exist, they are often over-worked and see the pressing problems of day-to-day field management as their immediate priority. Frequently, they lack the seniority to make the decisions necessary for progress on projects and must seek this from higher levels. This can involve a lengthy process of referral, particularly if the Conservation Officer is only 'attached' to, or works in isolation in, a multi-functional ministry or department where other priorities dominate (Reti and Thomas 1987).

The lack of technically trained personnel will continue to inhibit the implementation, enforcement and monitoring of environmental policies in island countries. The situation is improving within secondary schools and universities but there must be effective training of local policy makers and officers in all levels of government if the current uncertainty about the role of environmental assessment and its application to the decision-making process is to be overcome.

Institutional constraints. Table 2.1 shows that Pacific island countries are progressing in their legal and institutional responses to the range of environmental problems confronting them. Yet, there remain serious resource limitations and difficulties in making newly introduced structures work effectively, as illustrated in the following review of institutional reform throughout the region.

The US affiliated islands, as the former US Trust Territories, were bound to apply US Environment Protection Agency (EPA) regulations with the assistance of EPA expertise and annual grants. Now, the affiliated islands are seeking less sophisticated mechanisms for local administration. The drinking water quality monitoring programs, for example, were dependent on mainland expertise. Sampling was carried out by the local environment boards, set up by the USA, but the data were processed in Hawaii or mainland EPA centres with minimal practical feedback. This kind of dependence will take many years to overcome.

The Federated States of Micronesia and three other Micronesian countries—Palau, Marshall Islands and Northern Marianas—are gaining from the

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The lack of technically trained personnel will continue to inhibit the implementation, enforcement and monitoring of environmental policies in island countries. The situation is improving within secondary schools and universities but there must be effective training of local policy makers and officers in all levels of government if the current uncertainty about the role of environmental assessment and its application to the decision-making process is to be overcome.

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Table 2.1 Environmental impact assessment (EIA) of development proposals in South Pacific countries.

	EIA normally undertaken by outside experts	EIA rarely undertaken	EIA undertaken on an *ad hoc* basis	Partial statutory integration of EIA requirements	Advanced statutory integration of EIA requirements
American Samoa	+[a]			+[b]	
Cook Islands	+	+	+		
Federated States of Micronesia	+	+		+[b]	
Fiji	+[a]	+	+		
French Polynesia				+	
Guam					+[b]
Kiribati	+	+	+		
Marshall Is	+	+		+[b]	
Nauru	+	+	+		
New Caledonia				+	
Niue	+	+	+		
Northern Mariana Is	+[a]			+[b]	
Palau	+	+		+[b]	
Papua New Guinea	+[a]				+
Pitcairn	+	+	+		
Solomon Is	+	+	+		
Tokelau	+	+	+		
Tonga	+	+	+		
Tuvalu	+	+	+		
Vanuatu	+	+	+		
Wallis & Futuna	+	+	+		
Western Samoa	+	+	+		

[a] Participation by local institutions and experts increasingly common.
[b] Includes partial application of US EPA Regulations and regulations governing other US Federated Programs.

experience and guidance of neighbouring Guam. The island of Guam, as the most urban of the countries in the region, is the largest producer of hazardous waste per unit area, but it has developed the most advanced pollution control system. Guam was the first to establish an independent Environment Protection Agency in 1973, with programs and standards for the control of air, water and toxic chemical pollution. Currently, Guam is experiencing a tourist development boom and the associated waste disposal and land clearing problems have led the Guam EPA to call for the establishment of more refined planning and land-use policies and the introduction of regulations for mandatory environmental assessment of development proposals (SPREP 1988).

In 1984, Guam was the only island administration conducting comprehensive regular monitoring of coastal waters. At that time, thirteen of the twenty-two SPREP island countries had occasional or no monitoring of coastal waters (Brodie and Morrison 1984). By 1988, however, even the smaller countries were attempting to address the problem. The Marshall Islands, for example, undertook a 1986-87 water pollution control program involving monthly coastal monitoring for fecal bacteria at major population centres, as well as regulation and

monitoring of oil and refuse dumping in the ocean (SPREP 1986a). The Republic of the Marshall Islands has accepted broad obligations to safeguard environmental quality under Section VI of the Compact of Association with the USA.

Since the Federated States of Micronesia gained independence in 1987, the authority of the FSM EPA within the local administration has been upgraded. Two of the Federation's four states, Yap and Kosrae, enacted legislation to establish environmental regulatory agencies, while the other two, Truk and Pohnpei, are in the process of doing so. All face the problem of attracting adequate resources and expertise. Palau, which received full support from the US EPA until mid-1988, also faces the requirement of greater local contribution. Like FSM, Palau upgraded its Environmental Quality Protection Board, placing it directly under the Office of the President to improve co-ordination with other departments and ministries. Yet, enforcement of environmental standards remains a problem, as it does in other Micronesian states, due to a lack of staff and limited public awareness. Even when prosecutions have been mounted, for example to control fishing with explosives, these have failed because of extended family ties and the reluctance of witnesses to testify.

The French Territories have also found mainland environmental protection statutes and administrative procedures to be ill-fitting and so are developing systems tailored to local conditions. In 1985, French Polynesia set up an agency to co-ordinate all environment-related activities in the Territory, including the development of pollution control regulations for industry, farming and household effluents. Environmental monitoring and assessment work in French Polynesia and New Caledonia has been facilitated by the presence of the French research organizations ORSTOM and IFREMER. The research centre LESE, based in Papeete, is also undertaking important environmental monitoring work in French Polynesia, as is Cirad and the Institute Pasteur in New Caledonia which have generated a great deal of information about ecological and nature conservation issues. New Caledonia has enacted a wide range of legislative provisions over the past fifteen years relating to conservation both on land and in the marine environment. But this legislation has been implemented with varying commitment and success. The country has no independent environment office to co-ordinate environment work and to ensure standards are met. The government has appointed a Minister for the Environment and important initiatives have been taken in establishing protected areas, but major environmental problems remain to be effectively addressed, particularly the rehabilitation of land denuded by mining and inadequate land-use planning and sewage treatment in the urban areas.

Papua New Guinea also has severe problems in planning and regulating urban development, but it has made good progress in introducing legislation covering other conservation and environment management fields (ADB 1987). In 1974, PNG was second only to Guam in establishing an Office of Environment and Conservation to develop and implement planning, conservation and contaminant statues. These laws are now influencing the course of economic development; for example, in mining, forestry, palm oil and fish processing. Environmental impact assessments of development proposals can be required by law, prepared in English and in two other local vernaculars, and for major developments the proponent can be required to submit environmental management and monitoring reports at any stage during the development. Despite having one of the most comprehensive legislative frameworks for environment control, a lack of expertise, appropriate standards and information

on the natural systems of the areas to be developed hampers legal implementation. Serious staff shortages prevent effective site inspection work and enforcement of environmental conditions and standards. The government has severely cut the Department's budget over recent years which has limited its capacity to fulfil its mandate and restricted the level of co-operation received from other government agencies.

The Solomon Islands, like Papua New Guinea, is now trying to make maximum use of traditional environmental knowledge in planning and development decisions. But, whereas Papua New Guinea has led the region in experiments to promote local management for protected areas, there is no form of provision for such initiatives in the Solomon Islands. In 1985, an Environment Division was established in the Ministry of Natural Resources but it has no specific legislative backing and relies on provisions in the legislation administered by other government agencies to effect limited environmental assessments. The Natural Resources Ministry has not been supportive of the Division but some progress has been made to introduce environment provisions within mining and forestry legislation and, most importantly, to enact a statute for environmental assessment and the establishment of an Environmental Assessment Committee comprising representatives of all the key ministries. Yet, at the current level of resources and staffing for environment work, it is difficult to see how the new legislative framework could operate effectively (Baines and Hite 1988; SPREP 1988).

Vanuatu established an Environment Unit in 1986 within the Ministry of Lands, Minerals and Fisheries. In the same year, the Council of Ministers directed that environmental impact statements were to be prepared by proponents of major developments. Environmental assessment procedures were introduced in 1987 and, to date, two statements have been prepared, both for hotel development proposals. Provisions within various Acts relate to environment protection but the lack of specific environmental legislation limits the work of the Unit at this stage. Compared with its Melanesian neighbours, Vanuatu is relatively free of large scale development pressure and associated environmental problems. It has a little more time to put in place the institutional structures necessary for environmental planning and management and to tackle the common problems of limited funds and trained personnel.

Fiji is in a different situation with resource exploitation and major development continuing at a rapidly growing pace. Fiji is the most industrialized of the South Pacific countries but its record of government response to environment protection and conservation is not encouraging. Like New Caledonia, a range of provisions exist within public health, factories and forestry Acts for nominal protection of wildlife and for the maintenance of water quality and habitats. Yet, the majority of these have atrophied through lack of standards and guidelines to which these laws can be applied and some are obsolete, having been introduced during the colonial British administration.

In 1970, the National Trust of Fiji was established, the only statutory body in the country which has broad legal responsibility for conserving natural heritage. Although a small number of protected areas have been established, primarily with international assistance, the Trust is not well supported by the government and has not succeeded in having protected area and conservation legislation introduced. An Environment Management Committee was established in 1980 to co-ordinate and advise government on environmental matters and some useful environmental studies have been instigated by the Committee. Environmental

impact assessments and monitoring programs have been required of some major developments, such as the Monosavu Hydro Electric Power Development and the Drasa Sawmill/Chipmill Complex in Lautoka. The University of the South Pacific, situated in Suva, has assisted in these studies. But, at present, there is little environmental planning and management capability within most government departments, including those involved in licensing and certification and project approvals. Co-ordination between and within agencies in project planning and assessment is lacking. In 1988, positions were advertised for the establishment of an Environmental Management Unit within the Directorate of Town and Country Planning, an initiative that the Committee has pressed for during the past eight years. The Unit will require strong legislative backing with associated environmental guidelines and standards if planning decisions are not to continue on a haphazard basis.

Shanta Sutton (1988), an energy analyst with the Fiji Government, has identified the main institutional constraints to environmental assessment planning in the country as a lack of:

- integrated environmental planning;
- resource assessment and mapping;
- co-ordinating structures;
- policy, policing and monitoring structures;
- funds and trained personnel; and
- standards and other legislation.

Until a concerted attempt is made to address these difficulties the 'override principle', where top-ranking administrators and politicians short-circuit the planning process, is likely to continue to shape development in Fiji (Drysdale 1988).

Tonga has been a consistent supporter of SPREP since its inception and has long attempted to raise public awareness about the environment through an annual environment week and regular radio programs sponsored by the government. The primary force behind these activities has been the Superintendent of the Ministry of Lands, Surveys and Natural Resources, Sione Tongilava, who in 1988, was recognized by UNEP in its 'Global 500 awards for outstanding environmental achievements'. Emphasis has been placed on public education and awareness but, currently, there is no legislation in Tonga requiring environmental impact assessment in the development process. In recent years, the increase in the number of new development projects throughout the kingdom and their significant environmental impacts prompted the Division of Lands and Environmental Planning within the Ministry to recommend that an Environmental Impact Assessment policy be adopted for immediate use until appropriate legislation could be developed. To this end, the Tonga Cabinet decided to require the preparation of a series of environmental reports for major developments. Many projects still proceed without environmental assessment, and adequate enforcement of environmental conditions, when imposed, is lacking. These difficulties are receiving attention. In 1988, ESCAP funded, within the context of SPREP, preparation of a National Environment Plan for Tonga and is currently sponsoring the first stage of implementation of the plan which includes the development of legislation and standards.

In **Western Samoa**, conservation and environment issues received a great deal of attention throughout the 1970s with international assistance from IUCN, various United Nations bodies, World Wildlife Fund and New Zealand. Between

1978 and 1981, outside financial and management assistance enabled a major protected area system to be established and conservation measures to be put in place. A National Parks and Reserves Act was introduced in 1974 which complemented environmental provisions within a range of other legislation enacted between 1953 and 1972. Legislation to protect birds was also introduced in 1981. Since that time, the early enthusiasm has waned and staffing and funds allocated to conservation and environment administration have diminished by two-thirds (Table 2.2). Environment related work continues under a number of ministries but the Ministry of Agriculture, Forest and Fisheries has the primary responsibility for promoting and co-ordinating environmental assessment within the country and for instigating the annual national environment week celebrations. Heavy reliance for maintaining environmental quality in the country is still placed on cultural, traditional and oral law pertaining to community life in Samoa.

Table 2.2 Western Samoa park and reserve staffing and funding.

	Total staff	Operating budget (WS tala)
1979	26	66,300
1980	28	45,500
1981	30	42,350
1982	20	36,900
1983	19	38,741
1984	15	21,713
1985	15	25,390

Source: SPREP, *Third South Pacific Parks and Reserves Conference: Conference Report Vol. 2*, Noumea, SPREP/SPC, 1985.

In the **Cook Islands** a similar emphasis has been placed on traditional authority and government-sponsored public education programs. Any form of centralized environment administration is difficult in a country with a population of some 20,000 people occupying 240 square kilometres on fifteen islands covering an area of nearly two million square kilometres of ocean. Each island has its own council with members elected by the people from each village. Environmental impact assessment, particularly in the Northern Cook Group, is carried out through the traditional conservation practice of *ra'ui*, through which the use of certain resources are prohibited for a length of time to allow for replenishment, as described previously in this chapter. Development proposals are assessed by councillors on the basis of their experience and knowledge of the local natural and cultural resources. In important cases, each councillor will go back to his own village and call a meeting to hear his own people's views.

The practice of *ra'ui* is not coping as well in the Southern Cook Islands which are experiencing more intensive development pressures involving substantial foreign investment. Increasing coastal and hillside erosion from uncontrolled land-use prompted the government, in 1987, to establish an independent Conservation Service to implement new conservation legislation (The Conservation Act 1986-87). It is a broad-based statute which recognizes the need for environmental assessment and management plans without making them mandatory, leaving the way open for the *ra'ui* method of community consultation and assessment where appropriate. Currently, the new legislation applies in full only on the two most urbanized Cook Islands.

The Cook Islands hosted the 1982 Conference on the Human Environment in the South Pacific and, since then, has had a strong policy commitment to environment protection. Yet, like other island countries, it is struggling to develop the most appropriate environment assessment and management framework within a growing modern administration and with new technologies while respecting the predominance of customary ownership and control over natural resources.

Financial Constraints

Funding limitations overshadow all other constraints. SPREP has provided the means for member countries to pool their scarce resources but a much greater input from donors to support environmental initiatives and country requests through the Program is crucial to further progress. At present, the level of funds applied to economic development is not being balanced by an adequate financial commitment to maintenance of the environment and natural resources on which development depends. The central problem lies in the bilateral negotiations which continue between island governments and donors. The shopping list of development projects is usually a long one. Projects concerned with the environment are often viewed by both parties as competing with development interests. Projects conventionally regarded as contributing to economic growth are given higher priority than those which are not. The integration of environmental factors within development projects and the appreciation of the economic values of projects concerned with environmental enhancement or conservation is still not reflected effectively in the aid programs moulded by island governments and donors.

This dilemma is well illustrated in the following extract from the report of the Western Samoa Department of Agriculture, Forests and Fisheries to the Third South Pacific Conference on National Parks and Reserves:

> Proper management is greatly dependent upon the availability of adequate funds to apply to that management. National park and reserves funding has actually decreased in recent years (Table 2.2). At the same time, the purchasing power of Samoan tala has diminished. Resolution of this problem is difficult in a country which depends upon outside aid for 78 per cent of its operating budget. A scarcity of outside funds due to a depressed world economy, coupled with the Government of Western Samoa's emphasis upon projects which promote economic self-reliance, makes it difficult to compete with large development projects which have greater or quicker projected paybacks than investments in parks and reserves. Only when government accepts the premise that preserving wild land intact is a valid land-use, an investment in the future, will parks and reserves be able to compete equally with other land-use and development projects (SPREP 1985b).

Conclusion

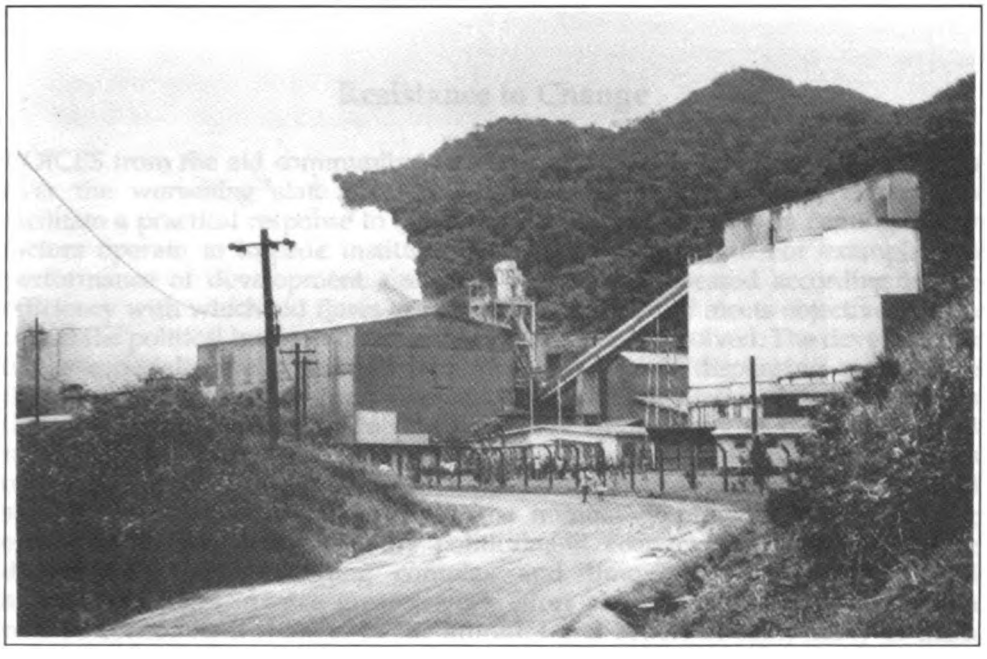
Although there is cause for optimism in the degree of national response to environmental problems, the various constraints identified in this section continue to undermine this effort. Even where the legal instruments are available, local administrators are not trained to apply them in defining the problems and asking the appropriate questions of development plans. Limited staff and resources hinder enforcement of environmental regulations and standards, even where they exist, while the equipment necessary for monitoring is not maintained or replaced and impact assessment procedures as a whole are applied on an *ad hoc*

basis in isolation from the ongoing development planning process. Island administrations frequently follow the European model according to the key resource development and social service sectors. Legal and administrative environmental provisions tend to be scattered across the conventional departmental boundaries without co-ordination. Where formal co-ordinating groups have been instituted as in Fiji, for example, they meet infrequently, lack adequate authority and involve officers of insufficient seniority to affect the activities of their parent departments.

A problem of special concern is the inadequacy of enforcement of environmental standards and requirements and the lack of administrative provision to hold developers, whether donor organization, government agencies or industry, accountable for ensuring that environmental safeguards are met and the negative effects of implemented projects are tackled (Horberry 1986). Effective mechanisms for accountability require that affected local interests can take developers to task for irresponsible activity; that thorough evaluation of projects is undertaken; that the legal means exist for enforcing implementation of environmental study recommendations; and that the 'user pays principle' can be applied, as appropriate, to put right environmental damage. Donors, as the economic force behind most major development, have a crucial role to play in this respect. Generally, however, establishing mechanisms for environmental accountability and standards enforcement does not receive emphasis in development assistance programs in the South Pacific. Island governments and aid organizations have tended to give priority to projects with high political profile and short-term measurable benefits. Yet, the growing determination of island governments to co-operate to promote SPREP will mean that changes occurring in the attitudes and environmental policies of major international aid agencies will begin to be reflected in aid programs for the South Pacific.

PART II

The environment and aid: a global issue



Air pollution is an increasing localized problem on many islands. In Fiji, a cement plant spreads a plume of fine dust over nearby villages. Photo: J. Carew-Reid.

CHAPTER 3

The Environmental Imperative: the Response of the International Aid Community

Resistance to Change

VOICES from the aid community were part of the early chorus raising concerns over the worsening state of the environment. Yet, institutional changes to facilitate a practical response to those concerns have been slow in coming. Many factors operate to impede institutional change of any kind. For example, the performance of development assistance agencies is assessed according to the efficiency with which aid flows to recipient countries and meets objectives which reflect the political interests of the donor governments involved. The development banks especially are concerned with the efficiency of dispensing money, the financial soundness of their projects and the credit worthiness of their borrowers (Runnalls 1986). Banks need to safeguard their credit rating in the international money market. Environmental work tends to be irrelevant to accepted measures of success within the aid community, whether it be the advancement of individual staff members or, at corporate level, the number of projects delivered. Long established procedures honed by political and economic considerations have difficulty in accommodating complex and time-consuming environmental analysis. Changes involve greater work effort and resources. Also, they often require concomitant changes in the attitudes and beliefs of staff, many of them economists who conventionally have viewed the environment as a special interest rather than an integral component of the project cycle. Change is not assured even where there exists strong commitment to new policies at senior level. The implementation of environmental policies at project level requires skills and tools not commonly found in aid organizations.

Despite these impediments to change, important innovations have occurred to provide for environmental assessments of projects funded through development assistance and to increase the level of support for environmental activities within recipient countries. These innovations have spread gradually over the past twenty years, from the first ripple of recognition to a mounting tide of international opinion now being felt throughout the aid community. The main events in this twenty-year period are listed chronologically in Annex 1.

Types of aid organizations. There are four main types of organization within this community each having characteristics influencing its inclination and ability to take on new policy direction.

Bilateral agencies are those of individual donor governments. Total Official Development Assistance (ODA) from all sources for 1986 was almost US$40,000 million, of which bilateral assistance made up about 80 per cent (OECD 1987b).

Multilateral development banks (MDBs), such as the World Bank and Asian Development Bank, function on the contribution of member governments who are represented on each bank's governing council.

International multilateral organizations channel funds through specialist agencies such as those of the United Nations, for example. Other providers of multilateral aid are the European Economic Community (EEC) and the Organization of Petroleum Exporting Countries (OPEC).

Non-government organizations (NGOs) provide multilateral assistance which is becoming increasingly important in terms of quality as well as quantity, now close to 10 per cent of the level of ODA. NGOs, particularly those organizations based in the USA, have played a crucial role in initiating and forcing the pace of change to accommodate environmental issues within the major bilateral and multilateral aid institutions.

Awakening of Environmental Concern in Aid Organizations

Two themes have run parallel during the past two decades of expanding environmental awareness: first, the degrading of Third World environments and the role of development assistance; and, second, the concept of 'sustainable development'. This concept emphasizes the basic needs of the poor and promotes strategies which are environmentally sustainable, are consistent with the social values and institutions of the local community affected, and which encourage participation by that community in the development process (Barbier 1987).

The first ripples of concern: the 1970s. Several observers give the origin of these two themes as the Washington Conference of Ecological Aspects of International Development convened by the US Conservation Foundation in 1968 (Caldwell 1984; Runnalls 1986). The Conference proceedings influenced the decision by the World Bank to introduce a program for dealing with the environmental impacts of its own development projects. That commitment led, in the following year, to the Bank appointing an Ecological Adviser and to the preparation of guidelines for environmental assessment. The Bank claims to be 'the first development assistance institution and the first bank ever to concern itself with the environmental dimensions of development' (Lee 1986). It was in the same year that the US Congress enacted a statute which was to have worldwide implications, the National Environment Policy Act (NEPA). An important role for the newly formed US Council for Environmental Quality (CEQ) was to ensure that all federal agencies met their obligations under NEPA. In 1971, the CEQ recommended amendments to the US Agency for International Development (USAID) regulations which would apply NEPA to all development assistance activities.

Internationally, the climate of opinion was changing rapidly, leading the UN (on an initiative by Sweden and supported by the US and other OECD countries) to propose a Conference on the Human Environment (1972). Third World countries lacked enthusiasm for the event, suspecting the Conference of being a precursor to tighter controls on assistance and to a slowing of development (Runnalls 1986). The President of the Canadian International Development Agency (CIDA), Maurice Strong, was appointed as Secretary-General of the Conference so ensuring that emphasis would be given to the problems of aid and the developing world. Mr Strong went to some lengths to involve developing countries in discussions leading up to the Conference. He convened a meeting at Founex in Switzerland, which, according to David Runnalls, Director of the International Institute for Environment and Development (IIED), 'made the

environment/development debate credible in the Third World' (Runnalls 1986). Yet, the meeting recommendations were formulated primarily to encourage developing countries to control negative effects of development rather than to promote direct action from development assistance agencies (Rich 1985).

The Stockholm Conference on the Human Environment and the establishment of the United Nations Environment Program (UNEP) in 1972 marked the first substantial step forward in official international recognition of the permanent union between development and the environment. In the widely quoted view of the World Bank President, Robert McNamara, at the Stockholm Conference:

> The question is not whether there should be continued economic growth. There must be. Nor is the question whether the impact on the environment must be respected. It has to be. Nor, least of all, is it a question as to whether these two questions are interlocked. They are. The solution of the dilemma resolves clearly not about whether, but about how (McNamara 1972).

The following year, the World Bank increased the number of staff working on environment matters to five and created an Office of Environmental Affairs. At that time it remained the only aid organization to act in a practical way on the Stockholm Conference Declaration.

USAID had been tardy in implementing NEPA, taking the view that the law was primarily intended for federal actions in the domestic arena. The Agency had not been responsive to pressure from Congress nor from lobbying by NGOs, particularly on the question of support for pesticide use in developing countries. In the USA, those in the community with a public interest in protecting the environment have legal standing to take court action to enforce environmental laws. In 1975, a consortium of environmental groups sued USAID for its failure to comply with NEPA, specifically for not preparing an environmental impact statement on the financing of pesticide sales overseas and for not having procedures for systematic review of all USAID projects (Horberry 1985). A settlement quickly followed which resulted in USAID introducing formal environment assessment procedures and conducting a review of pesticide use. To this day, USAID remains the only development assistance agency with detailed and legally enforceable procedures for environmental review.

The mounting tide of international concern: 1977–87. From 1977 to 1981, action by environmental groups led to a series of amendments to the US Foreign Assistance Act which required USAID to assist in the protection and enhancement of the environment and natural resources, specifically 'to maintain and where possible restore the land, vegetation, water, wildlife and other resources upon which depend economic growth and well-being, especially that of the poor'.[1] Thus, USAID was required to broaden its purview from mere environmental assessment of its activities to influencing the nature of development through direct investment in 'environmental' projects. Amendments to the US Foreign Assistance Act concerning international environmental protection are shown in Annex 2. In 1979, USAID introduced the preparation of country environmental profiles to identify the areas in greatest need of support. In the same year, the OECD Environment Ministers met and adopted the Declaration on Anticipatory Environmental Policies in which member countries undertook to 'ensure that environmental considerations are incorporated at an early stage of any decision in all economic and social sectors likely to have significant environmental consequences' and to 'continue to cooperate to the greatest extent possible ... with

[1] Section 18 of the 1977 amendments to the US *Foreign Assistance Act*.

all countries, in particular, developing countries, in order to assist in preventing environmental deterioration'.

The dearth of information on progress being made by aid organizations which had introduced environmental procedures hampered efforts to maintain the pressure of reform. During the late 1970s, US public interest organizations began to turn their attention to environmental performance in the wider aid community. During 1979–80, the IIED reported on two major surveys of environmental procedures and practices, the first covering nine multilateral development agencies (Stein and Johnson 1979), the second, six bilateral agencies (Johnson and Blake 1980). Both reports provided the comprehensive appraisal essential for another major step forward in international aid policies. On the performance of the multilaterals, including the major development banks, the EEC and UNDP, the 1979 survey found that, although the World Bank had made some progress, most lacked:

- clear procedures for the environmental assessment of their projects;
- criteria for assessing environmental impact;
- alternative forms of analysis and accountancy which include long-term social and environmental effects of development projects; and
- personnel with training appropriate to the task of ensuring proper consideration of the environmental dimensions of development projects (Stein and Johnson 1979; Runnalls 1986).

The Johnson and Blake (1980) survey, conducted from 1977 to 1979, of the bilateral aid agencies of Canada, the Federal Republic of Germany, Netherlands, Sweden, United Kingdom and the USA, also found that confusion in the mid–1970s concerning the meaning of 'environment' in the context of development, had been replaced by a general consensus. The bilateral aid agencies agreed that environmental factors were integral to a development assistance process which gave greater weight to sustainable development and to the costs of potential destructive side-effects. Yet, the study reported that 'this new view, however widely accepted theoretically, has still made too little impact on the orientation and design of the projects or practical development policies of the agencies studied' (Johnson and Blake 1980). USAID was found to be the exception largely because the public interest litigation had forced action.

Two other significant events occurred in 1980 which built upon the Stein and Johnson (1979) survey of the multinational institutions. First, a 'Declaration of Environmental Policies and Procedures Relating to Economic Development', based on the IIED Report Recommendations, was prepared under the auspices of UNEP for signature by the nine agencies examined in the study (Annex 3). The Declaration commits the signatories to

- institute procedures for systematic examination of all development activities for their environmental consequences;
- co-operate in ensuring integration of appropriate environmental measures in the design and implementation of economic development;
- give support to projects that are designed to protect, rehabilitate, manage or otherwise enhance the environment;
- seek to improve project appraisal, implementation and evaluation methods, including cost benefit analysis of environmental protection measures; and
- support the development of indigenous capacity of recipient countries to undertake environmental work through training, technical co-operation and information sharing.

Second, the institutions agreed to UNEP establishing the Committee of International Development Institutions on Environment (CIDIE) which would meet annually to report on progress in implementing the Declaration objectives, to exchange information and to encourage co-operative activities.

A further important step forward in 1980 was the launching of the 'World Conservation Strategy' by IUCN in co-operation with the World Wildlife Fund and UNEP. The Strategy was the clearest statement to date of the 'sustainable development' philosophy and represented a major shift by the international conservation movement from the preservation of plants and animals to the notion of conservation for development ensuring the sustainable use of species and ecosystems (IUCN 1980).

During 1980 and 1981, USAID greatly refined its environmental regulations and upgraded its environmental staff at the central, regional and field mission levels. In the meantime, the Netherlands and a number of Nordic countries adopted environmental policies for their aid programs.

In 1982, the OECD Development Assistance Committee and the Environment Committee co-sponsored the creation of the Ad Hoc Group on Environment Assessment and Development Assistance, an initiative in response to the 1979 Declaration of OECD Environment Ministers. The Group comprised member country officials from environment organizations and aid agencies. Its work is of such significance to future changes in direction, particularly within the bilateral aid community, that this is given detailed consideration later in the chapter.

In 1983, the same year that CIDA established an Office of Environmental Adviser, the results of an important survey were released by IUCN and IIED, analyzing environmental procedures and guidelines governing development aid (Horberry 1983). The study concluded that, except in the case of USAID, aid organizations were ineffective in identifying developments with potential to harm the environment. Guidelines and design criteria had proliferated without being systematically applied. Although many guidelines provided useful information, the study concluded that they were of little value unless systematically employed by staff and consultants who had the knowledge and experience to make environmentally sound decisions.

In the next three years, a number of the bilateral agencies made significant progress. West Germany and CIDA introduced comprehensive environmental impact assessment procedures into their aid programs and the British Overseas Development Administration (ODA) established a Natural Resources and Environment Department. The USA continued to lead the field with important and trend-setting policies. In 1984, Congress directed USAID to help developing countries protect and maintain wildlife habitats and develop better wildlife management programs. Two years later, USAID was instructed by Congress to help conserve tropical forests and the biological diversity within developing countries. Yet, in 1986, as discussed later, the OECD Ad Hoc Group on Environmental Assessment and Development Assistance found that, in general, substantial advances were few and far between.

The same period saw an increasingly public and critical scrutiny of the environmental performance of the multilateral development banks, particularly the World Bank, as the dominant force in development assistance (Rich 1985; Horberry 1985; Runnalls 1986). Almost one-fifth of all international development assistance is channelled through the Bank and similar regional institutions such as the Inter-American and Asian Development Banks (OECD 1987b). However, information began to accumulate on environmental problems within many of the

Bank's major projects, involving, for example, road building, deforestation, transmigration and dam construction (Adams 1985; Treece 1987; Roy 1987; Alvares and Billorey 1987). Criticisms concerned the lack of mandatory environmental guidelines, under staffing, inadequate consideration of environmental factors throughout the project cycle, particularly in earlier stages, and insufficient environmental accountability to the public and to governments (Runnalls 1986).

In 1987, the World Bank responded by announcing a major reorganization and new measures to protect the environments of developing countries. The World Bank President, Barber Conable, announced the intention to establish 'a top level environment department' and environmental offices in each of the Bank's four regional departments 'both as environmental watchdogs over bank-supported projects and as scouts and advocates for promising advances in resource management'. According to Mr Conable 'If the World Bank has been part of the problem in the past, I intend to make it a leader in finding solutions' (IUCN 1987). Yet, a number of observers remain sceptical of the likely impact of the reforms (Goldsmith 1987). In the view of Stephen Corry, Director of Survival International, an organization working for the rights of indigenous communities, '...there appears to be an unbridgeable gap between rhetoric and reality. The Bank lacks both the will and the structures to implement its own policies'. Other key activists in the field, such as Jim Barnes, Senior Attorney with the US Environmental Policy Institute, who represents a coalition of NGOs lobbying on the issue, are 'hopeful that the Bank is on the edge of major change' (Milne 1987). As discussed later, strong pressures on the World Bank will continue from the public interest NGOs and from within.

The Brundtland Commission

Of the important events in 1987 influencing the international climate of opinion on development assistance and the environment, the most significant was the report of the United Nations World Commission on Environment and Development (WCED) or Brundtland Commission, named after its Chairman, Gro Brundtland, Prime Minister of Norway. The Commission, established by the General Assembly of the United Nations in 1984, was asked to formulate 'a global agenda for change' specifically:

- to propose long-term environmental strategies for achieving sustainable development by the year 2000 and beyond;
- to recommend ways in which concerns for the environment may be translated into greater co-operation among developing countries and between countries at different stages of economic and social development, which would achieve common objectives interrelating people, resources, environment and development; and
- to consider ways and means by which the international community can deal more effectively with environment concerns (WCED 1987).

Central to the Commission's conclusions was the need to enhance the flow of resources to developing countries. More aid and other forms of finance were necessary but there should be a qualitative as well as a quantitative improvement, with projects and programs being designed for sustainable development and not according to narrow economic criteria which take little account of environmental effects. The Commission urged development agencies, and the World Bank in particular, to 'develop easily useable methodologies to augment their own appraisal techniques and to assist developing countries to improve a capacity for

environmental assessment' (WCED 1987). The World Bank was singled out for special attention because its major influence on economic development and its policy leadership exerted a significant influence on developing countries and donors. Each development assistance agency should establish a high level environment office 'with the authority and resources to ensure that all policies, projects and loan conditions support sustainable development, and prepare and publish annual assessments and reports on progress made and needed' (WCED 1987).

Bilateral aid agencies were also called upon to adopt a new priority and focus in three main areas:

- new measures to ensure that all projects support sustainable development;
- special programs to help restore, protect and improve the ecological basis for development in many developing countries; and
- special programs for strengthening the institutional and professional capacities needed for sustainable development (WCED 1987).

The Commission considered that an important step towards concerted action was taken in 1986 with the adoption by OECD of resolutions prepared by the Ad Hoc Group on Environmental Assessment and Development Assistance and it urged all member governments to implement the OECD Recommendations as quickly as possible. In 1988, IUCN released a strategy to implement the Brundtland Commission Report and adopted numerous resolutions at its general assembly of that year to promote Commission recommendations (IUCN 1988). The recommendations relating specifically to development assistance appear as Annex 4.

OECD Ad Hoc Group on Environmental Assessment and Development Assistance

The OECD Group's first objective was to identify the kinds of development assistance projects and programs most in need of environmental assessment. Its conclusions resulted in an OECD Council Recommendation in 1985 (Annex 5). The Council took the view that member country aid agencies should carry out, in co-operation with the host government, environmental assessment of all significant development assistance projects and programs. Particular attention should be paid to activities specified by the Council which generally correspond to those requiring assessment in OECD countries. The Council pointed out that environmental assessment should be required for all aid activities in certain fragile environments such as coral reefs, mangrove swamps and wetlands.

The OECD Group's findings on its second objective, which was to identify the constraints in developing countries which work against environmental assessments and to identify the means by which those constraints could be overcome, were referred to in Chapter 2. For the South Pacific region at least, similar messages have been broadcast in various reports and forums for almost two decades. This does not detract from the importance of the Group's work but reinforces the need to stimulate regularly the incremental process of institutional change so that ideas, once new and challenging, become widely accepted and the basis for common practice.

The Group's third objective was to examine the experience to date of development assistance agencies in conducting environmental assessments. That work complemented the regular Development Assistance Committee (DAC) reviews of development assistance policies and practices of member countries. Such reviews allow aid agencies to monitor their performance *vis-à-vis* their

counterparts in other countries, and to bring pressure to bear on governments which have been tardy in taking effective action. Comparative information also facilitates the adoption of a common set of principles and procedures when dealing with environmental issues. Almost a decade after the IIED studies on environment and aid, the OECD Group found that institutional reform had not progressed far. Most aid agencies had considered environmental factors in project planning in a general way but few had 'specific procedures or guidelines for routinely and/or systematically identifying the types of development assistance projects and programs which required an environmental assessment' (OECD 1986). Consequently, the application of environmental assessment to development assistance activities was much less advanced than for domestic developments in donor countries.

The fourth and final objective of the OECD was to identify the types of procedures, organization and resources needed to ensure that development assistance programs and projects are assessed on the basis of their environmental impact. On this issue, the Group reached the general conclusion that:

> The environmental assessment process needs to be integrated at an early stage of project and program planning; co-ordinated with the host country government; reflected in the implementation of the activity and followed up by monitoring and post-audit evaluation (OECD 1986).

