

South Pacific Regional Environment Programme  
IUCN Environmental Law Centre

# Environmental Law in the South Pacific

Consolidated Report of the Reviews of Environmental  
Law in the Cook Islands, Federated States of  
Micronesia, Kingdom of Tonga, Republic of  
the Marshall Islands and Solomon Islands

Edited by Ben Boer



Environmental Policy and Law Paper No. 28



**IUCN**  
The World Conservation Union

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Kingdom of Tonga, Republic of the Marshall Islands  
and Solomon Islands**

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Originally based at the South Pacific Commission in Noumea, New Caledonia, SPREP relocated its headquarters to Apia, Western Samoa in 1992 as an autonomous regional organization.

SPREP was established by its members to promote cooperation in the South Pacific region and so provide assistance in order to protect and improve its environment and to ensure sustainable development for present and future generations.

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Legal reviews conducted as follows:

Cook Islands, *Mere Pulea*  
Federated States of Micronesia, *Elizabeth Harding*  
Kingdom of Tonga, *Mere Pulea*  
Republic of the Marshall Islands, *Elizabeth Harding*  
Solomon Islands, *Ben Boer*

**Environmental Policy and Law Paper No. 28**

**South Pacific Regional Environment Programme  
IUCN Environmental Law Centre**

**IUCN - The World Conservation Union  
1996**

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# Foreword

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This Report is a consolidation of the five Reviews of Environmental Law carried out as integral components of the Asian Development Bank's Regional Environmental Technical Assistance (RETA) Project. The countries reviewed were the Republic of Marshall Islands, Cook Islands, the Kingdom of Tonga, the Federated States of Micronesia and Solomon Islands. The RETA project was developed to address environmental issues in a number of Pacific island countries. In addition to the funding from the Asian Development Bank, technical assistance, in the form of funding for the work of three environmental law consultants, was provided through the Environmental Law Centre of IUCN - The World Conservation Union. The RETA project was undertaken through the South Pacific Regional Environment Programme together with a similar project concerning another seven island countries funded by the United Nations Development Programme. They represent important regional initiatives which reflect the realisation of the need for careful management of the Pacific environment.

Pacific Islanders have lived in close harmony with their island environments for thousands of years and are well aware of the importance of environment protection to their way of life. Pacific peoples face the complex challenge, in common with other countries of the world, of integrating economic development with the need to protect the environment. The Legal Reviews are a vital step along the road to improved environmental management and the achievement of sustainable development in the Pacific region.

Each Review identified the major laws relating to the environment and to natural resource management. This law was then analyzed in terms of its effectiveness in addressing the major environmental issues existing in each country. The research has had a particular focus on the development of practical recommendations that build on the findings of the Reviews. Common among the recommendations in these Reviews is the need for new or improved environmental legislation and associated administrative frameworks. The introduction of appropriate legislation and improved institutional capacity represent vital means by which sustainable development can be achieved in the Pacific. However, it is important that any new law reflects the unique needs and circumstances of each Pacific country as far as possible, and where appropriate, incorporates customary laws and practices that relate to environmental protection.

The five Legal Reviews and this Consolidated Report are the result of a unique collaboration between the South Pacific Regional Environment Programme and the Environmental Law Centre of the World Conservation Union (IUCN). We would like to thank the environmental law consultant who prepared this Consolidated Report of the Reviews, Professor Ben Boer, together with his fellow consultants, Ms Elizabeth Harding and Ms Mere Pulea. A debt of gratitude is also owed to Mr David Sheppard, the Team Leader of the RETA Project (now Head of the Protected Areas Programme of the IUCN), who brought these consultants together and worked assiduously to ensure that the Legal Reviews were properly coordinated with the national environment management strategy processes for the RETA Project.

Vili Fuavao  
Director  
South Pacific Regional Environment Programme

Françoise Burhenne-Guilmin  
Head  
IUCN Environmental Law Centre

19 October 1995

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I would also like to thank David Sheppard, the Team Leader of the Regional Environment Technical Assistance Project, whose drive and enthusiasm were a great inspiration for all those who worked on various aspects of the Project. His comprehension of the difficulties posed by the research of the legal frameworks for each country, and his personal support throughout the work was much appreciated.

Further, I would like to record my appreciation of the support, encouragement and patience of Dr Françoise Burhenne-Guilmin over the period of the Legal Reviews and for her input in the preparation of this Consolidated Report.

Finally, on behalf of Elizabeth Harding and Mere Pulea, I would like to record once again our gratitude to all those people who assisted us in each country, and whose contributions to our work were acknowledged individually in each separate volume of the reviews.

Ben Boer, Sydney  
July 1996

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## Note on the Authors

### **Ben Boer**

Ben Boer is the Corrs Chambers Westgarth Professor of Environmental Law and Director of the Australian Centre for Environmental Law, Faculty of Law (Sydney), in the University of Sydney. He has acted as a consultant for the World Conservation Union, the United Nations Development Programme, the United Nations Environment Programme and the World Bank in the Pacific, Asian, African and Caribbean region. He has assisted in the drafting of environmental legislation in the Solomon Islands, Nepal and Trinidad and Tobago. He conducted the Review for Solomon Islands, and prepared each of the Reviews as well as this Consolidated Report for publication.

### **Elizabeth Harding**

Elizabeth Harding formerly practised in Solomon Islands and is now Legal Counsel to the Environment Protection Agency of the Republic of the Marshall Islands. She has had long experience in environmental law matters in the Pacific region, having acted as a consultant to SPREP and the World Conservation Union in a number of Pacific Island countries. She conducted the Reviews of the Federated States of Micronesia and the Republic of the Marshall Islands.

### **Mere Pulea**

Mere Pulea has been a Legal Adviser and Consultant to the South Pacific Commission and the South Pacific Regional Environment Programme for some years. She is now a Lecturer in Law at the Faculty of Law, University of the South Pacific. Ms Pulea conducted the Reviews of Cook Islands and the Kingdom of Tonga.

# **CHAPTER 1**

## **INTRODUCTION**



# 1. INTRODUCTION

*Many societies have rules rooted in legal tradition that require the sustainable and efficient use of natural resources. The obligation of stewardship is a feature of westernised legal systems. In nations following the common law tradition, the doctrine of waste requires owners of land to use it sustainably. Elsewhere, customary law systems demand strict rules governing the allocation and use of resources. There is, therefore, an existing legal culture into which our generation's obligations towards the world's resources can be set.*

*New laws should not be passed unless they fit into this existing setting, and can be enforced. Every legal instrument should be assessed for its practicality, in terms of its context, the resources available to implement and enforce it, and its acceptability to the society concerned.*

*The role of local authority legislation should not be underestimated. While national standards should, wherever possible, be set and adhered to (and should themselves reflect internationally-agreed rules), both federal and unitary states should accept that stricter environmental protection measures may be enacted at sub-national and local level. Local authorities should be encouraged to use their own powers to protect their environment, especially when community involvement in the formulation and implementation of the measures makes them more effective (IUCN, UNEP and WWF 1991: 69).*

## 1.1 Introduction

This Report comprises a consolidation of five comprehensive Reviews of the law relating to environmental management in Cook Islands, the Kingdom of Tonga, Republic of the Marshall Islands and Solomon Islands, together with this introduction and a conclusion. The Reviews were prepared under the Regional Environment Technical Assistance (RETA) project of the Asian Development Bank. In this Report, these nations are referred to as the RETA countries. The Legal Reviews are intended to be consistent with the *National Environment Management Strategies* (or equivalent documents) developed for these countries as part of the RETA project. The five Legal Reviews were followed by a further seven Reviews under another project coordinated by the South Pacific Regional Environment Programme (SPREP) and funded largely by the United Nations Development Programme. The latter project is known as the National Environment Management Project (NEMS) and covered by the following countries: Kiribati, Niue, Palau, Tokelau, Tuvalu, Western Samoa and Nauru (see Pulea M and Farrier D, 1993; Peteru C, 1993a; Pulea M, 1994; Angelo AH, 1993; Pulea M and Farrier D, 1994; and Peteru C, 1993b). Those Reviews are published separately from the RETA Reviews.

The Legal Reviews and this Report have been written in the light of the international debate relating to environmental matters. They take into account the issues raised by the United Nations Commission on Environment and Development in its report *Our Common Future* (WCED 1987), and the World Conservation Union report, *Caring for the Earth* (IUCN, WWF and UNEP 1991), as well as the instruments and documents which arose out of the United Nations Conference on

Environment and Development (UNCED) in Rio de Janeiro in 1992. This Report also draws to an extent on the proceedings of a Workshop on environmental law held in Apia in November 1992. That Workshop formed an important part of the Legal Reviews of both the RETA and the NEMS projects. The most recent report of the IUCN on the development of strategies for sustainable development at a national level is also referred to (See IUCN and IIED 1994). The Reviews and this Report take for granted that environmental concerns must be integrated with economic aspirations if the long term sustainability of natural and social systems is to be achieved. Fundamental to this understanding is the concept of "sustainable development" (see further below).

The Legal Reviews and this Report also refer to customary practice and customary ownership in relation to land and marine resources; these matters pose questions of central importance in the management of the environment in these countries.

The individual Reviews address the main environmental issues in each country in a systematic and consistent way. Each Review examined the administrative and institutional contexts of the relevant legislation, as well as the land tenure regime for each jurisdiction. The substantive areas of water supply and water quality, pollution control and waste management, environmental health, biodiversity and wildlife conservation, cultural heritage conservation, tourism, agriculture and forestry, fisheries, and mining and minerals were covered to the extent applicable in each country. Recommendations for each substantive area were made in relation to the reform and amendment of existing legislation and the enactment, where necessary, of new legislation.

In this introduction, the international framework for environmental law and the main international environmental conventions which apply in the region are outlined, together with the role and scope of environmental law, the meaning of customary law and the generation of sustainable development law. In successive chapters each country is then dealt with separately, summarising the substance and recommendations of each Legal Review, and listing the main legislative enactments relevant to the countries at the close of each chapter. In the conclusion, the Report analyses the common themes of the Legal Reviews, and indicates some of the future directions for the development of environmental law in the five countries. It is thereby intended that the reader may gain an overview of the situation in each country in relation to environmental law and management without going into unnecessary legislative detail. Readers who wish to gain a more comprehensive understanding of particular areas in each country are advised to consult a copy of the full Review for that country, obtainable from the South Pacific Regional Environment Programme in Apia, Western Samoa. It should be noted that the Reviews were completed in 1992; developments in individual countries since that time have not been included in this Consolidated Report. As such, it serves as a detailed "snapshot" of the environmental law situation in each country at the time that the National Environmental Management Strategies (or equivalent) document was being prepared. This introduction, and the conclusion to the Report, the international legal situation has been updated as far as possible.

## **1.2 Environmental Law**

### **Scope**

For the purposes of these Reviews, the area of environmental law is taken to encompass a broad range of legal elements of government policy and private sector endeavour. It is thus taken to cover environmental planning (also known as physical planning), pollution control and

environmental health, environmental and social impact assessment, resource management and conservation, and the protection of natural and cultural heritage. Environmental law has close links with a number of other areas of law, and can be seen to tie some of these other areas together in various ways. Thus constitutional law, administrative law, tort law (especially negligence and nuisance), property law and criminal law are all relevant to a proper study of environmental law. Sources of environmental law include legislation, judge-made law (i.e. common law precedents and those derived from the interpretation of legislation) administrative orders, policy directives and administrative practice (see Fowler 1984).