The final report of the Group led to a second highly significant OECD Council Recommendation in 1986 (Annex 6). The Council called upon governments of member countries to adopt environmental assessment policies for their aid activities and to develop effective procedures for their implementation. Governments were also urged to provide adequate human and financial resources for the task, both within aid agencies and developing countries.

In November 1987, the OECD organized a major seminar on 'Strengthening Environmental Co-operation with Developing Countries' as an initial follow-up to the Council recommendations. It was attended by representatives from forty-six countries, of which twenty-two were from developing nations. Three main ways to strengthen environmental co-operation between donors and recipients were identified. These are for aid agencies to:

- support environmentally beneficial projects;
- apply environmental impact assessment to conventional aid projects; and
- provide for environmental assessment training and technical services.

In response to its key objective to consider the most appropriate approaches to carrying out environmental assessments on donor-assisted activities, the Seminar called on all development aid agencies to take immediate steps to implement the OECD Council recommendations. Developing countries and aid agencies were asked to initiate assessments at an early stage in project planning involving joint donor/recipient teams, and to include monitoring of the project during its construction and operation (Wheeler 1987).

Perhaps the most important message to come from the developing country representatives at the Seminar was that donors should not always rely on specific requests for environmental projects but should take a strong initiative in promoting sustainable, environmentally sound development through aid.

Recent Progress

This chapter can be concluded on a positive note. In the last two years of the twenty-year period under review (1967–88), most multilateral and bilateral aid

agencies have come to recognize the environment as a central issue in development systems and are taking steps to respond to the 1985 and 1986 OECD Council recommendations. This was the conclusion drawn by the OECD Development Assistance Committee at its December 1988 meeting to discuss the issue of environmental co-operation with developing countries.

The Committee found that most DAC members and related multilateral agencies had adopted 'environmental policies' which varied in form and status from legislative mandates to internal guidelines. All appeared to have recognized that there were three essential components to an environmental policy (as identified at the 1987 OECD Seminar). These components are: specific projects for upgrading the environment, environmental assessment procedures for conventional aid projects and measures to strengthen the capability of developing countries to deal with environmental issues. Yet, although there had been a quick response in adopting appropriate policies, there had not been the same willingness to establish the necessary in-house institutional support to implement them. With the exception of USAID and CIDA, no bilateral agencies had created an environmental unit or adequately increased environmental expertise within existing technical divisions, steps necessary to fulfilling their ambitious policy aspirations (OECD 1988).

Of the three essential policy components, specific environmental projects and programs were attracting the most attention (see Chapter 4). On the other hand, few OECD member countries had taken steps to fully implement the OECD 1986 recommendations on measures required to facilitate the environmental assessment of aid projects. Most aid agencies had examined the adequacy of their present procedures with respect to implementing an environmental policy, and consequently, many were in the process of preparing assessment procedures. However, few had taken steps to address the associated recommendations relating to institutional arrangements and resources. Although a wide variety of environmental assessment procedures were being developed, very few aid agencies had carried out assessments in the field, with or without the involvement of officials of the recipient government. Only Canada, the United States and to a lesser extent West Germany, which have been implementing their assessment procedures for some time, had succeeded in actively involving host country officials in assessments, and had moved away from reliance solely on consultant firms and aid agency expertise.

The efforts of donors in strengthening the capacity of developing countries to formulate and implement their own coherent environmental policies remained limited. Even in this field, however, aid is increasing. Information on natural resources and the environment is improving and developing countries have been helped in preparing strategies for action based on environmental and resource profiles. Experts and advisers are being provided on long-term secondments to strengthen the environmental competence of government institutions in host countries; mounting resources are being applied to the preparation of appropriate education materials; and the number of environmental training courses for government officials and teachers is increasing dramatically. These important advances in the delivery of aid are undermined by limited donor co-ordination, a problem which becomes more serious as aid programs become more complex.

The purpose of this chapter, and the one to follow on current influences on aid policy, is to give heart to the island governments of the South Pacific and the aid organizations operating in the region by showing the great strides in awareness

and practice which have occurred in the international arena during the past twenty years. To some extent, the South Pacific region has been a neglected backwater with respect to the aid-environment debate. Awareness within island governments of what is being achieved in other areas of the world will enable them to use these precedents to promote their own cause more effectively in aid negotiations.

CHAPTER 4

Current Trends Affecting Aid Policy

THERE are no official development assistance agencies, either multilateral or bilateral, which can claim to be specialist aid agencies for the South Pacific. New Zealand and Australia have been increasing their development ties with the region, while the USA and France have been intimately concerned with the development of their Pacific territories. Of the multilateral agencies, the Economic and Social Commission for Asia and the Pacific (ESCAP) and the Asian Development Bank are perhaps the most closely linked to the Pacific, but the small land areas and populations of the islands mean that the operations of these agencies in the region constitute only a small part of their total aid programs.

Even though the South Pacific tends not to be the primary focus of the major donors, there is now an expanding range of avenues through which island governments can ensure that their interests are effectively brought to the notice of the international aid community. This chapter examines some of the main ways in which governments and non-government organizations can pressure the aid donors for greater commitment to environmental issues. It lends support to the argument developed later in the book, that island governments can, through active participation in international fora, through nurturing their networks of domestic and regional non-government organizations, and seizing upon initiatives and new methods being used by aid agencies elsewhere in the world, harness the power of development assistance rather than be driven by it.

Expanding Support for Reform

Recent years have seen advocates of sustainable development seeking to broaden the base from which pressure could be applied to the aid community. This has been achieved in a number of ways.

International co-operative agreements. One avenue of increasing importance is the promotion of co-operation through international agreements. The Brundtland Commission, for example, called upon governments to accelerate their efforts to strengthen international conventions and co-operative arrangements by:

- acceding to or ratifying existing global and regional conventions dealing with environment and development, and applying them with more vigour and rigour;
- reviewing and revising those relevant conventions that need to be brought into line with the latest available technical and scientific information; and
- negotiating new global and regional conventions or arrangements aimed at promoting co-operation and co-ordination in the field of environment and development (WCED 1987).

One important step, the Commission considered, was for the United Nations General Assembly to prepare a Convention on Environmental Protection and

Sustainable Development setting out the sovereign rights and reciprocal responsibilities in these fields of all states. The Commission submitted to the General Assembly twenty-two proposed legal principles which would form the basis of such a convention. In response to the Brundtland Commission, the IUCN also identified a series of actions to develop legal mechanisms for sustainable development, including the adoption of a Convention on the Conservation of Biological Diversity (IUCN 1988).

There are a number of practical ways in which international agreements can attract greater development assistance and co-operation for environmental protection and for achieving sustainable development goals. Conventions can impose certain obligations upon contracting governments and their aid agencies. Conferences of contracting parties can encourage participation by multilateral and bilateral development agencies as observers. Contracting parties may also decide to open the convention for membership by certain categories of organizations, as occurred in 1983 when the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was amended to allow regional organizations to accede to the Convention. The EEC has since become a party bringing with it substantial development assistance resources which could be applied to meet CITES objectives.

Special resolutions of meetings of parties to conventions also can be influential. The Third Conference of Contracting Parties to the convention on Wetlands of International Importance Especially as Waterfowl Habitat (RAMSAR) in 1987, for example, adopted two resolutions, one concerning the responsibilities of the Convention Bureau in respect of aid organizations and the other, the adoption of wetlands policy by those organizations. The Conference called upon the Bureau to attract aid to wetland conservation projects in recipient countries and to request of donors 'information on measures they have taken to integrate environmental aspects at all stages of projects affecting wetlands, including their planning and implementation, and monitoring the effectiveness of these measures'. The Bureau is required to report on these matters annually to the forty-four Contracting Parties. The recommendation aimed at the development agencies is comprehensive and provides a useful model for conferences of contracting parties to other key environment conventions (Annex 7). It urges the agencies to adopt wetlands policies and programs, to adopt systematic environmental assessment procedures in all stages of the project cycle, to fund projects for rehabilitation and restoration of disturbed environments and to upgrade the ecological expertise both within their own organization and those of developing countries.

Influencing bank policy — the use of national legislation by member states. Another way in which pressure for consideration of environmental issues could be placed on aid donors is by influencing bank policy. The multilateral development banks are increasingly coming under pressure to reform from within. Intensive lobbying by NGOs, initially in the USA and now in Britain and other OECD countries, has attempted to influence the shape of bank policy and practice through their official representatives on bank boards. Control of the World Bank, for example, whose initial finances come from its 151 member states, is vested in a Board of Executive Directors. The five largest contributors (the USA, Britain, West Germany, France and Japan) have the potential to initiate new policy direction, especially if supported by directors from other member states. Yet large bureaucracies, such as the World Bank with some 6000 staff, are not easily manoeuvred even at the bidding of directors. It requires a united board and the sustained commitment of key members. That level of commitment may follow

from a series of exceptional legislative reforms in the United States; reforms that are barely conceivable in Britain, Australia or other countries operating on the Westminster system which favours permissive legislation with enforcement of key provisions left to the discretion of ministers.

In December 1987, the US Congress enacted legislation for the third consecutive year that directs the US Treasury and other agencies to take specified actions promoting sustainable development by the multilateral development banks. The legislation, enacted as part of the Foreign Operations Appropriations Bill for Fiscal Year 1988, directs the US Secretary for Treasury to instruct the US Executive Directors of the multilateral development banks to 'vigorously promote' a commitment by these institutions to:

- add appropriately trained professional staff with expertise and rigorously strengthen training of existing staff in ecology and related areas;
- ensure systematic environmental review of projects;
- ensure that environmental and health officials in the recipient country and environmental and indigenous peoples organizations are fully informed and involved at all stages of the project cycle and in policy-based lendings such as structural adjustment and sectoral loans;
- ensure the active participation of local communities in the planning of projects that may adversely affect them;
- substantially increase the proportion of lending which supports environmentally beneficial projects including technical assistance for environmental ministries, resource rehabilitation, protection of indigenous people and appropriate technology projects; and
- favour small scale projects over large scale and capital intensive projects.[1]

A new provision directs that the US Executive Directors of the Banks and the International Monetary Fund (IMF) promote a requirement that all country lending strategies, policy-based loans and adjustment programs contain analysis of the impact of such activities on the natural resources, on the potential for sustainable development and on the local protection for the land rights of indigenous peoples. The Directors must also promote the establishment of programs of policy based lending in order to improve natural resource management, environmental quality and protection of biological diversity. In particular, the development institutions will be asked to facilitate the conservation of wetlands, tropical forests and other unique biological and highly productive ecosystems.

In a provision which alone heralds a new era in approach to development in the Third World, the US legislation aims to phase out support for chemical pesticide use. The US Bank Directors are to promote sustainable and non-chemical dependent agriculture by initiating discussions with other board directors and so establish policies that give priority to pest management and biological control of pests in all bank-sponsored agricultural projects. Another significant initiative

[1] The legislation contains the sort of detail seldom found in Australian statutes. Under Section 537(a)(4) it identifies other examples of projects to be promoted as 'small scale mixed farming and multiple cropping, agroforestry, programs to promote kitchen gardens, watershed management and rehabilitation, high yield wood lots, integrated pest management systems, dune stabilization programs, programs to improve energy efficiency, energy efficiency technology such as small-scale hydro projects, solar, wind and biomass energy systems, rural and mobile telecommunications systems, and improved efficiency and management of irrigation systems' — Foreign Operations Appropriations Fiscal Year 1988 (as contained in the FY88 Continuing Resolution).

requires the Secretary of the US Treasury to undertake an analysis of potential initiatives to be implemented through the multilateral development banks to enable developing countries to repay portions of their outstanding debt through investments in conservation activities. This concept of swapping 'debt for nature' was also promoted by the 1988 IUCN General Assembly (Annex 4). Strategies suggested for consideration include:

- the purchase of developing country debt in exchange for domestic currency investments in conservation;
- rescheduling of substantial amounts of developing country debt to longer term maturities with reduced interest rates in exchange for borrower country conservation investment; and
- the establishment of programs by the World Bank and IMF to encourage the private purchase of developing country debt in exchange for local currency conservation investment.

The Secretary was required to report his findings and propose an implementation plan to Congress by mid-1988 for such 'debt for conservation' initiatives.

Voting power on bank boards is weighted according to the size of the donor's contribution. The USA is the largest contributor to most of the banks but still has minority status and can be outvoted. In recognition of the multilateral nature of these development institutions, the legislation requires the US Treasury, State Department and USAID to conduct bilateral and multilateral discussions with other member states to further strengthen the environmental performance of each bank. Proposals identified for discussion relate to organizational, administrative and procedural arrangements to remove impediments within assistance programs for protecting and ensuring the sustainable use of natural resources in consultation with affected local communities.

In the past, a problem has been the dearth of information on which to base discussions and guide necessary reforms. In 1986, Congress instructed USAID to adopt the role of an international watchdog and carry out an information gathering role for which the MDBs should equally take responsibility. The 1987 legislation instructed USAID to continue and work to enhance this 'early warning system' by instructing its overseas missions to assess, well in advance of their approval, the impacts of bank loans on the environment, natural resources, public health and on indigenous peoples. The assessments are to include recommendations to eliminate or mitigate adverse impacts. USAID is also regularly required to compile a list, in consultation with interested members of the public, of proposed bank loans likely to have adverse environmental impacts and to report twice yearly to Congress on its findings and recommendations on alternatives.

Of particular significance is the obligation on USAID to create a co-operative process for sharing information collected through the 'early warning system' with the public and interested donor and borrowing nations. In order that the banks do not become complacent and treat the USAID activity as meeting their own assessment responsibilities, USAID is required to co-operate with other Board members in encouraging the banks to institute similar early warning systems. Congress made provision for the Asian Development Bank (ADB), Inter-American Development Bank and African Development Bank to receive help in meeting this challenge. The US State Department and USAID are to explore ways in which they and other donor nations can support the addition of staff trained in environmental and social impact analysis. Five or six professionals from donor countries are to be seconded to each of the regional banks during

1988–89, after which time these positions would be included in the regular budgets for the banks.[2] Despite its positive intent as a co-operative venture, USAID may end up carrying this initiative alone since most of the bilateral aid agencies themselves require help with professional staff of this kind. However, the first USAID Report to Congress has proved the worth of the system. Twenty-eight projects being considered for funding by multilateral development banks were assessed. USAID found that work to stop environmentally damaging projects or to modify them to reduce harmful effects had already led to successes. The banks had abandoned or delayed nine projects worth more than US$2000 million because of their environmental implications. A number of projects were also placed on the USAID 'watch list' for monitoring.

A final provision in the 1987 legislation will lead the way to future important changes. The US State Department is instructed to consult with USAID, other federal agencies and the public on the preparation for Congress of a 'comprehensive strategy' to maximize the use of foreign assistance provided by the US through multilateral and bilateral development agencies in addressing natural resource problems. These include desertification, tropical deforestation, the loss of wetlands, soil conservation, preservation of wildlife and biological diversity, estuaries and fisheries, croplands and grasslands. Special attention is to be paid to identifying the activities of agencies which have potentially significant effects on sustainable natural resource use and the rights and welfare of indigenous people in developing countries. Without clear and comprehensive legislative direction of this kind in all other OECD member countries, it is unlikely that the USA will receive the continuing and committed support necessary in bringing about reform of development assistance programs.

Co-operation between aid institutions. Co-operation between aid institutions needs to be greatly improved. At present, it occurs mainly on an informal basis between the staff of assistance agencies in the recipient country missions. However, the World Bank has recently initiated consultative meetings between major donors in countries where special problems have arisen, for example, with the transmigration program in Indonesia.

In 1985, USAID initiated a joint meeting between CIDIE members and representatives of bilateral aid agencies from fourteen OECD countries, including Australia and New Zealand. That meeting was a one-off affair but USAID and the World Bank are attempting to nurture regular meetings of this kind to focus on the environment/development issue. Regrettably, the Australian International Development Assistance Bureau (AIDAB) is showing little enthusiasm in joining this movement and recently has failed to take up invitations from the World Bank and USAID to attend consultative meetings. AIDAB meets on an ad hoc basis with French, US and Japanese aid officials concerning their activities in the South Pacific and regularly with New Zealand officials. However, more broadly based and formal consultative arrangements are lacking. There is potential for AIDAB to act as a catalyst for co-operation between development assistance agencies involved in the South Pacific and so to promote sustainable development policies, an opportunity discussed in Chapter 8.

The OECD Development Assistance Committee is becoming an increasingly important forum for consultation among the bilateral agencies within the context of its continuing review of project appraisal criteria and procedures. Pressure is

[2] As explained in a memorandum from Jim Barnes, Senior Attorney to the Environmental Policy Institute, to interested US Government officials, 28 February 1988.

mounting on the multilateral development agencies to make CIDIE a more effective forum for articulating common environmental standards and procedures and for developing co-operative initiatives. The Brundtland Commission suggested a special conservation banking program or facility, for example, to provide loans and to facilitate joint financing arrangements for the development and protection of critical habitats and ecosystems (WCED 1987).

The success of CIDIE, as for other international committees, will depend upon the degree of practical commitment its members bring to the Committee's resolutions. To date, it appears not to have lived up to expectation. Some observers believe that, with CIDIE preparing for its ninth meeting, this time hosted by the World Bank, the admonishment by the UNEP Executive Director at its sixth meeting still applies. In Mr Tolba's view, 'CIDIE has not yet truly succeeded in getting environmental considerations firmly ingrained in development policies'. Its members have 'gone along with the Declaration in principle more than in major shifts in action' (Tolba 1985). In IUCN's 1988 draft 'From Strategy to Action', it is reported that' the actions required to solve most conservation and development problems are generally well known, but implementation still falls short of needs'. IUCN quotes UNEP's Executive Director as saying: 'The means exists, only the will is required. We need less talk, less theory, and more action' (IUCN 1988). The Director of IIED, David Runnalls, agrees but believes that part of the problem with CIDIE is due to UNEP's poor performance as the Committee Secretariat and lack of leadership, offering criticism but nothing in the way of financial and intellectual help in finding specific and practical directions for change (Runnalls 1986). The recent major initiatives by the World Bank should breathe new life into CIDIE and, as international NGOs maintain the pressure for action, more of the multilateral organizations should also begin to move in the right direction.

The Increasing Role of Non-government Organizations

The role of NGOs has been pivotal at every stage in the evolving international consensus on the implications of development assistance for the environment. Every step taken, from the first conferences in 1968 to the issuing of the IUCN 'From Strategy to Action' in 1988, has seen NGOs as influential agents of reform. In the USA especially, NGOs have proved effective in winning key advances. The enactment of NEPA, mandatory regulations governing USAID, legislative measures for organization and policy reforms in multilateral banks and some of the crucial policy studies were all inspired by US NGOs. They have figured prominently in more than twenty Congressional inquiries since 1983 which have gathered evidence on environment/development issues. International networks of NGOs have now developed and a growing trend is for groups to form coalitions which are politically very powerful. Currently, these groups are active in Europe and Japan, arguing for greater environmental responsibility in the aid programs of their own countries and for governments to influence policy-making within MDBs.

In Australia, NGOs still tend to have a domestic focus. The Australian Senate Inquiry into Aid and the Environment which commenced in 1987 resulted from pressure from environment groups and was preceded by the formation of the Australian Coalition for the Reform of the Multilateral Development Banks. That coalition and other Australian NGOs were represented at the 1987 Citizens

Conference on Tropical Forests, Indigenous Peoples, and the World Bank held in Washington. The Conference was timed to coincide with the World Bank-IMF Annual Meeting and resulted in a lengthy petition to the Bank signed by thirty-five NGOs from fourteen countries. The petition was followed in April 1988 by a letter to the World Bank President from the coalition of US groups which had played such a central role in the drafting of both the petition and the 'Environmental Concerns' contained within the US Foreign Operations Appropriation Bill (1988). The letter requested a meeting with Mr Conable to discuss the petition recommendations and asked for his thoughts on how the new US legislation might affect the Bank's operations. The coalition restated five of its central concerns:

- there should be access to information and the promotion of NGO and public participation in preparation of development projects, country economic planning, and structural adjustment planning through adequate notification of proposed projects; access to all relevant documentation and voting records of executive directors; NGO access to project sites to carry out monitoring and evaluation; NGO representation at all bank meetings, including those of the Board of Directors; and processes for systematic public participation and monitoring of projects at all stages of the project cycle;
- new mechanisms should be developed to ensure that environmental, human rights and socio-cultural conditions in loan agreements and policy documents are adhered to;
- the World Bank should uphold and implement the Universal Declaration of Human Rights and the UN Charter for Nature;
- environmental and health authorities in recipient countries should be involved in all aspects of the Bank's work, including country economic and social planning, sector analysis and development projects;
- a greater percentage of Bank loans should go to smaller scale projects that are beneficial for the environment; and
- energy sector investments should be put into ecologically and economically more viable alternatives to large dams, including energy conservation measures in all sectors.

The Coalition recognized that positive steps were being taken by the Bank, including the preparation of an operations manual statement on the role of local NGOs in project formulation and implementation. The growing influence of NGOs on development assistance policy is clear from the tone of this letter. The release by the Bank of an operational procedure for NGO participation is evidence that this influence is matched by a recognition of the role of NGOs in the planning and delivery of aid projects.

The principle of NGO involvement is embraced under USAID regulations and, as described previously, in the new US legislation concerning MDBs. As a consequence, USAID is channelling more funds through NGOs to undertake research and survey work and in project delivery. This move is in keeping with the Brundtland Commission recommendation to provide increased aid directly to community groups using intermediaries such as national or international NGOs which, the Commission observed, 'are rapidly emerging as important and cost effective partners in work to protect and improve the environment locally and nationally'. Also,

> International NGOs need substantially increased financial support to expand their special roles and functions on behalf of the world community and in support of national NGOs. In the Commission's view, increased support that would allow these

> organizations to expand their services represents an indispensable and cost effective investment. The Commission recommends that these organizations be accorded high priority by governments, foundations, and other private and public sources of funding (WCED 1987).

Building upon this strongly worded recommendation, the IUCN argued that funds to international NGOs, in particular, could facilitate their role as 'multipliers' so that an aid agency could effectively support a large number of small initiatives in the field without the need for a large supporting bureaucracy (IUCN 1988).

In 1987, the OECD Development Assistance Committee (DAC) pointed out that NGOs, in their own right, make a significant contribution to funding for development assistance (about 10 per cent of the level of official development assistance). The Chairman of DAC, Joseph Wheeler, noted a number of positive features about NGO assistance which are pertinent to their participation in aid activities whatever the funding source:

- much of their assistance is either through or in co-operation with developing country community groups;
- they tend to concentrate their activities in low-income countries;
- they tend to direct their assistance towards the poorer elements of the community;
- they often provide a presence in rural areas or in low-income parts of urban communities which facilitates the organization of people to serve their own needs;
- they can work with local or regional governments;
- they often are well positioned to try out new ideas or techniques; and
- they use experts, who because of their voluntarism and willingness to live very simply, often cost less (Wheeler 1987).

These are undoubted values in applying development assistance through NGOs. Yet, if the role of NGOs in aid programs is to be upgraded, then there needs to be considerable introspection among NGOs to improve their own environmental performance in the delivery of bilateral and multilateral aid programs. A recent survey of NGOs in Australia concerned with assistance to the Third World found that the level of environmental awareness within these organizations was low (Paulovics 1986). The Brundtland Commission recognized this problem and suggested that, in setting their own house in order, 'environment' NGOs needed to assist the 'development' NGOs to appraise their procedures and practices in the manner expected of official aid agencies (WCED 1987).

Growth in 'Environmental' Projects

While environmental impact assessment necessarily remains an essential part of aid programs, to date most aid agencies have placed greater emphasis on projects which protect and restore the environment. A large proportion of assistance from all the main donors is devoted to 'integrated rural development' programs, often including environmental aspects such as soil conservation, watershed management and afforestation. Most of the environmental projects, therefore, have been implemented in rural rather than urban areas. Of the bilateral agencies, USAID has contributed most in this field: US$1500 million during the period from 1985 to 1988 (OECD 1988). According to USAID, this environmental investment has included:

- strengthening local skills and resource management, creating awareness of the issues, and strengthening local institutions and policies;
- conserving biological diversity, including protecting wildlife and plant genetic resources in reserves and parks;
- supporting reforestation, agroforestry, and watershed management;
- promoting sound land-use planning and increased co-operation and co-ordination between and among key ministries and departments (e.g. agriculture, forestry, environment, energy, and industry); and
- encouraging private sector participation in profit-generating programs that conserve natural resources (USAID 1988).

Other bilateral aid agencies also report major increases in environmental activities. In 1986, CIDA, for example, estimated that 25 per cent of its US$800 million aid budget is going to improved resource management, conservation and rehabilitation projects including anti-desertification, forestry, water supply and sewerage programs (CIDA 1986). The West German Government has allocated about 12 per cent of its aid program annually to environmentally and natural resource protection projects and, in 1987, increased this to 18 per cent. In 1988, the Netherlands, Norway and Sweden together committed US$130 million to aid programs which were directly targeted at environmental upgrading and rehabilitation, while the Swiss spent US$200 million annually between 1984 and 1986 on nine types of environmentally beneficial activities. These are identified as follows:

- soil conservation, erosion control, desertification control;
- afforestation, fuelwood production;
- protection of species, parks, reserves;
- protection and rehabilitation of water resources;
- pest control;
- waste management;
- integrated rural development (with special emphasis on environmental improvement);
- training, research;
- environmental policies, strategies and institution building (OECD 1988).

The British Overseas Development Administration (ODA) reported that, between 1984 and 1987, its commitment to environmental projects increased from 15 to 28 per cent, or US$110 million of the total expenditure on financial aid projects, with most of this assistance being concerned with forest management.

Impressive as these increases in financial support to environmental projects appear, the activities seemed mainly to be in the fields of forestry and soil conservation which have been a primary focus of bilateral aid for some decades. OECD has questioned whether the number of environmental projects is increasing or whether pre-existing development assistance categories have been reclassified to fit the bill (OECD 1988). Examination of individual projects within the lists of environmental activities prepared by aid agencies shows that considerable reclassification has occurred. Also, the definition of projects which fall within the environment category varies from agency to agency, thus complicating comparisons on performance.

This 'fudging' of the figures may distort the performance of aid agencies but there is no doubting the real and substantial increase in environmental assistance

which has occurred. The reclassification can be viewed in a positive light as an artifact in the evolution of aid practice reflecting the eagerness of development assistance agencies to appear to be giving much greater emphasis to the environmental concerns of developing countries.

Changes in the Aid Tool Kit

Environmental profiles. This expansion of aid programs to include direct investment in environmental quality has, in some agencies, shifted the spotlight away from impact assessment of conventional categories of development assistance and led to increased emphasis on a number of information gathering tools. USAID preparation of 'country environmental profiles', for example, has increased with twenty-three profiles having been completed by the end of 1987. The Agency is financing the preparation of profiles in every country in which it is active. Other bilateral agencies involved in the preparation of various kinds of country environmental studies include CIDA, which supported, for example, the preparation of a National Conservation Strategy (NCS) in Vanuatu, and the Governments of Finland, the Netherlands, Norway, Switzerland and Britain. They are all contributing to the preparation of National Conservation Strategies in various developing countries based on the framework prepared by IUCN, World Wildlife Fund and UNEP.

The Asian Development Bank places great emphasis on its Country Program Environmental Reviews which attempt 'to identity environmental and natural resources problems and constraints likely to impair the development projects of developing member countries and to establish strategies so that available resources may sustain socio-economic development in the longer term' (Runnalls 1986). The ADB also prepared country profiles on environmental and natural resources to guide the identification of future projects.

The World Bank has instructed its four regional environmental divisions to prepare, by the end of 1989, an environmental issues paper for every country to which the Bank lends. In some twenty selected countries, the Bank has decided to undertake in-depth 'key country studies' which attempt to model the effects of various scenarios of economic growth on environmental problems and resource constraints which are of high priority. Finally, as a means of keeping the Bank's operating staff informed, a series of task forces on key environmental problems facing the developing world are to provide regular bulletins on such issues as desertification, soil erosion, deforestation, water pollution, threats to bio-diversity and threats to fragile ecosystems (Warford 1988).

The extent to which this emphasis on the gathering of environmental data will affect the assessment and selection of projects is difficult to estimate. At the very least, it will enable the agencies to be held more accountable for the direction of their programs if profiles and review documents are made readily available to the public and other organizations. Some bilateral agencies which have not invested in data gathering programs are finding it simpler to divert funds to environmental projects on an *ad hoc* basis rather than to address the need for environmental assessment as an integral part of agency operations. Assistance to individual environmental projects can be slotted into existing programs as a special interest without the painful organizational and procedural reforms often necessary when introducing systematic impact assessment based on country profiles. Eventually, such agencies will need to accept that the approaches are two sides of the same coin.

Sorting through the projects for environmental effects. A crucial issue which many bilateral agencies are currently grappling with is the choice of methods used for sifting through the many hundreds of project proposals in order to find those which require the greatest environmental attention. The methods adopted at this stage will determine the effectiveness of an agency's entire environmental review program. The methods adopted vary from the application of broad policy guidelines which rely upon the expertise and discretion of operational staff to those with comprehensive and mandatory procedures applied according to project category lists. For example, the CIDA Environmental Assessment Framework, adopted in 1986, includes both discretionary and mandatory aspects. All project proposals are divided into two groups according to a guiding 'List A', which consists of projects that do not have significant environmental effects and therefore do not require further assessment, and 'List B' which identifies projects with significant environmental impacts and requiring further screening. The lists provide broad categories of projects with specific but not exhaustive examples. The next stage is a qualitative assessment resulting in a decision by the project team, in consultation with the recipient government, as to whether the impacts are significant enough to affect the sustainability of the project. An Environmental Impact Assessment is prepared if there is insufficient information on which to base that decision. Project staff then decide whether the potential impacts are unacceptable and, if mitigating measures are not feasible, whether or not the project is to proceed. USAID environmental procedures follow the mandatory model and detailed guidance is provided on environmental assessment within the agency's regulations. All USAID projects are subject to an initial environmental analysis which places each within one of three categories: those projects automatically requiring detailed environmental assessment; those not requiring any further assessment; and those for which a decision will have to be made on whether or not a formal environmental assessment is to be undertaken. All stages of the USAID assessment process are documented and subject to public scrutiny.

The development of lists categorizing projects according to their potential significance for the environment is a fundamental first step in providing systematic environmental assessment within aid programs. However, most bilateral agencies either do not have such lists or do not apply them systematically. Table 4.1 shows how far reform still has to go within many aid agencies. Australia, France, Japan and New Zealand are examples of important donors in the South Pacific region which still take an *ad hoc* approach to environmental assessment.

Expanding cost–benefit analysis. The introduction of new tools has not diminished the need to adapt the existing methods of economic analysis to deal with the wider concept of development based on a sustainable use of the environment. The conventional tools for economic analysis are an impediment to change (Rich 1985). Aid agencies primarily rely on cost–benefit analysis to evaluate projects and, as a result, planning and decision-making proceeds on the basis of incomplete information. Many factors or 'externalities' are excluded from the accounting process. Externalities for a mining venture, for example, may include the cost of direct impacts on the environment, such as soil erosion and sedimentation in rivers and estuaries, or the even less tangible social impacts associated with alienation of communities from traditional uses of areas and resources. Irreversible ecological changes, such as loss of plant and animal species and habitat alteration, are excluded from cost–benefit analysis closing off options for future generations. Also not accounted for are long-term and cumulative

effects such as gradual changes in demographic patterns, dietary habits, or pesticide levels in soils and food associated with cash cropping.

The deficiencies in conventional economic analysis have been recognized for some time. For example, it is common practice for governments to prepare social indicators which can be used in conjunction with those on economic trends to reflect the well-being or changes in welfare of a population (Hodgkinson 1975). Various forms of social indicators have been developed, for example, to assist in the evaluation of education projects, housing schemes and taxation proposals. It has been found that some social variables can be quantified and others cannot. The current quest for indicators of the health of the biophysical environment is proving to be no less complex and illusive. Yet, it is now widely recognized that such social and biophysical facets of the environment need to be fully reflected in all economic policy, including aid programs and projects.

Table 4.1 **Progress in integration of environmental procedures within selected OECD country aid programs.**

	Environmental procedures in aid delivery				
	Aid to the South Pacific	Fully incorporated	Partially incorporated	Case by case basis	Statutory requirement
Bilateral agencies					
Australia	+			+	+
Canada	+		+		
Denmark	+		+		
Finland			+		
France	+			+	
Germany	+		+		+
Japan	+			+	
Netherlands	+		+		
New Zealand	+			+	
Norway	+			+	
Sweden	+			+	
United Kingdom	+		+		
USA	+	+			+
Multilateral agencies					
Asian Development Bank	+		+		
Commission for European Communities	+			+	
World Bank	+		+		

In recent years, the Asian Development Bank has been seeking to extend its conventional economic methods for the analysis of aid projects so that significant project consequences such as income distribution effects and environmental impacts are not excluded. This commitment is reflected in the Bank's Guidelines for Economic Analysis of Education Projects which state that:

> The economic costs of a project are relatively easy to quantify, except in cases where significant externalities such as environmental impacts are involved. Even so, the cost of such effects should be quantified, their implication should be described and evaluated in qualitative terms.

The challenge lies in quantifying and valuing these impacts. The Bank commissioned a team from the East–West Center in Hawaii to suggest methods for doing this (Dixon *et al.* 1986). The team found that one way of overcoming the tendency to understate the true environmental cost–benefit values of aid projects is to fully integrate environmental assessment procedures and ecological standards in project design. Another way is to encourage greater investment in projects which directly enhance the environment and natural resource productivity. The team gave most attention to methods for quantifying the direct and indirect impacts and then expressing these values in monetary terms. It was found that some techniques could be readily adapted for use in the project cycle while others made more demands of data and time. However, the team also recognized limitations to the economic measurement of sustainability and environmental effects in general, and specifically to the use of cost–benefit analysis for this purpose. Issues, such as the value of human life or of genetic diversity and cultural significance, raised intractable measurement problems. They concluded that, in some cases where environmental assessment with economic valuation fails to capture certain impacts completely, these effects should be included qualitatively in the project analysis (Dixon *et al.* 1986).

The ADB and East–West Center are not alone in their efforts to develop more sensitive methods of economic and environmental analysis. The World Bank, USAID and numerous research organizations are joining in the search. Some aid economists believe this to be the greatest challenge that must be met by development assistance organizations (Warford 1988).

A New Approach to Economic 'Growth'

The failure of existing economic tools to account for many of the ecological and social values which have sustained subsistence affluence in the South Pacific reflects assumptions which underlie the notion of economic growth as promoted by the international aid community.

In conventional terms, economic growth is related to increases in the gross national product (GNP) of a country, or the flow of resources through the economy. Island systems with scarce resources dramatically illustrate the weakness of this concept when growth leads to degradation of the environment and natural resource base; that is, to development which cannot be sustained. The Brundtland Commission has called for a change in the quality or content of growth to make it less material, less energy intensive and more equitable in its impact. According to the Commission, 'changing the quality of growth requires changing our approach to development efforts to take account of all their effects'. This new approach entails broadening the range of economic or quantitative variables considered in the delivery of aid and incorporating non-economic variables such as education, health, clean water and air and protection of natural beauty and traditional values (WCED 1987).

Aid agencies have favoured capital-intensive, export-oriented projects because of their potential to increase GNP. Large scale, high technology projects may appear to have immediate economic advantages when assessed through cost–benefit analysis. Large, centralized power stations or food processing and storage facilities, for example, tend to be favoured over smaller decentralized systems. Yet, in the South Pacific, such projects have not often produced the economic benefits predicted and have proved to be a burden on the recipient community in complex and unforeseen ways. By contrast, some small and

decentralized projects, such as a micro hydro-electric scheme near Mendi in the Papua New Guinea highlands, have had no effect on GNP but have produced tangible benefits in the quality of subsistence living in the affected villages. A power project cannot be considered merely in terms of increased power output and associated industrial productivity. The effects on the environment and livelihood of the local community are also project outputs. If a project does not proceed because of its potential impact on traditional fishing areas or rare species, then this may be a true measure of progress, not a setback to development. The Brundtland Commission recognized that sustainability considerations will sometimes involve a rejection of activities that are financially attractive in the short term (WCED 1987).

According to the Brundtland Commission, economic development must always take into full account any improvement or deterioration in the stock of natural resources (WCED 1987). In South Pacific countries this kind of resource assessment has seldom occurred in major resource exploitation projects, such as in the forestry, agriculture or mining sectors where development assistance has proliferated. Extractive industries are assessed in terms of the value of products, i.e. timber or ore, and of the direct costs of extraction. The cost of reforestation, rehabilitation and losses in future resources due to depleted stock is rarely adequately accounted for.

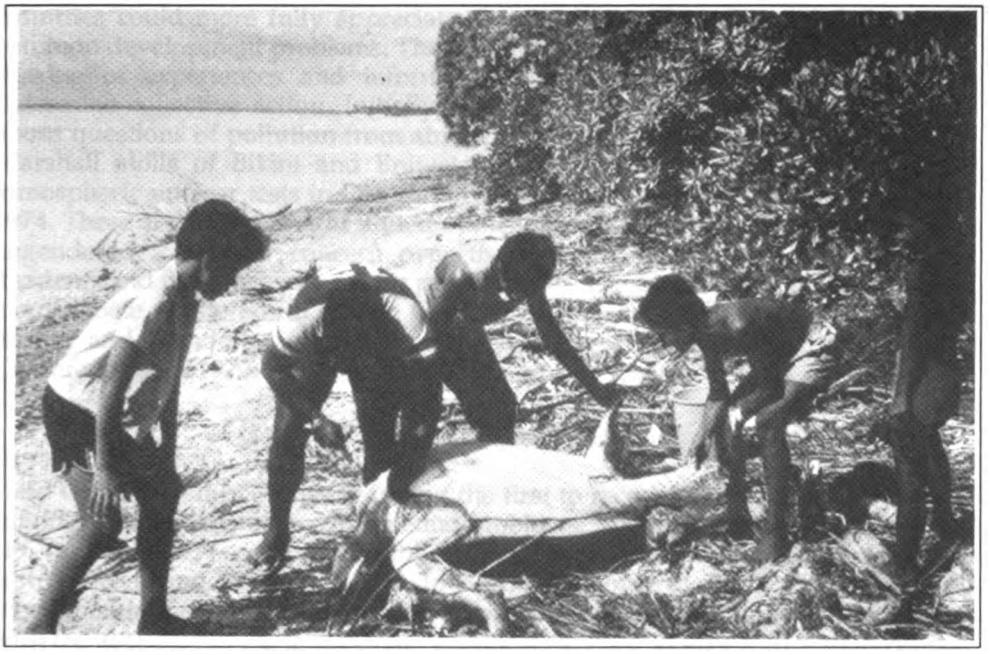
The failure of GNP and other economic measures of growth and community welfare to internalize the true environmental and social costs of development is now widely acknowledged by economists, as discussed in the previous section, but appropriate changes to planning and decision-making methods are slow in coming. Part of the problem rests with the difficulty in translating the concept of sustainable economic growth into a practical analytical approach which allows development projects to be designed and evaluated according to accepted standards. One obstacle to any practical application of the concept is its complexity. 'It is not easily subject to measurement; the quantitative and qualitative dimensions are mutually reinforcing and inseparable, and thus cannot be fully captured by any concept of direct and measurable economic gain (Barbier 1987). Another difficulty is that no universal formula for sustainability is applicable to all situations. Sustainability depends upon the interaction of economic changes with those of a social and ecological nature. It varies from country to country and over time. It requires development to occur through a dynamic process of trade-offs where realization of equally desirable but sometimes incompatible goals such as increased productivity, environmental quality and maintenance of traditional values are optimized in the light of all costs and benefits.

Inevitably, a process involving continuous balancing of quantitative and qualitative information is value ridden and based on ethical judgements. For these reasons, proponents of sustainable development stress the importance of information sharing, involvement of interested groups and of making explicit those values which impinge on the development process. An acceptable working definition of the concept for a particular island, or region within an island, will always be an amalgam of the most complete information available on environmental conditions, natural resources and the aspirations of the local communities affected. Ultimately, the severe natural constraints to island development must be recognized if more and more options are not to be permanently closed to future generations. Sustainable use is not about preventing resource exploitation, locking areas away for preservation or trapping people in rural poverty. It is not 'anti' development or 'anti' growth. Rather, sustainable use

involves strategies 'for manipulating the environment in such a way that its productivity, yield of crops, fertility and resilience are not diminished over time to the detriment of human welfare' (Dixon *et al.* 1986). Sustainable development of islands recognizes that there are limits to growth.

PART III

Regional co-operation in the South Pacific



Some island countries are recognizing the importance of carefully managing the traditional harvest of island species so that stocks are maintained. The trade in turtle shell has placed these species under pressure. SPREP is mounting a regional turtle conservation program in co-operation with countries of the ASEAN region. Photo: J. Fennel.

CHAPTER 5

The Regional Response to Shared Environmental Problems

THE first South Pacific Conference held in 1950, opened a new era in which island countries could more fully appreciate their common natural heritage and their common development problems. The Conference became an annual forum for the sharing of experiences and information on environmental concerns and to determine collective action. Initially, attention focused on informal discussions about questions of pollution from atmospheric nuclear testing by the USA at the Marshall atolls of Bikini and Eniwetak. Attention later turned to the French atmospheric nuclear tests in French Polynesia which began in 1966 and ran until 1974. These activities brought united opposition from South Pacific countries and engendered a broader concern over the growing number of local pollution incidents and the consequences for public health. The exclusion of 'political' issues from debate at the South Pacific Conference meant that the matter of nuclear testing and broader environmental concerns were not raised formally at the Conference until 1970.

Early Initiatives

Field Officers of the SPC were among the first to recognize the need for regional action to combat shared environmental problems. In one of its first initiatives, the SPC and the IUCN co-sponsored the Regional Symposium on the Conservation of Nature, Reefs and Lagoons in 1971. In 1974, in response to one of the Symposium recommendations, the SPC launched a Special Project on Conservation of Nature with the appointment of a Regional Ecological Adviser 'to give advice to territorial administrations on environmental planning and environmental conditions in the region' (SPC 1973). The Symposium also led the IUCN to draft a Convention on the Conservation of Nature in the South Pacific which was tabled for information at the First South Pacific Conference on National Parks and Reserves held in Wellington in 1975 and sponsored jointly by New Zealand and IUCN.

In the same year, consultations between the SPC and the United Nations Environment Program (UNEP) led to the suggestion of organizing a South Pacific Conference on the Human Environment. The SPC developed proposals promoting the idea of the Conference and the preparation of a comprehensive program for environmental management. In 1976, the Forum decided that SPEC should consult with SPC with a view to developing a co-operative and comprehensive regional environmental program. A few months later, the Conference also decided that the plan should be prepared jointly by SPEC and SPC. Also in 1976, the IUCN and SPC jointly sponsored an Inter-governmental Meeting to Conclude a Convention on Conservation in the South Pacific (the Apia Convention). Twelve countries attended the Meeting, in Apia, Western Samoa, and adopted a text for the Convention based on the IUCN draft (SPC 1976). The importance and implications of this Convention are the subject of Chapter 7.

In 1977, support for a comprehensive environment program for the South Pacific was reiterated at the Joint Programming Meeting of ESCAP and UNEP. The thirty-fourth Session of ESCAP in 1978 supported a Conference on the Human Environment in the South Pacific in co-operation with SPEC and SPC. Proposals submitted to the Forum and the Conference in the same year led to the inception of SPREP and preparations for the Conference on the Human Environment.

In 1979, the Second South Pacific Conference on National Parks and reserves was held in Sydney. Like the first event, it was dominated by park managers from Australia and New Zealand. It thus proved to be of limited value to the island countries except for an understanding that the event should be held approximately every four years and should try to concentrate more effectively on island conservation problems. The Conference brought a degree of commitment from the governments of New Zealand and New South Wales in Australia to assist on a regular basis in regional conservation matters.

The UNEP Regional Seas Model

At this stage in the development of a co-operative regional approach to environmental problems, UNEP, through its Regional Seas Program proved to be the most influential agency. This Program was established in 1974 in response to a UNEP Governing Council endorsement of a regional approach to the control of marine pollution and management of marine and coastal resources. Since that time, the Regional Seas Program has acted as a catalyst, bringing together countries of neglected regions of the world to define co-operative actions to counter their shared environmental problems. Within the past decade, 130 countries from eleven neglected regional seas have worked to accept action plans and to give these legal expression through conventions. To date, nine action plans and seven conventions are being implemented From the outset, UNEP identified SPREP as one of the regional seas programs through which it would channel project funds and technical assistance (Figure 5.1).

The blueprint for any regional program is outlined in an 'action plan' which is formally adopted by a high level regional inter-governmental meeting before the program enters an operational phase. In the preparatory phase leading to the adoption of an action plan, UNEP sponsors a series of studies and consultative meetings of government technical experts to determine the appropriate scope and substance of the plan. In addition, reviews are prepared of a range of the region's environmental problems to help governments set regional priorities. All action plans are set out in a similar way to ensure that the components of the regional programs are interdependent. The idea is for continuing environmental assessment to identify areas requiring attention. Countries are encouraged to negotiate legal agreements to underpin their action plan and to facilitate co-operation in managing the problems. The regional legal framework provides a basis for each country to fulfil its treaty obligations by introducing domestic legislation and institutions to meet the objectives of the action plan. It acts as a guide and incentive to donor organizations wishing to help countries meet their priorities established under the program. The treaties enable governments to express clearly their political commitment to manage individually and jointly their common environmental problems. The scientific information amassed from ongoing regional assessment work helps governments to evaluate the effectiveness of the legal agreements and management policies (UNEP 1987). This UNEP Regional Seas model was followed closely by island governments of the South Pacific in the development of SPREP.

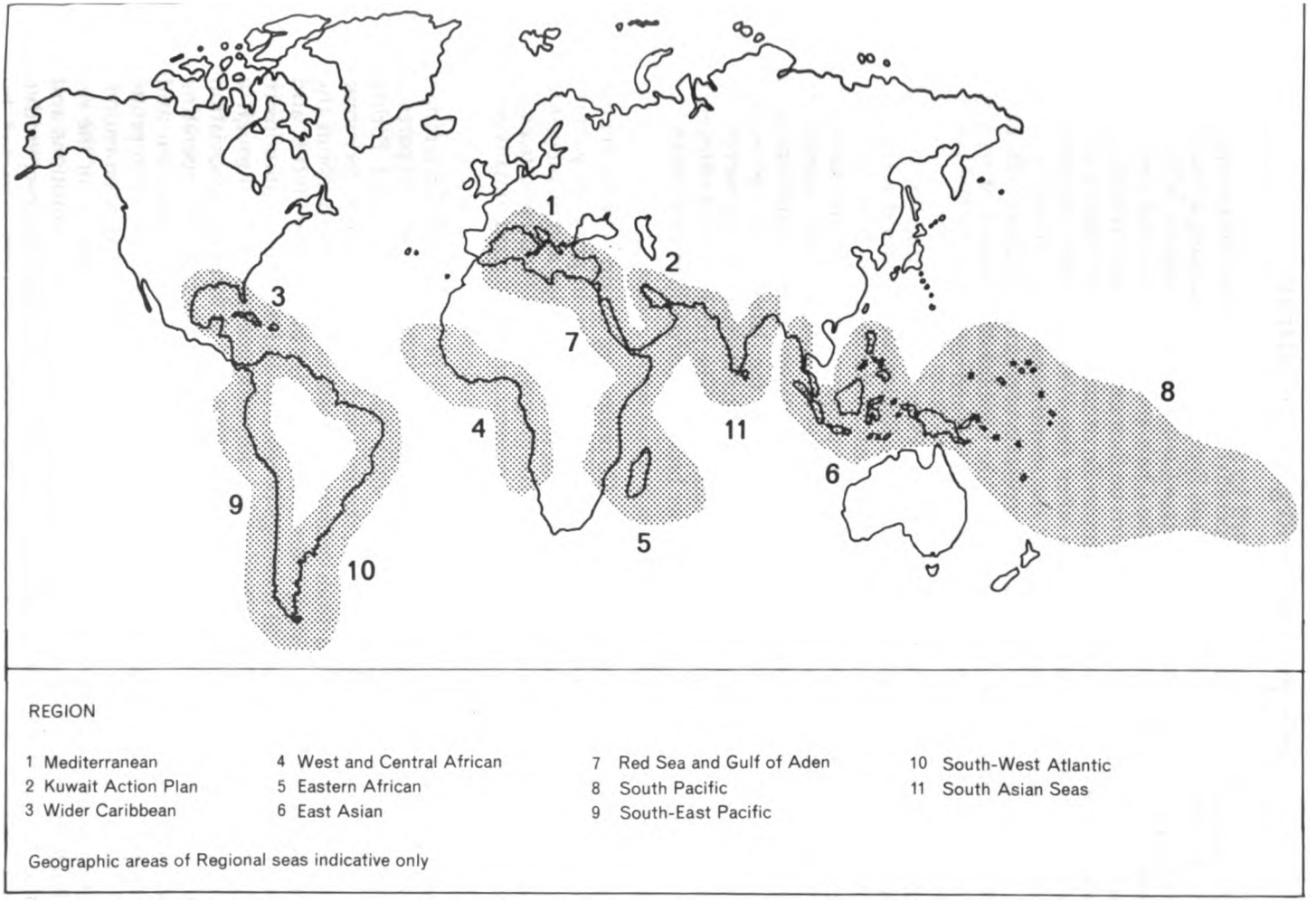


Fig. 5.1 Location of the Regional Seas in the UNEP Regional Seas Program.

The South Pacific Regional Environment Program: 'an Expression of Regional Solidarity'

SPREP became the first SPEC–SPC co-operative program and, in some respects, a model for future joint activities in the South Pacific region. Following a number of technical meetings of government experts, a Co-ordinating Group for SPREP was established in 1980 with SPEC taking the Chair and SPC, UNEP and ESCAP as Members. Island countries brought reports on their environmental problems to the ministerial level Conference on the Human Environment in the South Pacific in March 1982 in Raratonga, ten years after the World Human Environment Conference in Stockholm. At Raratonga, the countries embraced SPREP 'as more than a co-operative gesture — it was an expression of regional solidarity'. Through SPREP, the Conference sought to build on 'the established processes of regional co-operation based on independence, consolidation and consensus' (SPREP 1982).

SPREP Action Plan. The SPREP Action Plan for Managing the Natural Resources and Environment of the South Pacific Region was endorsed at the 1982 Raratonga Conference and adopted the same year by the South Pacific Conference and Forum. The Action Plan defines the broad program objectives and identifies some sixty areas for action within the categories of environmental assessment, environmental management, environmental legislation, and institutional and financial arrangements. A key objective under the latter category is 'the strengthening of national and regional capabilities, institutional arrangements and financial support which will enable the Action Plan to be put into effect efficiently and economically' (SPREP 1982). The other broad objectives identified under the Action Plan appear in Box 2.

During the period 1980–88, the SPREP Co-ordinating Group was the central guiding mechanism for implementation of the Action Plan. In principle governments were free to participate in Co-ordinating Group meetings and membership could be adjusted to reflect the emphasis of the Program or its funding sources. In practice, only in 1987 did a small number of governments send representatives to meetings of the Group.

The SPREP network. SPC, as host organization of the SPREP Secretariat, oversees the day-to-day execution of the Program. SPREP regularly prepares a work program for endorsement by the South Pacific Conference and Forum which have overall authority for substantive and financial policy decisions. Project proposals are derived from country requests submitted throughout the year, from research, from training courses and meetings initiated by SPREP, and from recommendations made at meetings of research and training institutions in the region covered by SPREP. Projects are implemented primarily through a network of local organizations which united in June 1986 to form the Association of South Pacific Environment Institutions (ASPEI). The Association, operating within the framework of SPREP, aims to facilitate regional co-operation and communication in conducting environmental studies and to promote appropriate action from governments (SPREP 1986b). Membership of ASPEI is open-ended, expanding to include government and non-government organizations of the region. Such an approach builds upon local research and training institutions and expertise by providing the framework for pooling resources in co-operative activities and by allocating, through the Association, resources attracted by SPREP. In this respect, SPREP acts both as a catalyst and broker for environmental research.

Box 2

Major objectives of the SPREP Action Plan

The principal objective of the Action Plan is 'to help the countries of the South Pacific to maintain and improve their shared environment and to enhance their capacity to provide a present and future resource base to support the needs and maintain the quality of life of the people'.

The Action Plan is intended to provide a framework for environmentally sound planning and management, suited to the needs and conditions of the countries and people in the region, and to enhance their own environmental capabilities. The more specific objectives of the Action Plan are:

- further assessment of the state of the environment in the region including the impacts of man's activities on land, fresh water, lagoons, reefs and ocean; the effects of these on the quality of man's environment; and the human conditions which have led to these impacts.
- development of management methods suited to the environment of the region which will maintain or enhance environmental quality while utilizing resources on a sustainable basis;
- improvement of national legislation and the development of regional agreements to provide for responsible and effective management of the environment;
- strengthening of national and regional capabilities, institutional arrangements and financial support which will enable the Action Plan to be put into effect efficiently and economically.

Source: SPREP, *Conference on the Human Environment in the South Pacific: Report*, Noumea, SPREP/SPC 1982: 36).

Key member organizations include the four universities of the region: the University of Guam, the University of Papua New Guinea at Port Moresby, the Papua New Guinea University of Technology at Lae, and the University of the South Pacific in Suva. Other members of ASPEI which make important contributions to SPREP include French research organizations such as the Office de la Recherche Scientifique et Technique d'Outre-Mer (ORSTOM), based in New Caledonia, and Laboratories d'Etude et de Surveillance de L'Environment (LESE) in Tahiti, the Guam Environment Protection Agency, and research institutions in Hawaii.

The Program structure includes high level 'focal points' nominated by each of the twenty-seven participating countries, to act as official contact persons for SPREP. The SPREP focal points met in September 1986, for the first time since the Raratonga Conference, to review the Action Plan and Program implementation. A meeting of focal points will occur every two years. Coastal water quality and waste management were re-emphasized as fields which should continue to receive priority in the work program. Building upon the reports and findings of earlier SPREP work, fifty-one projects were proposed for implementation through the Networks for 1987-88, including sixteen country requests currently under consideration (SPREP 1986b and c). The Third South Pacific National Parks and Reserves Conference in 1985 in Western Samoa identified another one hundred and four specific priority items for which help is needed.

The relationship of ASPEI to SPREP and its accountability to SPREP member governments were discussed at the Fourteenth Co-ordinating Group Meeting in September 1987. Since its inception, ASPEI, dominated largely by expatriates,

appeared to be assuming, through a direct working relationship with UNEP, a degree of authority in determining funding priorities and work program implementation. The Co-ordinating Group was in general agreement that ASPEI activities must respond to government priorities as identified to SPREP through the inter-governmental meetings, and that the results of these activities should be made readily available to governments. The UNEP representative recalled that ASPEI had been established as a non-governmental professional association of research and training institutions from within the region which could ensure an independent scientific evaluation of the results from project contracts between the SPREP Secretariat and ASPEI member institutions. The benefits of such an arrangement are fully appreciated by the SPREP countries. At the same time, some island administrators felt that there might be a need to remind ASPEI of the proviso stressed by the Raratonga Conference that:

> the Program must be relevant to the needs of the people of the region and that it should not become too complex nor lose its 'common touch' with the people. It should not become motivated by 'science for science's sake' (SPREP 1982).

It was intended that ASPEI would help the SPREP Secretariat in all matters concerning the scientific, technical, training and education components of the SPREP Action Plan. The Co-ordinating Group agreed that SPREP and ASPEI should work together to consolidate their relationship in the interests of the region (SPREP 1987a).

SPREP finances. Considering the status and achievements of the Program in the region, SPREP has been a remarkably low budget and cost effective activity. Direct funding to support the preparatory phase of the Program from 1977 to 1982 was well under US$1 million, 70 per cent being provided by UNEP within the framework of the Regional Seas Program (Table 5.1). A summary of financial contributions for the implementation of this SPREP Action Plan from 1983 to 1987 is shown in Table 5.2. Financial support for SPREP, totalling US$1.3 million in 1987, was derived mainly from the following sources: funding by UNEP (29 per cent of the total); estimated contributions in cash and kind from ASPEI organizations primarily in the form of cost of labour, technical input and facilities associated with project implementation (32 per cent); and voluntary contributions from member countries (20.3 per cent). Total contributions have doubled since 1983, reflecting increased commitment by governments, ASPEI members and other international organizations. Nevertheless, the SPREP Secretariat is finding that an increasing proportion of its time is taken up by fund-raising and that planning of the work program is inhibited by uncertainty each year about the level of funding.

Table 5.1 **Expenditures relevant to the preparatory phase of SPREP (in US $).**

Agency	1977	1978	1979	1980	1981	1982	Total
SPC	–	–	–	–	–	91,125	91,125[a]
SPEC	–	–	–	–	–	28,850	28,850[a]
ESCAP	–	–	–	–	–	80,800	80,800
UNEP[b]	2000	15,000	69,892	84,628	189,208	140,584	501,312[c]
Total	2000	15,000	69,892	84,628	189,208	341,359	702,087

[a] Contributions in cash, kind and services.
[b] Contributions through UNEP.
[c] Direct cash contributions through SPC = US$318,009.

Inconsistency in island government contributions is a particular problem. The agreed formula for annual voluntary contributions from member countries to SPREP has island governments providing 40 per cent of the total, with the remainder coming from metropolitan countries. During the first two years of the formula's application (1983–84), 70–90 per cent of specified contributions were made. But in the years which followed, island contributions have waned, in part reflecting worsening economic conditions in the region. Another reason for the drop is the lowering public profile of the Program due to the reduced political activity against French nuclear testing. The period 1983 to 1984 was one of intensive early negotiations on the SPREP Convention and debate on the testing issue. Once the SPREP Convention was finalized and the Nuclear Free Zone Treaty in place, Program resources reverted to more mundane but more significant environmental issues.

Important as contributions from island governments are as an indicator of political commitment to SPREP, the total contribution of the twenty-two countries served by the Program will always be small compared with the necessary contribution of their more developed neighbours. It is the donor governments and institutions with interests in the Pacific region which, directly or indirectly, will need to ensure adequate funding of SPREP for some time to come. The concept of a Trust Fund to which countries would contribute on a firm and assessed basis rather than by the existing voluntary contribution scheme, was endorsed by the 1986 Conference of SPREP Focal Points (SPREP 1986a). The Trust Fund proposal has been discussed at various high level meetings in the region and it is to be resubmitted for resolution at the next inter-governmental meeting on the SPREP Action Plan in 1990. The Trust Fund proposal will become all the more significant when the SPREP and Apia Conventions are in force and contracting parties are required to make contributions to facilitate implementation of the agreements. Sorting out these funding arrangements will be a vital issue facing the Program during the next few years.

Table 5.2 Summary of financial contributions to the implementation of the SPREP Action Plan.

Source	1983	1984	1985	1986	1987	Total	Per cent
SPC[a]	137,059[b]	75,000	75,000	80,000	82,000	449,059	8.7
SPEC[a]	26,000	36,000	18,000	18,000	20,000	118,000	2.3
ESCAP[a]	15,487	30,000	10,301	15,000	10,000	80,788	1.6
UNEP[c]	383,104	255,312	312,242	258,483	336,489	1,545,630	29.9
Assessed country contributions[c]	130,941	226,943	226,943	230,000	235,000	1,049,827	20.3
Others[d]	–	65,843	65,843	67,000	68,000	266,686	5.2
ASPEI network[a] institutions	–	300,000	340,500	468,800	548,425	1,657,725	32.0
Total	692,591	989,098	1,048,829	1,137,283	1,299,914	5,167,715	100.0

[a] Contributions in cash, kind and services.
[b] This figure may include some country funds.
[c] Contributions in cash.
[d] Contributions from countries for specific activities and from the World Wildlife Fund, IUCN and FAO in cash, kind and services.

Island Government Participation in International Environmental Protection Conventions

Among the objectives of the SPREP Action Plan are 'the development of regional agreements to provide for responsible and effective environment management' and 'consideration of participation by island countries in international conventions on the environment with particular emphasis on agreements concerning pollution of the environment by any source' (SPREP 1982). Island governments have recognized that pursuing those goals can bring considerable political and economic advantages by providing the basis for better regional co-operation and controls and for greater financial and technical commitments from developed countries to the region. Two international conventions which have been especially influential in this respect and in the shaping of South Pacific regional agreements are the United Nations Convention on the Law of the Sea and the Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matters, commonly known as the London Dumping Convention (LDC). In addition, some countries in the region have ratified the 1973 Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the 1971 Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, and the 1972 Paris Convention on the Protection of the World Cultural and Natural Heritage. These Conventions address specific aspects of environmental management or conservation.

Law of the Sea. Pacific island countries have benefited considerably in a conceptual and practical sense from the development of the new Law of the Sea. A Pacific country, Fiji, was the first state to deposit its instrument of ratification of the Convention.

Some forty of the 320 Convention articles concern environment and conservation matters. Yet the most important development for island countries is the concept of the Exclusive Economic Zone (EEZ), within which a coastal state has sovereign rights with respect to the natural living or non-living resources, and to economic activities for the exploration and exploitation of the Zone. The coastal state also has jurisdiction in the EEZ over marine scientific research and the protection and preservation of the marine environment.

In 1979, at the Tenth South Pacific Forum, the EEZ concept was enshrined in the Convention to Establish the South Pacific Forum Fisheries Agency. The significance of the EEZ for the countries of Oceania is best appreciated when expressed in land to sea ratios (Table 1.1 and Figure 1.2). The French Territories of New Caledonia, Wallis and Futuna and French Polynesia, for example, support only 6 per cent of the region's population but give France effective control over 23 per cent of the sea area covered by the region's contiguous EEZs. Yet with the benefits of EEZs there come substantial obligations. These relate to maintenance of transport corridors, mineral and hydrocarbon exploration and exploitation, development of fisheries, and environmental monitoring and control. Modern technologies associated with these uses are developing rapidly with unpredictable impacts. Extensive capabilities are required in marine research, monitoring, survey and enforcement of standards, integrated within a system of environmental assessment. In these circumstances, there exists a danger of increasing dependence on the more advanced nations and a loss of local control over the direction and pace of development activity (Commonwealth Secretariat 1984).

London Dumping Convention.[1] Opposition to the use of the region for nuclear testing and dumping activities engendered a firm commitment to the negotiation of an environmental protection convention in the South Pacific. The 1982 Raratonga Conference adopted resolutions which called on all countries of the region to accede to the LDC and to prepare a regional agreement invoking Article VIII of the LDC which states:

> ... contracting parties with common interest to protect the marine environment in a given geographical area, shall endeavour, taking into account characteristic regional features, to enter into regional agreements consistent with this Convention for the prevention of pollution especially by dumping.

Most Pacific countries were suspicious of associating with the LDC, believing it to encourage rather than to constrain dumping of low level wastes. They were not convinced of the potential for effecting change from within as parties to the Convention, even though two of their number, Nauru and Kiribati, had played an active role to this end in LDC consultative meetings.

On the other hand, a home-grown treaty which could incorporate the prohibitions on testing and dumping included in the SPREP Action Plan was an attractive proposition. In late 1982, at the direction of the South Pacific Conference and Forum, the Convention for the Protection of the Natural Resources and Environment of the South Pacific (the SPREP Convention) was drafted with assistance from UNEP. Major SPREP reviews of radioactivity and hazardous wastes in the region were also initiated to provide an independent source of information to island countries on these matters. This Convention was seen as a powerful instrument to promote assessment and supervision of the use and development of the marine and coastal environment of the South Pacific.

The Changing Face of SPREP

During the early years of the SPREP implementation phase, the Program shifted from a truly, if ill-defined, joint program of four organizations (SPC, SPEC, UNEP and ESCAP) to operate in practice as an internal program of the South Pacific Commission. In a sense, this signalled the end of a long tussle between the SPC and SPEC for control of the Program.

The debate on institutional arrangements for SPREP at the Eighteenth South Pacific Conference in 1978 came at a time of heightened conflict concerning which of the two main organizations should control regional programs (Fry 1978). This dispute had an ideological basis. For the larger island states, namely Papua New Guinea and Fiji, SPEC and the Forum facilitated indigenous control of the region while the SPC was subject to greater metropolitan influence. For the metropolitan powers, particularly France, Britain and the USA who are not members of the Forum, the SPC was an important avenue for their involvement in regional development and for strategic co-operation to counter 'outside influences'. Debate at the 1978 Conference on whether SPREP should be a joint program or controlled solely by SPEC was forceful and, at times, emotional (Fry 1978). Only when New Zealand proposed a compromise which retained joint SPEC/SPC control with the SPEC representative as Director of the Co-ordinating Group and the SPC representative as Secretary, was agreement reached. The compromise left the new regional program with a nominal head in Fiji and an administrative base in Noumea responsible to the Secretary General of the SPC. No additional guidelines were provided on the respective roles of the two organizations.

[1] Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter.

The arrangement was satisfactory during the preparatory phase of the Program but during 1984, the second year of its implementation, the Commission adopted the view that SPREP could not be an 'independent entity' or 'secretariat' hosted by the SPC, as stated in the Report of the Raratonga Conference on the Human Environment. Instead, in the Commission's view, SPREP had to be managed as a component of the SPC Work Program. At the time, this was a question of considerable importance to SPREP, both for its operation as a joint program with other organizations and in determining the nature and extent of its development. As an SPC program, SPREP staffing, resource needs and level of activity had to be kept in balance by SPC Management with those of other Commission programs.

The move by the SPC to rein in and integrate SPREP more fully into its standard operating procedures was an understandable administrative response to a situation where inadequate definition of responsibilities and functions had been provided within the Raratonga Report and, subsequently, by the Conference and Forum. Yet, SPREP was unlike other parts of the SPC Work Program. It was created by and received its authority from governments of the region partly outside normal SPC channels; in particular, from the Forum and originally from the ministerial level conference in Raratonga. SPREP will operate within the framework of its own regional convention, comparable in status to the Canberra Convention which created the SPC. The Apia Convention on the Conservation of Nature in the South Pacific will also be implemented within the context of SPREP. The SPREP Action Plan and its legal expressions adopted by the governments of the region require diplomatic negotiations and include political dimensions which are outside the mandate of SPC. Of particular importance, SPREP has its own independent source of funds. All these factors set SPREP apart from other SPC programs. The situation will be complicated still further when SPC, identified as the organization to carry out secretariat functions for the SPREP and Apia Conventions, will be answerable to three quite distinct conferences of contracting parties and to the Forum which, in principle, could provide conflicting direction on matters concerning SPREP.

The 1985 SPREP Evaluation Team found that those island governments which had a firm view on the matter considered the action by SPC to adopt the Program as its own to be contrary to the spirit, if not the letter of the decisions taken at the Raratonga Conference (Rongap and Piddington 1985). The development had a number of immediate practical implications. The role of the SPREP Co-ordinating Group, and particularly of SPEC was diminished. The Commission argued, with some justification, that full control over the Program was essential to ensure legal and financial accountability to the South Pacific Conference. These institutional issues were made more complex by each of the Co-ordinating Group Members, particularly UNEP, SPC and SPEC, needing to pursue, through SPREP, their particular institutional interests in a situation where the authority of each was not defined.

In the same period, some research and training institutions at the early consultative meetings were developing high expectations and a proprietary interest in funds channelled through SPREP from the UNEP Regional Seas Program. Those institutions brought to the co-operative forum more prosaic concerns than the complicated institutional and legal questions which the island governments and Co-ordinating Group members faced in SPREP. Inevitably, there was bound to arise a degree of impatience and some disenchantment with a Program which, to the outside observer, at times appeared weighed down by

complicated administrative and political detail. Many of these issues are now matters of historical interest only. But each had an important impact on the shape and development of the Program and some of the most difficult institutional problems remain to be solved.

At the September 1987 Meeting of the SPREP Co-ordinating Group it was generally agreed that the mechanisms for governments to provide direction to and set priorities for SPREP activities were inadequate and that the time had come to consider the necessary changes in institutional arrangements supporting the SPREP Action Plan and the Convention. It was considered timely for the role of the Co-ordinating Group to be phased out but for it to continue to provide guidance to governments in the transition to appropriate alternative arrangements (SPREP 1987a). The matter was referred to the 1988 Intergovernmental Meeting on SPREP in July which decided to replace the Co-ordinating Group with a Steering Committee consisting of single representatives from Polynesia, Melanesia, Micronesia, Australia–New Zealand, and USA–France–UK groupings. The Committee meets annually with every second meeting held back-to-back with the SPREP Intergovernmental Conference. The former Co-ordinating Group members attend the meetings as observers in an advisory capacity (SPREP 1988). This structure, which provides for greater direct accountability to the governments of the region, was endorsed by the 1988 Conference and Forum.

SPREP is now a permanent and highly significant co-operative program in the region. It has brought with it a heightened sense of environmental awareness among island countries and a greater political efficacy in pursuing their shared environmental concerns in the international arena. The Program is also a rapidly evolving institution and will undoubtedly continue to change in form as the environmental conventions, discussed in the following chapters, take on greater importance in the delivery of aid and in the politics of the region. Eventually, it may be in the interests of island governments to establish the Program as a separate organization akin to the Forum Fisheries Agency whose advocacy of island interests in fisheries has been of great importance in shaping the industry in the region. It is a measure of the underlying strength of the SPREP concept as a co-operative activity that the Program is receiving growing attention and support from governments and institutions within and outside the region.

CHAPTER 6

The Convention for the Protection of the Natural Resources and Environment of the South Pacific (the SPREP Convention)

IT was the intention of island governments, expressed from the earliest stages in the planning of SPREP, that implementation of the Program should be placed on a legal footing. This formal commitment was first elaborated at the 1982 Raratonga Conference on the Human Environment in the South Pacific and then endorsed at successive meetings of the South Pacific Conference and Forum. Governments of the region noted that out of eight other Regional Sea areas for which action plans had been developed, six corresponding legal conventions progressively supplemented by technical protocols had also been adopted. States in those regions had found it to be in their interest to accept the general legal obligation to co-operate to protect and manage their shared environment while gradually assuming more specific duties, as national, economic and social needs permitted.

The Draft Convention considered at the first meeting of experts of South Pacific governments in 1983, addressed the main sources of pollution, together with some priority management activities identified in the SPREP Action Plan. The Draft was prepared on the assumption that the Convention would be gradually expanded, through the addition of protocols on specific management issues, eventually to provide a legal basis for all aspects of the SPREP Action Plan. It would provide participating governments with the opportunity to make a legal and financial commitment to assist each other in undertaking an agreed work program on priority environmental concerns.

At the first two negotiation meetings in 1983, the wording of most provisions were quickly settled. These related to various forms of pollution from land-based sources, from the atmosphere, mining, and coastal erosion; to environmental assessment and scientific and technological co-operation and to nature conservation and institutional arrangements. But there had been acrimony and mounting tension due to disagreement on several key issues. These issues were alluded to in the opening statement by the SPC Secretary General to the Third Expert Meeting on the Draft Convention. His comments impart something of the atmosphere of the negotiations and of their great significance to the governments involved:

> I say this is an important meeting because we are here to finalize the wording of the most significant legal regional agreement that South Pacific governments have yet developed to enhance and maintain the quality of our shared environment. In my

> memory, there have been no other issues which have so galvanized our island communities into a collective response and which have caused such widespread and animated debate as those addressed in this Convention before us. Of course, the two major issues are the continued testing of nuclear devices and the proposed dumping of radioactive materials within the region. These issues are interwoven in complex ways with our aspirations for genuine political independence and social well-being. On these issues and the third, that of geographic coverage of the Convention, our opinions are well known. Any one of the distinguished delegates here today, I am sure, could provide a fair representation of the view of each delegation on these issues even before the meeting begins. Let us accept at the outset that, at this stage, we are polarized in our positions. But let us also recognize that we are not here to waste our time. We are not here merely to repeat views which are common knowledge and go home. That would be a step back. We are here to advance the situation towards shared objectives which can be achieved in part through ratification of this SPREP Convention (SPREP 1984).

The participating governments reached an acceptable compromise on the contentious issues following five meetings of senior officials. A convention and protocols were adopted and signed by seven countries including France, USA and New Zealand at a plenipotentiary conference in November 1986. Thirteen countries, Australia included, had become signatories and two had ratified the Convention by the closing date for signing in November 1987. The Convention will enter into force once ratified by ten countries. This target may be achieved during 1990.

The negotiating meetings significantly raised awareness and created among the island delegations a strong sense of unity. They were a salutary experience for the advanced nations involved, especially the USA whose overbearing negotiating methods in early meetings mellowed through necessity to become more accommodating. France also learned to adopt a more conciliatory style as the meetings progressed and island countries became more effective in co-ordinating their arguments on the often complex technical and legal issues.

This chapter seeks to introduce the Convention, the difficult points of negotiation which had to be overcome and some of the key environmental problems which led to its introduction.

The Convention Preamble

The SPREP Convention, like its Regional Seas counterparts elsewhere, comprises a main text of articles supplemented by annexes or protocols. Protocols may be added by contracting parties as the need arises to provide a more detailed legal framework to address problems of special importance.

Justification for the SPREP Convention is spelt out in the preamble where parties recognize:

- the threat to the marine and coastal environment posed by pollution from development;
- the need to co-operate among themselves and with competent organizations to ensure sustainable resource management; and
- the fact that existing international agreements concerning the marine and coastal environment do not cover all aspects and sources of marine pollution and environmental degradation and do not entirely meet the special requirements of the South Pacific Region.

The Pollution Control Provisions

The Convention obliges parties to adopt the best practicable measures, procedures and standards to prevent, reduce and control pollution from all sources. The main non-nuclear pollution sources have been identified as follows:

Oil spillages (Article 6): Over 80 per cent of the island countries are concerned about the effects of oil spills on their coastal resources. About one-quarter of the countries report existing oil pollution problems although these are generally on a small-scale extending to a few kilometres of coastline at the most (Box 3). However, a large oil spillage could spell disaster for island economies. The provisions contained within Article 6 therefore recognize the potential threats posed by the growing international importance of the region's shipping lanes and by proposals to develop supertanker ports within the region.

Box 3

Oil spillages: a disaster in fragile environments

Oil spills have occurred through port accidents, leaks in pipelines or storage depots and from shipwrecks. For example, in 1981, a Korean fishing boat broke up in the seas off the Cook Islands and spilled 70 tonnes of fuel oil along the fringing reef. SPREP responded to the call for assistance but transport problems and bad weather prevented the expert consultant from reaching the scene of the accident. A number of years before, at Fanning Island in the Northern Cooks, a tanker carrying coconut oil foundered and the resultant spill caused extensive damage to the reef and coastal zone.

In 1982, one million gallons of bunker oil leaked from underground pipes of Guam's Oil Refinery into a freshwater marsh. Only rapid placement of containment booms by the Guam Environment Protection Agency prevented the spill from entering the bay. Most island countries lack such a response capability. Fifteen years ago, a tanker broke up amongst the islands and islets of Northern Palau releasing oil with unassessed consequences. Also in Micronesia, an oil spill in 1978 due to a rupture in a storage tank destroyed a mangrove system on the coast of Yap.