## The Role

The central role of environmental law needs to be recognised in ensuring sound environmental protection and management. In its response to the Brundtland Report, the World Conservation Union set out the role of environmental law. The response is highly relevant to many of the issues raised in the Legal Reviews:

**Establishing norms and procedures with respect to resource issues is at least as important as increased funding.** There is a need to critically scrutinise the body of law available to nations in the field of resources and environmental concerns. The essential and crucial purpose of such an exercise is to ascertain whether the basic elements of a comprehensive body of environmental law are available. Mechanisms to prevent and control pollution of the soil, air and waters; mechanisms to prevent over-exploitation of living resources that are used; and mechanisms to control or allocate land uses are all required, along with legal devices inducing positive resource management.

It is too often forgotten that these basic requirements are often only partially met, if they are met at all. In achieving or improving the existing national instruments, the following considerations should be kept in mind:

**Recognise basic rights and responsibilities.** The duty of the State to take measures regarding environmental conservation for the benefit of present and future generations must be recognised as a matter of principle in national law. As a means of assisting in the realisation of this duty, the rights of individuals to have access to environmentally relevant information as well as to have access to legal remedies and means of redress must also be insured.

**Create cross-sectoral links.** Legal mechanisms must be established to permit ecological dimensions to be considered at the same time as the economic, trade, energy, agricultural and other dimensions. Achieving this is only possible if a number of legal strategies are used to that effect, such as providing for: public participation in the decision making process; consultation or participation of the environmental agencies in this process; requirement of environmental impact assessment.

**Be imaginative with enforcement assistance.** While there is no effective substitute for a strong national agency for many environmental problems, in virtually all countries means of enforcement are scarce and trained personnel insufficient. Compliance with environmental law requires, however, a high degree of monitoring and enforcement. Maximum use should be made of voluntary assistance, such as that of conservation groups, to assist in enforcement actions when individuals or associations can genuinely claim to possess the necessary expertise.

**Consider ecological damage.** When preventive measures have failed, it is imperative that a system of remedies be in place which takes into account not only the economic damage but also the ecological damage. A particularly important shortcoming in present legal systems is the failure to develop a coherent theory of liability to compensate for damage caused to the environment. Most national laws still insist upon a legally recognisable interest which has been adversely affected, but wildlife or other elements of the biosphere are not often recognised as being the subject of such rights. Few legal systems accept ecological damage as being recoverable, often due to uncertainty as to how it should be assessed. In the international field, however, the costs of environmental restoration have recently been used as a yardstick and this development may herald a new departure.

**Do not spoil what you already have.** Customary law should be given appropriate recognition in national legislation. In many countries which have gained independence during the past few decades, an understandable urge for modernisation has led to sweeping social changes, which have been reflected in legislation. Frequently, these have involved transplanting foreign models in what appears now to have been a rather doctrinaire fashion. Among the casualties of this process have frequently been counted long-established customary laws which in many cases embodied traditional wisdom about the sustainable management of land, particularly pastures and forests; examples include legislation which vests the ownership of all trees in the state or some public body, with the result that no incentive remains for private individuals to replant.

**Implement a cross-media or ecosystem approach.** An integrated vision will also require a cross-media approach to problems rather than a sectoral one, which often shifts problems like pollution from one environmental medium to another. In the same vein, use of living resources should be regulated, taking into account both the resource considered, and the effects of this use upon other species which have an ecological relationship with the harvested species (e.g. prey species) and on the ecosystem as a whole. These two elements point to the necessity to establish regulatory mechanisms which are area or ecosystem based, rather than tackling single elements in parallel (IUCN 1989).

## **Meaning and Application of Customary Law**

In many Pacific island countries, customary practices and law relating to the conservation and use of natural resources is an important element in policy making. With the modernisation of legislation relating to environmental matters, the question of incorporating customary concepts and practices into Western legal frameworks has occupied some attention in the Pacific (Eaton 1985; Pulea 1985; Thomas 1989). Pulea provides a comprehensive overview of customary law concepts in the Pacific relating to the environment. She indicates that customary law cannot and ought not to be inflexibly defined and that the term should be broadly interpreted. She uses the term "customary law" generically, and one whose source is found in both written and unwritten forms:

The range does not only cover customary practices but patterns of behaviour and social norms, the violation of which invokes coercive procedures. In some countries, customary law and practices are codified. Where no codification exists, customary law for any particular area becomes even more difficult to define, as wide ranging variations consisting of a variety of different principles, norms and rules are known to



exist in one small area or community. On the other hand, custom may not be a set of rules but a process or way of solving or providing alternatives to problems. Some of the rules or ways of solving problems state wide and general principles of morality and public policy and constitute a framework for justice. Not only are customary laws changing today, they are subject to different kinds of changes (Pulea 1985:2).

The question of incorporation of customary law into written legal systems has been commented on by Reti:

... customs and traditional law have in the past had some success in the protection of the natural resources and environment of countries in the Pacific. However, some customs and laws have lost the degree of respect they used to command and are not as effective today as they were some years ago. The ever-increasing reliance on the legal system to resolve issues more permanently has also seen the rapid decline in the power of the traditional law within the rural communities, which had traditionally looked at the legal system as the last resort in dispute resolution.

Both the written and unwritten laws can contribute positively to the protection of the environment of the Pacific. The unwritten law which has its basis in the traditional customs and practices can bring together local communities to observe and to pay respect to policies and principles set under the written law for the protection of the environment. The legal system must also respect the local traditions and practices if it is to gain the support and cooperation of the local people. Much of the legislation in the region has been adopted from that of countries like Australia and New Zealand and will need to be reviewed with the view to incorporating local customs and law where such customs and laws are considered appropriate for the protection of the environment (Reti 1993: 59-60).

In each summary of the Reviews in this Report, customary matters are touched upon.

### 1.3 International context

Another aspect of the legal reviews concerns the duties and obligations placed upon Pacific Island countries as signatories to major international conventions and agreements, including the instruments generated through the United Nations Conference on Environment and Development in 1992. These are the *Convention on the Conservation of Biological Diversity*, the *Convention on Climate Change*, the *Rio Declaration on Environment and Development*, *Agenda 21* and the *Forestry Principles*. In addition, and closer to the direct interests of Pacific Island countries, are the 1976 *Convention on the Conservation of Nature in the South Pacific* and the 1986 *Convention for the Protection of the Natural Resources and Environment of the South Pacific*.

A significant problem in the Pacific Island region is the implementation of conventions which the countries have signed. Barriers to adequate implementation include: lack of human resources in the relevant government departments, inadequate finance, lack of knowledge of the important benefits that can be derived from becoming a party, and, in some countries, a lack of political will (see further Lawrence 1994).

## **Main Environmental International Instruments Relevant to the RETA Countries**

### **Convention for the Protection of the Natural Resources and Environment of the South Pacific, 1986 (the Noumea Convention)**

The *Noumea Convention* was adopted in 1986, together with protocols on cooperation in combating pollution emergencies and on the prevention of pollution by dumping. It came into force in 1990. The preamble to the Convention is summarised as follows:

The Convention recognises the threat to the marine and coastal environment, posed by pollution and by the insufficient integration of an environmental dimension into the development process;

The parties therefore saw the need for cooperation between themselves and with international, regional and sub-regional organisations, to ensure a coordinated and comprehensive development of the natural resources of the region;

The Convention notes that existing international agreements about 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 Convention seeks to ensure that resource development will be in harmony with the maintenance of the unique environmental quality of the region and the evolving principles of sustained resource management [In the light of the now widespread use of the term "sustainable development", the word "sustained" may be read as "sustainable" (ed.)];

It therefore encourages the parties to conclude bilateral or multilateral agreements, including regional or subregional agreements, for the protection, development and management of the marine and coastal environment. (See Preamble to the *Noumea Convention*, 1986).

The Convention covers pollution from boats, land-based sources, sea-bed activities, air-borne sources, disposal of wastes, the storage of toxic and hazardous substances and the testing of nuclear devices. It also covers mining and coastal erosion. It puts an obligation on member countries to take all appropriate measures to protect and preserve rare and fragile ecosystems and depleted, threatened or endangered flora and fauna as well as their habitat in the convention area. They are thus obliged to establish protected areas such as parks and reserves and prohibit or regulate any activity likely to have adverse effects on species, ecosystems or biological processes.

It is noted that the *Noumea Convention* applies generally to the marine environment and has no specific application to the land. However, land-based activities related to the marine environment are covered. Further, Article 3 allows any Party to add areas under its jurisdiction "within the Pacific Ocean", which means that land could be included in the future.

The *Noumea Convention* is the most significant regional convention operating in the South Pacific in terms of the broad duties it places on countries in relation to the marine environment. The provision that countries shall "endeavour to establish laws and regulations for the effective discharge of the obligations prescribed in this Convention" (Article 5(5)), is of particular significance. However, the question of adequate implementation of the Convention, particularly

in relation to enactment and implementation of national legislation remains a problem (see further, Lawrence 1994 and Boer 1995: 83-84).

### **Convention on Conservation of Nature in the South Pacific, Apia, 1976 (the Apia Convention)**

The *Apia Convention* was drafted in 1976 but did not come into force until 1990. It is presently of limited effect, due to its lack of comprehensiveness and the low number of signatories to it. None of the five countries under review here are signatories. The Convention stresses the creation of protected areas, and the continued existence of national parks, restricting their exploitation for commercial profit "except after the fullest examination". Similarly under Article 3(3), the hunting, killing, capture or collection of specimens, including eggs and shells of flora or fauna in national parks is prohibited "except when carried out by or under the direction or control of the appropriate authorities or for duly authorised scientific investigations". The problem of providing "full examination" or "direction and control of the appropriate authorities" is particularly acute in countries where relevant government departments are inadequately resourced and staffed to carry out these functions.

Under Article 6, customary use of areas and species is allowed in accordance with traditional cultural practices. Under Article 7(ii) the parties shall "wherever practicable" conduct research relating to the conservation of nature. They are also obliged under Article 7(v) to "examine the possibility of developing programs of education and public awareness relating to conservation of nature". The Convention contains no provisions relating to management plans, community participation or consultation with affected interests when protected areas are being established or discarded.

Various weaknesses of the Convention were addressed by the "Action Strategy for Protected Areas" arising out of the 1985 Third Parks Conference in Noumea. In general, the establishment of national parks for the purposes of nature conservation has not worked well in the Pacific. Carew-Reid (1989:106) argues that eventually *the Apia Convention*, the *Noumea Convention* and its protocols, the Action Plan and the Action Strategy should be meshed into one regional structure with clearly defined lines of authority and communication.

### **South Pacific Forum Fisheries Convention 1979**

Sixteen countries in the Pacific region are participating members of the *Forum Fisheries Convention*. The Convention recognises the need for effective cooperation for the conservation and optimum utilisation of the highly migratory species of the region and establishes the Forum Fisheries Agency to give strength to the union of the member countries in all matters connected with fishing in the Pacific. The headquarters of the Forum Fisheries Agency are in Honiara.

The Forum Fisheries Agency carries out the following functions for the benefit of member countries:

- (a) it collects, analyses, evaluates and disseminates statistical and biological information about all marine resources, particularly the highly migratory species;
- (b) it collects and disseminates information concerning management procedures, legislation and agreements from throughout the world;
- (c) it collects and disseminates information on prices, shipping, processing and marketing of fish;
- (d) it provides, when requested, technical advice and information, assistance in the development of fisheries policies and negotiations and assistance in the issue of business

licences, the collection of fees or surveillance and enforcement of national fisheries legislation; and

- (e) it seeks to establish working arrangements with other international organisations, in particular the South Pacific Commission (see further, Tsamenyi).

### **Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific 1989**

This Convention provides in Article 2 that:

each party undertakes to prohibit nationals and vessels documented under its laws from engaging in driftnet fishing activities within the Convention area.

The Convention obliges each State party to prohibit the import of fish products caught using a driftnet and restricting port access to driftnet fishing vessels. The Convention has been successful in eliminating the use of driftnets throughout the South Pacific region (see further, Tsamenyi 1991:152-154).

### **The United Nations Law of the Sea Convention 1982**

This Convention came into force in 1994. The Federated States of Micronesia, Marshall Islands, Solomon Islands and Cook Islands are members.

The Convention sets out detailed provisions for the use of the world's oceans and seas. It is intended to promote the establishment of

a legal order for the seas and oceans which will facilitate international communication and will promote peaceful uses of the seas and oceans, the equitable and efficient utilisation of their resources, the conservation of their living resources and the study, protection and preservation of the marine environment (*Law of the Sea Convention*, Preamble).

Part XII of the Convention is specifically devoted to protection of the marine environment. It places broad obligations on states in relation to the protection of the marine environment, and allows states to either jointly or individually take measures to prevent, reduce and control pollution of the marine environment from any source. The Convention also establishes certain fundamental principles for states in dealing with land-based pollution, sea-bed activities subject to national jurisdiction, activities being conducted in the deep sea-bed; dumping at sea, pollution from vessels and pollution from the atmosphere.

The Convention creates Exclusive Economic Zones (EEZ) up to 200 nautical miles from the coasts of signatory countries, except where countries, such as island countries, are closer together. In that case, the EEZ is split between them.

From the point of view of the Pacific island countries, the Exclusive Economic Zones are of great significance, giving jurisdiction to many of these countries over vast areas of ocean. For example, in relation to the countries under review, the EEZ provisions give Solomon Islands jurisdiction over some 1,340,000 square kilometres of ocean; Republic of Marshall Islands: 2,061,000 square kilometres; Cook Islands: 1,830,000 square kilometres; Federated States of Micronesia: 3,051,000 square kilometres, and Tonga: 700,000 square kilometres (Carew-Reid 1989:11).

## **Convention on International Trade in Endangered Species 1973**

The *Convention on International Trade in Endangered Species (CITES)* includes a range of provisions to control trade in endangered species of flora and fauna. It places specific obligations on countries which have signed the Convention to ensure that strict controls are put in place on a national level.

A number of the countries under review have rare and endangered species of wildlife within their borders. Some of these species have been subject to international trading, both with official permits and, apparently, some without. None of the five countries under review have signed the Convention; it is recommended that they do so as one step to addressing the problem of export of endangered species. A further step is the enactment of appropriate legislation to ensure implementation of the Convention.

## **The Statement of Forest Principles**

The *Statement of Forest Principles* are a code of conduct agreed at the United Nations Conference on Environment and Development in June 1992 (the Earth Summit), on the management, conservation and sustainable development of all types of forests. They are a non-binding statement of global consensus for the management, conservation and sustainable development of all types of forests. These principles are of relevance to the various timber producing countries in the Pacific, and for the countries under review in particular to Solomon Islands, which has a substantial forest cover.

The principles encourage governments to promote and provide for community participation in development, implementation and planning of national forests policies, and urges that all aspects of environment protection and social and economic development relating to forests should be integrated and comprehensive. Consistently with the Rio Declaration, the principles state that the identity, culture and rights of indigenous peoples and their communities, as well as other communities and forests dwellers, should be recognised. The full participation of women in all aspects of forestry management and development is actively promoted.

The principles also provide that specific financial resources should be made available to developing countries to establish conservation programs for forests, in particular to stimulate economic, social and substitution activities.

## **Convention for the Protection of the World Cultural and Natural Heritage 1972**

The World Heritage Convention has been in force since 1974. Its functions include the maintenance of a register of cultural and natural heritage places of "outstanding universal value", which are recorded on the World Heritage List. Some 142 countries are parties to the *World Heritage Convention*. As of 1995, there were a total of 440 places on the World Heritage List.

Of all the South Pacific countries, only Solomon Islands and Fiji are signatories.

For several countries under review, the signing of this Convention may well prove to be of vital importance, both in terms of ecological and economic benefit. However, experience in other countries indicates that in order for the integrity of World Heritage sites to be safeguarded, adequate management strategies need to be formulated, as the integrity of some potential World Heritage sites could be destroyed unless adequate management arrangements are made. For example, at Nan Madol, on Pohnpei in the Federated States of Micronesia, an ancient temple and a complex of associated buildings and structures exist in a relatively intact state, and which clearly display world heritage values.

## **Convention on the Conservation of Biological Diversity 1992**

The 1992 *Convention on the Conservation of Biological Diversity* places obligations on signatory countries to ensure that biological diversity is conserved, by the introduction of legal and institutional mechanisms at a national level.

An important provision of the *Biodiversity Convention* which has relevance in many Pacific countries is the imposition of legal responsibility upon other nations for the environmental impacts that private companies from those nations have in countries in which they invest. This may allow Pacific island governments to exert some pressure through diplomatic channels to monitor and prevent environmentally damaging activities of foreign investors.

Of equal importance to the sustainable development of Pacific island countries is the provision which requires compensation to developing countries for the extraction of genetic materials which could be of enormous commercial value. A system to monitor and police this export business so that the economic benefits accrue to these countries is warranted. Appropriate legislative provisions could be incorporated into wildlife management legislation (for a detailed guide to the Convention, see IUCN 1994).

## **Agreement establishing SPREP**

In 1992 the South Pacific Regional Environment Programme became independent of the South Pacific Commission, and moved its operations from New Caledonia to Apia. At the same time, the SPREP parties determined to conclude an agreement to formally establish the organisation. The negotiations resulted in the *Agreement Establishing the South Pacific Regional Environment Programme*, which was concluded on 16 June 1993. The Agreement is vital to the continuing operation of SPREP as the environmental coordination body in the Pacific. The purposes of SPREP are set out in Article 2:

The purposes of SPREP are to promote cooperation in the South Pacific region and to provide assistance in order to protect and improve its environment and to ensure sustainable development for present and future generations. SPREP shall achieve these purposes through the Action Plan adopted from time to time by the SPREP Meeting, setting the strategies and objectives of SPREP.

The full text of the Agreement is included as an Appendix to this Report.

## **1.4 Strategies for Sustainability**

The IUCN has been developing a series of guides on strategies for sustainable development for the past several years. In doing so, it has refined the concepts of sustainable development further. The 1994 handbook on *Strategies for National Sustainable Development*, states:

... sustainable development (or sustainable living or sustainable well-being) entails improving and maintaining the well-being of people and ecosystems.

Human well-being exists if all members of society are able to define and meet their needs and have a large range of choices and opportunities to meet their potential.

Ecosystem well-being means ecosystems maintain their quality and diversity and thus their potential to adapt to change and provide a wide range of options for the future.

In most societies today, neither condition is being met. In some, progress is being made at the expense of the other. Even in wealthy societies, which make huge demands on resources and the environment, there can be extreme poverty and social decay among the least advantaged. (Carew-Reid, Prescott-Allen, Bass, Dalai-Clayton 1994:15-16).

The IUCN maintains that overcoming these obstacles requires continuing public discussion, negotiation and mediation among interest groups, and development of a political consensus (Carew-Reid, Prescott-Allen, Bass, Dalai-Clayton, 1994: xiii). The national environment management strategies developed under the RETA and NEMS projects are generally consistent with the prescriptions found in the IUCN handbook.

## Sustainable Development Law

Documents such as the Brundtland Report, *Our Common Future* and *Caring for the Earth*, and agreements such as *Agenda 21* and the *Rio Declaration* make it clear that the key to sustainability of resource use, and the achievement of environmental conservation is through the integration of environmental safeguards and economic decision making, embodied in the concept of sustainable development. The achievement of sustainability is a complex task, involving a broad range of governmental, community and industry initiatives. These initiatives need to be addressed globally, regionally, nationally and locally. To achieve long term economic and environmental viability, some comprehensive institutional and legal changes need to be made. As *Agenda 21* recognises, these include the introduction of integrated mechanisms for the generation and implementation of economic and environmental policy, and the enactment of legislation to ensure that policies can be carried out within a consistent and enforceable legal framework.

*Agenda 21* seeks to ensure the integration of economic, social and environmental considerations in decision making not only at all levels but also in all ministries. Governments are also urged, in cooperation with international organisations where appropriate, to:

adopt a national strategy for sustainable development based on, *inter alia*, the implementation of decisions taken at the Conference, particularly in respect of *Agenda 21*. This strategy should build upon and harmonise the various sectoral economic, social and environmental policies and plans that are operating in the country. The experience gained through existing planning exercises such as national reports for the Conference, national conservation strategies and environment action plans should be fully used and incorporated into a country-driven sustainable development strategy. Its goals should be to ensure socially responsible economic development while protecting the resource base and the environment for the benefit of future generations. It should be developed through the widest possible participation. It should be based on a thorough assessment of the current situation and initiatives. (*Agenda 21*, 8.7; see further Boer 1995a).

"Sustainable development law" refers to environmental legislation which is specifically drafted to incorporate the concept and principles of sustainable development found in the Brundtland Report and in the Conventions and other documents arising out of the Earth Summit of 1992. *Agenda 21* recognises the need for sustainable development law to be generated globally (*Agenda 21*, Ch. 8.19 see also Boer 1995b: 106-108).

## **The Minimum Content of Sustainable Development Law**

In the next few years there will be an increasing concentration by many countries on the enactment of adequate environmental laws to fulfil the obligations of *Agenda 21* and the various other instruments agreed at the UNCED Conference. In 1991, the IUCN in its publication *Caring for the Earth* spelled out the minimum content of environmental law, which can also be regarded as the minimum content of the law of sustainable development referred to in Ch 8.19 of *Agenda 21*.

The national legal system should provide for:

- the application of the precautionary principle and the use of best available technology, when standards for pollution are set;
- the use of economic incentives and disincentives, based on appropriate taxes, charges and other instruments;
- the requirement that all proposed new developments and new policies should be subject to environmental impact assessment;
- the requirement that industries and government departments and agencies be subject to periodical environmental audit;
- effective monitoring, permitting detection of infringements and adjustment of regulations where necessary;
- granting public access to EIA (environmental impact assessment), environmental audit data and monitoring results, and to information about production, use and disposal of hazardous substances ((IUCN, UNEP and WWF 1991: 68-69).

In order to enforce these laws, *Caring for the Earth* further states that penalties must be severe enough to deter non-compliance, and that liability systems should provide for economic, ecological and "intangible" losses. The requirement that damaged ecosystems should be restored where possible is also included. It further includes the imposition of strict liability for accidents involving hazardous substances, and a requirement that insurance or other financial provisions be made.

Importantly, the minimum content of this law also includes the need to provide for citizen access to the courts, in order to assist in the enforcement of these laws and to seek remedies for environmental damage. Finally, *Caring for the Earth* also states that government agencies responsible for the implementation and enforcement of environmental law should be made accountable for their actions (see further Boer 1995a).