The US Coast Guard is required to document all oil spills in the Trust Territory, but a similar reporting procedure is not followed elsewhere in the region. Two damaging oil spills occurred in the late 1970s in Pago Pago Harbour in American Samoa. One was due to the sinking of a Japanese fishing boat and the other the rupture of a fueling pipe to the harbour. A number of salvage operations have had to proceed in Vanuatu and New Caledonia where rusting hulls of vessels, sunk during the Second World War, began leaking fuel oil. Information on these cases is anecdotal. No research or monitoring into the effects of the spills took place. In many cases, the islanders themselves have had to take action to save their coastal environment from pollution. When the small inter-island cargo vessel Lamua sank in the Solomon Islands and released 200 gallons of diesel oil into the sea, local villagers were instructed to gather vines and coconut leaves. The buoyant vines were tied together and dragged out by canoe to the spill site where they were arranged to form a boom. The coconut leaves were thrown onto the oil to slow down its flow. Most of the oil was contained in this way and the changing tide took it well away from the island. The vines were later cut to let the oil disperse in the hope that nature would complete the clean-up.

Coastal discharges (Article 7): the provisions of Article 7 charge the signatories to the Convention with the responsibility of preventing pollution from coastal disposal of wastes or discharges from rivers, estuaries, coastal establishments, outfall structures, or any other structure in their territory. An example of such pollution occurred in the Solomon Islands when a large storage tank at a palm oil mill ruptured, spilling oil into a stream which then carried it a short distance to the sea. Both the stream and the foreshore were extensively polluted and local villagers complained of the stench and the disruption to their subsistence activities. Organic pollution is of special concern to island communities (Box 4).

Box 4

Organic Pollution

Environmental conditions such as high solar radiation, low nutrient concentrations, very clear ocean waters, and permeable soils with little or no clay, make the region particularly susceptible to organic pollution. This is of great concern to South Pacific countries because:

- there is a strong correlation between organic pollution in ground or coastal waters and detrimental effects on human health;
- gradual eutrophication of lagoons and the coastal strip threaten the well-being of subsistence fishing communities; and
- many ecological systems in the region cover only a small area and localized pollution can destroy an entire ecosystem.

In 1980, three quarters of the island countries reported problems of reef pollution and 90 per cent had problems with the disposal of liquid wastes, particularly human wastes (SPREP 1982). Eight years later, water pollution and organic waste disposal remained two of the major environmental concerns in the region (SPREP 1988). Important sources of organic waste reported by countries of the region are given in Table 6.1.

Larger towns generally have a sewerage or drainage system to collect waste water which is discharged through a pipe or outfall, perhaps after treatment. On many islands, the steep undersea face or unstable sediment slopes prevent an outfall or drainpipe being carried any distance from the edge of the reef flat and, therefore, the point of discharge is close to the shore. Other direct discharges originate from oversea latrines, defecation on beaches, and septic tanks draining directly to the shore; since tanks are rarely desludged, this is equivalent to a direct discharge of raw sewage. Organic wastes also reach the coastal waters in the perennial streams of the mountainous islands, which generally carry a substantial load of organic waste. Another path is underground seepage. On atolls, dissolved organics are not filtered out during percolation because the clay content in soils is very low. Also, low topography and a shallow water table ensure that pollution rapidly reaches the ground water.

Estimates of the weekly loadings of human wastes for urban areas of various sizes in the region are given in Table 6.2. Waste generated at these levels can have major health and environmental consequences if not adequately treated.

Secondary industries in the Pacific principally involve processing of primary produce and food and alcohol production. Each of these processes produce substantial quantities of organic waste which are discharged, in most cases, untreated into the environment. The types of industries of concern are:

BOX 4 ... continued

breweries
fish processors
sugar mills
distilleries
ginger factories
sawmills
dairies
cake/biscuit producers
vegetable oil processors
soap processors
soft drink manufacturers

The organic waste produced by a major food processing industry can equal or even exceed the quantity of human waste produced in the surrounding town. Little is known of the quantities or effects of organic waste discharges from such island industries.

Table 6.1 **Concerns of South Pacific countries regarding organic pollution**

Country	Organic pollution problems
American Samoa	Disposal of rubbish and malfunctioning septic tanks in urban areas; odours, effluents and sludge from the two fish canneries.
Norfolk Is. (Aust.)	Disposal via septic tanks to land has led to pollution of the groundwater in some areas.
Cook Islands	Disposal of waste from the juice cannery has led to a reduction in fish and biotic diversity in the harbour.
Fiji	Untreated sewage disposal and depletion of coral communities through tourist resort sewage outfalls.
French Polynesia	Discharge of domestic sewage and refuse into rivers and lagoons.
Guam	Lack of knowledge about the northern groundwater, sewage disposal, stormwater runoff, erosion and hazardous wastes.
Kiribati	Coastal erosion, pollution, physical degradation of the environment on which subsistence livelihood depends.
Niue	Inadequate sewage disposal with obvious public health consequences.
New Caledonia	Serious water pollution in urban areas.
Papua New Guinea	Sewage disposal, improperly controlled effluent from factories and effluents from improper housing conditions in urban areas.
Solomon Islands	Liquid organic wastes from the palm oil processing plant pollute the adjacent sea; possible large-scale health problems from raw sewage disposal to the sea.
Tonga	Septic tanks and sewage treatment.
Trust Territories of the Pacific Islands (TTPI)	Inadequate and unsafe cesspools, privies, over-water benjos and septic tanks which receive raw sewage from almost the entire population: very few functioning absorption fields and very limited, if any, septic tank pumping facilities.
Tuvalu	Significant pollution of groundwater by human and animal wastes.
Vanuatu	Sewage pollution in Port Vila Harbour and eutrophication of lagoons associated with the growing urban population in Vila. Possibility that some large agricultural projects could cause water pollution.
Western Samoa	Disposal of effluent from the feed mill, the proposed Apia sewerage system, septic tanks and a proposed hotel sewage outfall.

The concentration of people in coastal and urban areas is creating increasing volumes of organic waste water which require well designed and operated treatment, disposal and monitoring systems for human, household and industrial wastes. These requirements are not easily met. For example, many island communities cannot afford the cost of reticulated waste water disposal facilities.

BOX 4 ... continued

Table 6.2 **Estimated weekly waste water contaminant loadings in South Pacific urban centres**

Urban population	Wastewater loading (kg/week) BOD[a]	Solids	Nitrogen	Phosphorus
5000 (e.g. Lae)	2,240	1200	350	41
20,000 (e.g. Port Vila)	9,000	4900	1400	84
50,000 (e.g. Port Moresby)	22,400	12,200	3500	210
100,000 (e.g. Suva)	45,000	24,500	7000	420

[a] Biological oxygen demand

The cost of a single connection to a sewer can exceed US$1000 which represents a substantial investment for residents of squatter settlements and subsistence agricultural or fishing communities. Even when capital costs are covered through aid programs, sewerage operation proves difficult. The annual operating costs of centralized treatment plants are about 25 per cent of the capital cost. Communities which cannot afford to construct a plant are unlikely to be able to afford to operate and maintain one. In developed countries, such as Australia, a large proportion of rural sewerage systems have considerable and recurring operating and maintenance problems. It is a concern that aid programs continue to support the construction of sophisticated reticulated sewerage systems in remote Pacific communities.

Source: I. Wallace and J. Carew-Reid (In preparation), 'Organic pollution in the South Pacific region', *Marine Pollution Bulletin*.

In effect, this Article of the Convention impinges upon the whole development planning process, since nearly all land-based developments in island systems will have some effect on the coastal and marine environment. Already SPREP has responded to this by undertaking, upon island government request, land-based pollution source surveys which will form the first step in developing monitoring programs, control measures and standards. The first country-wide survey was conducted in 1984 for Tonga (Chesher 1984) and another is planned for Vanuatu.

Offshore mining (Article 8): the offshore sea-bed in the region is already being extensively explored for mineral and hydrocarbon resources. In some countries, such as Tonga, international petroleum companies are now queuing to stake a claim. Inevitably, island countries will find it most profitable in the short-term to licence development rights to foreign operators. The SPREP Convention aims to provide the legal basis for introducing adequate safeguards to combat sea-based pollution sources associated with such activity.

Air pollution (Article 9): Fifty per cent of South Pacific countries report local air pollution, mostly in urban areas or associated with particular industries (Dahl and Baumgart 1982).

Mining and coastal erosion (Article 13): Special attention is given to pollution caused by coastal engineering, mining, sand removal, land reclamation and dredging. Acute local problems of these kinds occur throughout the region, leading as in the case of phosphate-rich Banaba and Nauru, to the destruction of

entire natural systems. A further example is the opencast mining of nickel in New Caledonia. Here, destruction of scrubland or maquis over large areas causes extensive erosion which sterilizes portions of the lagoon. Tonnes of ore fall from ships and wharfs during loading resulting in similar problems (Bird *et al.* 1984). Mining on land will become one of the major foci for economic development in the larger countries of Papua New Guinea, the Solomon Islands, Vanuatu and Fiji, where extensive prospecting is underway and mineral deposits of world importance have been found. In the Solomon Islands, for example, fifteen mining companies have been issued with prospecting licences and a further eighty-four applications await consideration (Baines and Hite 1988). Island countries cannot afford severe environmental degradation of the kind caused, for example, by the Bougainville, Ok Tedi and Bulolo copper and gold mining operations in Papua New Guinea.

Toxic chemicals (Articles 10 & 11 and Protocols on Dumping and Pollution Emergencies): More than half the island countries report environmental problems associated with the use of toxic chemicals. Many small accidents have occurred but, since there is little or no monitoring, their effects have gone largely unrecognized. Reporting of incidents is usually anecdotal (Box 5).

Within the pollution control provisions, there are also a number of Articles dealing with the prohibition and management of pollution and related environmental assessment:

Emergency action (Article 15 and Protocol on Pollution Emergencies): In order to combat pollution in cases of emergency, parties are directed to develop individual and co-operative contingency plans.

An associated Protocol requires them to establish procedures to ensure that information about pollution incidents is reported as quickly as possible. It includes provision for mutual assistance to deal with pollution incidents, for operational measures, and for sub-regional and institutional arrangements. The need for such measures was reinforced during 1984–85 when SPREP helped in the following emergencies: an arsenic spillage in Port Vila harbour, Vanuatu; a cyanide spillage in the Fly River estuary of PNG; and two incidents in Tonga, one associated with the discovery of lead in paint widely applied to roof catchments, and another concerning the safe disposal of large numbers of disintegrating drums of DDT stored at a coastal depot (the pesticide incidentally was given by an aid organization).

Prohibition of the dumping of hazardous substances (Article 10 and Protocol on dumping): A second Protocol to the Convention was prepared to prevent pollution by the dumping of hazardous substances. It is modelled on the London Dumping Convention to the extent that it prohibits dumping in the Convention Area of wastes or other matters listed in Annex 1 to Protocol but permits dumping of Annex 2 wastes by a special permit and of other wastes under a general permit. Unlike the LDC, the Protocol does not cover the disposal of radioactive wastes and materials. This is dealt with under the Convention proper (see below).

Legislation and guidelines for environmental assessment (Article 16): Parties are obliged to co-operate in the development and maintenance of legislation and technical guidelines required for the environmental impact assessment of major projects. The aim is to ensure that appropriate measures can be taken to prevent pollution or other harmful changes to the environment. It is also stipulated that, as part of the assessment process, public comment be invited from affected interests and that the results of assessments be made public.

Box 5

Pesticide Pollution

The axiom that the smaller the environmental system the more sensitive it is to disruption, has special pertinence to South Pacific countries. The problem becomes acute with the use of toxic chemicals such as pesticides. A listing of a number of cases is illustrative of the nature of the problem.

Typically, pesticides find their way into the marine environment in run-off. In Western Samoa, this process is reportedly accelerated by people commonly pouring excess of pesticides onto the ground near streams and erosion ditches and using herbicides not designed for aquatic weed control in drainage ditches. Commonly, however, chemicals are intentionally poured into streams and lagoons to kill fish. In 1976, in the Cook Islands, a forty-four gallon drum of dieldrin was poured into a lagoon for this purpose. Similar intentional spillages have occurred in fresh-water streams of the Cook Islands. Setting aside the substantial immediate impacts, the long-term threats to consumers of seafood are of great concern. Serious multiple poisonings have occurred in Micronesia as a result of eating lagoon fish poisoned with a pesticide. A pesticide spill on Truk resulted in a fish kill estimated at 20 tonnes and another on Ulithi, in Yap, may have contaminated the water supply; however, no tests were run (Falanruw 1980). In 1978, dramatic die back of the reef in a lagoon off American Samoa, covering some 200m^2 was reported and the use of pesticides in fishing suspected as the cause. In Western Samoa, the herbicide Paraquat has been used in suicides, and sometimes to kill fish. In Papua New Guinea, between 1969 and 1984, there were forty-five confirmed deaths from Paraquat poisoning. A total of 229 pesticides are used in PNG, often with little regulation or safeguards, some of which are banned in the country of origin (Mowbray 1986).

The use of the pounded root of Derris bush and chlorine bleaches or the 'chloroxing' of fish in lagoons, tidal pools and estuaries, is widespread in Oceania. Bleaching of the Truk lagoon, for example, has eliminated entire reef systems that once were productive fisheries.

The problems of poor storage of chemicals is widespread in the region and often is associated with over-ordering of drums or the ordering of inappropriate chemicals. A shipment of pesticides was supplied to Tuvalu as a gift from the Australian Government. Following trials, the chemical was found to be ineffective and the drums are disintegrating through inadequate storage, posing an incipient pollution problem. The Tuvalu Government cannot afford the transportation costs to return the chemicals to Australia; land dumping would poison the groundwater and ocean dumping would be costly and have unpredictable effects. Similarly, in Tokelau, a hurricane in the mid-1970s washed an agriculture storehouse, including a large consignment of drums containing the pesticide Lindane, into the lagoon. One to two square kilometres of reef were destroyed. The pesticide had been imported for the control of coconut beetle but was found to be ineffective.

Scientific and technical co-operation (Articles 17 and 18): A key to the success of the Convention's pollution control provisions rests with scientific and technical co-operation in the fields of research, environmental monitoring and management, and the exchange of information. Developed countries which intend to ratify the Convention, such as Australia, France, New Zealand, United Kingdom, USA and possibly Japan have a crucial role in this regard, as have other competent international organizations.

Liability and compensation (Article 20): The provision concerning the adoption of rules and procedures in respect of liability and compensation for damage resulting from pollution will become an important component of the environmental management and enforcement system for the region.

Finally, one provision which is of particular significance to the discussion on the Apia Convention on the Conservation of Nature in the South Pacific (Chapter 7), concerns the protection of rare or fragile environments. This provision stands out in what has been interpreted as essentially a 'pollution control' convention. UNEP objects to this view of its regional seas conventions and, at the Third Expert Meeting, the UNEP representative expressed concern at the attempt by some delegations to interpret the environmental issues addressed in the Convention as relating predominantly to marine pollution problems. He pointed out that:

> The protection of the environment means more, much more than just pollution control and conservation. It involves the wise management of natural resources upon which socio-economic development crucially depends. Environmentally sound management of these resources is a key to the well-being of your present and future generations and, therefore, we hope that the need to deal with the roots of the environmental problems, rather than with their consequences, will not escape your attention (SPREP 1984).

Protocols can be added progressively to the SPREP Convention on the initiative of the parties so that it evolves into a broad-based environmental management agreement eventually to reflect more fully all aspects of the SPREP Action Plan.

The conservation of nature provision, for example, could be developed in the form of protocol to address a wide range of current island issues, such as endangered, migratory and introduced species. A conservation protocol would better integrate the SPREP Convention and the complementary Apia Convention.

Preservation of species and habitats (Article 14): This provision requires parties to all appropriate measures to protect and preserve rare or fragile ecosystems and depleted, threatened or endangered flora and fauna and their habitats. The establishment of parks and reserves is promoted, as is the regulation of activities 'likely to have adverse effects on the species, ecosystems or biological processes that such areas are designed to protect'.

The governments of the Eastern African region decided to elaborate on a similar provision under their Convention for the Protection, Management and Development of Marine and Coastal Environment (1985) by adding a detailed protocol on protected areas and wild fauna and flora in their region. The protocol covers such issues as species requiring special protection, harvesting of wildlife, migratory species, traditional activities and a range of protected area establishment and management concerns. This agreement provides a useful model for the preparation of a similar protocol under the SPREP or Apia Conventions. The value of also developing subsidiary bilateral agreements on conservation issues within the legal framework now being set in place for SPREP is discussed in Chapter 7.

Three Major Hurdles to Agreement on the Convention

At the Fourth SPREP Meeting of Experts in 1985, there were three inter-related matters on which there was fundamental disagreement. These were the geographic area of the Convention, the dumping and storage of radioactive wastes and the testing of nuclear weapons in the Convention area (Articles 1, 10 and 12). For island countries, the SPREP Convention negotiations marked a new

awareness of environmental pollution and of the value of control through regional co-operation. A brief review of the debate on the three contentious issues is instructive, representing as it does a crucial development in attitudes to environmental protection in the region.

The position of island governments was clear; they demanded a prohibition of dumping and testing and pushed for the maximum geographic cover of the Convention. The situation for the advanced countries, constrained by global interests, was not so straightforward. Australia and New Zealand concurred with the majority island view on testing and dumping. Their position, particularly that of Australia, was complicated by the pursuit of a separate Nuclear Free Zone Treaty. The United Kingdom, actively involved in a radioactive waste-dumping program, had withdrawn from negotiations after the first meeting. Nevertheless, the United Kingdom indicated that, were an agreement to be reached on the Convention wording, it would consider becoming a signatory. The United Kingdom relied on the USA to reflect its interests in the negotiations, but the latter, with the support of France, consistently refused to agree on banning the dumping of low-level radioactive wastes. The USA was not prepared to surrender the right under customary international law to prevent or regulate the dumping of such wastes within its own 200 nautical mile zone or that of its Pacific Territories. The USA claimed to have no need or plans to dump radioactive waste in the South Pacific; its position was one of principle. In addition, the USA considered that the provisions of the Convention should cover only those areas of the Pacific Ocean within the EEZs of island countries. France's difficulty stemmed from its refusal to accept a total ban on the dumping of radioactive wastes under the LDC, which applies globally and provides for the regulation of dumping of low level radioactive waste. France considered that it could not accept a treaty ban on the disposal at sea of all radioactive wastes unless such disposal polluted the marine environment.

For the USA, the dumping and Convention Area issues were inextricably linked. It was this link which allowed a compromise to be reached at the Fourth and Fifth Expert Meetings. The USA agreed to the inclusion of a prohibition clause on radioactive waste dumping. All other delegations agreed to a reduction in their preferred Convention Area to one which covered the 200 nautical mile zones and the high seas enclaves they surround (Figures 1.2 and 6.1). The Marshall Islands and other island delegations had argued that the Convention should cover large expanses of international waters north and south of the area encompassed by the contiguous exclusive economic zones of the Pacific island countries, particularly those high sea areas subject to Japanese proposals for the dumping of radioactive wastes. France still had difficulties with the dumping article but finally agreed to accept it subject to a reservation and an addition to the definition of 'pollution'. France retains the option of whether or not to confirm its reservation when it proceeds to ratify the Convention (De Stoop 1987).[1]

With regard to the nuclear testing issue, important political, moral, and legal principles came into play. Consequently, the Fourth Expert Meeting agreed that the issue could be resolved only at the political level and it was passed to a Plenipotentiary Conference of SPREP for decision. Eleven alternative approaches to the problem were appended to the Expert Meeting Report. One fact was

[1] The French reservation reads as follows: 'The Government of the French Republic, in signing the present Convention, declares that, as far as France is concerned, the provisions of the said Convention do not cover wastes and other matter entailing radioactive pollution to a degree less than that prescribed by the recommendations of the International Atomic Energy Agency (IAEA).

certain: if most countries insisted on a prohibition clause then France and its territories would not participate in the Convention. Australia and New Zealand, surprisingly perhaps, favoured the exclusion of any reference to testing in the SPREP Convention. The reasons for this position were, first, the importance of French involvement in a truly regional approach to environment protection under SPREP, and second, the adoption in 1985 of the Nuclear Free Zone Treaty (NFZT). Radioactive waste dumping and testing are banned under the Treaty which has been signed by ten of the fourteen Forum Governments but not by France or the USA (Fry 1985; Power 1986). At the 1983 Forum Meeting, the Australian NFZT proposal did not receive broad support as it was thought by some island governments to overlap the draft SPREP Convention to little practical effect. The view that the existence of the NFZT might promote a successful resolution of the impasse threatening the SPREP Convention helped to engender wide backing for the proposed Treaty at the 1984 and 1985 Forum Meetings.

Governments at the Seventeenth South Pacific Forum in August 1986, decided to make clear at the Fifth Meeting of Senior Officials and SPREP Convention Plenipotentiary Conference, in November that year, that their opposition to testing continued unchanged. Yet, given the legal expression of that opposition in the NFZT the Forum decided to negotiate general agreement on a provision to prohibit environmental pollution from testing and to revert to pressing for a complete ban on testing only if this option was not acceptable to all. France had no problem with this approach, given its position that pollution had not and would not result from the underground testing at Mururoa. The final Convention wording thus facilitates its ratification by all countries with interests in the region, including the nuclear weapons states. On this issue, the Papua New Guinea delegation noted with regret that 'the goodwill and the pacific nature of the island peoples have been compromised to further the interests of the nuclear powers'. PNG joined fifteen other Pacific countries, including Australia and New Zealand, in insisting that a declaration, calling upon all nations not to dump and not to test in the South Pacific, should be reflected in the record of the Meeting (SPREP 1987b).

The Way Ahead

The SPREP Convention has its roots in the SPREP Action Plan which specifically requested 'the development of regional agreements to provide for responsible and effective management of the environment' as one of the four main objectives of the Plan (SPREP 1982). The 1982 Raratonga Conference on the Human Environment clearly recognized the close relationship between the Action Plan it adopted and the Convention it recommended be developed.

The principal objectives of the Action Plan and the Convention are virtually the same: the former aims 'to help the countries of the South Pacific to maintain and improve their shared environment and to enhance their capacity to provide a present and future resource base to support the needs and maintain the quality of life of the people' and the latter 'to take all appropriate measures...to prevent, reduce and control pollution of the Convention Area, from any source, and to ensure sound environmental management and development of natural resources'. Therefore, there is no difficulty in principle in the institutional and administrative arrangements already established for the implementation of the Action Plan becoming an effective mechanism for the implementation of the Convention. Similarly, the Convention would become the legal framework for the Action Plan.

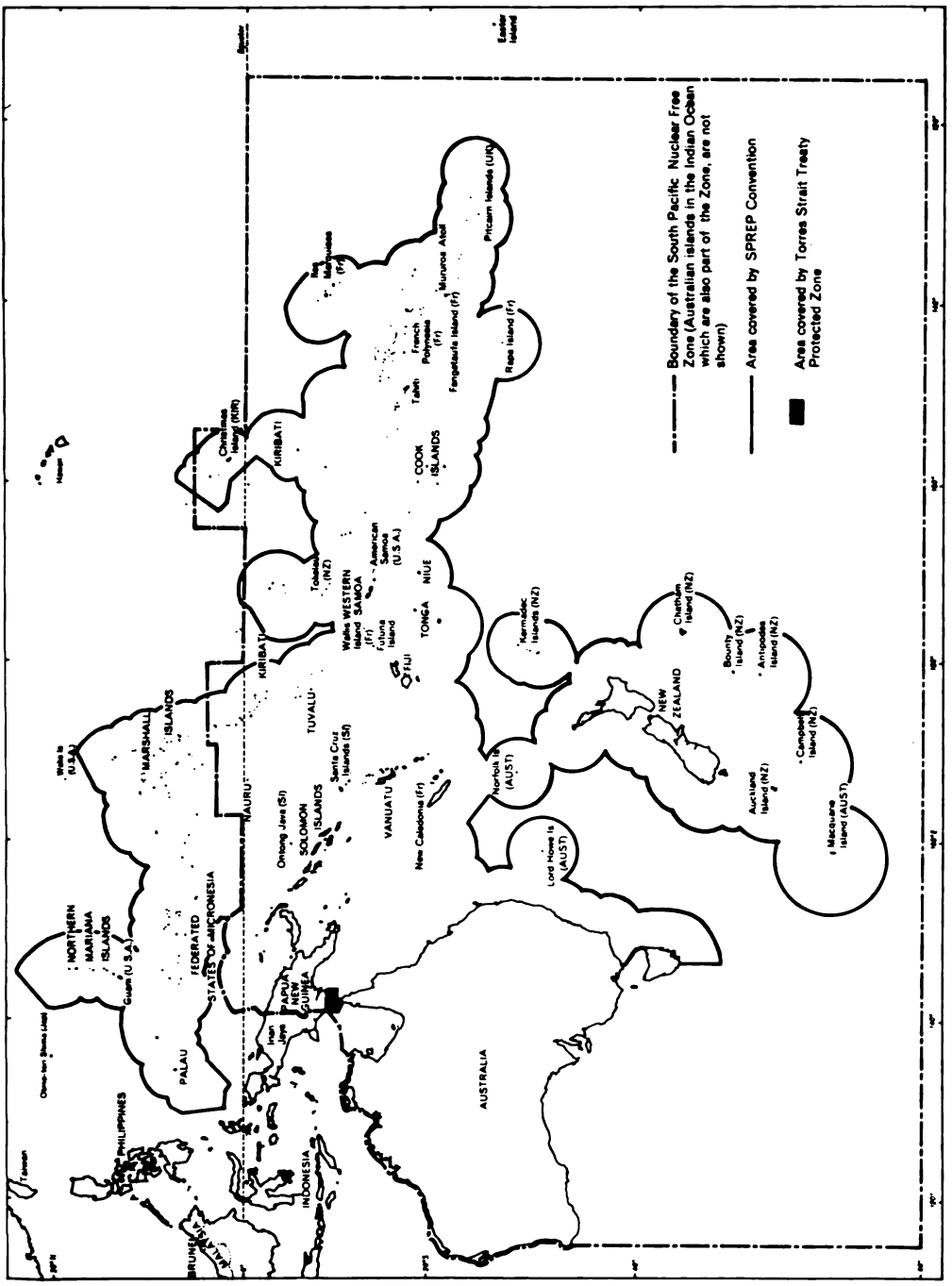


Figure 6.1 Area covered by South Pacific Regional Environment Protection Convention.

When the Convention enters into force and more countries which are participating in SPREP become parties, the meetings of contracting parties could assume overall authority for the implementation of both the Action Plan and the Convention. UNEP has found that development in other regions covered by the Regional Seas Program followed a similar general pattern and resulted in a flexible and efficient institutional arrangement. The Parties to the Convention will not necessarily include, at least in the initial phase, all the governments which support the SPREP Action Plan. Again, as experience in other regions has shown, the number of states joining the Regional Convention will progressively increase and the contracting parties will become one and the same group as that which participates in the related Action Plan. Confusion concerning authority over the SPREP Action Plan could be avoided during the early stages of the Convention implementation if work programs, timetables and budgets of both the Convention and Action Plan are discussed at joint meetings of contracting parties and all other governments participating in SPREP.

Some countries, because of their political status, will not be in a position to sign either the SPREP or Apia Conventions and will not therefore have an equal participatory role in policy decisions relating to the Conventions. The SPREP Co-ordinating Group favoured a suggestion by UNEP that all states and territories which participate in the SPREP Action Plan and in negotiations on the Conventions should be invited as full participants to the joint meeting of contracting parties and other SPREP countries. All decisions of the joint meetings would be taken by general consensus and, in cases of disagreement on matters related to the implementation of the Conventions, only the contracting parties would have the decision-making power (SPREP 1987a). This issue like the other institutional uncertainties, will not be resolved until one or both Conventions enter into force.

Servicing of the Convention and the Action Plan, implementation of commonly agreed activities and sharing of the costs are vital issues which also remain to be resolved formally by governments of the region. The relationship between the various legal, administrative and financial aspects of the regional environmental initiatives need to be clearly enunciated and united under the umbrella of SPREP, an issue which is considered further in the following chapter on the Apia Convention.

The broad legal framework for SPREP provided by the SPREP and Apia Conventions, once in force, will give added impetus to environmental aid. Bilateral funding arrangements in which environmental activities have variable emphasis will continue. But the obligations under the legal agreements for parties to co-operate in combating shared environmental problems inevitably will lead to increased funding and co-ordination of environmental work in island countries. International attention on the region's environmental concerns will be maintained through regular meetings of the contracting parties which will be obliged to make these concerns a permanent fixture in their budgetary cycle. The stage will be set in the 1990s for heightened international effort and co-operation in safeguarding the South Pacific environment.

CHAPTER 7

The Convention on the Conservation of Nature in the South Pacific (the Apia Convention)

A Lengthy Gestation

A draft text for the Apia Convention was initially circulated in 1975 at the First South Pacific National Parks and Reserves Conference in Wellington, New Zealand. The Convention had been drafted by IUCN in response to resolutions of its Regional Symposium on Conservation of Nature held jointly with the South Pacific Commission in New Caledonia, 1971. IUCN's intention was to encourage the protection of species and ecosystems through the establishment in the islands of national parks and reserves. The draft was put before the 1976 Meeting to Conclude a Convention on Conservation in the South Pacific. All delegations at the meeting in Apia gave support to the principles and objectives in the Convention and the adopted text was signed on the spot by Western Samoa (which is the Depository), France and Papua New Guinea. Some fifteen years after it was conceived, the Apia Convention still had not entered into force. By mid-1989, only one state, the Cook Islands, had acceded to the Convention although Australia and New Zealand were in the final stages of accession procedures. The agreement comes into affect once four countries have become parties.

The main reason for this apparent neglect was the decision by the South Pacific Forum and Conference, in 1976, the same year as the Apia plenipotentiary conference, to develop a comprehensive environmental protection program. This initiative, which led to the establishment of SPREP, attracted attention away from the Apia Convention whose objectives were subsumed within the SPREP Action Plan.

The 1982 Raratonga Conference on the Human Environment in the South Pacific noted within the SPREP Action Plan that, although not in force, the Apia Convention 'could serve as a legal basis for regional co-operation on conservation in the region'. However, the Conference raised the caveat that 'a revised convention consistent with evolving principles in environmental management may need to be considered' (SPREP 1982). The Apia Convention was based on the classical 'protection' model of conservation, whereas SPREP recognized conservation as integral to development. The IUCN Environmental Law Centre explains the evolution of conservation thinking as having:

> ... taken the form of a continuous move from the classical 'protection' model towards an attempt to achieve a comprehensive and integrated natural resource management system in which protection plays only a part. The objectives at which modern

conservation models aim are those described in the World Conservation Strategy, namely the maintenance of essential ecological processes and life-support systems, preservation of genetic diversity, and the sustainable utilization of species and ecosystems (Forster 1985).

Another major criticism of the Apia Convention is that it does not reflect the significant developments relating to nature conservation in the South Pacific that have occurred since 1976, such as the Raratonga Conference, the establishment of SPREP and the SPREP Convention. Consequently, in planning for the Third National Parks and Reserves Conference to be held in Apia in 1985, the SPREP Secretariat was acutely aware of the need for countries to settle on the most suitable regional framework for their shared conservation goals, but uncertain of how best to proceed to that end. Meanwhile, negotiations on the SPREP Convention were proceeding apace with success in sight. UNEP feared a loss of momentum to these negotiations and confusion if the languishing Apia Convention were resurrected for re-evaluation by countries at a time when effort was being concentrated on the NFZT and SPREP Convention. On the other hand, some countries, such as Australia, wished to consolidate on advances gained and retain their commitment to the Apia Convention. The SPREP Co-ordinating Group therefore decided that the matter should be left for resolution at the ministerial level session of the Third National Parks and Reserves Conference and that countries should receive prior briefing on their options which were:

- accede to the Apia Convention without amendment;
- promote the Apia Convention with appropriate amendments and/or protocols; and
- seek to achieve the introduction into the SPREP Convention (whether by protocol or otherwise) of more comprehensive provisions for the conservation of nature.

The Third South Pacific National Parks and Reserves Conference

There was no denying the importance placed on the Third Parks Conference by countries of the region. Approximately ninety people from twenty-four countries and eleven regional and international organizations took part in the three-week event. At the Ministerial Session, eight countries were represented at ministerial level, one, New Caledonia, by its Vice-President, and others by senior officials. Even the South Pacific Conference now fails to attract representation at such a senior level.

The Ministerial Session left no doubt about the desired course of action. There was general consensus that the Apia Convention provided a useful legal basis for the establishment and management of protected areas in the South Pacific and, despite some weaknesses, should be supported. The Session also saw scope for amending the Convention once in force. Such amendments, it was suggested, could be incorporated as specific protocols subject to the concurrence of participating countries. The delegations of France, Papua New Guinea and Western Samoa indicated that they would urge their governments to ratify the Convention. Seven other countries indicated the commitment of their governments to accede to the Convention. A further seven countries expressed support for the intent of the Convention and gave assurances that their governments would consider accession (SPREP 1985). Regrettably, despite that enthusiastic endorsement, the Convention has not entered into force. Active follow-up is required from the SPREP Secretariat while Western Samoa, which at

one point mislaid the Convention documents, may need legal assistance to advise on Depositary duties. The Fourth South Pacific Parks Conference (now entitled The South Pacific Conference on Nature Conservation and Protected Areas) scheduled for September 1989 in Vanuatu, may well impel more governments to join the Convention and see it come into effect. The Fourth Conference will promote a greater understanding of the links between the Apia and SPREP Conventions within the overall context of SPREP.

The Relationship between the Apia Convention and the SPREP Convention

The Apia and SPREP Conventions can be viewed as being complementary, the former providing the basis for Article 14 of the SPREP Convention, but they have important differences. The first is the territorial scope of the Conventions. The Apia Convention covers the area served by the South Pacific Commission.[1] It applies to the protection of land and water within that area but gives greater emphasis to the former. The SPREP Convention area, on the other hand, comprises the 200 nautical mile zones of listed countries and those areas of high seas which are enclosed from all sides by those zones, and at this stage is consequently concerned primarily with protection of the marine and coastal environment. The SPREP Convention may be given terrestrial coverage through application of Article 3 which allows any party to add areas under its jurisdiction within the Pacific Ocean region. Specific Protocols to the SPREP Convention may apply to land or water areas as defined by the Signatories. The second difference concerns the environmental scope of the conventions. The SPREP Convention is concerned with pollution and broad-based environmental management and assessment integrated within the development process. The Apia Convention, on the other hand, focuses on the protection of plants, animals and areas, including those of historic and cultural significance, two issues alien to the other agreement.

The 'Protection' Convention: the Main Provisions

Protection of areas and species. The Apia Convention is concerned primarily with the importance of the protection of areas and of species. 'Protected Areas' are divided into two categories: 'National Parks' and 'National Reserves' (Article 1). National parks are areas reserved by the highest appropriate authority within a country primarily to protect the natural environment, subject to proper arrangements for visitors. The commercial exploitation of natural resources within national parks is prohibited but the legal force of this provision is weakened by the addition of the words: 'except after the fullest examination' (Article 3.2). There exists a similar qualification to the prohibition on the alteration of park boundaries to reduce their areas (Article 3.1). Provision is made for authorized scientific use of parks (Box 6).

National reserves cover a variety of areas established under public control to protect and conserve natural and cultural heritage. The primary objective may

[1] The geographic limits of the area served by the South Pacific Commission have never been legally defined. The area was not prescribed under the Canberra Agreement, 1947 which constituted the Commission nor by the Apia Convention which refers to it. Early maps of the Commission area showed an indicative boundary which had no legal basis. In practice, the area is now taken to cover the territory of the twenty-two islands listed as countries of the region, including portions of sea within the contiguous exclusive economic zones of those territories but excluding pockets of high seas.

Box 6

Existing protected areas in the South Pacific

Ninety-five protected areas have been established in sixteen of the Pacific countries, the first being three botanical reserves in 1950 in New Caledonia (Table 7.1). Almost 60 per cent of the protected areas were established under colonial administrations or current territorial governments. Only some 10 per cent of the total have been established since 1980. Protected areas cover 8023.9 square kilometres on forty-three islands or 1.46 per cent of the total land area covered by the twenty-two South Pacific countries. This compares with 4.49 per cent of land area in Australia reserved for nature conservation and 5.9 per cent under parks and reserves in New Zealand. Most of the South Pacific parks are terrestrial but, more recently, there has been greater interest in establishing marine reserves. There are only nine national parks in the region; in Papua New Guinea, the Solomon Islands and Western Samoa. All but one were established by colonial administrations. Most countries with protected areas have established nature or wildlife reserves with no provision for traditional practices. In general, the objective in establishing these reserves has been the protection of nature with little concession to other resource uses, following the conventional concept of protected areas in developed countries.

Only nineteen of the forty-three islands with protected areas have an area greater than five square kilometres under protection, raising concerns about the size required for protected areas to adequately conserve island species and systems. Twenty per cent of the 2000 different ecosystems in the region are represented in the current protected area system. Many of those not represented are unique to the region, are under development pressure and may be lost to the world if not adequately protected. Even when included in a park or reserve, samples of ecosystems are seldom effectively protected. Legislative intent is rarely realized in practice (Dahl 1986). Understanding why this is so holds the key to effective conservation in the region (Carew-Reid in press).