## **1.5 International Covenant on Environment and Development**

The draft International Covenant on Environment and Development was developed as a result of the suggestion of the World Commission on Environment and Development to generate an international instrument to assist in the achievement of sustainable development. The Covenant was drafted by the Environmental Law Commission of IUCN. It seeks to provide the legal framework to support the further integration of the various aspects of environment and development (Burhenne and Hassan 1995). The Covenant takes inspiration from and develops further the concepts found in the *Rio Declaration, Agenda 21*, the UNCED conventions as well as the *Statement of Forest Principles* developed at UNCED. One of the members of the IUCN Environmental Law Commission has described the Covenant thus:



The covenant presents for the first time in the history of international environmental law making, the results of a spirited attempt to produce a multilateral treaty, seeking to address all aspects of sustainable development in a single instrument. This is an appreciable departure from the traditional approach to international environmental law making, which has taken place in a piece-meal and sectoral way, e.g. marine environment, pollution, biodiversity and so on.

... the draft covenant is the only instrument that contains all the core provisions of all the sectoral conventions in a single document. The result is a mosaic of treaty obligations to encourage states and other actors (including individuals) to pursue the goal of sustainable development. (Adede, A: 1994)

The draft Covenant may serve as a basis for the negotiation of an international treaty. Such a treaty would cast very significant obligations on all signatories, making the achievement of sustainable development a requirement at national level. However, in the Pacific island countries, as elsewhere, actually implementing the law and policy of sustainable development will still be dependent upon the political will and the effort of national and local governments and communities, as well as individuals (see further Boer 1995b: 122-124).

## 1.6 Background to the RETA and NEMS Projects

The following sets out the background to the RETA Project, covering five countries, and the separate but linked NEMS Project, covering another seven countries, and their associated Legal Reviews (the following paragraphs on Objectives and Principles are drawn from Wendt and Sheppard 1993:6-7):

In the late 1980s, Pacific countries became increasingly aware of the need for a strategy to ensure that their environments are managed on a sustainable basis and that important areas are protected. SPREP, on behalf of Pacific countries, approached a number of donor agencies to assist with development of such strategies.

In 1990, the Asian Development Bank and IUCN - the World Conservation Union, agreed to provide technical and financial assistance to develop National Environmental Management Strategies in five Pacific countries. This Project is referred to as the RETA (Regional Environment Technical Assistance) Project. It commenced in late 1990. Subsequently, the United Nations Development Programme (UNDP) agreed to fund an identical project in a further seven Pacific countries. This project is referred to as the NEMS (National Environmental Management Strategy) Project; it commenced in mid 1991.

These two complementary projects are among the largest environmental projects ever implemented in the Pacific and, between them, will result in the development of National Environmental Management Strategies (NEMS), or their equivalent, in 12 Pacific countries.

### Objectives

The RETA and NEMS projects included the following objectives:

- To develop National Environmental Management Strategies (NEMS) for the Cook Islands, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Solomon Islands, Tokelau, Tonga, Tuvalu and Western Samoa;

- to review the effectiveness of environmental and natural resource legislation in each of the above countries;
- to implement relevant environmental management training in the above countries as well as in Vanuatu and Fiji;
- to strengthen the capabilities of SPREP and participating countries to achieve National and Regional Environment Management Goals;
- to increase community awareness within participating countries of the need for environment protection.

## Principles

The following principles have guided the implementation of the RETA and NEMS projects:

- **Practicality:** The emphasis, particularly in relation to the development of National Environment Management Strategies, has been on the development of practical recommendations which relate to priority environmental issues in each country.
- **Ownership:** The National Environmental Management Strategy must "belong" to the Government and people of each country. There is no point in developing a Strategy which "sits on a shelf and is not used to guide policy making and activities in the environmental area.
- **Catalyst:** The project will be used as a catalyst for encouraging awareness and support for environmental management and the implementation of projects in each country.
- **Sustainable Development:** The Strategy will link environmental management to long term economic development in each country. There will be an emphasis on convincing political and government leaders that sound environmental management practices equate to sound and sustainable economic development.
- **Partnership:** Activities associated with the RETA project will be in partnership with other international bodies, non-government organisations and other relevant parties in working together to achieve shared environmental objectives.

## 1.7 The Review of Environmental Legislation

An integral aspect of the RETA Project was these Reviews of environmental law and policy in each of the five countries. The Reviews indicate that in many Pacific countries, environmental legislation and associated administrative machinery is still in its infancy. However, it is also clear that there is a heightened awareness of environmental pressures in the Pacific at all levels of the political hierarchy as well as in local communities. This awareness has been fostered in the past decade by the activities of the South Pacific Regional Environment Programme, and has increased particularly in the past several years by the processes associated with the United Nations Conference on Environment and Development. Part and parcel of these developments was been the wide range initiatives, including seminars, workshops and meetings involved in the development of the National Environment Management Strategies under the RETA and NEMS Projects.

The Legal Reviews were unusual in a variety of ways. Few reviews of environmental law have been done elsewhere in the world in a coordinated fashion and in collaboration with governments, regional organisations and bodies such as the Asian Development Bank and the World Conservation Union. The reviews were also unusual in terms of the collaboration between three

legal researchers of different backgrounds and experience. Operating over vast distances and the usual difficulties of communication, the projects were nevertheless completed in a reasonable time span, were printed in a consistent style and format and have been made available to a wide range of people.

The specific objectives of the Legal Reviews were to:

1. review existing legislation and associated administrative structures in each country relating to environmental management;
2. critically evaluate the effectiveness of this legislation in addressing current environmental issues; and
3. recommend amendments to existing legislation and, where appropriate, recommend new legislation and structures, to more effectively address environmental issues in each country.

## **1.8 Methodology of the Legal Reviews**

Each of the Legal Reviews followed a slightly different methodology; however the common elements were as follows:

1. Meeting of Legal Consultants and RETA Team Leader in Noumea, September 1991.
2. Attendance by the relevant consultant at the National Environment Management Strategy Seminar.
3. Gathering of legislative materials and other documentation.
4. Interviews with all relevant government officials, representatives of non-government organisations and others for the purposes of gathering further information and gauging the needs of each jurisdiction.
5. Close interaction by the relevant consultant to the RETA project with each of the respective in-country consultants.
6. Intensive analysis of legislative and other materials, research and writing by the consultant both in-country and in own country to draft the Legal Review.
7. Forwarding of drafts to RETA Team Leader, the Legal Review editor and to reviewers in-country for comment.
8. Incorporation of comments in final drafts.
9. Forwarding of final drafts to relevant governments for comment, consideration and, where necessary, endorsement.
10. After consideration in-country, forwarding of final drafts for editing and printing.
11. Printing of final reports and forwarding to SPREP and to World Conservation Union; April 1993.

## **1.9 General findings of the Legal Reviews**

The Legal Reviews show that legislation has been drafted and/or enacted in the past few years in relation to environment protection and the management of natural resources in each of the RETA countries.

The status of the environmental legislation in each RETA country is:

**Cook Islands:** Several drafts of *Sustainable Environment Bill* have been prepared, the latest version entitled more simply as the *Environment Bill* of August 1994;

**Federated States of Micronesia:** The FSM enacted an *Environmental Protection Act* in 1984, together with a range of detailed regulations on environmental impact assessment, pesticide use, public water supply and earth moving. Responsibility for environmental management between the State and National Government levels in the Federated States of Micronesia was addressed in part in 1992 through the preparation of a joint State/National Attorney-General's opinion on responsibilities for environmental management, as part of the environmental law review for the FSM;

**Kingdom of Tonga:** A draft *Land Use and Environmental Planning Bill* is under consideration in the Kingdom of Tonga;

**The Republic of the Marshall Islands (RMI):** The RMI has a *National Environmental Protection Act*, dating from 1984. The development of specific regulations on Environmental Impact Assessment has been proposed;

**Solomon Islands:** An *Environment Bill* was prepared in 1993 and endorsed by Cabinet. It is awaiting consideration by the Solomon Islands Parliament.

One of the features of Pacific environmental management and law that came out clearly in the Legal Reviews was the need to be aware of the customary ownership of land and the still strong customary law in existence in certain areas. Whilst this customary element might be regarded by some as a block to progress in modern environmental management, it can, and perhaps should be seen more correctly as a unique opportunity for the use of traditional practices and ideas to be incorporated into forward-looking environmental management regimes. One of the problems of importing Western models of environmental legislation is the lack of sensitivity to traditional concerns. It must be realized that customary practices can be important additions to a management regime. This applies to the encouragement of traditional land and marine management practices, as well as to traditional enforcement mechanisms. In the drafting of legislation for each country, there are of course clear principles that can be followed to address similar problems, but the institutional and legal mechanisms for implementation of the legislation clearly should be geared to the needs of each individual jurisdiction, taking into account different traditions, attitudes and legal concepts of the ownership, allocation and use of the environment and its resources.

Although each of the countries reviewed is different one from the other it is possible to draw some conclusions which are applicable to all five jurisdictions. The most general conclusion is that in all five jurisdictions, there remains a clear need for the development and enactment of new legislation and regulations in most sectors relating to environment protection and resource development, and the building up of infrastructure to ensure that both new and existing legal instruments are adequately implemented.

Concentration on legislative aspects alone is of course not enough. As noted by Mere Pulea in the introduction to the Legal Review of the Cook Islands:

Legislation is seen as only one measure to ensure sustainable development and to prevent and minimise the adverse effects on the environment, whether by the activities of humans or by natural causes, but environmental law, though a powerful tool, cannot be solely relied upon. The scale of environmental problems dictate other measures (such as environmental education) to support and supplement environmental

legislation. The changing perceptions concerning the environment have also resulted in changing perceptions with regard to the environmental provisions in the regulatory framework. This Legal Review is part of that changing perception as the protection and conservation of the environment cannot be effectively carried out without first making some assessment of the strengths and weaknesses of the existing environmental provisions and the institutions which implement them. More importantly, a review of this nature provides the basis for the development of new environmental policies and laws.

A further concern raised by the Legal Reviews is the need for more awareness within government departments, conservation organisations and the general community of the role and potential for environmental law in addressing the local and national environmental issues faced by each country. The 1992 Workshop on strengthening environmental legislation in the Pacific region was a first step towards a much broader awareness of the potentials and the limitations of environmental law in the region (Boer 1993). Further environmental law and management training programmes organised by SPREP, IUCN and UNEP would appear to be highly desirable. These needs are addressed in some detail in the conclusion to this Report.

## **CHAPTER 2**

### **COOK ISLANDS**

## **2. COOK ISLANDS**

### **Condensed Version of Legal Review**

*Conducted by Mere Pulea*

#### **2.1 Introduction**

A substantial body of environmental law already exists in the Cook Islands. Apart from the Conservation Acts and the proposed *Sustainable Environment Development Bill* (now the *Environment Bill 1992*), environmental provisions are scattered in a number of pieces of legislation and Council By-laws. In practice, the primary focus of this Review is on legislation. The provisions of the 1986/87 *Conservation Act* have been discussed in some detail throughout the Review as, whilst the Act is not legally in force, the Conservation Service, in the absence of enabling legislation, relies on its provisions to guide its work. Essentially, a broad definition of environmental law has been chosen to include laws which are not only concerned with the protection of the physical environment, but also laws relating to the sustainable development of resources.

A number of issues identified during the course of this Review highlight the fact that where adequate environmental provisions exist, enforcement and non-compliance have been found, in some cases, to lag. The scope and potential for including environmental conditions in leases and licences requires investigation. Customary law also has a great deal to offer. The use of Raku (customary prohibition) was highlighted in the public Environment Seminar held in Rarotonga in March 1992, but research needs to be done by Cook Islanders to identify those other customary practices that are sensitive to the environment so that they can be reinforced through education and, where necessary, by appropriate legal procedures.