Many difficulties face island governments in establishing and managing protected areas. The British colonial inspiration for the Queen Elizabeth National Park in the Solomon Islands is apparent from its title. Established in 1965 under the colonial protectorate's National Parks Act, it covers some 60 square kilometres of forest in the hills behind the capital city, Honiara. At the time, the area had been designated as public land. In 1973, following local protest, a significant portion of the park was excised and returned to customary ownership. Nominally, the remaining area was under total protection but, by 1985, squatters within the Honiara town boundary had cultivated most of the remaining forest, leading the Solomon Islands Government to report that 'full protection would now be politically and physically impossible' (SPREP 1985b). The National Botanical Gardens in Honiara have also been affected by polluted streams draining from the park through the centre of the gardens and by the intensive gathering of fuel wood. Similar problems have arisen in bird sanctuaries declared on several of the small outlying islands of the country. There, habitat destruction and poaching has continued due to the lack of staff and funds to enforce regulations. In 1980, the Solomon Islands Government, responding to international concern over the conservation status of turtles, established a Wildlife Sanctuary in the Arnavon Islands (in Manning Strait between Choiseul and Santa Isabel). At the time, ownership of the land was disputed. The issue came to a head after the turtle sanctuary and research station had been operating for a short time. Armed Choiseul islanders destroyed the station's buildings and equipment and forced the research staff to leave the islands. Since then, killing of turtles has continued and the sanctuary has ceased to exist in all but name.

Continued onnext page.

Table 7.1 **Protected areas in the South Pacific.**

Country	Island	Number of protected areas	Area (km^2)	Per cent total island area
American Samoa	Tutuila	1	–	–
American Samoa	Rose Atoll	1	0.1	100
Belau	Ngerukuid	1	2.6	100
Cook Islands	Suwarrow (Suvarov)	1	0.4	100
Fiji	Vanua Levu	2	0.4	–
Fiji	Taveuni	1	40.2	9
Fiji	Yadua Taba	1	0.7	100
Fiji	Viti Levu	7	21.2	–
Fiji	Kadavu	1	0.1	–
French Polynesia	Manuae (Scilly)	1	–	–
French Polynesia	Takaro	1	20.0	100
French Polynesia	Motu One	1	1.0	100
French Polynesia	Hatutaa	1	18.1	100
French Polynesia	Elao	1	51.8	100
French Polynesia	Mohotani	1	15.5	100
Guam	Guam	7	45.0	8
Kiribati	Birnie	1	0.2	100
Kiribati	Rawaki(Phoenix)	1	0.5	100
Kiribati	McKean	1	0.6	100
Kiribati	Kiritimati	6	321.0	100
Kiribati	Malden	1	39.3	100
Kiribati	Starbuck	1	16.2	100
Kiribati	Vostok	1	0.2	100
Marshall Islands	Bokaak	1	3.2	100
Marshall Islands	Bikar	1	0.5	100
New Caledonia	New Caledonia	18	621.8	4
Niue	Niue	1	2.0	1
Northern Marianas	Maug	1	2.0	100
Northern Marianas	Sarigan	1	4.9	100
Papua New Guinea	New Guinea	12	5914.9	1
Papua New Guinea	Long	1	419.2	84
Papua New Guinea	Karkar	1	137.6	34
Papua New Guinea	Fergusson (Moratau)	1	50.0	4
Papua New Guinea	Normandy (Duau)	1	7.0	1
Papua New Guinea	New Britain	2	170.0	–
Papua New Guinea	Talele Islands	1	0.4	100
Papua New Guinea	Nanuk	1	0.1	100
Solomon Islands	Kolombangara (Nduke)	1	5.0	1
Solomon Islands	Arnavon Islands	1	–	–
Solomon Islands	Guadalcanal	1	60.8	1
Tonga	Tongatapu	3	0.2	-
Vanuatu	Espiritu Santo	1	–	–
Western Samoa	Opolu	4	29.2	3
Total	43	95	8023.9	

Source: Modified from Dahl, A. Review of the Protected Area System in Oceania, IUCN in collaboration with UNEP, 1986.

Box 6 continued on next page.

Box 6 ... continued

In Western Samoa, important advances in protected area establishment took place during 1978-81 with financial and staffing assistance from New Zealand. The initiative followed a joint IUCN-United Nations Advisory Team study which proposed a system of national parks and reserves for the country. One national park and three reserves were established with buildings, interpretive facilities and management plans, making them amongst the best developed protected areas in the region. Since then, substantial management problems have arisen. The O Le Pupu-Pu'e National Park has suffered from poaching, fuel wood collection and encroachment for subsistence cultivation even though the park and the other reserves are on government land. Iosefatu Reti, the Western Samoan co-ordinator of SPREP, recalls the example of a park employee enforcing park regulations when on duty then tending his illegal gardens within the park after hours (SPREP 1985c). In this and other cases, the farmers concerned are invading the park without any traditional association with the area. They do not claim traditional rights but they are desperately short of land on which to continue traditional subsistence activities. Traditional rights and subsistence practices underpin Pacific island cultures and inevitably will override conservation measures which do not take them fully into account. In the case of the Palolo Deep Marine Reserve, the local landowners with customary rights over the reef area concerned, agreed to manage the Reserve in return for the construction of facilities and annual payments by the government. Yet, conflicts have arisen when other villagers have continued to fish the area. Also, the construction of a raised viewing platform, using living coral, and a path along the reef flat made by traditional owners have damaged the reef. This structure and an entry fee to the reserve were initiatives of younger members of the family who wished to take advantage of the tourist dollar but without consultation with the government. Effective management plans developed through community consultation are lacking for most protected areas in the South Pacific.

In the Cook Islands, a move by the government to establish a World Marine Park on the atoll of Manuae has been resisted successfully by the traditional owners objecting to inadequate community consultation on the proposal. In Fiji, an attempt to establish a small forest reserve on the island of Vanua Levu ran into difficulties when local landowners requested compensation for timber royalties foregone in addition to leasing payments, costs the Fiji National Trust could not afford. The Trust receives little support and encouragement from the Fiji government to enable it to respond in an innovative way to reasonable requests from landowners for compensation.

These are examples of the kinds of difficulties which are being experienced throughout the protected area system of the South Pacific. The outstanding concern is the desire of island communities to maintain traditional rights and patterns in the face of concepts of protected areas which seek to constrain those rights.

differ from that of a park; for example, in a forest reserve the aim may be to conserve timber on the basis of sustained-yield production, or, in a geological reserve, the protection of geological features. National reserves must be maintained inviolate, 'as far as practicable' within the primary purpose for which they are established (Article 4).

The protection of flora and fauna is achieved through the establishment of appropriate parks and reserves, which protect the natural habitat or ecosystems. However, other measures may be taken for the protection of flora and fauna from unwise exploitation or threats that may lead to their extinction outside parks or

reserves (Article 5). Species threatened with extinction are to be listed and to be protected as a matter of urgency. Special attention is to be given to migratory fauna and to problems created by introduced species (Box 7). Notwithstanding these protective measures, the Convention allows for appropriate arrangements to be made for the customary use of areas and species according to traditional cultural practices (Article 6) (Box 8).

Research, Information and Training. A second major facet of the Convention is its promotion of co-operation between parties in the conduct of research, exchange of information and the interchange and training of personnel (Article 7). Parties are also required to maintain consultation with one another to ensure the effective implementation of the Convention (Box 9). The South Pacific Commission is identified as a Secretariat for these purposes (Article 8), but in effect, bureau responsibilities would rest with SPREP which was instituted as a joint SPEC–SPC program.

Weaknesses of the Convention. The Convention makes no provision for enforcement, for the preparation of management plans or for consultation with the community and affected interests in the establishment and management of protected areas. No special arrangements are made for funding of Convention related activities or for Secretariat support. However, the stated intention of the Third South Pacific National Parks and Reserves Conference (1985) was that the Convention should operate within the financial and institutional arrangements for SPREP. Furthermore, the other weaknesses have since been addressed in terms of prescribed policy within the Action Strategy for Protected Areas (1985) which arose out of the Ministerial Session of the Third Parks Conference and which is examined below.

Action Strategy for Protected Areas

Owing to the fact that neither the Apia Convention nor the SPREP Convention are yet in force, the adoption of an Action Strategy for Protected Areas at the Third Parks Conference is seen as a step of great importance to conservation in the region. The Strategy aims to provide a work program to implement the conservation and protected areas objectives of the SPREP Action Plan in the four years leading up to the Fourth Parks Conference (Objectives 20.15 and 20.16). It aims to further the objectives of both Conventions. The Strategy is based on the premise that sustainable development of resources can be aided by the conservation of protected areas and ecosystems. Such protection helps maintain biological diversity and genetic resources, supports traditional culture and customs, provides opportunities for research and education, and engenders economic development through recreation and tourism. According to the Strategy, effective establishment and management of protected areas and species involves 'an enforceable legal framework' a close working relationship between governments and community groups in planning and management, the integration of modern and traditional skills applied in the field, and support from research, training, education and information services' (SPREP 1985). The Strategy sets out five goals to this end. These are to:

- implement programs and expand efforts in conservation education and increase public awareness of the values and benefits of environmental conservation including protected areas;
- develop conservation policies which promote protected area management as an integral part of natural resource use;

Box 7

Threatened island species and introduced pests

The existing mix of plant and animal species on any island today represents a moment in a succession reflecting continuous processes of invasion and extinction. The distance between islands and their isolation in the marine world makes colonization by new species a fairly rare event. Having colonized an island, plants and animals quickly evolve to occupy niches, in the process often losing the defence mechanisms which would ensure their survival in a more competitive environment. The number of organisms are limited by the space available. In general, the smaller the island the smaller are its populations and less diverse its habitats. Assemblages of island plants and animals have little capacity to absorb even small changes to their populations, habitats or composition without becoming unstable and suffering reduced diversity and productivity.

In the South Pacific islands, the rate and scale of change has increased dramatically in recent decades due to human activities so that now there are more endangered species per capita and per unit of land area in the region than anywhere else in the world (Dahl 1984). Countries with very high rates of endemism experienced profound habitat modification and massive invasion by introduced species associated with man. New Caledonia was identified as being among the islands most at risk in the IUCN Review of the Protected Areas System in Oceania (Dahl 1986). Of its original species, 74 per cent (i.e. 2578 species) are endemic, including over 90 per cent of the original flora.

Norfolk Island, which was also ranked in a high risk category, illustrates well the impact of more aggressive species introduced from the mainland which compete directly for specific niches occupied by endemic species. The European Blackbird, for example, replaced the Grey-headed Blackbird on the island. The Polynesian Starling also became locally extinct when confronted by its more aggressive European cousin and the Eastern Silver-eye permanently dislodged the White-breasted Silver-eye from its island perch. Currently, the Crimson Rosella, introduced to Norfolk Island for its decorative value, has largely replaced the Green Parrot whose numbers have dwindled to about thirty individuals. A program to save the species has been mounted by the Australian National Parks and Wildlife Service in co-operation with island residents. Some introduced animals have widespread and diverse effects. Rats, for example, have been implicated in major declines or extinctions of island birds. On Lord Howe Island, five species of indigenous land bird became extinct following the arrival of Rattus rattus in 1918 (Recher and Clarke 1974). In New Zealand, eight species of indigenous land birds were either greatly reduced or became extinct immediately following the arrival of R. rattus on outlying islands in about 1962 (Atkinson and Bell 1973). Introduced rats were also a contributing factor, along with cats, dogs, mongooses and pigs, in the massive extinctions of Hawaiian bird species (Atkinson 1985).

Predators have a profound and direct impact on island ecosystems by drastically reducing or exterminating entire populations. Introduced herbivores, such as cattle, goats, sheep and rabbits, have also modified island vegetation and led to the extermination of many plant species.

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Box 7 ... continued

Rabbits and other introduced animals denuded Phillip Island of its vegetation cover (Coyne 1982), while goats in Fiji have caused habitat destruction and severe erosion in local areas.

Probably the most widespread pollution problem in the Pacific Islands is weeds. Invading plants, free from the wide range of ecological factors which keep them in check in their place of origin, have multiplied unrestrained in the islands, in parts replacing entire endemic biological systems. Impenetrable mats of leucaena and mimosa, for example, now cover large areas of the Northern Mariana Islands, Guam, New Caledonia, Vanuatu and Fiji. In 1861, there were nineteen species of grasses in Fiji, of which five were indigenous. By 1955, 158 grass species had established, replacing the indigenous grasses in many areas and several had become major pests. Weeds on the larger islands tend to be a more complex problem than on smaller isolated islands. Yet, even on Niue, a raised atoll of 260 square kilometres, 454 of the 629 taxa of vascular plants on the island were introduced by man (Wodzicki 1973).

Direct destruction of island habitats by people has been the main cause of island species becoming extinct or endangered. On many of the Pacific Islands, only fragments of undisturbed natural areas remain. For example, in American Samoa, two-thirds of the lowland rainforest has been destroyed. In many islands of Micronesia the situation is more serious. The forests of Pohnpei and Yap are mostly disturbed, and in Truk, no undisturbed areas exist. Only scattered and inaccessible remnants remain on Guam and there are none remaining on the Marshall Islands (US/OTA 1987b). Further south, in Niue, the original tropical rainforest of tall trees with a relatively dense canopy, has been reduced to small remnants surrounded by large expanses of scrub and fernlands resulting from prolonged overcropping and soil impoverishment. Niue provides an unusual example of a significant patch of primary forest protected as 'sacred forest' by customary owners.

The Pacific Island countries are confronting a situation in which both their terrestrial and coastal marine systems are diminishing in productivity and rapidly losing their distinctive character, in many instances, irreversibly due to species loss.

- establish a representative network of protected areas within the South Pacific region;
- develop and maintain an adequate capacity for effective protected area management in the South Pacific region; and
- strengthen co-operation in promoting conservation in the region and support from international agencies.

Within each goal, a number of objectives are identified under which are listed activities needed at national, regional and international levels. The Third South Pacific National Parks and Reserves Conference appended 104 project suggestions to the Strategy to be formalized after suitable consultation and to be implemented as resources permit and with regional or international assistance if required. The countries of the region endorsed the Strategy at the 1985 South Pacific Conference and, since then, SPREP, and other agencies and governments in pursuit of its goals, have undertaken an impressive array of activities (Reti and Thomas 1987). The Strategy is to be revised at the 1989 Fourth Parks Conference in Vanuatu.

Box 8

The importance of tradition in the success of protected area systems

Protected areas were not conceived to accommodate traditional values. The concept grew from concern over the effects of development on natural systems. The aim was to protect nature from man by preventing him from inhabiting an area and restricting his activities and access. The limitations of this concept, when applied through legislation in traditional communities, quickly became apparent and met with stiff resistance from some island leaders who viewed it as an unwanted legacy of the colonial past. In 1980, for example, John Waiko and Kipling Jiregari, of Papua New Guinea, criticized their country's National Parks Ordinance as 'elitist in character and orientation'. Protected area categories under the Ordinance were national parks, marine national parks, provincial parks, historic sites, nature reserves and national walking tracks which were defined as having two functions: recreation and conservation. In the view of Waiko and Jiregari, 'These are designed for the bureaucrats, for barbecues and beer drinking after they have spent time between the imposing brick walls of the urban centre. Alternatively, they are holiday resorts to attract foreign tourists to bring money into the country...It is about time that Papua New Guinea threw off its yoke of colonialism and returned to its own customs and conditions as a guide to conservation practice' (Waiko and Jiregari 1980).

In recent years, a number of island countries, particularly Papua New Guinea, have gone some way to meeting these concerns. **Papua New Guinea** has a decade of experience in the establishment of Wildlife Management Areas under a 1974 amendment to the Fauna (Protection and Control) Act. Wildlife Management Areas can be declared only at the request of local landowners and without any effect on their ownership of the area in question. Regulations which may restrict use and access in the area are only those which the owners themselves decide upon. Similarly, enforcing the regulations is a local responsibility.

To date, the PNG Department of Environment and Conservation has received over 100 requests to investigate possible wildlife management areas and eleven are now operating. All requests have stemmed from local concern associated with the over-exploitation of wildlife on village land. Problems have involved the poaching of wildlife or taking of eggs by people without traditional rights in the area and international visitors hunting wildlife such as deer and crocodile. Loss of wildlife habitat, through forest clearing, is of widespread concern and the commercial overexploitation by landowners of species of special traditional value, for example, crocodiles and cassowaries, has been cause for action as has been the decline in some species because traditional hunting rules are being ignored and new hunting methods, such as shotguns, are being adopted (SPREP 1985c).

The impetus for a Wildlife Management Area comes from the landowners but may follow discussions with officers of the PNG Wildlife Division who have noted a particular problem when working in the area. Once the need for protection is established, discussions begin with landowners on the legal framework available to assist in their action. The cause of the problem is identified, existing traditional laws and practices which may assist in resolving the problem are investigated and the area requiring protection identified. Complete agreement must be reached among the landowners on all aspects of the initiative, particularly rules which may be thought necessary. Commitment to implementing the management strategy will only come if there is unanimity at this stage. To this end, discussions may take up to seven or eight years with regular meetings within

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BOX 8 ... continued.

the community and with Wildlife Division officers. Declaration procedures are initiated once there is complete agreement on the boundaries of the areas to be declared, the membership of the management committee of landowners and the rules which they want established. All aspects of the agreement are reflected in the legal proclamation for the Wildlife Management Area. Once established, government meetings with the committee members should take place at least every six months to discuss progress and implementation of the management rules. When infringements arise, committee members may prosecute, but kinship ties and ignorance by police and court officials regarding the laws have led to problems in implementation.

Tonda was the first Wildlife Management Area to be established and there the management committee introduced a licensing system to control, and require royalties for, the taking of deer, duck and fish by outsiders. In another area around Lake Lavu on Fergusson island, concern arose over uncontrolled hunting by outsiders, including Europeans, and the resultant scarcity of some species. Seven villages in the area are represented on the management committee which has banned all but traditional hunting methods and the collection of crocodile eggs. In other Wildlife Management Areas, committees have forbidden shotguns, dogs and logging, for example, and the use of commercially manufactured nets, hurricane lamps, and derris root and other poisons for fishing. In all areas, rules tend to promote traditional practices and authority (Eaton 1985).

In Fiji, community involvement in the establishment of protected areas has not been so successful, primarily due to the lack of government support and clear legislative direction. But one case is significant, that of the Yadua Taba island Crested Iguana Sanctuary established in 1981. Only small remnants of the forest habitat of the iguana population remained following extensive grazing by goats, slash and burn cultivation and severe erosion. Following a series of meetings between government officials and the local landowners, an agreement was reached whereby the goats would be removed to the nearby home island, wire fencing provided to protect food gardens there and compensation paid to the landowners to act as wardens for the sanctuary.

Despite these promising cases in Papua New Guinea and Fiji, some substantial impediments remain which are retarding progress. The low priority and level of resources given to the establishment of protected areas by governments has wide-ranging implications. Most important is that a lack of consistent field presence by park staff means that protected area initiatives lose momentum and landowners lose interest. Communication channels with the local community cannot be maintained. This breakdown in communications and the clear dominance which government land-use and resource development agencies have when conflicts arise between conservation and development goals causes a loss of credibility for park authorities. Often, where traditional owners are presented with conservation options or those which involve other uses of their resources, such as leasing for logging or mining, they choose developments which will bring the maximum financial return. In these circumstances, conservation proponents cannot compete. The large sums paid to owners for the purchase or leasing of traditional lands on which major development is to proceed, such as commercial forestry, can raise community expectations and reduce enthusiasm for less profitable options. Yet, there are many examples of traditional owners holding out against logging and mining interests despite strong financial and material inducements, sometimes to be undermined by members of their own community (particularly their town-based relatives) or through government manipulation.

The issue of agricultural use in conservation areas is probably the most widespread problem still to be effectively addressed in the region and, in this respect, the Papua New Guinea Wildlife Management Areas provide the best model to date. In the view of Iosefatu Reti, the Western Samoan experience has

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BOX 8 ... continued.

shown that 'as long as we continue to outlaw traditional farming practices from protected areas, we have to be prepared to accept the fact that (they) will continue to diminish in size and may be totally lost over a period of time' (SPREP 1985c). He believes that encroachment of land clearing and other farming activities is the most common and widespread threat to protected areas in the region and he advocates intensive community education programs through the use of demonstration reserves. A range of approaches which accommodate traditional ownership and practices remains to be tried. For example, in some areas, it may be feasible to establish a system of rotating reserves over a biome where intermittent traditional activities, or even more intensive uses such as forestry could proceed, followed by fallow periods to allow for regeneration. A certain percentage of the biome would be conserved at any one time in different parts of the protected area system.

In **New Caledonia,** a rotating reserve system has been established on the Barrier Reef opposite Noumea. The reserve covers three distinct sections of reef separated from one another by channels used for navigation. One of the sections and its surrounding waters is closed to all fishing activity for three years, while the other two sections remain open to fishing without restriction. The period of closure rotates from one section to another. The difficulty is in determining the most appropriate cycle for opening and closing the areas in a situation in which insufficient biological information is available to assess exploitable stocks. The lack of ecological data for use in conservation management is a problem common to all countries of the region and one which traditional knowledge could help resolve.

The Fagatele Bay National Marine Sanctuary in **American Samoa,** the most recent protected area in the region, established in 1986, provides another useful model. As an American territory, US government federal procedures were followed in establishing the sanctuary, involving the preparation of an environmental impact statement on the proposal and the holding of community meetings and workshops. The backing of expertise and funds from the US National Oceanic and Atmospheric Administration provided a security to the planning effort which is often lacking in the Pacific. Yet, similar kinds of community concerns were raised during the consultation stages as those found elsewhere in the region in response to protected area proposals. The community was worried that the establishment of the sanctuary might conflict with their traditional lifestyle and traditional heritage and that their traditional uses of the bay might be prohibited. They feared that local participation in managing the site would be ignored and that there would be too few native Samoans qualified to manage the sanctuary effectively (Thomas 1988).

The Sanctuary Management Plan addresses each of these concerns and a commitment has been made to provide technical training and a Sanctuary Education Program running to 1993. The Plan includes educating those who violate sanctuary regulations about the reasons for safeguarding the bay's resources. The emphasis on a six-year education program reflects the importance placed by island leaders on this aspect of conservation. The Action Strategy for Protected Areas in the South Pacific region has as its first goal 'to implement programs and expand efforts in conservation education and increase public awareness of the values and benefits of environmental conservation, including protected areas'.

As this goal implies, protected areas are only a part of the solution. Between 1986 and 1987, the 'traditional' harvesting of the endangered Hawksbill Turtle in the Solomon Islands increased almost three-fold to 12,000–16,000 adults in 1987, spurred on by the flourishing export of shell. Dynamiting of reefs as a fishing method is on the increase in Palau. In many instances, the traditional harvesting of wildlife species is not a safeguard against extinction. Problems such as these require a range of economic, legal and conservation solutions but, underlying them all, is the need for community involvement and awareness.

Box 9

Bilateral agreements for conservation

SPREP, through its regional conventions, will provide the broad legal framework for countries to co-operate in achieving conservation goals. But the development of more specific legal agreements between two or more countries is envisaged where special concerns relating to migratory species or ecosystems crossing national boundaries require co-operative management. Australia, for example, has Migratory Bird Agreements with Japan and China, two of the many countries with which it is linked through the seasonal journey of hundreds of bird species. The Agreements promote the conservation of migratory bird habitats and place controls on the harvesting of the birds and their eggs while recognizing sustainable use by traditional communities. Australia is keen to negotiate similar agreements with relevant countries within the context of SPREP, particularly Papua New Guinea and the other Melanesian neighbours. Once the regional legal agreements are operative, island countries need to consider the benefits of such co-operative bilateral agreements, especially when two countries share an archipelagic system, as is the case with Papua New Guinea and the Solomon Islands. Such agreements can provide the management and institutional framework for the conservation of common species and biological systems which might otherwise be neglected due to the sensitivities of political and economic boundaries.

Bilateral agreements under SPREP based on the concept of sustainable use and conservation of resources, is exemplified by the Torres Strait Treaty, ratified by Australia and Papua New Guinea in February 1985. The Torres Strait is the waterway between Papua New Guinea and the Australian mainland encompassing more than seventy islands, seventeen inhabited by some 7000 people. The Treaty delimits the fisheries and seabed jurisdictions of the two countries where they overlap (Figure 7.1). A central feature of the Treaty is the establishment of a Protected Zone principally to protect the traditional way of life and livelihood of the inhabitants of both countries who live in or near the Strait. The Treaty gives equal emphasis to the protection and preservation of the marine environment and indigenous fauna and flora in and around the Protected Zone. All mining and oil drilling is prohibited within the Zone for ten years and provision is made for the conservation and management of commercial fisheries of interest to both countries. Consultation and liaison is facilitated through regular meetings of a Torres Strait Joint Advisory Council, a third of its members representing the traditional inhabitants, and technical meetings on the environment and fisheries. In addition, permanent consultative arrangements are in place within the Protected Zone.

The Treaty recognizes the necessity to manage the living resources of Torres Strait on a sustained yield basis. In this respect, issues raised for management attention at meetings of the Joint Advisory Council and its technical committee on the environment have included impact assessment of Ok Tedi and other mining ventures on the Fly River estuary and the Torres Strait, traditional bird harvesting, dugong and turtle conservation, environmental planning and management and proposals for the establishment of marine reserves, particularly over one of the largest seagrass communities in the world.

There is considerable potential for bilateral agreements, such as the Torres Strait Treaty, to facilitate the wise management of sensitive areas adjoining two or more Pacific island countries. Such agreements would enact the principles of co-operation and consultation which underlie SPREP and its two regional conventions. The Torres Strait Treaty has also shown that bilateral agreements can encourage the introduction of legal and administrative arrangements at national level to implement the agreed environment protection and sustainable resource use strategies.

The Need to Link the Conventions and Integrate Regional Environmental Effort

When the time comes, joint meetings of the contracting parties to both Conventions must be encouraged to avoid duplication of effort and wasted resources. It is likely that the Conventions will attract support from the same assembly of countries as those already represented at meetings of the SPREP country focal points. The financial and institutional arrangements to be defined for SPREP need to ensure that the Apia Convention, the SPREP Convention and its protocols, the Action Plan and the Action Strategy are meshed into one regional structure with clearly identified lines of authority and communication (Figure 7.2). This would result in one annual work program being developed and efficiently implemented in a co-ordinated and co-operative fashion according to the limits of regional institutional capabilities and funds. Ways to facilitate this integration of effort would be:

- the establishment of a South Pacific Environmental Trust Fund as recommended in the 1985 evaluation of SPREP (Rongap and Piddington 1985);
- agreed commitments for regular contributions to the Fund by countries and regional inter-governmental organizations participating in SPREP with SPREP–SPC responsible for its management;
- the integration of all SPREP meetings within a well-planned SPREP program cycle, for example, meetings of SPREP Focal Points (two yearly), Parks Conference (four yearly), of Contracting Parties to the Conventions (when they enter into force), of ASPEI Members (two yearly), and the Steering Committee; and
- the clear enunciation of the SPREP program cycle within a policy document for the information and guidance of SPREP members and donor organizations which sets down the lines of authority and the functions of the key participants.

A policy document confirming SPREP as responsible for the overall co-ordination of the four regional environment instruments and defining the accountability structure within which the work program is developed, implemented and funded, would raise the credibility of SPREP in the eyes of donors and bring recognition of it as an increasingly important channel for development assistance.

Conclusion

The continuing importance of the Apia Convention lies in the fact that it gives a necessary focus to nature conservation and protected area concerns within the broader sustainable development principles governing SPREP. These crucial facets of conservation tend to receive a lesser emphasis by governments of the region when discussing the SPREP Work Program than the more dramatic environmental concerns associated with the development process, such as environmental impact assessment, pollution control and land degradation. The Convention, once in force, will perpetuate the tradition of regular technical meetings specifically to address nature conservation concerns. The four-yearly South Pacific Parks Conferences will become one and the same or be held back-to-back with conferences of contracting parties to the Convention. The

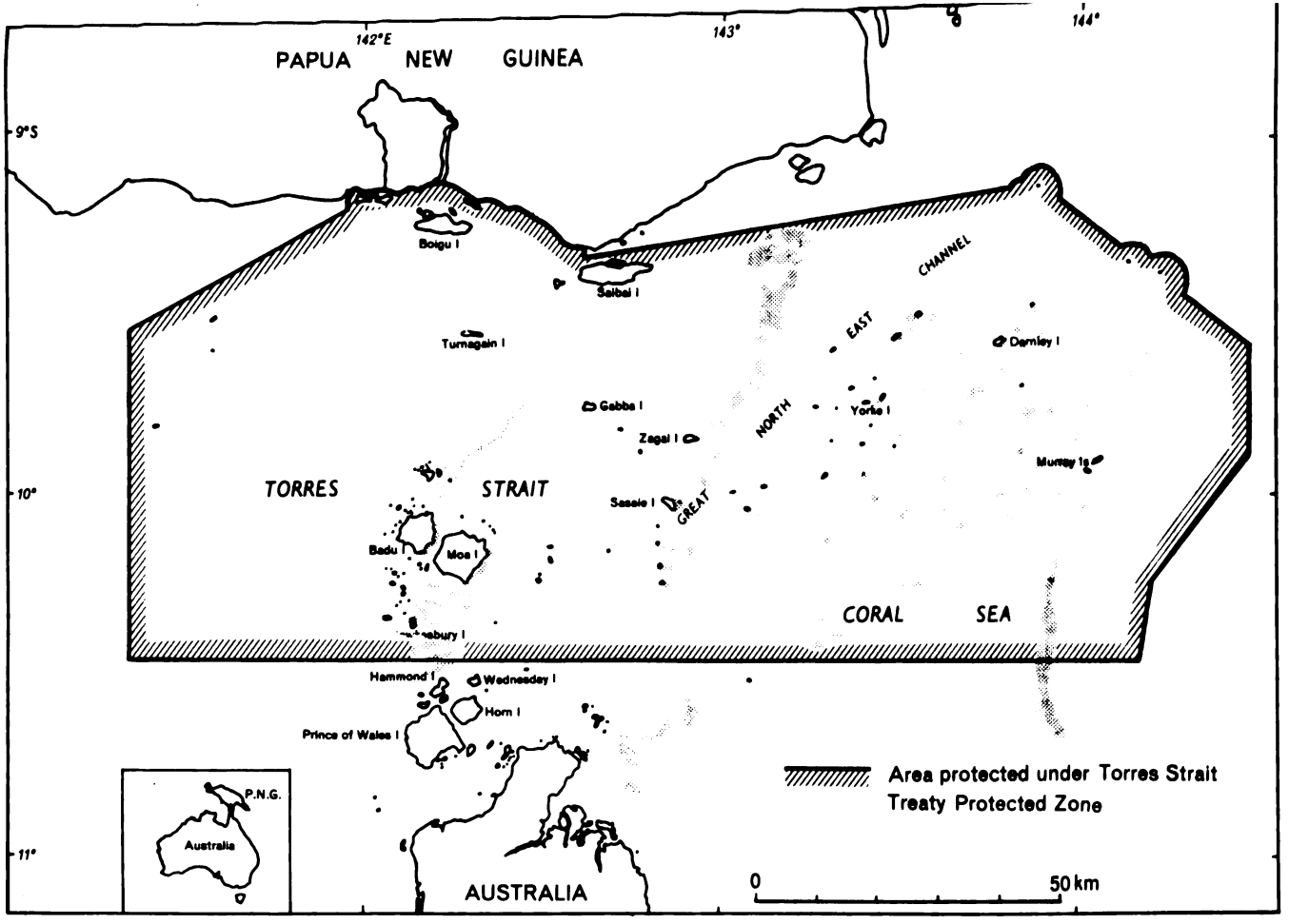


Figure 7.1 The Torres Strait Treary Protected Zone.

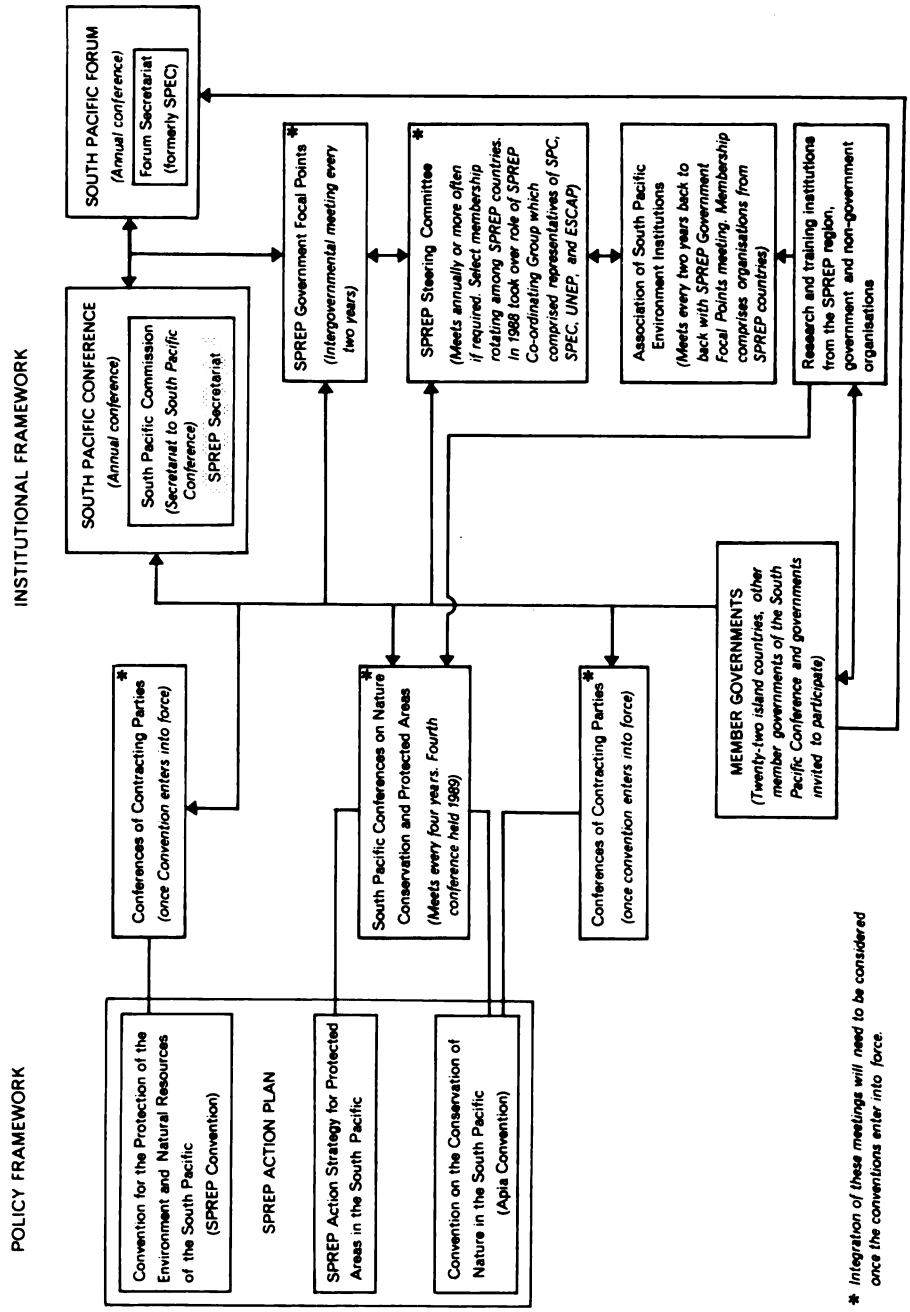


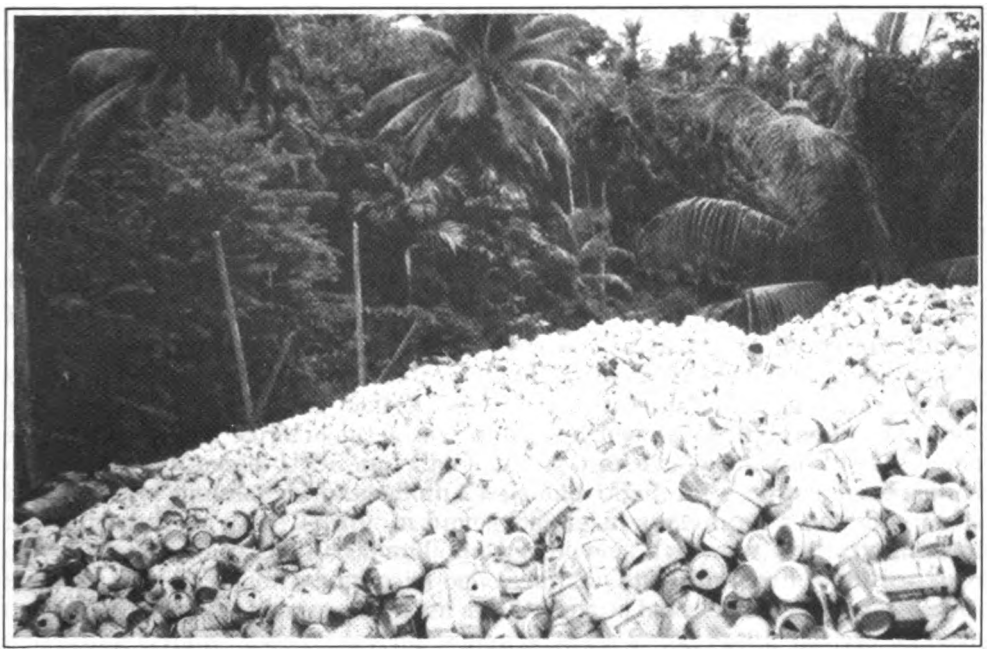
Figure 7.2 SPREP: the legal and institutional framework.