#### **2.2 Constitutional and Administrative Structure**

The Cook Islands became a self-governing state in free association with New Zealand in 1965 under the *Cook Islands Constitution Act 1964* and the *Cook Islands Constitution Amendment Act 1965*. The severing of formal ties to New Zealand, in existence since 1901, brought to a close the power to direct the internal affairs of the Cook Islands. Defence and external relations continue to remain the responsibility of the New Zealand government and the Cook Islanders continue to retain New Zealand citizenship rights. The Head of State is "Her Majesty the Queen in right of New Zealand" who is also the "Head of State of the Cook Islands" (Art. 2). Executive authority is vested in Her Majesty the Queen, represented in the Cook Islands by the Queen's Representative, who is appointed on the advice of the Cook Islands Government.

#### **House of Arikis**

The Constitution provides for the establishment of the House of Arikis (chiefs) under Article 8. The Constitutional provisions are supplemented by the *House of Arikis Act 1966* and its amendments. The House comprises eight Arikis representing the Outer Islands and not more than

six appointed to represent Rarotonga and Palmerston. Members of the House are appointed by the Queen's Representative. The House is required to meet at least once in every 12 months. The function of the House is to consider matters relating to the welfare of the people of the Cook Islands as may be submitted to it by Parliament and to express its opinion and to make recommendations thereon (Art. 9(a)). It may also make recommendations to Parliament on any question affecting the customs and traditional practices of the Cook Islanders.

## **Sources of Law**

The Constitution is the supreme law of the land. No Bill can become law until it has been passed by Parliament and has been assented to by the Queen's Representative. Parliament alone has the power to make laws for the 'peace, order and good government of the Cook Islands' and laws 'having extra-territorial operation'. Parliament also has the power to amend and repeal laws. Other sources include:

- any New Zealand statutes made applicable to the Cook Islands;
- the law of England existing on 14 January 1840 (the date New Zealand became a colony of Britain) and English common law and equity as developed by the courts unless inconsistent with any Act or inapplicable to the circumstances of the Cook Islands;
- and the ancient custom and usage of the people of the Cook Islands particularly in relation to land.

## **Judiciary**

Since 1981 the High Court has had three Divisions: civil, criminal and land. A Court of Appeal of the Cook Islands was also created in 1981. Appeals from all divisions of the High Court now proceed to the Cook Islands Court of Appeal. The decisions of the Court of Appeal are final. There is however a right of appeal to Her Majesty, the Queen in Council, with leave.

## **Local Government**

The *Outer Island Local Government Act 1988* applies to all islands except Rarotonga. The *Rarotonga Local Government Act 1988* is administered by the Rarotonga Island Council but it is understood that no Island Council has been established on Rarotonga as yet.

Wherever the *Outer Islands Local Government Act* applies, local government is in the main vested in the Island Councils. Membership of an Island Council consists of the following:

- (a) the Ariki or the Ui Ariki of the island (if any);
- (b) a representative of the Aronga Mana of the island who is elected at a meeting chaired by the Chief Administration officer of the island;
- (c) the members of Parliament of the island;
- (d) the elected members of the island council constituencies for each island.

Only elected members are entitled to vote at any meeting of an Island Council although members belonging to (a)(b)(c) categories listed above enjoy the right to speak and be heard at such a meeting. Each Island Council is empowered to elect a mayor and deputy mayor from the



elected members. The mayor is entitled to a deliberative vote and in the event of an equality of votes, he or she is entitled to a casting vote.

Island Councils have the following functions:

- (i) to carry into effect and administer the provisions of Ordinances and By-laws that may be applicable to the island;
- (ii) to assist in the co-ordination of any activity relevant to the economic and social development of the island;
- (iii) to assist the Government of the Cook Islands in the good rule and government of the island; and
- (iv) to advise on or determine any matter, question or dispute referred to it by any person or organisation.

An Island Council has the power to make, alter or revoke By-laws. Any offence committed against any By-law or Ordinance made under this Act is punishable in the High Court. The Cook Islands Police have the responsibility to ensure the enforcement of By-laws and Ordinances applying to the island.

## **Administrative Responsibility for Environmental Matters**

The Conservation Service is the principal agency dealing with environmental matters. The Service administers seven programmes namely:

- Resource Management and Environmental Impact Assessment;
- Wildlife Protection;
- Environmental Education;
- Soil Conservation;
- Pollution;
- Coastal Zone Management; and
- Cultural Conservation, including the conservation of medicinal trees;

In addition, it has begun a three year trainee employment programme to provide opportunities for people to be employed in the above programmes. The Service works in close cooperation with other government departments, non-governmental organisations and with the local Island Councils in the outer islands.

The administrative and statutory framework for the Service was first established by the 1975 *Conservation Act* which created the Conservation Service within the Ministry of Internal Affairs and Conservation. In time the 1975 Act "was considered inadequate with the increase in commercial activities and Government's policy to boost the private sector" (Cook Islands, 1992: 66). The responsibilities of the Service were increased and strengthened by the 1986/87 *Conservation Act* which repealed the 1975 Act. Under this new Act, the Queen's Representative may by Order in Executive Council specify from time to time the parts of the Act or the whole Act to apply to parts or to all of the Cook Islands and Cook Island waters. Although the 1986/87 *Conservation Act* is not legally in force, it is important to discuss, as the work of the Conservation Service is largely guided by its provisions. Under the Act, the Conservation Service is established as a body corporate and administered by a Conservation Council consisting of five members chaired by the Director of Conservation.

One of the key features of the Act is the power given to the Director to prepare draft management plans for the protection, conservation, management and control of national parks, reserves, Cook Island waters and water resources, coastal zones, indigenous forests, and to prevent or minimise soil erosion and pollution (s. 30). By necessity, because of its broad powers, the Conservation Service is required to work in close cooperation with other Government Ministries, particularly where responsibilities overlap. Thus any new environmental legislation envisaged for the Conservation Service must harmonise the responsibilities for environmental management and planning with other Ministries, as overlapping functions could bring about conflict and reduce the effectiveness of the programme. Specific aspects of environmental management should also be well defined and clarified with other Ministries and Departments so that each can be held accountable for their own environmental management functions.

The Act also gives wide powers to Conservation Officers to search, arrest and seize where there is reasonable ground to believe that an offence has been committed.

The Ministry of Marine Resources is empowered under the *Marine Resources Act 1989* to manage fisheries resources and to ensure their sustainable development. The Government's policy makes clear that economic exploitation of marine resources must take into account conservation and protection measures to prevent the depletion of species beyond sustainable levels. Controls imposed in the lagoon areas must also be designed to prevent pollution. The Ministry has responsibility for monitoring and regulating foreign fishing vessels in the Exclusive Economic Zone (EEZ) and for enforcing the ban on driftnet fishing pursuant to the *Long Driftnet Fishing Convention* of 1989.

The Ministry of Agriculture and Forestry was established by the *Ministry of Agriculture Act 1978*. It is generally responsible for matters relating to agricultural activities and forestry. The various agriculture-related statutes empower the Ministry to regulate and control the introduction of animals and plants and set standards for the export of agricultural crops. The Ministry promotes research into agricultural crops, forest species, pests and diseases and conducts trials, tests pesticides and biological controls at the Research Station at Totokoitu. Agricultural planning, Extension Services and Quarantine are also part of the Ministry's extensive responsibilities. The Forestry programme established in 1986 includes introduced forest species trials on all types of soil as part of its mandate.

The Ministry of Cultural Development was established in 1990 by the *Ministry of Cultural Development Act*. The functions of the Ministry include the preservation of cultural heritage, the development of cultural art forms and where appropriate, presentation of the varied elements of ancient and contemporary Cook Islands art and culture. The preservation and use of local wood and materials for the making of local artefacts are also part of the Ministry's function.

The Ministry of Health includes sanitation, waste management, and monitoring the quality of water supplies amongst its responsibilities.

In the Non-Government sector, the Cook Islands Chamber of Commerce has established an Environmental Sub-Committee to assist the Conservation Service. The waste management sector has received particular attention.

## **Proposed Environment Bill**

During the period of the Review, a new draft Bill entitled *Sustainable Development Environment Bill 1992* was under discussion. This Bill has now been revised and renamed the *Environment Bill 1992*. Similar to the 1986/87 *Conservation Act*, the new Bill establishes the Agency for the Environment as a body corporate which will be composed of an Environment Council and an

Environment Service (s. 5). The functions of the Agency have been broadened to include more specific matters such as the management and control of endangered species; the prohibition of trade in wildlife and the protection and preservation of sites of national historic and archaeological significance. The functions of the Environment Council have been strengthened to include the coordination of environmental policies and programmes and to advise the Minister responsible for the environment on these matters.

## **Environmental Impact Assessment**

Part II of the Bill makes provision for Environmental Impact Assessment to deter projects being carried out without proper attention being given to the environment. This provision was not included in the 1986/87 *Conservation Act*. As the *Environment Bill* binds the Crown, every application for a project permit (government or private) must be submitted to the Agency for the Environment for an Environmental Impact Assessment.

The establishment of National Parks and Reserves (Part III) and the issue of Environment Notices (Part IV) are also provided for in the revised *Environment Bill*.

## **Management Plans**

The *Environment Bill* provides for the preparation of Management Plans for:

- wildlife, endangered species and their habitats;
- national parks;
- reserves;
- Cook Islands water and water resources;
- foreshore areas;
- forests;
- soil erosion;
- pollution and waste;
- any other matter relating to the environment which, in the opinion of the Director, will benefit from a management plan.

The Bill also makes provision for Island Environment Management Plans . The Director may prepare draft management plans in respect of any particular island and, with the consent of the Island Council and the Aronga Mana, prepare draft plans for the protection, conservation, management and control of any aspect of the environment. The involvement of the Island Councils and the Aronga Mana in the management plans of any of the island environments is the key to the success of island management plans, as Island Councils are composed of representatives from the various parts of the island. The representatives are in a position to initiate consultation with the people and monitor the implementation of any approved management plan.

## **Conclusion on Environmental Administration**

The Conservation Service (Agency for the Environment) currently undertakes a wide range of environmental responsibilities, sets its own standards and attempts to enforce them.

The *Environment Bill* is comprehensive and fundamentally sound and with some amendments and additions should become one of the most important pieces of environmental protection legislation in the Cook Islands. If the *Environment Bill* is adopted, the responsibilities of the

Agency will be even greater. This logically envisages the type of Agency which has the capability to undertake environmental measures such as Environmental Impact Assessment, pollution monitoring control, soil conservation, water protection, protected area management, wildlife protection and control etc., and to have expertise and resources to undertake all these tasks. The Agency currently lacks the required technical expertise and the financial resources to undertake some of these tasks. The Agency is given an enormous range of duties but with no real standing or influence with those Ministries and Departments which have some legal sectoral responsibilities for the environment. Current areas of overlapping responsibilities need to be identified and defined and it is suggested that a thorough assessment be made to eliminate the confusion of overlapping responsibilities.

The creation of the Agency as a corporate body requires special attention. As a corporate body, the Government underwrites its resources but the Agency, accountable for its activities, is in an extremely vulnerable position as it can be sued for actions taken and presumably also for advice given; this may inhibit some of its work. The resulting consequences flowing from legal actions taken against the Agency could have disastrous results and undermine its work in the community. There are suggestions, expressed in the *Cook Islands State of the Environment Report 1992*, that the Agency should find ways to obtain other financial resources. It proposes an environmental tax charge on tourist accommodation and cultural tours but these would only partially solve the Agency's needs for financial resources. The suggestion in the Report to engage a corporate funding planner to assist in this regard is supported.