Action Strategy to be regularly revised at those meetings will become the nature conservation and protected area component of the SPREP Work Program. The existence of the Convention and Action Strategy also encourages the application of greater financial resources to nature conservation matters than might otherwise be available through SPREP. Regular review of the Action Strategy will enable SPREP's response to these concerns to keep pace with the evolving concept of conservation and to better suit the needs of traditional island communities in a region where customary ownership of resources prevails.

Consideration may need to be given to the preparation of protocols which link the Apia and SPREP Conventions and which provide detailed legal recognition of the importance of tradition and to conservation approaches which embrace the multiple and subsistence uses of natural resources by island communities. New methods which rely on local communities to plan and manage their resources according to conservation principles that reinforce appropriate traditional jurisdiction and rules, need to be promoted through SPREP's legal framework with greater international aid being channelled to support local initiative.

Alone, the Apia Convention is not a strong instrument for regional co-operation in addressing modern conservation problems but, when viewed as one component of an integrated policy for SPREP, it provides a useful legal basis on which to build a comprehensive conservation strategy. Most governments of the region have expressed support for the convention but have yet to prove their commitment by formally accepting it. The Convention has been in gestation for almost fifteen years and it would be unfortunate if the advances gained in that time through related discussions and negotiation were sacrificed so close to the birth of the agreement. Once the Convention enters into force (it requires only four parties to bring this about) it will bring added impetus to nature conservation in the region.

PART IV
Aid and the South Pacific environment



Mountains of aluminium cans on Yap, Federated States of Micronesia, with nowhere to go. The land area is too small to cope, but transport costs are too high to return them to the US. A number of countries, notably the Solomon Islands and Guam, are running successful can recycling programs. Photo: J. Carew-Reid.

CHAPTER 8

The Nature and Extent of Aid

The Increasing Aid Flow to the Region

THE population of the world's developing countries and territories in 1985 was 3672 million. The South Pacific island communities made up five million or 0.14 per cent of that total. Yet the region received almost 3.5 per cent of the US$37,000 million total official development assistance (ODA) flow to the developing world (OECD 1987b). South Pacific countries have ODA/GNP ratios among the highest in the world, equal to 16 per cent on average. The estimate of total aid to the region is doubled if all government assistance flowing from France and USA to their departments and territories is taken into account (Table 8.1). What is more, this assistance represents only part of the total development resources entering the region. OECD estimated that, in 1985, official aid made up only 52 per cent of the total net resource flows to developing countries including, for example, private flows and export credits (OECD 1987b).

The total net disbursements of development assistance to the South Pacific (including dependent territories) from all official sources increased more than 85 per cent between 1977 and 1980 (AIDAB 1987). Currently, the region is experiencing another major surge in aid with countries such as Japan, the Federal Republic of Germany, Canada, USSR and China taking a greater interest in the area on a bilateral and multilateral basis. Both China and USSR, for example, have signed the Nuclear Free Zone Treaty. In June 1988, Japan announced a doubling of its development aid to US$10,000 million over the next five years, with countries of the Asia/Pacific region being major beneficiaries. Other European countries, such as the Netherlands, Norway, Sweden and Denmark, have expressed an interest in providing certain kinds of development assistance to the Pacific islands, as have Taiwan, Kuwait and Libya. Also, major aid agencies such as the World Bank, ADB and NGOs (for example, IUCN and the World Wildlife Fund) are expanding their activities in the region.

Australia: a Major South Pacific Donor

Setting aside the French and US Territories (including the former Trust Territories), Australia was the major aid donor in the South Pacific in 1989 and, consequently, has special responsibilities relating to the effect of aid on countries of the region.

In 1987, Australia's total development aid was A$976m, of which A$420m, or 43 per cent went to South Pacific countries.[1] Papua New Guinea continues to be the major recipient, accounting for 34 per cent of total aid. Australian aid to the South Pacific (excluding Papua New Guinea) has increased thirteen fold since

[1] About 85 per cent of Australian aid flows directly back to Australia in the form of consultancy fees and through the purchase of Australian equipment and products. For similar reasons, close to 90 per cent of total bilateral ODA funds allocated to the South Pacific region either never leave or eventually return to the donor countries.

Table 8.1 **Total annual development assistance to South Pacific states, territories and affiliated islands**[a]

Country	Total Assistance (US$m)	Assistance per capita (US$)	Assistance/ GNP ratio (%)
Cook Islands	26.4	1200	33.3
Fiji	42.5	62	2.8
Kiribati	13.4	220	30.0
Nauru	*	*	*
Niue	4.2	1313	140.0
Papua New Guinea	263.6	83	11.9
Pitcairn	*	*	*
Solomon Islands	30.2	119	15.0
Tokelau	2.0	1000	200.0
Tonga	15.1	145	20.0
Tuvalu	4.4	550	110.0
Vanuatu	24.4	192	13.0
Western Samoa	23.3	148	24.8
Sub total/average	**449.6**[b]	**90**	
French overseas departments and territories[c]			
French Polynesia	686.0	4035	52.8
New Caledonia	336.2	2244	36.5
Wallis and Futuna	17.2	1720	172.0
Sub total/average	**1039.4**	**3150.0**	-
United States affiliated islands[d]			
American Samoa	61.0	1649	..
Fed. States of Micronesia	152.0	1788	..
Guam	768.0	6194	..
Marshall Islands	106.0	3028	..
Northern Mariana Islands	103.0	5421	..
Palau	142.0	9466	..
Pacific Islands (US)[e]	13.0	76	-
Sub total/average	**1345.0**	**4270**	-
Unallocated aid[f]	23.3	-	-
Total	**2857.3**	**571**	-

.. Not available.
* Negligible aid.

[a] Including official development assistance from all sources and flow of development funds from France and USA to their territories and affiliated Pacific islands. Figures for 1986 financial year unless otherwise indicated.

[b] OECD, *Development Co-operation: Efforts and Policies of the Member States of the Development Assistance Committee*, Paris, OECD, 1987; AIDAB, *Environmental Implications of Australia's Official Development Assistance*, AIDAB; Development Paper No.10, Canberra, 1988.

[c] Henningham, S., 'Keeping the Tricolour flying: the French Pacific into the 1990s', paper for the Australian Institute for International Affairs, 1988. ODA from non French sources was negligible. Figures converted from FF to US$ using 30 June 1986 exchange rate of 6.9925 FF = 1 US$. Military spending was 60 per cent of the total for French Polynesia and 13.4 per cent for New Caledonia.

[d] Funds from US sources (Budget papers of the US government, fiscal years 1989 and 1990). Figures for 1987FY except for Palau, which is an estimate for 1989, and for American Samoa, Guam and Northern Mariana Is. which are for 1984FY (US/OTA 1987a). Figures include grants to state and local government; federal salaries, payments to individuals, procurements and other.

[e] Aid from non US sources to former US Trust Territory of Pacific Islands: Palau, Federated States of Micronesia, Marshall Islands and Mariana Islands (except Guam); OECD (1987b).

[f] OECD, *Development Co-operation: Efforts and Policies of the Member States of the Development Assistanct Committee*, Paris, OECD, 1987.

1970–71 to $78m, with $36m being provided to individual countries on a bilateral basis (Table 8.2). Multi-country and regional aid are important components of the total, benefiting island countries in addition to the key recipients listed in Table 8.2. The aid allocation is based on an Indicative Planning Figure (IPF) of $300m for the five-year period which began in 1983–84. At present, the bilateral allocation is related primarily to population size.

Project specific aid comprises about 50 per cent of the bilateral component and is an important element of non-bilateral aid covering activities such as multi-country projects, joint ventures, co-financing and some non-government organization projects. AIDAB reports that the key areas of emphasis in the South Pacific bilateral aid program have been public infrastructure (for example, schools, airports and hospitals), projects in the education sector (including training and technical assistance) and assistance in productive sectors such as agriculture and forestry. At a regional level, assistance has focused on telecommunications, energy, trade, marine, geoscience and fisheries (AIDAB 1987). Activities in any of these sectors have potential environmental implications, so adding significance to Australia's core budget contribution to SPREP, currently standing at US$60,000 per annum.

Australian aid to the South Pacific supports a relatively large number of projects which are small in scale and value. Of the 169 projects scheduled for the South Pacific in 1986–87, 56 per cent were valued under $250,000. This compares with 27 per cent in the Philippines, 11 per cent in Thailand and none in Indonesia for projects in the same cost category (Table 8.3). On the other hand, the average value of commitments for projects in the $1m or more category was $2.8m in the South Pacific; $16.2m in Indonesia; $17.4m in the Philippines; and, $5.1m in Thailand.

Despite their small scale, each project mounted in an island country requires a disproportionate administrative input from recipient and donor. This places considerable burdens on island government planning authorities, particularly when projects need to be maintained long after the development assistance has ceased. In Tonga, for example, forty-seven Australian aid projects were scheduled in 1986–87. This level of activity, combined with aid projects from New Zealand and other donors, means that local resources are often inadequate to give each project any more than superficial examination and management, especially during the post-implementation monitoring and evaluation stages. Even so, the Pacific island countries have administrative bureaucracies and public sectors proportionately much larger than in other developing countries (AIDAB 1987). This growing government sector, reflecting the volume and nature of aid entering the region, has not been matched by sound economic performance in recent years. On the contrary, most countries are experiencing negative growth and a greater dependency on aid, suggesting the need for a major reappraisal of development assistance in the region (OECD 1987; AIDAB 1987, 1988). As a first step, the conventional consensus underlying aid programs of what constitutes economic growth must be set aside as must reliance on the associated indicators of 'successful' development performance.

The Aid–Development Relationship

Development policy is affected in many ways by the aid agencies themselves; for example, by the type of training supported, expert meetings funded, technology and information transferred, expert assistance provided, research undertaken, institutional structures promoted and capital projects selected for support. One of

Table 8.2 **Australian Official Development Assistance to the South Pacific region, 1978–87 (Year ended 30 June, A $'000)**

Recipient	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Cook Islands	299	283	306	217	859	688	371	995	494	1,352
Fiji	6,199	8,188	9,760	9,657	11,590	12,474	10,039	16,384	17,693	19,647
Kiribati	1,479	2,501	2,383	2,482	2,502	2,289	2,283	3,459	3,602	3,058
Nauru	1	12	21	–	1	6	48	58	61	63
New Caledonia	–	1	2	2	2	3	5	54	137	90
Niue	1	95	109	243	252	251	132	105	195	441
Pacific islands (US)[a]	23	12	20	27	19	15	94	227	316	384
Papua New Guinea	219,441	237,196	235,624	245,113	252,897	274,947	302,280	320,199	325,973	333,399
Polynesia, French	–	–	–	–	1	103	12	96	–	85
Solomon Is.	1,710	3,162	3,901	5,530	5,937	8,830	7,270	8,629	17,543	8,364
Tokelau	–	1	–	1	–	1	5	–	–	1
Tonga	2,103	3,833	3,702	4,591	5,541	4,146	4,986	6,789	6,759	7,367
Tuvalu	359	934	1,312	644	690	1,148	1,187	1,385	1,256	9,186
Vanuatu	814	1,445	2,755	3,547	3,409	5,881	5,134	5,584	7,183	12,675
W. Samoa	3,801	4,634	3,902	2,816	4,005	7,207	5,301	5,271	6,376	6,514
Unallocated	1,342	2,346	3,319	3,995	3,585	5,685	6,583	9,223	9,911	12,145
Total bilateral	237,572	264,644	267,116	278,865	291,290	323,674	345,730	378,458	397,599	414,771
Regional agencies	1,779	1,922	2,212	2,730	4,269	4,514	4,435	3,852	5,170	5,090
Total	239,351	266,566	269,328	281,595	295,559	328,188	350,165	382,310	402,769	419,861

[a] Former Trust Territory of the Pacific Islands: Palau, Federated States of Micronesia, Marshall Islands and Mariana Islands (except Guam).

Source: Modified from AIDAB, *Environmental Implications of Australia's Official Development Assistance*, submission and supplementary submission to the Senate Standing Committee on the Environment, Recreation and Arts, AIDAB Development Paper 10, Canberra, 1988.

Table 8.3 Australian aid projects in the South Pacific and Southeast Asia, 1986: comparisons in size and number

A$'000	South Pacific	Philippines	Thailand	Indonesia
0–250	95	5	2	-
250–500	30	6	4	-
500–1000	19	2	1	-
1000+	25	5	11	18
Total	169	18	18	18

Source: AIDAB, *Australia's Relations with the South Pacific*, submission to the Joint Parliamentary Committee on Foreign Affairs and Defence, Canberra, 1987:36.

the most influential of the aid agencies is the World Bank which, even in the largest developing countries, can play a central role in determining policies governing entire sectors, such as agriculture and forestry (Rich 1985). The World Bank acknowledges that:

> this role as a partner in the dialogue with governments on overall economic policy and sectoral strategies, and as a source of technical assistance and advice, is as important as its role as a lender. The deterioration in the economic climate in many of the Bank's developing member countries has increased the importance, as well as the visibility, of this advisory function (World Bank 1983).

Similarly, the Brundtland Commission found that the influence of aid agencies individually and collectively, on the quality and nature of development in recipient communities is 'substantial and persuasive' (WCED 1987).

Involvement of donors in development policy is not the prerogative of the larger institutions. Because the South Pacific is on a smaller scale in aid terms than most other developing regions, and the investments need not be great to bring policy leverage. Small commitments in aid agency terms are often very large sums indeed to island communities and are bound to have a significant impact however applied. Australia, as a major donor, is inevitably a key player in moulding development policy in the region.

The United States makes no bones about the influence and role of its aid program in the region. In 1988, USAID reported to Congress that 'to be effective in developing and implementing strategies which help shape how countries utilize their own resources, (USAID) must have influence'. Such influence, according to USAID, derives from a number of sources including the capacity of USAID to

- bring the authority and expertise of the US Government to discussions with host-country officials;
- help shape the opinions, programs and resource allocation decisions of others; and,
- provide the personnel resources and programmatic expertise to demonstrate the important developmental impact which can result from appropriate policies and resource management systems (USAID 1988).

In approving the USAID budget for Fiscal Year 1989, Congress accepted the Agency view that:

> The United States will continue to have important foreign policy interests in even the most advanced of [the Asian/Pacific] countries. If anything, our economic interests will grow as the countries themselves grow. The United States will also continue to have development interests in countries in the process of modernization, in part because

> growth does not provide uniform relief from poverty and in part because these countries are affected by and contribute to international issues like environmental problems. As a result of our continuing interests, the United States will want to maintain bilateral influence, and foreign assistance programs will continue to be instrumental in exercise of that influence (USAID 1988).

This refreshing candour is not matched in reporting of other aid agencies to their respective governing bodies. It is crucial to successful environmental reform of development assistance programs that aid organizations openly acknowledge and take responsibility for the substantial influence they have over the shape of development in recipient countries.

In the midst of aid proliferation in the Pacific region, these influences are critical, particularly where island countries tend to accept assistance without adequately assessing needs, costs and benefits. Aid projects such as port development, power stations or causeways linking islands have seldom been properly assessed for their potential impacts on the bio-physical and human environments or even for their long-term maintenance requirements. Generally, donors lack the incentive for any comprehensive environmental assessment because this necessarily involves project monitoring and evaluation and hence a long-term aid commitment.

Awareness of the role and potential of SPREP amongst the aid community is limited and assistance programs have generally been carried out in isolation with little forward planning. For example, during the US administration of the Trust Territories, sophisticated sewage plants were constructed, requiring constant expert maintenance. In the transition leading to free association, the US teams of engineers departed, leaving behind inadequately trained technical and administrative local staff. Now, in areas of Micronesia such as Saipan, the plants have corroded and malfunctioned allowing raw sewage to pass to the sea. At the time they were installed, the appropriateness of this centralized technology for small island communities was not questioned. Similarly, a large power station has recently been built in Palau, with British assistance, which commits the 13,000 people of the country to a central power grid, a crippling foreign debt and mounting fuel bills. These burdens have chained Palau to the USA, further reducing its bargaining power in the Compact of Free Association negotiations. Aid-funded power projects can have other undesirable effects if not properly planned and monitored. A study undertaken for the Asia Development Bank found that, in the Bank's Fijian and Western Samoan power projects, service roads for transmission equipment gave access to formerly inaccessible forests thereby promoting poaching and deforestation. Changes were recorded in hydrological patterns, soil erosion, sedimentation and flooding in these areas, resulting in losses in forestry, agricultural land and fisheries, reduction in the useful life of downstream hydro power facilities, loss of property, and increased incidence of disease (Dickson *et al.* 1986).

These cases illustrate the dilemma of all Pacific island countries — they are experiencing environmental problems stemming from the processes of development and underdevelopment. The two are linked in a growth spiral as the pace and quantity of aid entering the region increases and leads to hastily conceived and poorly planned development. The diversity of development aid activities compounds the problem by leading to an unhealthy level of competition among the aid organizations for new initiatives, adding to the pressure on island governments to plan in the short term in line with the aid project cycle and often tying them to equipment and expertise from the donor country (Blaikie 1985).

Donor organizations bear a heavy responsibility to ensure that their development projects are adequately assessed for environmental effects and that provision is made for continuous monitoring of these effects with adjustments made as necessary to the project operation. It has already been shown that few island countries have the expertise or resources to undertake such work without assistance. Representatives of bilateral aid agencies frequently argue that it is not their role to initiate environmental assessment of aid projects or to influence the nature of development because important issues of sovereignty which must be respected are at stake. Donors cannot interfere in the internal political affairs of other countries. It is for recipient governments to determine development policy and it is the responsibility of those governments to initiate environmental assessments according to their domestic requirements and standards. Such arguments do not hold weight in the South Pacific for two reasons. First, island countries have a united policy on the issue contained within the framework of SPREP which provides clear direction on the means for co-ordinating and integrating environmental assessment and development. Donor governments and organizations have an important function within the policy and strategic context of SPREP and the onus rests with them to heed the call. Second, as shown already, aid agencies can and do have a profound influence over the nature and shape of development.

The Project Cycle and the Need for a Cross-sectoral Perspective

Project aid is the largest component of aid to the South Pacific and consequently, the process of identifying, documenting, establishing and evaluating projects takes the greatest proportion of aid agency administrative resources. Generally, each project follows a path or project cycle, initiated by a submission to the country post followed by feasibility or design studies. The project then undergoes appraisal and, if approved, implementation. Ongoing monitoring is provided through regular progress reports and, on completion of the aid input, an evaluation of the project is usually carried out. The diversity of projects makes the co-ordinated management of their effects difficult, both for the recipient and the aid donor. This diversity inhibits the development of aid agency expertise in specialized activities. Some donors are attempting to reduce the number of individual projects and move towards sectorally integrated programs (AIDAB 1987). This move should be encouraged for there are other more fundamental reasons for moving beyond the *ad hoc* single sector approach, not least the fact that the environment is not bound by sectors. The cross-sectoral perspective underpins the IUCN strategies to implement the Brundtland Commission recommendations. Judgements on resource use that may be technically sound within one sector can be damaging to other sectors (IUCN 1988). Integration of development assistance projects across sectors would necessitate a longer term commitment to related activities and a better understanding of the complex ways in which they are linked to island life.

The Response to SPREP by International Aid Organizations

Inter-governmental organizations. The international inter-governmental organizations currently involved in environment activities in the South Pacific include UNEP, ESCAP, UNESCO, the United Nations Development Program (UNDP), the Inter-governmental Oceanographic Commission (IOC), the International Maritime Organization (IMO) and the Commonwealth Science Council.

As outlined previously, UNEP played a central role in the development of SPREP through its Regional Seas Program, and will continue as a major participant, contributing funds and technical assistance towards the work program. ESCAP, one of the original members of the SPREP Co-ordinating Group, is trying to increase its input through joint programming between its Environmental Co-ordination Unit and SPREP. Currently ESCAP is funding the preparation of an Environment Management Plan for Tonga and proposes a follow-up assistance program to implement the Plan.

The Committee of Co-ordination of Joint Prospecting for Mineral Resources in South Pacific Offshore Areas (CCOP/SOPAC), once a specialized agency of ESCAP, is now an independent regional organization answerable to a committee of island country representatives. It is primarily concerned with surveys and technical studies relating to marine geology and offshore prospecting, and is intimately associated with SPREP through the ASPEI. Each year, the two organizations aim to develop a program of joint projects in response to country requests. To date, activities have included environmental impact assessment of a sewage outfall in the Cook Islands, a fish processing plant in the Solomon Islands and lagoon eutrophication in Vanuatu. They also co-operate in training exercises in marine pollution and coastal mapping.

The Commonwealth Science Council has signed a co-operative agreement to formalize its relationships with SPREP and, in 1985, embarked on a regional program of coastal zone management giving special emphasis to promoting traditional knowledge and practices (Baines 1985). Major activities include integrated studies of Marovo lagoon in the Solomon Islands and Puka Puka lagoon in the Northern Cook Islands, and the development of simple coastal marine survey and monitoring methods.

UNESCO, like a number of other UN agencies, has not yet fully appreciated the co-ordinating role of SPREP in the region and, for the most part, develops its projects on a bilateral basis without consultation with SPREP. Co-operative activities have begun with UNESCO's Asia/Pacific Marine Science Division on a study of reef lagoon ecology in the Cook Islands. SPREP's close association with UNEP engenders a sense of rivalry in UNESCO which should fade now UNEP has withdrawn from the Co-ordinating Group and as the degree of political commitment to the Program is better appreciated. UNESCO contributes generously outside the framework of SPREP, for example, as a major donor for the Fifth International Coral Reef Congress held in Tahiti in 1985. In addition, the IOC, an autonomous body within UNESCO, is now developing productive ties with SPREP, through the Commission's Western Pacific (WESTPAC) Task Team on Marine Pollution, Research and Monitoring. Several co-operative training courses have been conducted, such as an Organochlorine Workshop in Port Moresby and an inter-calibration exercise for heavy metals in shellfish.

The International Maritime Organization is working with SPREP to conduct a series of Pacific Regional Workshops on Marine Pollution Prevention, Control and Response and to provide direct advice to countries in developing oil spillage contingency plans. The IMO initiatives are facilitated by the activities of the United Nations Development Program (UNDP) which is a key UN funding organization in Oceania. It represents a number of other UN agencies which are directly or indirectly involved in environmental management such as FAO, IOC, UNESCO, WHO and IMO. UNDP operates primarily on a bilateral basis in funding projects involving its sister organizations, a tradition which has inhibited SPREP from developing comprehensive joint work programs with

these UN agencies. For this reason and the fact that SPREP is supported through UNEP, UNDP is not funding the Program directly; CCOP/SOPAC, on the other hand, receives substantial financial backing. However, a closer relationship between SPREP and UNDP would greatly enhance the cover and effectiveness of SPREP. UNDP needs to review its policy in this respect and begin making annual contributions to SPREP, given the high priority accorded the Program by island countries. In the meantime, UNDP continues other important activities in environmental-related fields. It has, for example, a Regional Fisheries Program, a Tourism Planning Project, physical planning projects and provision for short-term consultancies on specific environmental issues such as mangrove protection and management.

Multilateral agencies. Apart from the UN family of organizations, multilateral agencies with increasing activities in the region include the World Bank and the Asian Development Bank. They provide aid primarily in the form of grants or concessional loans for project financing. Recently, the ADB set aside US$80,000 to support a SPREP training seminar in 1989 on environmental impact assessment for South Pacific countries. At this stage, the World Bank has had no direct involvement in SPREP although, at the Program's June 1988 inter-governmental meeting, the Bank representative noted that the environmental implications of a number of development projects had been carefully considered in lending for Fiji, Papua New Guinea, Solomon Islands, Vanuatu and Western Samoa (SPREP 1988). Another important multilateral source of aid is the European Community, through the European Development Fund and the European Investment Bank, under the terms of the Lome Convention. The Lome Convention is an international treaty establishing a contractual relationship between the Community and recipient countries on a five-yearly basis. The Fifth Convention covers aid allocation for the period 1985–90. This formal legal arrangement tends to be rather inflexible if major changes to the aid program or projects are required during the funding period.

Non-government organizations. A number of international non-government organizations, not encumbered by political considerations, are assisting in meeting environment protection needs. Foremost among these is IUCN, which channels its assistance to the region through SPREP according to a Memorandum of Understanding signed with SPC at the Third Parks Conference. IUCN and the World Wildlife Fund (WWF) were major sponsors of that conference and are committed to assisting in implementing the Strategy on Protected Areas adopted by the Conference. Past and planned joint activities with IUCN's Conservation for Development Centre include an environmental assessment and coastal management training course conducted in the Northern Marianas (1985) and a series of environmental impact assessments of major projects within SPREP member countries. WWF is preparing to launch a major conservation program in the region in 1990 backed by an annual commitment of US$300,000 which would make it the most significant single contributor to SPREP.

Church and women's organizations are also seeking ways to contribute. In 1985, the Melanesian Council of Churches, for example, conducted a symposium in Papua New Guinea on environmental protection. This gave direction to further Church involvement. Women have played an important role in the Nuclear Free Pacific Movement, and Pacific Women's Conferences have repeatedly expressed a desire for more active involvement in resource use planning and environmental issues at the local level.

Responses to SPREP and the Environmental Challenge by National Aid Organizations

Since 1983, Australia, France, New Zealand and the USA have provided approximately 65 per cent of voluntary country contributions to the core budget of SPREP. Chile, which closely monitored the NFZT and SPREP Convention initiatives, pledged an annual contribution of US$6000 towards SPREP beginning in 1986. Canada and the four original metropolitan members of SPREP have also contributed to specific projects and activities outside the core budget. For example, USAID has included, in its program for Fiscal Year 1989, support for the assessment of biological resources in ten islands in the South Pacific (USAID 1988). New Zealand and Australia were the primary contributors to the cost of the Third and Fourth Parks Conferences, respectively, and as well as hosting the first two events, have sponsored a number of training activities for park managers and periodically have provided *ad hoc* expert assistance within countries on conservation projects. For the two years 1986–87, New Zealand has supported a staff position within the SPREP Secretariat to promote the protected area and conservation objectives of the Program. Another initiative, of particular importance as an example to other donors, followed the 'Rainbow Warrior' bombing incident in Auckland in 1985. New Zealand set aside NZ$3.21 million of the NZ$13.16 million compensation received from France to establish a trust fund for the protection of the environment and peaceful development of the South Pacific (SPREP 1987c). New Zealand also assists on a project specific basis through its scientific organization DSIR and France contributes in this way through ORSTOM which is a member of ASPEI.

The USA and France indirectly contribute to SPREP through their support for environmental activities in their dependent territories and through the contribution of those territories as members of the Program. Guam, for example, has by far the most advanced environmental assessment and planning framework of any South Pacific country, reflecting the large US investment each year; US$768 million in 1984 or about US$ 1.5 million per square kilometre of the island per year.[2] About US$2 million a year goes directly to the Guam Environment Protection Agency which also benefits from programs and support of US Federal Agencies.

Some environmental work in the region is conducted as an integral component of development aid projects but only USAID has comprehensive statutory regulations for such work. Other donors are at various stages of developing an approach to the environmental aspects of their activities, as discussed in Chapter 3. The British Overseas Development Administration (ODA), for example, once the primary donor in the region, has a policy to take account of social and environmental issues in its project design and appraisal procedures. It also seeks to draw the attention of potential aid recipients to the environmental implications of development projects which they have been asked to finance (ODA 1987; Pattern 1987). According to the ODA's South Pacific Regional Office in Suva the Administration's awareness of environmental issues has been increasing in recent years, not only because they are an essential element of properly planned development, but also because public and political interest in the subject has risen.[3] This has led to the formulation within ODA of environmental guidelines for development staff who may be involved in the design, appraisal, implementation, monitoring and review of aid projects or programs.

[2] A large proportion of these funds goes to the upkeep of the US military base on Guam.
[3] Letter to the author from R.A.R. Barltrop, British High Commissioner, Fiji, 18 July 1985.

Two major ODA projects approved in 1985, namely a cocoa estate in Vanuatu and a fisheries jetty in Kiribati, exemplify the sort of issues which the Suva-based British Development Division in the Pacific has had to address. In the case of the Metenesel Cocoa Estate on Malekula in Vanuatu, environmental considerations included the long-term impact of the proposed development on ground and surface water resources, soil stability, waste products and their disposal from the cocoa processing factory, and the identification of areas of vegetation worthy of genetic preservation. The appraisal of the project proposal for a deep water jetty for the commercial fishing fleet at Betio in Kiribati included provision of sanitary facilities and sewage disposal from the land and from vessels. The effects of the jetty structure on wave action, current flows and sediment patterns were also addressed, as were the pollution potential and safety aspects of bulk fuel deliveries and bunkering of fishing vessels, the hygiene aspects of bulk fish handling, and import quarantine controls.

Of all the aid donors, USAID has had the most experience in conducting such environmental studies but, as with the British work, various problems remain, including limitations in the practical application of study results in development aid projects and difficulties in encouraging local involvement in project assessment. Some aid projects, by their very nature, are 'environmental' and may involve protection of the environment. For example, in Western Samoa, West Germany is funding major long-term projects for sewage and watershed management. A number of small co-operative projects of this kind were also supported by the British ODA. One was a pilot project for cultivating giant clams in the Solomon Islands, in association with the International Centre for Living Aquatic Resources Management (ICLARM); another, the production of a bilingual booklet on the natural history of Christmas Island, Kiribati, prepared by the local Wildlife Conservation Unit and produced by the International Council for Bird Preservation (ICBP). Australian aid also supports many projects in the environment category each year as discussed in the next section. In general, however, the proportion of development assistance which goes to this kind of 'environmental' project and to the environmental assessment of development is only a small portion of the total aid entering the region. Each of the national and multilateral donors in the region conduct their activities with limited co-ordination and varying sensitivity to the environmental implications of their development assistance. SPREP should try to attract aid agencies to join the Program so as to facilitate a co-operative and consistent approach to the principles of sustainable development which must be adhered to if the degradation of island systems is to be avoided.

Case Study: an Environmental Review of Australian Aid Projects and Procedures in the South Pacific

Australia's special role as close neighbour and major donor. Australia has particular expertise to offer South Pacific countries in undertaking many types of environmentally beneficial projects. Soil conservation, erosion control and fertility restoration are well developed practices in Australia and have special pertinence to island environments. Australian scientists can help with forest management and reforestation which is of increasing value to degraded islands. Developing and cultivating crops appropriate to island conditions, pest control through careful use of pesticides or biological methods, quarantine procedures, and appropriate agricultural technologies are all fields in which Australia is well

placed to provide expert support. Other fields in which Australia has extensive practical skills include coastal, estuarine and coral reef management and restoration, nature conservation and protected area management, and the complex problems association with urban planning and development.

The Australian Centre for International Agricultural Research (ACIAR) is drawing on Australia's research expertise in tropical agriculture to address some of the environmental problems which severely limit agricultural production in the region. In 1986–87, the Centre operated on a budget of $A13 million (with a further $A1.4 million in specific-purpose grants from AIDAB) in its bid to 'build the capacity of developing countries...to improve the social, physical and economic well-being of the poor by increasing productivity, stability and sustainability in the agricultural sector' (ACIAR 1987). ACIAR has supported projects on the rehabilitation of marine resources, for example, coconut crabs in Vanuatu and giant clams in Fiji and Papua New Guinea; smallholder farming in Tonga and the Solomon Islands (identifying constraints and opportunities); and biological control of weeds and insect pests in Fiji and elsewhere (Persley and McWilliam 1987). In 1986, the Centre's budget was cut by 21 per cent (ACIAR 1986-87 Annual Report, p.iv) but more recently has been increased. The importance of ACIAR and similar bodies in linking Australian research and training institutions and NGOs with South Pacific organizations must be reflected in the consistency and level of budget and project support from the Commonwealth government and AIDAB.

Environmental Assessment of Aid Projects. Some 400 bilateral projects were being funded by AIDAB worldwide in mid-1987. About 170 or 42 per cent of these were being undertaken in South Pacific countries. At least fifty (30 per cent) of the island projects concerned resource management or public developments and services which might cause significant environmental change (AIDAB 1988). Examples are listed in Table 8.4. Projects of this type should receive comprehensive environmental assessment, yet environmental matters were considered during the planning and design stages of only about one half of these South Pacific projects. The principal potential effects of 40 per cent may be assessed as being beneficial to the environment, particularly those concerned with the provision of water supply, watershed management, reforestation, solid waste disposal and sewage systems. One project, the Kauri Reserve Study in Vanuatu, was directly concerned with conservation. However, the remaining 60 per cent of the projects listed in Table 8.4 have the potential to cause negative effects which would require control and monitoring or, in extreme cases, rejection of the development.

In summary, of Australia's 170 or so total development assistance works underway in the South Pacific during mid-1987 only 20 per cent had the potential to cause significant negative environmental effects. Most either had insignificant effects or were related to protecting and enhancing environmental quality and natural resources. However, a significant number of projects received no environmental assessment by AIDAB or the recipients including 58 per cent of those South Pacific projects judged to have potential negative environmental effects. Few projects were concerned directly with the development of environmental and conservation policies, procedures and institutions.

Application of Australian Environment Protection Legislation to Development Assistance Programs. Since 1974, the Australian government has had a statutory obligation to ensure that, as far as practicable, matters significantly affecting the environment are fully examined and taken into account in its decisions and actions, specifically in relation to:

Table 8.4 1987 AIDAB projects in South Pacific region for which environmental assessment was desirable

Country	Project	Total cost ($A)	Sector initiated	Date	Environment considered
Cook Is	Aviatu Port Dev/dredging	347,000	Transport	1985	Yes
Cook Is	Aviatu Harbour Plan	20,000	Transport	1986	Yes
Fiji	Kinoya Sewage Outfall	2,530,000	Sanitation	1986	Yes
Fiji	Yalavou Cattle Scheme	10,379,000	Agriculture	1977	Yes
Fiji	Forest Industries	1,514,000	Forestry	1982	No
Fiji	Transport Energy	108,000	Transport	1985	No
Fiji	Mutton Sheep	1,400,000	Agriculture	1980	Yes
Fiji	Lani Wharf	2,000,000	Fisheries	1986	Yes
Fiji	Reforestation Study	102,000	Forestry	1985	No
Fiji	Levuka Fisheries	10,000,000	fisheries	1986	No
Fiji	Soil and Crop Evaluation	1,450,000	Agriculture	1985	No
Kiribati	Tarawa Sewerage	6,475,000	Sanitation	1977	No
Kiribati	Tarawa Water Supply	7,500,000	Water Supply	1982	No
Kiribati	Outer Is Causeways	61,000	Transport	1984	No
Kiribati	Water Supply & Drainage Engineer	541,000	Water Supply	1982	No
Kiribati	Tarawa Refuse Disposal	160,000	Sanitation	1986	Yes
Kiribati	Christmas Is Water Supply	235,000	Water Supply	1980	Yes
PNG	Simbu Rural Development	3,200,000	Multisector	1987	Yes
PNG	Coffee Rust	2,200,000	Agriculture	1987	Yes
PNG	Hagen-Bayer Rd Study	300,000	Transport	1987	Yes
PNG	Quarantine Course	58,700	Law Enforce	1986	Yes
PNG	Lae Flood Mitig Study	400,000	Regional	1987	Yes
PNG	Yonki Dam Study	1,454,000	Energy	1985	Yes
PNG	Land Eval & Demarc Study	700,000	Agriculture	1986	Yes
Solomon Is	Beef Cattle Development	2,000,000	Agriculture	1984	No
Solomon Is	Rural Water Supply	742,000	Water Supply	1984	Yes
Solomon Is	Forestry Inventory Ph2	3,000,000	Forestry	1987	Yes
Solomon Is	Livestock Development	2,200,000	Agriculture	1984	No
Solomon Is	Forestry Industry Mission	50,000	Forestry	1985	Yes
Solomon Is	Kolamangara Refor Study	43,000	Forestry	1984	Yes
Solomon Is	Helena Goldie Hospital	312,000	Health	1984	No
Solomon Is	Guadalcanal Bridge Const	2,400,000	Transport	1980	Yes
Solomon Is	Cattle Under Trees	2,300,000	Agriculture	1979	No
Tonga	Desiccated Coconut Factory	2,010,000	Industry	1984	No
Tonga	Water Supply Schemes	100,000	Water Supply	1976	No
Tonga	Nukualofa Port	7,445,000	Transport	1981	No
Tonga	Vavau Reservoirs	293,000	Water Supply	1986	No
Tuvalu	Piggery Improvement	..	Agriculture	1985	No
Tuvalu	Fisheries Study	319,000	Fisheries	1983	No
Tuvalu	Fish Market Equipment	204,000	Fisheries	1985	No
Tuvalu	Lagoon Beds Material	3,000,000	Construction	1987	Yes
Vanuatu	Rural Water Supplies	425,000	Water Supply	1976	No
Vanuatu	Livestock Study	50,000	Agriculture	1984	Yes
Vanuatu	Airport Upgrading	3,202,000	Transport	1985	No
Vanuatu	Phyto Sanitary Services	231,000	Agriculture	1978	No
Vanuatu	Kauri Reserve Study	16,000	Environment	1986	Yes
W. Samoa	Cocoa Rehabilitation	60,000	Agriculture	1986	No
W. Samoa	Groundwater Study	50,000	Water Supply	..	No
W. Samoa	Rural Water Supply	1,500,000	Water Supply	1987	No

Source: Modified from AIDAB, *Environmental Implications of Australia's Official Development Assistance*, submission and supplementary submission to the Senate Standing Committee on the Environment, Recreation and Arts, AIDAB Development Paper 10, 1988.

- formulation of proposals;
- carrying out of works and other projects;
- negotiation, operation and enforcement of agreements and arrangements;
- making decisions and recommendations; and
- incurring expenditure.

The Environment Protection (Impact of Proposals) Act, 1974, requires proponents of environmentally significant decisions or proposals to provide information to the Minister responsible for environmental matters[4] so that the level of environmental assessment required can be determined. Responsibility for deciding if a proposal is environmentally significant, and hence subject to the Act, rests with the action minister or project proponent which, in the case of development assistance projects, is the Minister for Foreign Affairs and Trade or AIDAB. The Act lists those environmental effects most likely to be significant and further guidance can be provided in the form of a memorandum of understanding of the types which have been developed between the Environment Department and other Commonwealth agencies and with the State Governments. Memoranda of understanding also set down the agreed procedures to be followed to ensure effective implementation of the Act. They do not have the force of law.

In order to confirm the application of the Act to overseas aid, the Environment Department approached the Attorney General's Department which advised that:

> The 'environment' that the Act seeks to protect is defined in section 3 to include 'all aspects of the surroundings of human beings' and, in this Department's view, is not limited geographically to Australia. Rather, the Act relates to all aspects of the surroundings of human beings whether inside or outside Australia.

Consequently, the Environment Department and AIDAB have a statutory obligation jointly to develop suitable procedures which satisfy the Act and ensure that environmental factors are effectively considered in the development assistance program. In an appearance before a 1988 Senate Committee hearing, AIDAB questioned the validity of this legal interpretation. Unlike the US National Environment Policy Act (NEPA), the Australian Commonwealth Environment Protection Act does not provide legal standing to those with a public interest in resolving the issue through the courts.[5] It is not unusual, however, for aid agencies to be reluctant to take on environmental responsibilities. In the USA, for example, Congress felt obliged to provide USAID with specific legislative guidance over a number of years to ensure that NEPA objectives were being met in the US aid program.

In Australia, wholesale application of domestic procedures may not be appropriate for aid projects. This has already been seen to be the case in the USA where, in 1980, new regulations were introduced to deal specifically with aid projects. These followed the same principle adopted under NEPA which directs that environmental impact assessments must always be performed unless they are specifically not required or can be proved not to be necessary. Similar regulations need to be introduced in Australia to clarify AIDAB's responsibilities with respect to the environmental implications of its programs.

[4] The titles of the Minister and the Department responsible for environment protection have changed over time and so they are henceforth termed Environment Minister and Environment Department in the text.

[5] Australian Senate Standing Committee on the Environment, Recreation and Arts, Hearing into the Environmental Implications of Australia's Official Development Assistance, June–July 1988, Canberra.

Yet National governments which operate on the Westminster model have been reluctant to provide detailed legislative direction on EIA requirements for special categories of development. In general, promiscuous legislation backed by soft policy guidelines which do not fetter ministerial and administrative discretion is preferred. The use in Australia of Memoranda of Understanding between the Environment Department and other Commonwealth agencies is one form of policy guideline which seeks to clarify the role of those 'action' agencies in applying the federal environment protection legislation to their activities.

AIDAB resisted applying such an agreement to its development assistance programs. More recently Senate Committee scrutiny prompted the Bureau to consider adopting an MOU with the Department. Initially a Memorandum would provide the opportunity to spell out comprehensively and in a formal manner the conceptual approach and administrative arrangements which are to be adopted to address environmental matters. Given the special circumstances, the conventional Memorandum format would not be appropriate. The document needs to go further in recognizing the requirements of the Environment Protection Act and the OECD Council Recommendations and in embracing the principles set down in the World and National Conservation Strategies. Most importantly, the Memorandum needs to place the responsibility for conducting environmental assessment of aid activities firmly with AIDAB and not with the Environment Department so that those most intimately concerned with aid program development and implementation come to accept environmental assessment as a routine aspect of their work. The current procedure whereby action Ministers must refer 'significant' domestic development proposals to the Department for determination of the appropriate level of assessment would have to be modified so that these decisions would be made by AIDAB, in consultation with the Department through the Liaison Committee. The Memorandum should hold AIDAB accountable by detailing formal reporting requirements to the Committee, Environment Minister and Parliament.

The MOU is a second best option. In practice, it is not the most effective instrument when the implementing agency has displayed minimal commitment to environmental policies. In such cases, the MOU, which has no force in law, tends to give the appearance of sound environmental administration while reinforcing the status quo. In the long term, the feasibility of giving legal expression to the Memorandum through amendments to the Administrative Procedures under the Act or some other statutory avenue, needs to be examined.

Although this field of environmental regulation is in its infancy worldwide, Australia can benefit from the experiences of other national and international donors (as explored in Chapter 3) in formulating its own environmental policies and procedures for development assistance.

Pressure for change. A liaison group involving AIDAB and the Environment Department was formed in 1985 to examine the environmental aspects of Australian development aid and other international environmental questions. Some AIDAB projects were referred to the Department for environmental advice, but the group rarely met during the four years to 1989 and therefore was ineffectual.

In 1986, following concerted lobbying by non-government environment organizations, the Senate Standing Committee on Science, Technology and Environment initiated an inquiry into two related issues. The first was the capacity of AIDAB to assess the environmental impact of proposed projects and to ensure the environmentally sound management of such projects. The second issue concerned the adequacy and effectiveness of Australia's participation in the

decision-making process of the international banks and those multilateral aid agencies of which it is a member, in relation to the environmental aspects of development projects. The inquiry added momentum to the slow evolution of thought and practice on environmental matters which existed within AIDAB. The re-thinking stemmed from the general reorganization of the Bureau which followed the Jackson Committee Inquiry into all aspects of Australia's overseas aid program (Jackson 1984). The Jackson Committee noted that AIDAB did not have the professional resources nor the organizational structure to 'effectively handle development-related planning and the ensuing operation tasks'. Consequently, the Bureau lacked the 'capacity for coherent overall policy development and implementation'. Since then, however, the Bureau has had substantial staff increases and has undergone reorganization to try to improve policy formulation, appraisal and evaluation of aid activities, systematic country programming and links with community organizations.

Preparation of the Bureau submission to the Senate Inquiry in 1986 generated further internal debate on the various methods for addressing the environmental aspects of development assistance. One result of this was the establishment of an environmental co-ordinating committee within the Bureau to help screen projects for environmental significance. However this committee, which met for the first time in December 1987, still requires senior level backing to operate effectively. Despite the expansion, AIDAB did not establish a section or appoint officers with full time responsibility for environmental matters; nor did it introduce systematically applied procedures to ensure that environmental factors were properly integrated within the project cycle. The adoption, in May 1988, of a framework for assessment within all appropriate sections of the Bureau and the preparation by a consultant of detailed environmental screening procedures signals significant change to this end.

With regard to the second issue identified in the inquiry, namely the effectiveness of Australia's participation in the decision-making of multilateral aid organizations, it is clear that AIDAB could take a leading role by calling for all major donors in the South Pacific to meet regularly to discuss environmental matters within the context of SPREP. A co-ordinating mechanism of this kind is necessary to share information, to undertake joint training exercises, develop compatible environmental assessment policies and procedures, and to motivate donors towards environmental reform.

Similarly, Australia has an influential voice on the UNEP Governing Council in promoting sustainable development in the South Pacific region. At the 1987 UNEP Governing Council meeting, the Australian delegation was in the embarrassing situation of wishing to strongly support SPREP in its call for greater resources for the region but was conscious of its diminished credibility due to the Australian government's failure to make a financial contribution to UNEP in fiscal year 1986. The Brundtland Commission appealed to all governments to substantially enlarge the UNEP Environment Fund (WCED 1987). As UNEP has been the mainstay of SPREP it would be contrary to the interests of the region if Australia were to allow its contribution to lapse again. Australia's contributions recommenced in Fiscal Year 1987 at $300,000 and $320,000 in Fiscal Year 1988.

The deed always speaks louder than the word in this field; the most effective way for AIDAB to influence the policies of other organizations is through practical demonstration and through sharing the results of any innovative environmental policies introduced into its operations.

Conclusion

The South Pacific region is supported by one of the highest levels of development assistance per capita in the world and the flow of aid is increasing. Island communities are facing the dilemma of accepting aid to achieve higher material standards of living at the cost of diminishing self-reliance. In the view of Ieremia Tabai, President of Kiribati, the stark reality is that 'it is simply impossible to behave as an independent country if somebody else is paying the bill' (Tabai 1987).

An inevitable practical implication of this loss of independence is the relinquishing of full control over development policy. The sheer quantity of aid flowing into countries, relative to their GNP, makes it one of the primary determinants of the use of island natural and social resources. At the same time, fluctuations in the nature and levels of aid commitment by donors discourages recipient governments from taking a long-term view of resource use planning, making them even more susceptible to the priorities of donors.

Whether intentional or not, the influence of organizations and governments providing aid is profound. Their role in shaping development is incremental and unpredictable and takes many forms, usually continuing in ways which give priority to activities in isolation of other development decisions. With this influence comes a responsibility to assist island governments in minimizing the negative environmental costs of development. More aid organizations are accepting this shared responsibility through the introduction of internal environmental procedures and by working with recipients and through SPREP in developing the appropriate institutional structures and procedures for environmental assessment and management. Yet, there is need for much greater initiative from the aid community to respond to the policy direction provided by island governments through regional legal agreements and other co-operative strategies underlying SPREP.

The emphasis by donors on bilateral aid programs has meant that important regional environmental initiatives are not reflected in the proportion of bilateral aid going to environmental activities. South Pacific governments are taking strong co-operative action to address environmental issues in international arenas but, when settling on bilateral development assistance programs with individual donors, conventional development projects tend to be promoted over those with relevance to the environment. This is largely due to a lack of information and expertise within island administrations both of which are needed to define the environmental problems and their solutions at the domestic level in terms appropriate to development assistance requests. Donors too are generally lacking in these skills. Even where the will exists they are not always in a position to offer appropriate services and assistance in the identification of environmental problems. In this situation both the donor and recipient depend upon conventional development economics in settling on assistance programs. Consequently, the primary contact for donors within island administrations are the ministries for finance and national planning agencies which control all associated decisions and policy. Environmental authorities, when they exist, and other community interests affected by development assistance, remain peripheral to this centralized decision-making process.

Even in those island countries where governments and national planning agencies have expressed a determination to reflect international environmental commitments within the domestic arena, they have tended to direct their requests

for related assistance to those international agencies promoting or offering specialist environmental expertise, such as SPREP and IUCN. Conventional development assistance requests continue to be channelled to those multilateral and bilateral agencies which have not displayed any interest or ability to handle environmental issues. The specialist environmental assistance organizations have become overloaded with requests and need to spend unproductive resources in attempting to convince donors to provide funds for the purpose.

This convoluted process has led to a number of important practical and procedural difficulties. First, as most aid money is absorbed through bilateral programs, little surplus remains for recently established international organizations assisting island countries on environmental problems. When cuts in aid budgets occur it is the regional and multi-country programs which suffer most. Second, donors may require that the original country request to an international environmental agency be regenerated through their bilateral channels if it is to receive support. This places the project at a disadvantage where the bilateral aid package has already been determined and funds committed. Usually, the annual list of conventional development assistance requests go far beyond the funds available and, in this situation, recycled requests have little chance of success.

Determining projects for support is a two-way process and unless donors assist in environmental project definition from the earliest stages, the syndrome operating against assistance in this field will be perpetuated. The final chapter in this book seeks to provide some guidance to both donors and recipients in creating the necessary institutional environments to facilitate and promote integrated programs for environmental assistance and sustainable development.

CHAPTER 9

Approaches to Sustainable Island Development

Development Strategies: a View to the Future

Views on what constitutes the ideal future for the island countries of the South Pacific are based as much on values and preconditioning as on objective appraisal of their resource and environmental characteristics. The visions of the future for any island country vary greatly and often demand of governments ethical judgements and fundamental choices in determining the optimal use of island resources. Choices are involved because some patterns of resource use aimed at achieving a specific development goal may rule out other development options, both for current and future generations. The basic tenet of sustainable development is that the exploitation of resources, the direction of investments, the orientation of technological development and institutional change, should meet present needs without denying the needs and options of future generations. Strategies for sustainable development aim to keep open as many future options as possible. The yield of renewable resources therefore needs to remain within levels which can be maintained and the exploitation of non-renewable resources should foreclose as few future options as possible.

Development strategies need to take into account their effects on the five main interrelated components of island communities and their environment. These comprise:

- an ecological component which recognizes the primacy of conserving the life-giving natural resources;
- a cultural dimension in recognition of the fact that cultures confer identity and self-worth to people;
- an economic dimension dealing with the creation of wealth and improved conditions of material life;
- a social component measured as well-being in nutrition, health, education and housing; and
- a political dimension pointing to such values as human rights, political freedom, security, participation and some form of self-determination (IUCN 1988).

The environmental perspective on island development requires that the values which underlie development options, the impact they have on each of these key components of island life, the trade-offs involved and the balance which is struck between them, are all made explicit and are fully understood by the affected community. Value judgements concerning what constitutes the ideal island society and its relationship to the natural environment obviously underlie the decisions of development planners. For this reason then it is crucial that island communities should have ultimate control over those decisions.

Dynamic economic performance, technical efficiency and growing material welfare are elements of conventional notions of development but they represent only one of many possible development pathways which a community can choose. This is where the building of self-reliance and greater independence becomes so important. The more directly communities can control the incremental and dispersed decisions effecting changes to their environment, the more accurately will the values of those communities, rather than those of outsiders, be reflected in shaping development. It is in the interest of island communities to maximize their adaptability to changing circumstances. Adaptability is enhanced by sustaining as many elements of an island's natural and social systems as possible with each development decision.

Some development planners consider that self-reliance for small island countries solely relates to macro- and micro-economic management, leading to high ratios of trade to GDP. Self-reliance is considered as having meaning for Singapore, for example, which has achieved high trading levels and material wealth. Inward oriented economies, the argument goes, inevitably become dependent on outside assistance. Other development practitioners would see the Singapore model as irrelevant to South Pacific conditions. Its cultural context, locational advantage, long history as a trading centre and relatively large population set it apart from most South Pacific countries. In addition, they might question whether the Singapore economy is truly sustainable in the long term or wholly dependent on the fluctuations of international economic forces. They might question whether increased material wealth has led to improved conditions of cultural and political life or whether these values have been degraded along with the total transformation of the natural environment.

Some development economists would argue that environmental concerns and sustainable development do not necessarily need to go together. For example, an island community could exploit all of its timber resources for maximum short-term commercial gain, use the funds for investment abroad and live off the proceeds. Such a strategy is not consistent with the concept of sustainable development which builds upon natural systems and is tailored to the constraints imposed by ecological processes and resource availability, a concept which is sensitive to the cultural and social implications of resource exploitation. In Nauru, the policy of maximum exploitation of phosphate deposits on the island, adopted by the colonial administration, was continued following independence in 1968. The immediate creation of wealth was not balanced with the other components of sustainable development and 80 per cent of the island's natural environment has been devastated. Traditional cultural patterns could not adapt to the sudden onset of affluence. The Nauru community has the highest per capita income in the South Pacific but also one of the highest levels of diabetes in the world, unusually high levels of alcoholism and cardiovascular disease and one of the lowest life expectancy rates in the region. These problems have meant that improved conditions of material living have been accompanied by a severe degradation in cultural and social values. In this case, the basic principles of sustainable development which require that (i) the rate of depletion of non-renewable resources should foreclose as few future options as possible; (ii) the ratio of production to proven reserves remains below a pre-specified limit, and (iii) land restoration and other environmental control measures in the area affected by mining be an integral part of the operation, were not followed. Another principle of sustainable development of non-renewable resources — that the funds generated by royalties are used in a way that compensates for the declining income when the resource deposit is exhausted — has been addressed but, even

so, the Nauruans have no assurance that investments made will sustain future generations at the material standard of living which the current population enjoys. Environmental concerns are integral to sustainable development.

Sustainable development strategies can assist in increasing the self-reliance of South Pacific countries. The size of an island remains an important factor affecting the ease and extent to which this can be achieved. It would appear to be both desirable and necessary to retain the traditional interdependence between island countries and particularly between islands within archipelagos. Yet, given the political direction and will, even in the smallest countries, the extreme dependence on aid and trade could be reduced, if not eliminated, by appropriate sustainable development policies.

Smallness and isolation bring special development problems which need to be recognized, perhaps the most important being the difficulty and expense in establishing and maintaining transport and communication between islands and elsewhere. Other environmental factors combine to make small islands, especially atolls, among the most inhospitable habitats in the world for human subsistence. Countries consisting entirely of atolls (Tuvalu, Kiribati, Marshall Islands and Tokalau) are greatly constrained in their development options by limited and poor natural resources such as land, soil and water, and their susceptibility to natural disasters. Countries which have a significant number of atolls, such as the Federated States of Micronesia, French Polynesia and the Cook Islands, are similarly constrained, as are others of the smaller island countries such as Niue, Wallace and Futuna and Palau. Although sharing the constraints which come with smallness, these countries present a diverse range of environments and development opportunities. They also present a range of attitudes to aid and to the urgency of achieving greater self-reliance; but for all, the same principles of sustainable development apply.

Niue, a raised coral island of only 259 square kilometres, is supported by one of the highest per capita aid levels in the world, running at about US$1300 per head each year (Table 8.1). Most of this aid is required to establish and maintain public services and infrastructure, including roads, a hospital, government buildings, schools, churches and village water supplies. Residents merely have to hang out a red flag if they wish to have attention from the doctor who drives around the island each day. Unquestionably, the aid is contributing to the maintenance of an unusually high standard of living on Niue. In addition, the 2000 inhabitants of the island are supported by remittances from 9000 Niueans in Auckland, New Zealand, which allow for the purchase of imported consumer goods. Many traditional aspects of Niuean culture are retained in the midst of this relative affluence. Traditional social and family obligations and authority structures, community functions and feasts, and traditional crafts are maintained. Every family on Niue is self-sufficient in vegetables and fish. The country earns about US$0.13 million each year from the export of passionfruit, copra, limes and lime products, honey and baskets. To the Niueans, self-reliance may be an impossible and perhaps undesirable dream. For them, there may be no advantage in being self-reliant and having the life expectancy of I-Kiribati males (50 years) when one can enjoy dependent affluence and live to 70 years.

However, for the present government of Kiribati, this level and kind of dependency is unacceptable, even though it is one of the poorest countries in the South Pacific. According to President Ieremia Tabai, Kiribati rejects as an option having to depend on others for the vital needs of its people (Tabai 1987). At independence in 1979, following 87 years of colonial administration, Kiribati

inherited an exhausted phosphate mine (which left Banaba Island uninhabitable), with minimal infrastructure and copra as the only commercial crop. Yet, by 1986, Kiribati had succeeded in ridding itself of all recurrent budgetary support (about 25 per cent of the budget until that time). This was achieved in part through major cuts to the Public Service. Aid remains a major component of the country's development budget but, according to President Tabai, 'the most important commitment to make is to regard aid as a means to reduce the need to rely on it, and to eliminate this form of assistance altogether in the future' (Tabai 1987). A range of policies are being implemented in pursuit of that goal. An important development theme is to sustain the strong subsistence lifestyles in the outer islands. This is being encouraged through the decentralization of government and expansion of district centres by giving major emphasis to improved rural education, including traditional and practical skills, by subsidizing the price received for copra, by reallocating unskilled jobs in government every three years and by providing incentives for the resettlement of the distant and sparsely inhabited Line Islands (Connell 1986). Other policies include increased exploitation and development of marine resources, initially through licensing agreements with foreign fishing nations and, where possible, through the diversification of agricultural production.

It must be added though, that some island leaders and development analysts consider that it is totally unrealistic for island states, such as Kiribati, to seek self-sufficiency and that instead, they should attempt to achieve reduced, diversified and stable levels of aid. Indeed, given the high aspirations for material goods and for services among the Pacific communities, they see the rejection of aid and a re-emphasis of subsistence practices and traditional social systems as an exercise in futility (Ward and Proctor 1980).

These are issues for individual governments to decide. Irrespective of the aid flow into a country, strategies for sustainable development which lead to improved environmental quality while maintaining or increasing options for future development can only enhance an island community's potential to move towards self-reliance. This final chapter suggests a range of actions which may be taken by South Pacific countries and the aid community to promote sustainable development.

Environmental Policies: the Commitment by Aid Donors and Island Governments

Environmental policies aimed at improving an island's long-term productive capacity reflect a commitment to tackle resource management problems on a co-ordinated and integrated basis. The process of arriving at agreed policies is as important as the product. It provides a major opportunity to build awareness and consensus within communities about natural resource issues and priorities for action. Environmental policies will have limited effect without broad-based involvement in their formulation.

South Pacific countries need to reflect policies agreed at international levels within the context of SPREP in their national conservation strategies. Nine countries have indicated their desire to prepare such strategies (SPREP 1985). Vanuatu is in the second phase of strategy preparation with assistance from IUCN and Canada. Tonga has prepared a National Environmental Management Plan with assistance from ESCAP. Such national environmental policy statements are intended to identify natural resources in a country. All activities which have

impact on the status of those natural resources are reviewed and the obstacles to ensuring that they are properly used are defined (IUCN 1984). These strategies should bring together the activities required to achieve sustainable development, estimates of the human and financial resources needed and schedules for implementation.

The purpose of the National Conservation Strategy process is not just to prepare a Strategy but to achieve community knowledge and understanding of the interdependence between conservation and development and to ensure that the ability and commitment exists to implement agreed policies. Australia has completed the lengthy process of preparing conservation strategies at the national level (and in some states) and needs to share its experiences and technical expertise with island countries in developing their strategies (Wilson 1987). National and multilateral donor support is needed for the preparation of domestic national and local environmental plans.

Donor governments also need to look at their own policies for the environmental effects they have on island governments; for example, through certain foreign investment, trade, and development assistance policies and those relating to the export of hazardous chemicals, wastes and technology. The Brundtland Commission urged all governments to adopt a 'foreign policy for the environment' reflecting a recognition of the impact that a nation's activities, domestic and international, can have on the environment of other countries (WCED 1987).

Australia, New Zealand and several other metropolitan powers have already recognized an environmental policy guiding international activities in the South Pacific in the form of the SPREP Action Plan and related conventions which are 'intended to provide a framework for environmentally sound planning and management, suited to the needs and conditions of the countries and people in the region, and to enhance their own environmental capabilities' (SPREP 1982). The SPREP Action Plan and Conventions need to be integrated into development assistance philosophy and policies. The Action Plans for other regional programs for the ASEAN Countries (ASEP) and South Asia (SACEP) must also be recognized. Each seeks the integration of environmental concerns into economic development.

Also important at the international level is the role that donor governments can play in promoting and supporting environmental policies within multilateral organizations. Governments can be influential in directing the activities of major development assistance organizations, such as the World Bank and the Asian Development Bank, through their representation on governing councils. These organizations should be encouraged to participate in SPREP and to lend support to environmental activities within South Pacific countries.

Actions Within Island Countries

Projects for sustainable development. Projects concerned with sustainable resource development and the restoration or recovery of degraded resources are receiving increasing priority by island governments and the aid community. Many projects, for example those relating to forestry and watershed management, fall within the classic areas of development assistance.

Yet, projects often have an environmental impact more by the manner in which they are undertaken than by the subject or sector to which they relate. Aid will continue to have poor results and unpredictable community response if

island strategies are not defined with an overall policy framework which recognizes the integrated nature of island environments. Waste treatment illustrates the problem. Normally, a country might adopt a reticulated system of sewage collection and a central treatment plant with ocean outfall. An integrated sustainable resource management approach would look instead for opportunities to increase agricultural productivity with land application of sewage, sludge, treated wastewater and municipally derived compost. The integration of aquatic plant cultivation with water treatment might also be considered. These alternatives may be fraught with social and technological difficulties, but creative options towards maximum use of community resources which better suit island conditions need to be recognized and tried in national strategies and development assistance programs.

Projects of this nature have been identified to guide 'integrated renewable resource management' for US affiliated islands (US/OTA 1987a). The US Office of Technology Assessment strategies for island development are consistent with SPREP Action Plan objectives and in summary include:

1. **Support and protection of subsistence and part-time agriculture.** Subsistence agricultural systems are usually characterized by high crop diversity and are well adapted to natural conditions, making optimum use of local resources.
2. **Development of smallholder agriculture.** The aim is to generate cash income for subsistence farmers by raising productivity and strengthening urban markets for local farm products.
3. **Integration of the characteristics of traditional agriculture into productive systems.** This is, however, usually extremely difficult in practice.
4. **Development of intensive commercial farming.** In most islands, selective opportunities exist for highly productive commercial agriculture on a small scale. Some carefully selected crops and new technologies could be adapted to tropical island ecology. High value speciality crops offer commercial opportunities. Some, such as Pohnpei black pepper, vanilla and coffee have already been established. They need to be accompanied by environmental quality controls.
5. **Development of commercial forestry.** Forestry development through reforestation, species enrichment and forest maintenance measures, particularly on severely degraded lands, may be appropriate on some lands unsuitable for other uses.
6. **Support for subsistence and small-scale commercial fisheries aimed at under-utilized stock.** Pelagic resources probably offer an opportunity for expansion with research and management of small-scale island fisheries.
7. **Management of near-shore fisheries for sustained yields.** Near-shore areas are over-exploited in some areas. Research, habitat restoration and restocking are needed for sustained management.
8. **Development of aquaculture.** This method of cultivation can supply fishery products to local and export markets, increase employment and income in rural areas, and supplement marine resources through reseeding programs. Already, a successful export industry of aquaculture prawns has been established in New Caledonia.
9. **Development of research programs relevant to island needs.** Although the need for research is widely recognized, the capacity of island institutions is limited. Development assistance is needed to build on local facilities to improve research and extension services (US/OTA 1987a).

The US Office of Technology Assessment has also proposed strategies to support sustainable agricultural activity such as minimization of soil erosion and degradation, enhancing re-vegetation programs, developing local soil amendments and reducing agricultural crop losses. If these strategies were adopted by island governments they would provide numerous opportunities for development assistance. For example, reducing crop loss might be achieved through pest- or disease-resistant crops and livestock, through new husbandry methods, through biological control or locally produced pesticides, or through a combination of these measures. Other assistance opportunities include facilitating food preservation and processing, market development and the establishment of co-operatives. Many of these methods are being applied on an experimental basis with varying degrees of success. Like other development assistance activities, these strategies will fail without an integrated approach involving the affected community and a long-term commitment by the aid organizations.

Special care is required in the design of development projects to examine the potential for intersectoral integration, particularly when this might lead to the decentralization of energy production by association with agriculture or watershed management for example. Renewable domestic energy resources reduce dependence on imports of oil. Opportunities exist in the islands to produce energy from numerous types of biomass associated with agricultural projects; for example, wood, grass, crop residues, animal manure, food processing wastes or oil bearing plants. Thermochemical processes, ocean-related energy generation and hydropower are renewable sources of energy which are also being explored in many islands of the Pacific (US/OTA 1987a). Once again, progress in developing these methods requires a long-term commitment and investment by island governments and donors.

Environmental assessment and management. Sustained economic development of islands is improbable unless it continues within the framework of environmental assessment and management processes. These involve:

- baseline monitoring of natural resources;
- regular stocktaking of natural resources (environmental audit);
- assessment of alternative resource uses;
- environmental appraisal of development proposals;
- monitoring and adjustment of development;
- enforcement of environmental standards; and
- evaluation of development to gauge how sensitively it is integrated with other human activities and natural systems.

Within this framework, four main areas for development assistance can be identified: environmental baseline assessment; impact assessment of programs and projects; monitoring and evaluation; and the protection of wildlife and habitats.

Environmental baseline assessment involves gathering information so that limited resources can be developed in appreciation of the environmental effects. In 1980, SPREP sponsored the preparation of country environmental profiles as a first step in this information gathering process. Country profiles of this kind need to be revised on a regular basis. A number of donors, including USAID, the World Bank and the Asian Development Bank already have programs for the preparation of country profiles and this sponsorship needs to continue on a

co-operative basis to cover each of the South Pacific countries. Country environmental profiles assist recipient governments to better define development assistance programs.

Similarly, donors could assist governments in preparing sectoral or regional environmental profiles to help identify and integrate projects within key sectors (for example, agriculture, forestry, health and education) or areas (for example, watersheds and coastal zones). To complete the folio for a country, project environmental profiles need to be prepared to identify the likely environmental implications and the assessment procedures to be followed for particular categories of activities.

Preparation of this folio of environmental profiles for each country should be linked to the development of its national conservation strategy. Such profiles will identify resources which are under pressure but on which little information is available and for which inventory surveys are urgently required.

Environmental impact assessment procedures must be followed for all development projects with the project specific assessments continuing within the context of those carried out at regional and sectoral levels. The OECD has identified three policy implications for development assistance with respect to the environmental assessment process in developing countries (OECD 1986). These are:

- take account of the prevailing constraints in the host country; for example, the availability of trained personnel and information about environmental conditions;
- help to overcome these constraints and enhance the host country's capability to perform impact assessment; and
- provide technical and financial assistance for conducting assessments.

The final suggestion raises the question of the cost of environmental impact assessment for particular developing assistance activities. An adequate proportion of the cost of every project should be applied to the environmental assessment component. The proportion of expenditure will vary depending upon the nature and size of the project. For conventional development assistance activities costing $250,000 and less, for example, 10 to 15 per cent of expenditure may be needed for the assessment. For larger projects, the proportion will be much smaller. Donors may need to develop policy guidelines on EIA cost to facilitate preparation of forward estimates and budget papers.

Monitoring and evaluation are essentially components of the impact assessment process but they have been singled out here to stress the need for their broader application rather than merely as an element of site specific project assessment.

Environmental profiles are comprehensive appraisals of natural systems at a given time. Environmental monitoring refers to periodic measurements of natural resources and environmental quality parameters to determine changing trends. Both the profile and monitoring process contribute to an ecological baseline assessment. Monitoring can be undertaken on an international basis, as it has been by the SPREP research network, or have a national, regional or site specific focus. Donors should support SPREP in conducting land-based pollution sources surveys in member countries. These surveys can provide the means for an ongoing aid commitment to the development of appropriate monitoring programs, pollution standards and enforcement measures.

Project evaluation is a necessary supplement to environmental impact assessment procedures. Evaluations can be used to assess the unintended impacts of projects and then to formulate recommendations for changes in objectives, strategies, techniques, institutional arrangements, priorities and government policies (US/OTA 1987a). Development assistance needs to be flexible enough to respond to the recommended changes. Evaluations also provide lessons for planning other projects and should be linked to measures which hold developers accountable for the unwanted effects of their activities.

Conservation management and protection of wildlife and habitat is largely incorporated in the South Pacific Action Strategy for Protected Areas which the island countries have adopted and revise every four years. In force, the Apia Convention would provide an international legal context for aid in this field and facilitate co-operative projects drawing upon the expertise of parks and wildlife services in industrialized countries. The New Zealand, Australian and New South Wales National Parks and Wildlife Services already have links with SPREP.

Assistance in establishing and maintaining these four related programs is required in all Pacific island countries. Custom-made structures to suit the special circumstances of each island must not hamper effective co-ordination between economic planning and resource development agencies and those responsible for environmental assessment and management. The OECD recommends that donor countries consider direct support by providing environmental advisers to work with national planning agencies for as long as required to see that the appropriate institutional arrangements are in place and working. Funding of local counterpart positions may also be required, as will the provision of EIA training opportunities.

Once the legal and institutional structures are in place, guidelines to set them in motion and keep them operating effectively can be a useful tool for island administrators. The project environmental profiles suggested previously, for example, will provide a step-by-step guide on how to conduct environmental impact assessment for particular types of activity. UNEP has prepared a series of environmental management guidelines for various resource sectors or broad categories of development, such as afforestation projects and watershed management. The adaptation of existing guidelines to better fit the circumstances and administrative arrangements of island countries would be a useful initiative for financial support, particularly if backed up with expert guidance on their application (OECD 1986). Pollution standards especially need to suit local political and environmental conditions.

The existence of environmental assessment guidelines and various forms of design criteria and standards could help developers to integrate environmental factors into their activities and enable local communities to hold developers accountable if standards are not adhered to.

Actions within Aid Agencies

Within the aid agencies themselves there is a need for a similar shift in focus from site specific projects to a broader understanding of environmental 'cause and effect'. These agencies should develop in-house environmental assessment procedures which relate to the environmental demands of the host countries. For this reason, such procedures need to include the following elements:

Screening. This is a regular sifting of all aid programs and projects as they arise to determine their potential environmental significance. The OECD has provided a list of potentially significant development assistance activities. It

would be useful for aid agencies to prepare a series of lists for the South Pacific region (based perhaps on the methods adopted by USAID and the Canadian Aid Agency) of projects requiring environmental assessment, not requiring assessment, and of those projects for which a decision on assessment will have to be individually determined.

Determining the scope of assessment. Once significant activities have been identified, then the 'scope' or level of environmental assessment to be undertaken needs to be determined.

Information gathering and assessment studies. The environmental profiles suggested previously should form the basis of in-house assessment. Methods need to be adopted to suit the activity under consideration. Vast experience has now been gained by international and national environmental organizations in undertaking EIA, and aid agencies need to work closely with their domestic environmental protection authorities in determining the range of methods in which they should develop expertise.

Monitoring. The need for continuous monitoring of all development assistance activities and the integration of resulting information within the environment management process, to allow for modifications in project design and operation, was stressed previously. It is a current weakness in aid project cycles and special attention should be given to developing appropriate monitoring expertise in agency staff.

Evaluation. The evaluation process holds the key to the steady improvement of an aid agency's environmental performance. Its presence as a formal stage in environmental assessment provides incentive for the agency to account for environmental factors effectively in project planning and design.

Accountability. Evaluation also enables an agency to be held accountable for its actions. All contractual arrangements and project specifications developed in co-operation with recipient governments need to specify the donors responsible to safeguard the environment during and after project implementation. The development assistance activities of aid agencies need to be subject to environmental assessment regulations in the same way as is domestic development in donor countries. In this way, all aid transactions can proceed with a clear understanding of the ground rules concerning respective donor/recipient EIA responsibilities. Under such regulations, a donor's legal obligations are spelt out to the benefit of the implementing aid agency and host government. Of special importance, EIA regulations ensure that donors can be held more accountable for the environmental effects of their aid programs.

Community involvement. This aspect of environmental assessment is probably the most difficult and time consuming to conduct. It may also be the most important. Donor country and international non-government organizations, in addition to recipient community groups, need to have a key role in the development, review and delivery of aid projects as discussed below.

Information sharing. Many of the prerequisites to effective project assessment and delivery depend on the sharing of information at all stages of the project cycle. Information on projects under consideration, staff appraisals, environmental profiles and assessments and other reports leading to aid decisions are rarely made accessible, as a matter of course, to local community, non-government organizations or other aid agencies. Fundamental changes in attitudes and procedures are required which recognize access to information as a right and an essential element of aid programs.

Implementation of these procedures requires permanent budgetary provision on the part of aid agencies and also training and recruitment of staff with environmental expertise.

Environmental staff. To date, aid agencies have been reluctant to allocate staff positions and reorganize to accommodate environmental strategies. Few aid agencies have adequate senior staff with appropriate training to pursue environmental initiatives. Environment units within aid agencies are necessary as catalysts for promoting the new procedures and as the centres of environmental expertise. Environmental focal points within other agency sections need to be identified to work in consultation with the unit as members of an environmental co-ordinating group and with country desk officers on specific activities. The larger country posts also require environmental field officers. The field scientists would play a key role in the preparation of the environmental information portfolio for a country and in the assessment, monitoring and evaluation of aid projects. Work responsibilities of all officers involved in environmental work need to be well defined, as do the functions of the co-ordinating group, and fully understood by all agency staff.

Community Involvement

A key to the success of environmental controls is effective involvement of the local community in project planning and management. Such involvement can lead to an increased understanding of the natural systems of a project area through local knowledge, greater compliance with and enforcement of local regulations, and general public support and goodwill. In order to achieve effective local involvement the number of assistance activities need to be reduced so as to allow for a longer term commitment to each project and the recipient community. This will engender a greater understanding of the community's social and natural setting and build rapport and mutual respect. Wherever possible, projects need to be undertaken by local people and by organizations whose involvement extends from project design to implementation.

All projects need to include on-the-job training so that the recipient community can take over maintenance and monitoring. When it becomes necessary to draw upon specialists from outside the region, local counterparts in the project team are essential. Associated education and research activities need to have local people actively participating with government project staff and professionals.

SPREP attempts to maintain these principles in implementing its Work Program. The Land-based Pollution Sources Survey in Tonga, for example, was in some ways a model project. There, the SPREP Project Co-ordinator headed a team of five local officials from appropriate government departments in designing and conducting the field survey. Team members held meetings with members of the local community, appeared on local radio to explain the survey and wrote regular items for local newspapers. They also assisted in preparing education and public awareness materials for an Environment Week celebration held during the survey (Cheshire 1984). Generating local public input can be extremely time-consuming. Considerable sensitivity should be applied to the traditional authority structures and customs of the local community concerned if a participation program is to be effective. In American Samoa, for example, hearings and meetings required under US Environment Protection Authority Regulations were found not to attract all affected interests because permission to attend such public gatherings could only

be granted by the head of a family. Alternative additional involvement methods had to be developed. The importance of community involvement in the success of all approaches to sustainable development cannot be overestimated.

Conclusion

Setting the course for sustainable development in the South Pacific is the responsibility of island governments. The initiative for introducing environmental impact assessment and adequate environmental controls on resource use rests with the countries concerned. Ultimately, it is for governments of the region to ensure that environmental assessment and management are recognized as fundamental to sustainable island development, and that they are adequately reflected within their domestic policies, procedures and practices.

Donors have complementary responsibilities in the region. They need to encourage and promote interest in the options for sustainable development and the underlying environmental concerns. They need to make evident a commitment to these strategies through the projects they support and, in the case of bilateral agencies, through the national policies of their governments.