The location of the Agency also requires consideration. The importance and current high interest placed on the environment and the range of environmental problems identified in the 1992 *Cook Islands State of the Environment Report* indicate that the proposed Environment Council and Agency under the new Bill will bear the substantial responsibilities for the furtherance of the national environmental agenda. Closer ties with direct responsibilities to the Office of the Prime Minister or the Central Planning Office is recommended. An independent assessment of the institutional structure of the Agency is also recommended.

### **Recommendations on Environmental Administration**

1. Further training in such areas as Environmental Impact Assessment, pollution monitoring, soil conservation, protected area management, wildlife protection and control for members of the Conservation Service (Agency) should be conducted to develop their expertise in these matters;
2. Consultation should be carried out on a regular basis where environmental responsibilities are fragmented between line Ministries and the Conservation Service (Agency) to sort out areas that are likely to cause confusion;
3. A corporate planner should be engaged to assist the Conservation Service (Agency) in finding ways to obtain funds to implement its various programmes;
4. An independent assessment should be made of the institutional structure of the Conservation Service (Agency); ways in which the Conservation Service (Agency) could be supported by, and be more closely linked to, the Office of the Prime Minister or the Central Planning Office should also be investigated.

## 2.3 System of Land Tenure

The emotions which characterise the debates over land matters in Pacific Islands countries make land use planning a challenging issue. Laws relating to land are often the most difficult to implement. Managing land for multiple use and in accordance with the principles of conservation and sustainable development must take cognisance of the intricate weave of custom, law and practice in relation to land. A brief account of the land tenure system is provided in this Review to serve as a background to those laws (e.g. protected area legislation, land use laws) that rely on the land tenure system.

Tenures are human-made and shaped both by external forces and the society they serve. Crocombe describes the main landholding units throughout the Cook Islands during the pre-European contact period as localised, patrilineal descent groups. In the southern high islands, three levels of chieftainship were recognised—the Ariki, Mataiapo and Rangatira—but only one or two levels in the small atolls of the north. Rarotonga, before the coming of Europeans, had the most elaborate hierarchy of landholding. Atiu, Mauke and Mitiaro had tenure systems broadly similar to that of Rarotonga. Land tenure in Mangaia was determined by the fortunes of war between the major social units. In Aitutaki, the system appears to have been based on several chiefly structures which were in some respects similar to those found on the northern atoll of Tongareva (Crocombe 1987:59).

One of the characteristics of the islands in the Northern Group is the large lagoons. Traditionally, rights were claimed over both land and lagoon areas. This changed with the legal incorporation of the Cook Islands within the boundaries of New Zealand, whereby all land below high water mark was declared Crown land. Traditional claims remained unspoken and recognised in varying degrees, generally more in the atolls than in the high islands, reflecting the geographical differences between the Northern and Southern Groups. In heavily populated Rarotonga, the customary rights to lagoons are now of minimal significance. In the other Southern Group islands they are of minor significance, but in the atolls they are of growing importance especially now that the cultivation of artificial pearls is becoming an important and lucrative industry.

The introduction of Christianity, the annexation of the Cook Islands by the New Zealand Government in 1901, emigration of Cook Islanders and the decline of the population due to diseases, brought changes to the tenure system in a number of ways. Women became eligible to hold chiefly titles and the powers of high chiefs over land increased greatly for a time last century in all the larger islands except Aitutaki. Increased mobility led to individuals holding land rights over a much wider area and to land rights being acquired by women with increased frequency. Some land was leased by chiefs to Europeans but permanent alienation was prohibited (Crocombe and Marsters 1987:60).

### Customary Rights to Land

In the Federal Parliament of the Cook Islands on 3 August 1894, the Ui Ariki explained the position with regard to land as follows:

The land belongs to the tribe; but its use is with the family that occupy that land. The family consists of all the children who have a common ancestor, together with the adopted children and all the descendants who have not entered other tribes.

At least that is the record in English. The Ariki spoke in their language and no record of that remains. So it is only a loose and general summary, with the actual operation of the system still in dispute.

The lands of the tribe are distributed by the head of the family who is the Ariki or a Mataiapo to the various descent groups who were called Ngati. The Ngati included everyone with close and recognised blood connections.

In 1901, a Land Court was established along the lines of the New Zealand Maori Land Court. Its first aim was to make "idle" land available to European settlers and secondly, to increase production from lands used by islanders by individualising titles thereby 'freeing' the commoners from the control of the chiefs. The first goal was soon abandoned as few European settlers were attracted. The second goal has been implicit in the court's work ever since and has been the major cause of the decline of the chiefly authority.

The *Cook Island Act 1915* apportions land into three major parts: Crown land, customary land and freehold.

## **Crown Land**

All land in the Cook Islands is vested in Her Majesty except for those lands which were vested in persons before the commencement of the *Cook Islands Act* or any Crown land which had vested in any person for an estate in fee simple. There are two exceptions to this:

- the Island of Nassau is vested in the "natives of Pukapuka (s. 7 of the *Cook Island Amendment Act 1952*); and
- the island of Palmerston in the "native inhabitants" (s. 2 of the *Cook Islands Amendment Act 1954*), except that ten acres may be taken by the Crown for public facilities on Palmerston.

Crown land is nominally controlled by the Queen's Representative on behalf of Her Majesty (s. 363). The Queen's Representative is empowered under section 355(1) to grant Crown land in fee simple or to grant leases, licences, easements or any other limited estate; or rights or interest in Crown land (s. 355(1)). The land may also be reserved for a public purpose.

## **Customary Land**

The term customary land is used to describe both native land and native customary land. These words are sometimes used interchangeably.

Part XII of the *Cook Islands Act 1915* provides for customary land. This may be declared as Crown land if the Queen's Representative is satisfied that the land is free from native customary title, (because the title has been extinguished or the land has never been subject to native ownership). The limits of native customary land, whether judicially investigated or not, lie at the high water mark (i.e. the line of medium high tide between the spring and neap tides). Any land below the high water mark is Crown land.

## **Other Changes to the Land Tenure System**

Freehold land can be held by individuals through the leasehold system and through Occupation Rights.

## Leasehold system

As the sale of land is prohibited, the only transfer permitted (apart from inheritance) is by lease and occupation rights. Leaseholding was formally introduced in 1891 to enable a few Europeans and Chinese to obtain secure tenure to business premises and some plantation land but the area leased has always been very small (Crocombe and Marsters, 1987: 64). Leaseholding between Cook Islanders was virtually unknown until the 1960s, though customary permission to occupy land in return for a usually unspecified gift was widespread. After self-government in 1965, the then ruling Cook Islands Party proposed to legislate to distinguish rights between "ownership" of the land and ownership of the things growing on the land. A *Short Term Crop Lease Act* was passed in 1966 as the "first trial towards changes in land tenure" in order to protect users with land from the many non-users with an equal legal right to the same land.

### Through Occupation Rights:

In 1946, a scheme was introduced to permit land-holding groups to allot to one or more individual co-owners, exclusive rights of occupation to particular portions of the lands in which he or she (or they) held rights, in order to plant long term crops. Occupation rights were also later extended for housing and agricultural purposes such as the citrus schemes. Occupation rights obtained through an agreement by the landowners must be registered with the Land Court.

## Conclusion

The development and intervention of statutes and the granting of occupation rights and leases are among the factors changing and shaping the land tenure system. The disadvantages associated with land lying "idle" through absenteeism or dispute within the community of owners, the granting of leases to individuals over portions of customary land and multiplicity of right-holding through bi-lateral inheritance, are among the factors changing the character and scope of traditional authority over land.

## 2.4 Environmental Planning and Assessment

In the Cook Islands where land is limited and land adjudications plentiful, the difficult task of administering and enforcing any physical planning laws is foremost among current natural resource issues. The current *Land Use Act 1969* lies dormant and unenforceable, which indicates the significance of this issue. The *Land Use Act* is old law and developing alongside it is a relatively new and fast growing body of law intended to protect and conserve the environment. The merging of past and present laws is changing the basis of land use planning, with users facing new restrictions on their land use activities.

The responsibilities for land use planning is shared by the Central Government, the Justice Department under the *Land Use Act 1969* and the Land Court Division of the High Court and the Department of Surveys.

## Statutory Background

### Land Use Act

The *Land Use Act 1969* administered by the Ministry for Justice is the principal Act dealing with physical planning. Although the Act has been dormant for a number of years because of the effect

it could have on the present system of land holdings, it is still useful to record the main features of the Act.

The Act establishes a Land Use Board consisting of five members, one of whom is the Chief Judge of the Land Court who is also the Chairperson (s. 9). The function of the Board is to hear and determine submissions from any occupier, persons or groups with respect to:

- any zoning or proposed zoning order;
- application by an occupier for permission to deviate from a zoning order;
- any application concerning the use of land or zoning or other order (s. 10(1)).

The Board may also make recommendations to the Minister of Justice to establish any zone or class of zones, the conditions to be attached, and the alteration or rescission of any zoning order (s. 10(2)). The Act gives the Board "all the powers necessary to carry out its functions under this Act..."(s. 11).

Under the *Land Use Act 1969*, a zone or zones for land use may be established in any island in the Cook Islands by the Queen's Representative by Executive Order in Council. Once a zoning order is made, the use of land within the zone created will be in accordance with the provisions of the zoning order. The order will not in any way be deemed an acquisition by the Crown of any right or interest in the land affected. Zoning orders may provide for the use of land in any one or more of the following aspects: the use of land primarily for public recreation and enjoyment; tourist accommodation; residential purposes; industrial purposes; commercial purposes; agricultural purposes; and public works including roads.

Once a zoning order is made with respect to any land, the occupier may continue to use the land in the same manner as the land was used at the date of the zoning order, but he or she is prohibited from making any permanent improvement or alteration to the land or any building except in accordance with the terms of the zoning orders and with the prior consent of the Board. Penalties apply for the breach of zoning orders. Only one Zoning Order has been made since the Act came into force. In 1973, an order was made to zone an area for public recreation and enjoyment, but the Order was revoked in 1983 under the *Revocation of Zoning Order (No. 1)*.

The *FAO Interim Report* to the Government of the Cook Islands on Legislation for Conservation and the Restoration in Land Use dated August 1991 encourages the involvement of the community in the gradual introduction of planning and zoning for Rarotonga (at 3).

## **Environmental Impact Assessment**

There is no requirement under the *Land Use Act* for an Environmental Impact Assessment (EIA) with respect to any project.

The *Cook Islands State of the Environment Report* states (at 71) that a recent evaluation made on the draft Tourism Master Plan strongly highlights the need for evaluating projects in terms of their potential social and ecological effects and that the lack of evaluation is perhaps the greatest single factor acting against the interests of sustainable development in the Cook Islands. Under the current FAO Soil Conservation Project, a draft of Environmental Impact Assessment guidelines has been prepared for the Conservation Service based on the initial Environmental Impact Assessment provisions proposed for the 1986/87 draft *Conservation Act*.



## Planning and Building Control

The erection of buildings on any land changes the use and the physical characteristics of the land. In the Cook Islands, a permit is required to erect a building under the *Building Controls and Standards Act 1991* unless the building is exempted by regulations made under the Act. Under the *Building Controls and Standards Regulations 1991* a building permit is not required for the erection of a number of structures such as temporary construction work for building maintenance; scaffolding; and for traditional Cook Island Maori buildings such as kikau houses, limited to an area of 25 square meters and using traditional materials and methods of construction.