Many activities of donor countries have an impact on the resource base and development of island nations. This applies particularly to those governments which have immediate strategic and economic interests in the region, such as Australia, France, Japan, New Zealand and the United States. The course and momentum for so much of the major resource development in the region (for example, in the forestry, agriculture, and mining sectors), were set in train during periods of colonial administration for the benefit of the colonizing powers and often with disregard for the sustainable development of the islands. In 1986, the Nauru government set up a Commission of Inquiry to consider which government or organization should accept responsibility for rehabilitating the areas of phosphate land worked out during the German administration, League of Nations Mandate, Japanese occupation and the United Nations Trust involving Britain, Australia and New Zealand. With respect to these latter countries, the Commission found that 'entrusted by the world community with this sacred trust of civilization, the three powers concerned failed to act in accordance with that trust and acted for their own benefit rather than the people in their care' (Dinnen 1989). The Australian government has refused to pay any part of the $A72 million claimed by Nauru as compensation for the damage caused by phosphate mining on the island. Nauru has mounted a multi-million dollar challenge in the International Court of Justice to press its claim.

External pressures persist which encourage forms of development or practices detrimental to island environments. In 1987, for example, numerous island countries, including Western Samoa, Tonga and Papua New Guinea, were approached by a US-based waste management company seeking sites for the regular dumping of large quantities of hazardous wastes. There was promise of high financial return but no proposals for assistance with management of the wastes or associated training. In this case, the proposals were rejected following environmental reviews with assistance from SPREP. Other developments are proceeding through foreign aid or investment with doubtful or unknown environmental effects. Centralized power plants, clear felling of forests, polluting fish and food processing plants, and destructive mining and fishing operations are examples of such developments. In the agricultural sector, 620 pesticides are imported for use in the region; 94 of these are classified by WHO as extremely or

highly hazardous, 99 are banned or severely restricted in the United States, and 177 are not registered for use in Australia or New Zealand (Mowbray 1988).

It is for the island governments to decide on what developments proceed and what products are used in their countries but donor organizations and nations with an interest in the region share the responsibility to ensure that their activities and products meet with recipient countries' development and environmental goals.

Donors also have a responsibility in helping to build the necessary institutional capacity for island governments to gain full understanding of the environmental implications of alternative development strategies prior to making their decisions. They have a responsibility not to become involved in environmentally detrimental projects and to ensure that all their aid programs adhere to sustainable development principles and are subjected to adequate environmental impact assessment.

The role which aid has to play in the sustainable development of South Pacific islands will vary from country to country. A number are making determined attempts to reduce their dependence on development assistance. This might not entail a reduction in the flow of foreign money into those countries. Negotiation of agreements between South Pacific countries and distant water fishing nations concerning exploitation of the region's tuna resources has proven that, once island resources are sufficiently valued by the outside world, island countries can demand fair and reasonable payment for their use. Recent fisheries agreements have also shown that the negotiating authority of the islands is enhanced through regional co-operation. In a similar way, as the importance to the world community of the region's conservation and biological diversity are more fully appreciated, island countries can begin to charge the international community for the services they provide in sound management of these resources. Island gene pools and ecosystems will become increasingly valuable economic commodities allowing South Pacific countries progressively to replace aid with rental income or fees for services. Preserving biological diversity will become one of the major global concerns of the next decade and beyond. The potential for wild genetic strains to provide some human benefit relating to food, fibre, medicine or industrial material and the immediate aesthetic values of rare species and ecosystems will ensure that the island countries of the South Pacific are well placed to make capital out of this trend. It will require that they do so through the sustainable development of their islands.

A long-term global trend which is potentially disastrous for the development of atolls and those Pacific communities concentrated in the coastal fringes of islands is the human-induced climatic change, or 'greenhouse effect', caused by the addition of carbon dioxide and other gases to the atmosphere. Mean sea levels are predicted to rise over the next fifty years by 20–150 centimetres, with tidal peaks and storm surges possibly increasing sea levels by 5–8 metres. Rainfall patterns are expected to change, increasing flooding and the frequency of cyclones. Changes in the temperature of the sea and ocean currents and the steady salinization of groundwater supplies may greatly alter coastal natural systems and their productivity. Kiribati and the other countries of the Pacific consisting entirely of atolls (Tuvalu, Marshall Islands and Tokalau) with a maximum elevation above sea level of 2 metres, are in a particularly precarious position. In late 1989, SPREP and UNEP sponsored the first regional conference on the 'greenhouse effect' in Majuro Atoll, capital of the Marshall Islands. Pacific leaders at the conference called on the industrialized countries to provide Pacific

countries with financial, scientific and technological resources to counteract the threat to those island communities which will be the 'innocent victims' of rising sea levels.

Even this troubled situation has a positive side. First, the international response may succeed in reducing the threat, allowing the growth of coral and other biological responses to keep pace with environmental changes. Second, the increased attention which the greenhouse effect has attracted to small island countries may result in a heightened international concern and sensitivity to their special environmental and economic needs. Lastly, it is to be hoped that this shared problem of such enormous scale will serve to strengthen further the momentum for regional cohesion and concern over an environment held in common.

Annexes

Bougainville Mine, Papua New Guinea (left), planned with limited environmental assessment and community involvement, has had major biophysical and social impacts. Photo: A. Dahl.

Uncontrolled runoff from mine operations on islands can destroy river systems and increase sediment loading of coastal waters. Runoff from a goldmine in the Bulolo district of Papua New Guinea (right) is heavy with sediment and carries toxic chemicals used in the extraction process. Photo: J. Carew-Reid.

ANNEX 1

Events in the Tide of International Opinion on Development Assistance and the Environment

1968
- Paris 'Biosphere Conference'.
- Washington Conference on Ecological Aspects of International Development convened by US Conservation Foundation.

1969
- World Bank decided to initiate program of environmental assessment of projects it finances.

1970
- US National Environment Policy Act (NEPA) enacted.
- World Bank appointed Ecological Adviser to 'review every project for its consequences to the environment' and issued first Environmental Assessment Guidelines.

1971
- UN-sponsored meeting at Founex, Switzerland, which made 25 recommendations to integrate environment policy into the development process.
- US Council for Environmental Quality (CEQ) recommended amendments to USAID regulations to apply NEPA to all development assistance activities.

1972
- UN Stockholm Conference on the Human Environment.
- United Nations Environment Program established.

1973
- World Bank created Office of Environmental Affairs (5 staff members).

1974
- UN Cocoyoc Declaration on Patterns of Resource Use, Environment and Development Strategies.

1975
- Legal action by US Environmental Non-government Organizations forced USAID to respond to NEPA with procedures for systematic environmental review of all AID projects and programs and specifically, for its financing of pesticides sales to developing countries.
- USAID issued Environmental Policy Determination.
- World Bank began financing 'environmental projects'.

1976
- USAID issued general environmental regulations for implementing NEPA, began environmental reviews of proposed development projects and prepared an environmental impact statement on use of pesticides in developing countries.
- Canadian International Development Agency (CIDA) formulated a general environmental policy.

1977
- Amendment to the US Foreign Assistance Act mandated USAID to provide assistance in the area of environment and natural resources, specifically, deforestation and desertification.

1978
- USAID issued Pesticides Policy Statement.
- Amendments to the US Foreign Assistance Act during 1977-81 mandated USAID to institute policies promoting protection and enhancement of environment and natural resources.

1979
- Report of UNEP/CIDA funded study 'Banking on the Biosphere?: Environmental Procedures and Practices of Nine Multilateral Development Agencies' (Stein and Johnson).
- Declaration of Environmental Policies and Procedures Relating to Economic Development prepared under auspices of UNEP.
- US Executive Order 12.114: 'Environmental Effects Abroad of Major Federal Actions' requiring all US Federal Agencies to prepare environmental impact statements for their actions which have potential significant environmental effects in foreign countries or on the global commons (related amendments to the Foreign Assistance Act).
- USAID began preparing country environmental profiles (23 profiles completed to 1987).
- Organization for Economic Co-operation and Development (OECD) Environment Ministers' Declaration on Anticipatory Environmental Policies.

1980
- Nine major multilateral development assistance institutions signed the New York Declaration of Environmental Policies and Procedures Relating to Economic Development (12 signatories as at 1987).
- UNEP initiated formation of Committee of International Development Institutions on Environment (CIDIE) to meet annually for exchange of information on environmental procedures and plans.
- World Conservation Strategy launched by IUCN with assistance from UNEP and the World Wildlife Fund.
- International Institute of Environment and Development (IIED) study of six bilateral aid agencies reported: 'The Environment and Bilateral Development Aid' (Johnson and Blake).
- Netherlands adopted environment assessment policy for aid program.
- USAID appointed Environmental Co-ordinator, a co-ordinator for each of its regional bureaus, and designated an environmental officer in each field mission.

1981
- Asian Development Bank (ADB) established Environment Unit (two staff members).
- USAID issued revised environmental regulations.

1982
- UNEP 'Review of the Global Environment 10 years after Stockholm Seventeenth Congress'.

1982
- UNEP adopted the Nairobi Declaration supporting the UN International Strategy for the Third UN Development Decade.
- OECD established Ad Hoc Group on Environmental Assessment and Development Assistance.
- Nordic Working Group on Environment and Development Assistance reported (Denmark, Finland, Norway, Sweden).

1983
- CIDA established Office of Environmental Adviser.
- IUCN and IIED released report on Environmental Guidelines Survey: An Analysis of Environmental Procedures and Guidelines Governing Development Aid (Horberry).
- US Congressional Committees scrutinized the environmental performance of Multilateral Development Banks (1983–84).

1984
- World Bank incorporated environmental policies and practices into operating procedures.
- US Congress directed USAID to help developing countries to protect and maintain wildlife habitat and develop better wildlife management programs.
- UN Assembly established the World Commission on Environment and Development.

1985
- OECD Council made 'Recommendation on Environmental Assessment of Development Assistance Projects and Programs'.
- European Economic Community issued Manual for Preparing and Appraising Project and Program Dossiers including a statement of environmental policy.
- West Germany introduced comprehensive environmental impact assessment procedures to its aid program.
- USAID initiated joint meeting between CIDIE members and representatives of bilateral aid agencies from fourteen OECD countries (including Australia and New Zealand).

1986
- CIDA introduced Environmental Assessment Framework into project appraisal procedure.
- Ottawa World Conservation Strategy Conference drew up sustainable development guidelines for aid donors and recipients.
- US Congress directed USAID to help conserve tropical forests and biological diversity in developing countries.
- British Overseas Development Administration (ODA) established Natural Resources and Environment Department.
- OECD Ad Hoc Group on Environmental Assessment and Development Assistance reported.
- OECD Council made 'Recommendation on Measures to Facilitate the Environmental Assessment of Development Assistance Projects and Programs'.

1987

- UN World Commission on Environment and Development (WCED) reported: 'Our Common Future', and WCED adopted Tokyo Declaration.
- IIED Sustainable Development Conference in London.
- World Bank released 'Environment, Growth and Development' Report.
- World Bank established major Environment Department with substantial staff increases and new environmental programs.
- Australian Senate Committee on Environment, Recreation and the Arts initiated inquiry into Environmental Implications of Development Assistance.
- OECD Paris Seminar on Strengthening Environmental Co-operation with Developing Countries.
- US Congress enacted legislation as part of the Foreign Operations Appropriations Bill for Fiscal Year 1988 directing the US Treasury and other federal agencies to take action to promote sustainable development by the Multilateral Development Banks.
- UN General Assembly adopted UNEP report on 'Environmental Perspective to the Year 2000 and Beyond'.
- Conference of Contracting Parties to the Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, urged aid organizations to adopt policies of sustainable use, wise management and conservation of wetlands.
- Citizens Conference on Tropical Forests, Indigenous Peoples, and the World Bank in Washington.
- New Zealand established trust fund for the protection of the environment and peaceful development of the South Pacific.
- Environment Agency of Japan released 'Basic Direction for Environmental Considerations in Development Assistance' as first step in implementation of OECD recommendations.
- USAID reported to Congress on MDB projects as part of the 'early warning system'.

1988

- USAID reported to Congress on assessed environmental needs of developing nations.
- IUCN issued Draft Report 'From Strategy to Action: How to Implement the Report of the World Commission on Environment and Development'.
- World Bank hosts Ninth CIDIE Meeting.
- OECD DAC convened meeting to 'Review Current Programs and Arrangements by Aid Donors to Address Problems of the Environment'.
- USAID expects to complete more explicit guidelines for pesticide use and procurement financed by the Agency.

ANNEX 2

Amendments to the US Foreign Assistance Act Concerning International Environmental Protection

Congressional concern with international environmental protection has increased markedly over the past decade. US foreign assistance programs began incorporating environmental concerns in the late 1970s when a series of amendments to the Foreign Assistance Act defined the Agency for International Development's (AID) mandate in the area of environment and natural resources. These amendments gave specific emphasis to promoting efforts to halt tropical deforestation, a major threat to conserving biological diversity.

1977
- Amended Section 102 to add environment and natural resources to areas AID should address.
- Added new Section 118 on 'Environment and Natural Resources', authorizing AID to fortify 'the capacity of less developed countries to protect and manage their environment and natural resources' and to 'maintain and where possible restore the land, vegetation, water, wildlife, and other resources upon which depend economic growth and well-being, especially that of the poor'.

1978
- Amended Section 118, requiring AID to carry out country studies in the developing world to identify natural resource problems and institutional mechanisms to solve them.

1978/79
- Amended Section 103 to emphasize forestry assistance, acknowledging that deforestation, with its attendant species loss, constituted an impediment to meeting basic human needs in developing countries.

1981
- Amended Section 118, making AID's environmental review regulations part of the Act, and added a subsection (d), expressing that 'Congress is particularly concerned about the continuing and accelerating alteration, destruction, and loss of tropical forests in developing countries'. Instructs the President to take these concerns into account in formulating policies and programs relating to bilateral and multilateral assistance and to private sector activities in the developing world.

1983
- Added Section 119, directing AID in consultation with other Federal agencies to develop a US strategy on conserving biological diversity in developing countries.

1986
- Redesignated Section 118 as Section 117 with the new Section 118 addressing tropical forest issues.

1986 • Amended Section 119, which among other things earmarked money for biological diversity projects.

1987 • Congress legislates to require US Executive Directors of Multilateral Development Banks to promote programs to improve resource management, environmental quality and protection of biological diversity.

Source: Modified from US/OTA 1987(b); originally adapted from Rich and Schwartzman (1985).

ANNEX 3

Declaration of Environmental Policies and Procedures Relating to Economic Development, UNEP, 1980

WHEREAS, economic and social development is essential to the alleviation of major environmental problems by providing for an integral relationship between societies and their environment, realising also that economic development and social goals should be pursued in such a manner as to avoid or minimize environmental problems peculiar to it,

RECOGNIZING THAT, the major environmental problems of the developing countries are not necessarily of the same nature as those of developed countries in that they are problems which often reflect the impacts of poverty which not only affects the quality of life but life itself,

CONVINCED, that in the long run environmental protection and economic and social development are not only compatible but inter-dependent and mutually reinforcing,

ACKNOWLEDGING, that the need for environmentally sensitive and responsible development has become more important and urgent in light of increasing population and concomitant pressures on the earth's resources and life-supporting ecological systems in some areas,

ACKNOWLEDGING, the sovereign right of governments to determine their own priorities and development patterns,

RECALLING, that the states which adopted the declaration of the United Nations Conference on the Human Environment (Stockholm, 1972) stated their common conviction (Principle 25) that they will ensure that the international organizations play a co-ordinated, efficient and dynamic role in the protection and improvement of the environment,

CONSIDERING, furthermore, that international development assistance institutions have, along with their member governments, a responsibility to ensure the sustainability of the economic development activities financed by them,

THEREFORE, the undersigned declared that they:

I. REAFFIRM their support for the principles and recommendations for action of the United Nations conference

II. WILL, to the best of their abilities, endeavour to:

1. INSTITUTE procedures for systematic examination of all development activities, including policies, programmes and projects, under consideration for financing to ensure that appropriate measures are proposed for compliance with Section I above;

2. ENTER into co-operative negotiations with governments and relevant international organizations and agencies, to ensure integration of appropriate environmental measures in the design and implementation of economic development activities;

3. PROVIDE technical assistance, including training, on environmental matters to developing countries, at their request, thus developing their indigenous capacity, and facilitating technical co-operation between developing countries;

4. GIVE active consideration and, if appropriate, support project proposals that are specially designed to protect, rehabilitate, manage or otherwise enhance the human environment, the quality of life, and resources thereto related;

5. INITIATE and/or otherwise co-operate in research and studies leading to improvement of project appraisal, implementation and evaluation methodologies, including cost-benefit analysis of environmental protection measures;

6. SUPPORT the training and informing of operational staff in the environmental dimension of economic development;

7. PREPARE, publish and disseminate documentation and audio-visual material providing guidance on the environmental dimension of economic development activities.

ADOPTED AT NEW YORK ON 1 FEBRUARY 1980

The African Development Bank
The Arab Bank for Economic Development In Africa
The Asian Development Bank
The Caribbean Development Bank
The Inter-American Development Bank
The World Bank
The Commission of The European Communities
The Organization of American States
The United Nations Development Programme
The United Nations Environment Programme

ANNEX 4

Recommendations of the 1988 General Assembly of IUCN

17.30 Debt for Nature Swaps

NOTING that 'debt for nature' swaps can in some circumstances afford an excellent opportunity for funding natural resource management institutions, conservation projects and programmes in developing countries with heavy debt burdens;

RECOGNIZING that the debt of more heavily indebted countries is frequently sold in the secondary market at substantial and growing discounts;

AWARE that these discounts present an unprecedented opportunity for developing nations to negotiate the exchange of outstanding debt for certain conservation obligations;

WELCOMING the initiative displayed by nongovernmental organizations (NGOs) in certain developed and developing countries to conclude transactions in cooperation with their respective governments;

RECALLING the experience of Costa Rica in 'debt for nature' swaps;

NOTING that among the procedures that may be considered under such circumstances are:

a. The exchange of foreign debt for local currency, local bonds or certain conservation obligations (e.g. allocation of land for conservation use);

b. The transfer of ownership of debt by private commercial banks in developed countries, whether by acquisition, donation or pledge, for the purpose of financing conservation projects and programmes in developing countries;

c. Tax incentives to promote such transfers.

The General Assembly of IUCN, at its 17th Session in San José, Costa Rica, 1–10 February 1988:

1. STRONGLY URGES concerned governments to consider these opportunities for promoting nature conservation and to take appropriate measures to derive benefit from them.

2. REQUESTS the Director General of IUCN, in conjunction with other organizations and within the resources available, to consider the types of debt-swapping mechanisms that might be appropriate in various circumstances and to bring the opportunities in this area to the attention of Ministers of Finance and Directors or Governors of Central Banks, as well as to governmental agencies and NGOs in charge of conservation programmes. The Director General is requested to pay particular attention to the experience of Costa Rica and other countries that are operating such programmes.

17.31 Development Assistance Institutions and Conservation

RECOGNIZING the critical role that multilateral and bilateral development assistance institutions play in the choice and planning of economic development projects and policies in developing countries;

RECOGNIZING FURTHER that economic development projects, and overall economic policies in developing countries, have a significant effect on the sustainable use of natural resources and the rights and welfare of local inhabitants including the poor, the landless and indigenous people;

RECALLING the concern expressed elsewhere by this General Assembly with regard to the impacts of development assistance on biological and other natural resources, and that these impacts can be beneficial or adverse depending on how well conservation and development are integrated;

NOTING the initiatives that some of these development institutions have recently undertaken to integrate development and environmental aspects in their projects;

CONVINCED that better understanding of the relationship between conservation and development and more rapid progress toward the achievement of sustainable development would result from pooling of intellectual and financial resources by development assistance institutions;

The General Assembly of IUCN, at its 17th Session in San José, Costa Rica, 1–10 February 1988:

1. COMMENDS those development assistance institutions that are incorporating environmental conservation measures into their projects and programmes.

2. URGES those institutions to demonstrate and strengthen their commitment to promoting the wise use of natural resources and the protection of the rights and welfare of local inhabitants as well as to enhancing the welfare of people affected by their projects and programmes.

3. STRONGLY URGES those institutions that are not incorporating environmental protection measures in their projects and programmes to do so as soon as possible.

4. RECOMMENDS that the multilateral development institutions pay special attention to the importance of, and benefits that can be provided by, encouraging the active participation of local conservation and indigenous peoples' organizations in all stages of planning and implementation of their activities in borrowing countries.

5. RECOMMENDS that development assistance institutions — through the medium of the Committee of the International Development Institutions on the Environment (CIDIE), the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD), or other appropriate institutions — promote and facilitate research, appropriate pilot projects and the exchange of information on sustainable development, and train people from developing countries in environmental topics.

6. REQUESTS governments to exercise leadership within the multilateral development assistance institutions to achieve the objectives outlined in this Resolution.

7. CALLS UPON the nongovernmental organization (NGO) members of IUCN to use their influence with their governments to promote the objectives outlined in this Resolution.

8. FURTHER REQUESTS the Director General, as part of IUCN's Programme 1988-1990, to assist and promote the efforts of NGO members called for above.

17.32 Development Aid and Conservation Programmes

CONSIDERING THAT:

a. As a result of the economic crises faced by developing countries and indigenous populations within developed countries, it is very difficult for them to invest in, and give priority to, the conservation and development of natural resources;

b. Various international funding agencies seek to promote development by granting loans to governments;

c. The World Bank and other agencies seek to develop large-scale programmes for the conservation of areas of international ecological importance;

The General Assembly of IUCN, at its 17th Session in San José, Costa Rica, 1–10 February 1988:

1. RECOMMENDS that:

a. Developing countries and indigenous populations within developed countries recognize the actual and potential values of renewable natural resources as a basis for their own sustainable socio-economic development; and, when seeking aid and allocating resources, accord a higher priority to these values;

b. Donor countries and aid agencies give a high priority in their aid programmes to projects submitted to them that reflect an appreciation of the importance of the conservation of natural resources.

2. REQUESTS the Director General of IUCN, in collaboration with other international organizations such as the World Bank, the United Nations Environment Programme, the United Nations Educational, Scientific and Cultural Organization, the Food and Agriculture Organization of the United Nations, the United Nations Development Programme and multilateral and bilateral aid agencies, to promote a coordinated approach to funding of conservation projects, including the establishment of protected areas.

ANNEX 5

OECD Council Recommendations — June 1985

RECOMMENDATION OF THE COUNCIL
on environmental assessment of development assistance projects and programmes
(adopted by the Council at its 627th Meeting on 20th June 1985, C(85)104)

THE COUNCIL,

Having regard to Article 5 (b) of the Convention on the Organisation for Economic Co-operation and Development of 14th December 1960;

Having regard to the Recommendation of the Council of 8th May 1979, on the Assessment of Projects with Significant Impact on the Environment [C(79)116];

Having regard to the Declaration on Anticipatory Environmental Policies of 8th May 1979, adopted by the Environment Committee at Ministerial level;

Recalling in particular paragraphs 1 and 10 thereof, in which Governments of OECD Member countries and Yugoslavia declared that 'They will strive to ensure that environmental considerations are incorporated at an early stage of any decision in all economic and social sectors likely to have significant environmental consequences' and that 'They will continue to co-operate to the greatest extent possible, ... with all countries, in particular developing countries in order to assist in preventing environmental deterioration';

Considering that many Member and non member countries have accumulated over the years a growing body of experience in assessing environmental effects of projects in their countries;

Mindful of the need for Member countries to adopt a common set of principles when dealing with environmental issues and to bring support and assistance to the use of environmental assessment in developing countries;

Recognising that, while developing countries have the responsibility for managing their own environment, Member country aid agencies should, when necessary, carry out environmental assessment and, in doing so, seek active participation of the host Government;

On the proposal of the Environment Committee supported by the Development Assistance Committee;

I. RECOMMENDS that Member Governments ensure that:

(a) Development assistance projects and programmes which, because of their nature, size and/or location, could significantly affect the environment, should be assessed at as early a stage as possible and to an appropriate degree from an environmental standpoint;

(b) When examining whether a specific development assistance project or programme should be subject to in-depth environmental assessment, Member country aid agencies should pay particular attention to those projects or programmes referred to in the Appendix, bearing in mind the particular legislative and socio-economic setting and environmental conditions in the host country;

(c) Where dangerous substances or processes are involved, they also continue to seek ways to promote the integration of the best techniques of prevention and protection and the best manufacturing processes in projects in which they and their industrial enterprises are involved.

II. INSTRUCTS the Environment Committee, in the light of practical experience of aid agencies in Member countries and in co-operation with the Development Assistance Committee, to prepare guidance on the types of procedures, processes, organisation and resources needed to facilitate the assessment of environmental effects of development assistance projects and programmes and to contribute to the early prevention and/or mitigation of potentially adverse environmental effects of certain aid projects or programmes.

Appendix to the Recommendation

PROJECTS AND PROGRAMMES MOST IN NEED OF ENVIRONMENTAL ASSESSMENT

1. Projects and programmes which are most in need of the environmental assessment can be identified on the basis of a number of criteria which aim at ascertaining whether the anticipated direct or indirect effects of a project or programme on the environment are likely to be significant.

2. When judging whether a specific project or programme may have a major effect on the environment, it is necessary to take into account, among other things, the ecological conditions in the area where it is planned to locate the project or programme. In-depth environmental assessment is always needed in certain very fragile environments (e.g., wetlands, mangrove swamps, coral reefs, tropical forests, semi-arid areas). When carrying out environmental assessment issues which should be considered include effects on:

(a) Soils and soil conservation (erosion, salination, etc.);

(b) Areas subject to desertification;

(c) Tropical forests and vegetation cover;

(d) Water sources;

(e) Habitats of value to protection and conservation and/or sustainable use of fish and wildlife resources;

(f) Areas of unique interest (historical, archeological, cultural, aesthetic, scientific);

(g) Areas of concentrations of population or industrial activities where further industrial development or urban expansion could create significant environmental problems (especially regarding air and water quality);

(h) Areas of particular social interest to specific vulnerable population groups (e.g., nomadic people or other people with traditional lifestyles).

3. Projects or programmes most in need of environmental assessment fall under the following headings:

(a) Substantial changes in renewable resource use (e.g., conversion of land to agricultural production, to forestry or to pasture land, rural development, timber production);

(b) Substantial changes in farming and fishing practices (e.g., introduction of new crops, large scale mechanisation); use of chemicals in agriculture (e.g., pesticides, fertilizers);

(c) Exploitation of hydraulic resources (e.g., dams, irrigation and drainage projects, water and basin management, water supply);

(d) Infrastructure (e.g., roads, bridges, airports, harbours, transmission lines, pipelines, railways);

(e) Industrial activities (e.g., metallurgical plants, wood processing plants, chemical plants, power plants, cement plants, refinery and petrochemical plants, agro-industries);

(f) Extractive industries (e.g., mining, quarrying, extraction of peat, oil and gas);

(g) Waste management and disposal (e.g., sewerage systems and treatment plants, waste landfills, treatment plants for household waste and for hazardous waste).

4. The above list of projects or programmes is not in any order of importance and is not meant to imply that any particular project or programme type is necessarily more in need of environmental assessment than another. In addition, the list is not meant to be exhaustive as there may be projects or programmes not mentioned above which may still have significant effects on the environment in certain areas. Although the presence of a project or programme will necessarily have significant adverse effects on the environment and some indeed have positive environmental effects, experience has shown that there is often a need to take particular measures to eliminate or mitigate the adverse environmental consequences of such projects or programmes. Whether a project or programme should be subject to in-depth environmental assessment will therefore depend on an analysis of all the facts of the specific case.

ANNEX 6

OECD Council Recommendations — October 1986

RECOMMENDATION OF THE COUNCIL
on measures required to facilitate the environmental assessment
of development assistance projects and programmes
(Adopted by the Council at its 649th Meeting
on 23rd October, 1986)

THE COUNCIL

Having regard to Article 5(b) of the Convention on the Organisation for Economic Co-operation and Development of 14th December 1960;

Having regard to the Recommendation of the Council of the 8th May 1979, on the Assessment of Projects with Significant Impact on the Environment [C(79)116];

Having regard to the Declaration on Anticipatory Environmental Policies of 8th May 1979, adopted by the Governments of OECD Member countries and of Yugoslavia at a meeting of the Environment Committee at Ministerial level [C(79)121, Annex];

Having regard to the Declaration on 'Environment: Resource for the Future' of 20th June 1985, adopted by the Governments of OECD Member countries and of Yugoslavia at a meeting of the Environment Committee at Ministerial level [C(85)111];

Recalling in particular paragraphs 1 and 11 of the latter Declaration, in which Governments of OECD Member countries and Yugoslavia declared that they will extend the use of environmental impact assessment and appropriate economic instruments, on the one hand, and strengthen their efforts to contribute to environmentally-sound development in developing countries, on the other hand;

Having regard to the Recommendation of the Council of 20th June 1985, on Environmental Assessment of Development Assistance Projects and Programmes [C(85)104];

Mindful of the need for Member countries to take into account the possible impacts of their activities on the environment and strive for closer cooperation with developing countries;

Recognising that environmental assessment of development assistance projects and programmes can help reduce the risk or costly and potentially adverse effects on the environment;

Recognising from the experience in Member countries that a successful environmental assessment process is dependent upon effective organisation, procedures and resources;

On the proposal of the Environment Committee and the Development Assistance Committee;

I. RECOMMENDS that Governments of Member countries:

(a) Actively support the formal adoption of an environmental assessment policy for their development assistance activities;

(b) Examine the adequacy of their present procedures and practices with respect to implementing such a policy;

(c) Develop, in the light of that examination and to the extent necessary, effective procedures for an environmental assessment process taking into account, as need be, the approach outlined in Annex I;

(d) Firmly establish the responsibility for applying such procedures within each office responsible for the planning and/or implementation of development assistance projects and programmes;

(e) Establish the responsibility for supervising and providing guidance on the environmental assessment process in a central office of their aid agencies;

(f) Ensure that adequate human and financial resources are provided to conduct the environmental assessment process in a timely and cost-effective way; and

(g) Ensure the provision of human and financial resources to developing countries wishing to improve their capability for conducting environmental assessments, taking into account all or part of the measures outlined in Annex II.

II. INVITES Member countries to exchange information on their progress in and experience with implementing environmental assessment on development assistance projects and programmes.

III. INVITES the Development Assistance Committee in cooperation with the Environment Committee to:

(a) Collect further information on the way in which aid agencies of Member countries conduct environmental assessment of their development assistance projects and programmes;

(b) Examine how risk assessment can be incorporated in assessing the environmental effects of certain development assistance activities;

(c) Prepare a report in three years' time on all measures which will have been taken to implement this Recommendation and on pertinent activities in other international organisations.

IV. INSTRUCTS the Secretary-General to transmit this Recommendation and its accompanying Report [ENV(85)27] to competent international organisations with a view toward fostering better environmental assessment of development assistance projects and programmes by all countries.

Annex 1 to Recommendation of the Council: Suggested approach in establishing an environmental assessment process for development assistance activities

1. Whether a new process for assessing the environmental impacts of development assistance activities is created, or existing procedures are adapted to such a process, it is suggested that environmental assessment be coordinated with the host country government; integrated at an early stage of project and programme planning; reflected in the implementation of the activity and followed up by monitoring and post-audit evaluation.

2. The following elements of such a process have been found useful:

   (a) An initial screening process should be undertaken to determine whether or not a full environmental assessment is required.

   (b) An environmental assessment on a project or programme should begin at the pre-feasibility or project proposal stage and be integrated with cost-benefit and engineering feasibility studies.

   (c) The content of the assessment should be determined by a procedure designed to identify reasonable project/programme alternatives and the most significant environmental impacts associated with them. The reason for doing so is to ensure that the ensuing assessment is carried out in the most timely and cost-effective manner by addressing only the most important issues necessary for making a decision. The procedure should be implemented preferably with a group of individuals responsible for the project or programme, coming together to discuss the issues and determine those to be addressed in the assessment. Host-government officials and, to the extent possible, the public affected by the activity and other interested parties should be included in the procedure as well.

   (d) After this, terms of reference should be drawn up for the assessment itself. Depending on the size, nature and location of the project/programme, the assessment can range from a one to two page analysis based on existing information and carried out by a single individual to a comprehensive environmental impact statement based on extensive field surveys and data gathering and carried out by an interdisciplinary team. Regardless of the extent of the assessment, it is necessary that it be carried out in conjunction with traditional investigations (e.g. engineering feasibility).

   (e) An assessment should not only point out the possible environmental consequences of a particular activity but also suggest mitigating (i.e. corrective) measures or alternative designs for limiting negative environmental impacts should the project/programme be implemented. In addition, attention should be given to the creation of appropriate institutional mechanisms in the host countries to ensure that mitigation measures are carried out.

   (f) The assessment process should continue beyond the point at which a decision is taken, to include monitoring of the activity during its construction and operation. Monitoring is necessary to ensure that the

findings of the assessment (e.g. suggested mitigating measures) are implemented, and to test the accuracy of the predictions made (e.g. the actual impact of the project on air quality, water quality, human health, ecosystem stability). The results of monitoring can lead to project modification as well as improving the data base for implementing the procedure described in paragraph (c) above in connection with future projects/programmes of a similar nature.

Annex II to Recommendation of the Council: Suggested measures by Member countries for improving the capability of developing countries to conduct environmental assessment

1. The ultimate goal of an aid agency environmental assessment process should be to help developing countries themselves manage their own development in an environmentally sound way. The following measures are suggested as steps which could be taken by aid agencies in Member countries in transferring to the developing world and supporting in it an environmental assessment capability.

2. An immediate measure which can be taken would be to involve actively host country officials in conducting environmental assessments for which aid agencies are responsible. That involvement could begin by including host government officials and others in the initial phase of the environmental assessment process and continue by engaging host country nationals in conducting the assessment and in monitoring activities (see Annex I).

3. OECD Member countries' aid and environmental agencies could institute training courses in environmental assessment. The provision of training should be made to a number of target groups in the host countries including elected representatives and senior decision-makers in government and business, high level administrators, project managers, technical specialists, members of review bodies and representatives of environmental interest groups. The specific type of training to be undertaken would vary depending on the target group. For policy makers, for example, seminars should be conducted to demonstrate the negative effects which result from a failure to incorporate environmental elements in economic development planning and emphasize the benefits to be gained from environmentally sound planning. Training for project managers and technical specialists would emphasize procedures and methods for environmental assessment and their role and significance in environmental management.

4. OECD Member countries might consider direct support to developing countries by providing environmental advisers to work with national planning agencies for as long as requested. Such advisers would have the task of helping government officials assess the environmental impacts that might be expected to arise from projects, programmes or policies and to inform decision-makers and the public of reasonable alternatives which would mitigate negative environmental impacts and enhance the quality of the human environment in the affected area.

5. The lack of adequate baseline data and information on the state of the environment is a major constraint to successfully implementing environmental

assessment in developing countries. OECD Member countries' aid and environmental agencies might consider providing information such as host-country 'environmental profiles' and base line studies on particularly sensitive areas. In addition, direct financial and technical assistance could be provided to host countries to carry out their own studies.

ANNEX 7

Convention on Wetlands of International Importance Especially as Waterfowl Habitat

Third Meeting of the Conference of the Contracting Parties
27 May to 5 June 1987
Regina, Saskatchewan, Canada

Recommendation 3.4

Responsibility of Development Agencies towards Wetlands

Note: For the purposes of this Recommendation the term 'Development Agencies' will be taken to mean all banks, government institutions and international governmental agencies (such as the Development Fund of the European Economic Community) with a significant role in providing funds to countries for their development.

BEING CONVINCED that, as noted in the Preamble to the Convention, "wetlands constitute a resource of great economic, cultural, scientific and recreational value, the loss of which would be irreparable";

NOTING the rapid destruction and loss of wetlands around the world due to development that neglects or underestimates the natural values and functions of wetlands, and that this development continues without taking adequate account of past experiences and traditional life-styles;

CONSCIOUS of the potential of wetlands to provide the basis for sustainable development founded on the husbanding of self-renewing natural resources;

AWARE that Development Agencies can play a crucial role in enhancing the capacity of wetlands to contribute to the well-being of the people;

THE CONFERENCE OF THE CONTRACTING PARTIES

URGES the Development Agencies

(a) To formulate and adopt coherent wetland development policies directed at sustainable utilization, wise management and conservation of wetlands;

(b) To create special regional wetland programmes in order to ensure the integration of this policy into all their activities;

(c) To coordinate their programmes at the international level to ensure that their independent activities do not in combination adversely affect wetlands;

(d) To strengthen the ecological expertise in all departments involved in development and implementation of projects affecting wetlands;

(e) To develop guidelines to ensure the integration of environmental aspects in all stages of the project cycle;

(f) To ensure that the funding of projects is preceded by an environmental impact assessment, and the implementation of the recommended measures;

(g) To take appropriate steps for an assessment of their policies at regular intervals; and

(h) To rehabilitate those wetlands which have become degraded through non-sustainable development.

URGES the Development Agencies to use their influence with borrowing or recipient governments

(a) To promote the formulation and adoption of national policies for wise use and conservation of wetlands

(b) To strengthen the institutional arrangements and the ecological expertise both at the national level and among regional development authorities in the project regions, in order to implement these policies; and

(c) To train and educate personnel at project implementation level.

CALLS ON the Contracting Parties to the Convention to support conservation and wise use of wetlands by requiring their own appropriate agencies to adhere to the strategy recommended above.

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Widespread destruction of mangrove areas in the region is reducing the fisheries productivity of coastal waters. This site in Fiji is being filled for urban development. A national mangrove management plan is being developed for Fiji in co-operation with SPREP. Photo: A. Dahl.

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