There is no reference made in the current building laws to the preservation of buildings of special architectural or historic interest. There are a number of buildings which require particular attention, such as ecclesiastical buildings and ancient monuments that are of special interest and form part of Cook Islands' national heritage. It is suggested that regard be given to the preservation of such buildings and monuments in current building and land use planning legislation.

## Controls over the Littoral Zone

All foreshores and soil under the water are owned by the Crown. The 1986/87 *Conservation Act* makes provision for the protection of the foreshore by prohibiting the removal of any silt, sand, gravel, cobble, boulders or coral from the foreshore and coastal waters without the prior consent in writing of the Conservation Council. An exception will be made if the Council is of the opinion that the removal will result in the restoration or preservation of the natural configuration and features of the foreshore or the natural flow of the water or the alteration of the natural configuration of the foreshore or coastal areas.

## Conclusion

The existing laws on physical planning are inadequate to meet the current development needs of the Cook Islands. The *Land Use Act 1969*, though dormant for some years, in general does not unduly restrict the level of land use nor does it pose a serious threat in the future. The Act basically dictates that development be orderly through a system of zoning and that any building construction in a zoned area requires the prior approval of the Board. The Act gives the Ministry for Justice a central role in physical planning and establishes the Board as a planning authority. The *Land Use Act* is supplemented by other statutes described above that authorise other specific land uses and restrictions in the use of land. As laws are required to keep pace with current developments, a number of problems can be foreseen. With increases in population, residential areas, industry and towns are likely to spread outwards. There is already some concern expressed with regard to the encroachment of residential areas on fertile agricultural land. Traffic, access and parking problems are likely to increase with the development of new buildings and tourist facilities. Without proper physical planning, conservation areas, amenities, historic sites and buildings of architectural and historic importance could also be at risk.

The *Land Use Act* provides a legal regime for orderly physical planning to take place. This Act could be amended to include other aspects of physical planning. An explanatory guidance document covering all aspects of the Land Use Act as part of the community education programme may also be helpful.

Potential may also exist through the reservation of land for public purposes and through leasing arrangements with landowners to meet physical planning objectives. Alternative methods are

needed to resolve the problems where sound laws are unpopular and cannot be enforced. Alternative methods merit further investigation.

The provisions for Environmental Impact Assessment should be made mandatory for development projects. The new *Environment Bill* includes this requirement.

### **Recommendations on Environmental Planning and Assessment**

5. That the *Land Use Act* be updated to include provisions for Environmental Impact Assessments;
6. Consideration be given for the preservation of buildings of special architectural or historic interest in the current land use and building legislation;
7. An explanatory guidance document covering all aspects of the *Land Use Act* be developed as part of a community education programme;
8. Alternative methods be investigated to enforce those laws which are environmentally sound but remain unpopular with members of the community;
9. That the new *Environment Bill* be enacted.

## **2.5 Water Supply and Water Quality**

Water supplies in the Cook Islands are managed through three programmes: Community and Household Water Tank Programme; the Underground Generator-Pumped Programme and the Stream Intake and Gallery Programme. The Ministry of Works is responsible for water supplies which are provided free of charge to end users. Water quality is generally good although it does not meet the full criteria of the World Health Organisation Guidelines for potable water. There is a water quality monitoring programme for both ground and surface water on Rarotonga but on the outer islands, monitoring and testing the quality of water is less frequent. Pollution of the water sources is a serious concern.

### **Statutory Background**

There is no single, national comprehensive Water Supply legislation in the Cook Islands but there are scattered legal provisions that address the supply of water to the public.

The two key components of water legislation are water quantity and water quality but sometimes the law (particularly those dating to earlier times) does not address these two components together. The responsibility for water supply and water quantity generally falls within the Ministry of Works whilst water quality is left primarily to the Ministry of Health. The distinctions drawn between these two key components and responsibilities lying in more than one Ministry, may be resolved with the proposed *National Water Authority Bill*.

The provisions found in the current law are as follows:

- (a) Under the *Cook Islands Act 1915*, the Queen's Representative may take any land in the Cook Islands for any public purpose specified in the warrant (s.357).
- (b) The *Conservation Act 1986-87* provides for the protection, conservation, management and the control of the water catchment areas (s. 6(d)); and further provides for the Director of Conservation to prepare draft management plans for the protection, conservation, management and control of water resources (s. 30(c)). The proposed *Environment Bill* also incorporates a similar provision. This provision would need to be considered in the light of the proposed *National Water Authority Bill*.
- (c) A number of Island Councils are made responsible for protecting water sources through the Peace, Order and Good Government Ordinances.

The National Water Authority Bill establishes the National Water Authority with a wide range of duties and powers. The Bill provides for the Authority to impose adequate controls to ensure supply of suitable water for domestic use, agricultural use, irrigation and for commercial and industrial use. Controls can be imposed by the Authority to prevent the haphazard and unregulated exploitation of underground and surface water and in addition, safeguards can be imposed to control and prevent wastage, flooding, soil erosion and damage to the catchment areas.

### **Recommendations on Water Supply and Water Quality**

10. The *National Water Authority Bill* and the *Environment Bill* be assessed together to identify areas where there are overlapping responsibilities to avoid any conflict that is likely to arise in the management of water resources, and that the *National Water Authority Bill* be considered urgently with the view to implementation.
11. The protection of the catchment areas and ground water lenses be given more protection than presently exists.

## **2.6 Waste Management and Pollution**

The enormous costs and potential environmental liabilities associated with waste disposal have already triggered efforts to reduce the volume of waste through a variety of processes such as re-cycling, incineration, burial and shipment to alternative transboundary disposal facilities. Because of the tendency for the volume of refuse to grow and for the area of disposal sites to get larger and higher, waste disposal wherever located, presents serious problems of environmental degradation and in some cases, direct threats to health. Solid waste and its disposal are major problems in the Cook Islands, due to the changing lifestyle of Cook Islanders. The Conservation Service has made efforts to manage dump sites but split responsibilities shared by Internal Affairs, the Ministry of Works and the Health Department renders this less than satisfactory.

### **Waste**

The *Outer Islands Local Government Act 1987* provides for the Island Councils to make by-laws to regulate, control or prohibit the deposit, accumulation or disposal of any refuse, garbage or rubbish of any description on any vacant land, in the sea or on any motu.

The *Animal Disease Prevention Regulations 1982* prohibits the dumping of refuse by any overseas ship or aircraft within the territorial limits of the Cook Islands except as provided for by these regulations.

The *Rarotonga Harbour Control Regulations 1974* provide for the removal of sunken, stranded or abandoned ships within the harbour and the Harbour Master may give notice to the owner to remove the ship if it is likely to obstruct navigation.

## **Litter**

The *Conservation Act 1986/87* makes extensive provisions for the control of litter. The Minister responsible for Conservation may designate any Crown land or any other land acquired by the Crown through lease or licence, for the disposal of litter and rubbish. The Act gives Conservation Officers wide powers to prevent the disposal of litter in any public place or on private land, without the consent of the occupier. Management plans for dump sites may be prepared by the Conservation Service under their broad management responsibilities to prepare plans with regards to "any matter relating to the environment which in the opinion of the Council, will benefit from the management plan". The proposed *Environment Bill* also makes provision for the control of litter.

## **Recycling of Waste**

The recycling of waste is carried out by two companies in Rarotonga, Glema Waste Management and Pacific Cook Island Steel. Glema recycles cans and other non-ferrous (e.g. paper, cardboard) rubbish. The *Re-Use of Bottles Act 1988* administered by the Department of Trade, Labour and Transport provides for the re-use of bottles.

## **Sanitation**

The *Cook Islands State of the Environment Report 1992* (at 54) points out that sewage disposal is currently a problem on Rarotonga. The Report states that the majority of houses in Rarotonga are connected to a system of septic tanks. While coverage is extensive, overall standards have been judged deficient. The Report adds that the present practice of sewage disposal on Rarotonga is to spread sludge from septic tanks over orchard lands as fertilisers. With the current increased rate of new housing development, particularly on agricultural land, problems associated with this practice will require some attention. Sewage contamination is posing problems for some householders in Avarua. The increase of algal growth along the foreshores of Rarotonga implies that there is an increased level of organic content in that system. There is also concern expressed over the effectiveness of the waste treatment systems in some hotels and other tourist accommodation. Some hotels have their own sewage treatment system but in some cases, the existing system has become inadequate with the influx of tourists and expansion in the tourist industry. Attempts are however being made to up grade the treatment plants.

## **Statutory Background**

The *Public Health Regulations 1987* (28/1987) specify that sanitary conveniences must be connected to a public sewerage system, where such a system is available; or a septic tank where no public sewerage system is available. The *Building Controls and Standards Regulations 1991*

set out specifications for toilet facilities. The *Public Health Regulations* make provision for drainage, septic tanks, water closets, urinals and privies.

## Pollution Control

Activities carried out on the waterfront such as the storing of goods, machinery and cargo in sheds or on land have environmental implications for marine pollution from potential discharges. Operating industrial facilities requires a focus on the disposal of both solid and liquid wastes.

The unsecured storage of dangerous goods is potentially hazardous to the environment. It is therefore important to assess what legal requirements exist to safeguard the storage of potentially dangerous chemicals and petroleum.

The primary statute that regulates and controls the storage of dangerous goods is the *Dangerous Goods Act 1984*. The Act is administered by the Department of Trade, Labour and Transport.

## Air Pollution

Because of the lack of heavy industries in the Cook Islands, contaminants are unlikely to cause any significant adverse impacts on the health of the population or on the environment. There are however likely sources of air pollution in the Cook Islands, for example, from sand quarrying, burning, odours from animal waste (mainly pigs) and motorised vehicles.

Legislation to control discharges of pollutants into the atmosphere is currently inadequate. The only piece of legislation controlling discharges of pollution into the atmosphere is the *Tobacco Products Control Act 1987*.

The proposed *Environment Bill 1992* provides for the Environment Agency to "prevent, control and correct pollution of air". It would appear that the Environment Agency would be the authority to establish legally binding national emission standards for all sources of air pollution but as this will not take place until sometime in the future, it is suggested that the emissions from sand quarrying and motor vehicles be assessed with a view to establishing air quality objectives.

## Noise Pollution

The *Noise Control Act 1986* provides for the abatement of unreasonable and excessive noise. The Act currently applies only to the Islands of Rarotonga and Aitutaki. The Act does not apply to the conduct of military business (s. 3). The Act binds the Crown.

A noise control officer who believes on reasonable grounds, that any noise emitted from any premises is such as to constitute a nuisance, may with such assistance considered necessary, give to the occupier a written notice to abate the noise to a reasonable level within seven days or within any shorter or longer period as the officer considers appropriate.

## Marine Pollution

The *Rarotonga Harbour Control Regulations* prohibit the deposit of any rubbish, dead animal or filth below the high water mark in any harbour. Under the *Marine Resources Act 1989* the Queen's Representative may, by Order in Council make regulations for the prevention of marine pollution. No regulations have been made.

## **International Conventions**

The Cook Islands became a Contracting Party to the *Noumea Convention* and its related Protocols on 9 September 1987. The provisions of this Convention relating to the prevention and control of *atmospheric pollution needs to be fully addressed in domestic legislation.*

### **Recommendations on Pollution**

12. That emissions from sand quarrying and motorised vehicles be assessed with the view to establishing air quality objectives;
13. That regulations be considered for the prevention of marine pollution;
14. Article 9 of the *Noumea Convention* which relates to airborne pollution be considered when detailed provisions to prevent and control air pollution under the proposed *Environment Bill*.

Article 9 of the *Noumea Convention* which relates to airborne pollution be considered when drafting detailed provisions to prevent and control air pollution under the proposed *Environment Bill*.

## **2.7 Biodiversity and Wildlife Conservation**

The *Convention on Biological Diversity* of 1992 brought to centre stage the necessity to effectively conserve biological diversity through policies and legislation. The direction that policies and legislation should take is to ensure that there is an appropriate balance between the preservation of areas in perpetuity as reserves for their intrinsic worth and those areas that are protected but open for the use and enjoyment of the public. The national park system both terrestrial and marine through the various categories of protected areas (e.g. sanctuary, nature reserve), is the most commonly used strategy to protect living resources and to conserve biological diversity.

### **Protected Areas**

The preservation of protection of about ten per cent of land in a country (e.g. as national park, nature reserve etc.) is seen internationally to be a minimum requirement to prevent the trend towards species depletion (MacKinnon et al, 1986:5). In countries with limited land mass and where most of the land is privately owned in a complex system of tenure, this figure is unrealistic. A system of protected areas can however be facilitated by: directly involving landowners in management of such areas, through a system of protected areas tailored specifically to the unique land tenure system in the Cook Islands or through the designation of several categories of protected areas, each area with a different management objective and each permitting different levels of use.

## Traditional Protection

There is little Crown land available in the Cook Islands for protected area development and any land available is subject to competing land use demands. Protected areas and restrictions imposed on land, sea and natural resources for the protection of species and natural systems is not altogether an alien concept in the Cook Islands. Different types of traditional conservation practices exist. However, in some islands such as Rarotonga these practices have greatly weakened or have disappeared altogether with economic development. The traditional custom of Ra'ui (customary prohibitions) can be placed by the chief of the tribe or the head of the land holding lineage, on lands, lagoons, areas, rivers, fresh water ponds, lakes, swamps, fruit trees, coconuts, birds, wildlife etc. for conservation purposes. People on the islands or in the villages are expected to observe the prohibitions placed on these areas or species. Although Ra'ui is basically imposed to allow the resource to recover either to improve the yield of a particular species or in preparation for a special event, it is an important tool in protected area management.

## Statutory Background

The *Cook Islands Act 1915* allows for the setting aside or taking of Crown land as a reserve for any public purpose. When land is taken for a public purpose, all persons having a right, interest, title or estate in that piece of land are entitled to compensation from the Crown. If the land taken is native customary land, the Land Court is required to investigate the customary title to that land and award compensation accordingly. The Act provides for the establishment of nature reserves on any native land, whether freehold or customary for historical or scenic interest.

The *Outer Islands Local Government Act 1987* gives the Island Councils the power to make By-laws for regulating, controlling or prohibiting the use of any reserve or park under their control. The now repealed *Trochus Act 1965* (which regulated the harvesting of trochus within three reserves) also affected protected areas. The *Trochus Act* was repealed by the *Marine Resources Act 1989* but the Act does not appear to make any specific reference to the establishment of marine reserves. Regulations under the Act may prohibit fishing of all kinds within any lagoon or any part of any lagoon.

## Conservation Act

The *Conservation Act 1986/87 Act* provides for the conservation and protection of the environment and natural resources and the establishment of national parks and reserves. The Act does not however cover historic sites as it did in the previous Act, but archaeological sites must be given consideration by the Conservation Service in the preparation of any management plans. The Act distinguishes between national parks and reserves though the Act itself does not define what these terms mean.

## Environment Bill 1992

The *Environment Bill 1992* adopts similar provisions for protected areas to those in the 1986-87 *Conservation Act*. Under the 1986-87 Act, any land, lagoon, reef or island or any Cook Island waters, or portion of the sea bed of those waters can be established as a national park by proclamation. Further proclamations may be made in the same way for additional allocations to national parks. Reserves may also be proclaimed, but any proclamation made cannot be revoked except by an Act of Parliament.

## **Existing Protected Areas**

The island of Suvarrow, with the lagoon and atolls covering 13,468 hectares was gazetted a national park in 1978. Suvarrow, located about 950 kilometres north north-west of Rarotonga is a low coral atoll atop an extinct submarine volcano. The atoll rim, 0.5-1 kilometres wide, is continuous and encloses a 10 kilometres wide lagoon. Twenty-two islands occur on the rim, most featuring limestone exposures of 0.5-1.5 kilometres above sea level. The Park is administered by the Conservation Service with assistance from other Government departments. Important as a sanctuary for seabird and other wildlife, commercial development activities are prohibited in the area except for a number of limited exceptions. Exploitation of fish and other resources by visitors is permitted for immediate use but not for commercial purposes. Licences can be issued for mother-of-pearl, and trochus harvest, copra production and coconut crab culling.

Its distance from Rarotonga poses a number of management difficulties for the Conservation Service. The illegal visits by passing yachts, the introduction of species by those yachts as well as fishing vessels and poaching on marine resources by visitors are difficult to control. The potential threat of fire to the sanctuary from careless acts by passing illegal visitors is a matter of concern to the administrators.

## **International Conventions**

The *Noumea Convention* requires that the Parties establish protected areas, such as parks and reserves and prohibit or regulate any activity likely to have adverse effects on the species, ecosystems or biological processes that such areas are designed to protect. Under the *Apia Convention*, the Contracting Parties are required to encourage the creation of protected areas to safeguard representative samples of the natural ecosystems occurring therein (particular attention to be given to endangered species), as well as superlative scenery, striking geological formations, and regions and objects of aesthetic interest or historic, cultural or scientific value.

## **Wildlife Conservation**

One of the major responsibilities of the Conservation Service under the 1986/87 *Conservation Act* is the protection of wildlife. Wildlife is defined by this Act to mean:

- (a) animals and plants that are indigenous to the Cook Islands;
- (b) migratory animals that periodically visit the Cook Islands or Cook Island waters;
- (c) Other animals and plants described by regulations made under this Act (s. 2).

The *Cook Islands State of the Environment Report 1992* (at 69) points out that the Conservation Service has investigated three areas of biological interest and concept documents have been prepared for each of the following areas:

- (a) The Takutea Nature Reserve

The Takutea Nature Reserve was first proposed by the Conservation Service in 1988 to protect seabird breeding areas. Takutea is located in the southern Cook Islands and comprises an area of approximately 150 hectares. According to Paine (1) the island is the most important seabird breeding area in the Southern Group.



**(b) Kakerori Nature Reserve**

The proposed Kakerori Nature Reserve is situated in central south east Rarotonga and the reserve is proposed principally to protect the Rarotonga Flycatcher (Kakerori) *Pomarea dimidata*. The proposed area covers approximately 200 hectares.

**(c) Te Manga Nature Reserve**

The proposed Reserve located in the central uplands of Rarotonga is one of the few known breeding grounds of herald petrel (koputu) *Pterodroma arminjoniana*, which was recorded as extinct in 1899. It is not uncommon to see birds flying over the main Te Manga Te Atukura breeding ground today. The Mist land snail *Tekoulina* sp. is uniquely viviparous, and endemic to the proposed Reserve.

**(d) Suwarrow Atoll National Park**

Suwarrow Atoll National Park is a breeding ground for turtles, especially the green turtle *Chelonia mydas* on Turtle Island. All the islets, especially Manu and Turtle, and with the exception of Anchorage, are major breeding areas for seabirds. Coconut crab *Birgus latro*, terrestrial hermit-crabs and a variety of other crabs, some clam *Tridacna maxima* and five species of lizard also occur on Suwarrow.

**Statutory Background**

Wildlife located in the areas described above attracts the necessity for strong legislation which can stand alone to be put in place to protect wildlife, especially that under threat or endangered. The only piece of current legislation protecting wildlife is the 1986/87 *Conservation Act* which gives the Conservation Service the power to "protect, conserve, manage and control wildlife" (s. 6(b)). Any new law envisaged needs to specify the bird species covered and the prohibitions on taking and destruction, subject to limited exceptions. The legislation should make it unlawful to hunt, take, capture, kill or possess any named bird protected by law or to take or disturb their nesting sites. The prohibition should also extend to the taking and destruction of eggs. The Minister responsible for conservation should be authorised to establish by regulation the circumstances under which protected birds may be taken, such as for research or species propagation.

Protecting wildlife from direct injury or killing is of little value if adequate protection is not given to their habitat. Areas set aside to protect wildlife and wildlife habitat are usually units of the National Parks and Reserve system as well as the Forest and Marine Reserve system. Although in general, legislation to protect Parks and Reserves also extends to wildlife found therein, wildlife should have its own enabling authority and protective regulations which spell out in greater detail the conservation and protective measures and particularly the measures to protect endangered species.

Wildlife and its natural habitat is extremely vulnerable to agricultural and commercial development as well as to human settlement. The Government, through the Conservation Service has the legal capacity to provide protection. Cook Islands is not a party to the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* and it is suggested that this Convention be given some consideration in the light of its long term benefits to protect wildlife. The Convention is designed to govern trade in threatened and endangered or exploited species and aims to regulate and control trade across national borders. The Cook Islands with its many islands and valuable wildlife would be an attractive target for international wildlife smugglers.

## Conclusion

The land tenure system is one of the major constraints against establishing protected areas. Negotiations however continue for the involvement of landowners in the establishment and administration of national parks and reserves. The competing demands for land use where land is limited can also adversely affect the establishment of protected areas. The resolution of such issues is important, as the destruction of unique and special species of wildlife and the degradation of the environment have serious implications for the future development of the nation. In addition, the enforcement of controls in the different categories of protected areas established is critical to an effective protected area system.

The two conservation acts and the proposed *Environment Bill* give the Conservation Service wide responsibility to protect wildlife, establish, and manage protected areas. Such laws illustrate the Government's role as steward for wildlife and its habitat, and its duty to ensure the health of the earth's life support system which also includes the protection of representative samples of landscapes and natural systems.

Given the complexities involved in establishing protected areas, alternative solutions require investigation. Perhaps one approach that could be explored is the question of imposing moratoriums on the taking of wildlife and species and imposing moratoriums on the areas to be protected. The principal feature of the moratorium is to protect particular species and bring such species to an optimum sustainable level. Under the moratorium it would be illegal to take and destroy particular species of wildlife except for scientific and educational purposes. Moratoriums could also be placed over areas of land or units within an area containing unique and special species or that of special scientific and historic interest. Moratoriums may be waived provided stringent standards are met. The use of Ra'ui in such circumstances may be possible and requires further investigation.

Protecting areas with landowner agreement has been tried in the Cook Islands and negotiation by the Conservation Service in this regard is an ongoing process. The establishment of protected areas, with the landowners playing a central role has been tried elsewhere in the Pacific with varying degrees of success. Given the circumstances in the Cook Islands, this may still be a viable option.

### Recommendations on Biodiversity and Wildlife Conservation

15. The involvement of landowners in the management of protected areas be a continuing process to ensure the success of the protected area system;
16. The use of Ra'ui to protect species and habitats be considered and if feasible to be given legislative support;
17. The *Noumea Convention*, and the *Apia Convention* be examined when details of National Parks and Reserves outlined in Part III of the proposed *Environment Bill 1992* is drafted to ensure that the obligations under both Conventions have been complied with;
18. The value that the Cook Islands place on its wildlife should be clearly reflected in strong legislative provisions. It is suggested that specific wildlife legislation capable of standing alone be considered, or alternatively adequate measures to protect wildlife and endangered species be incorporated in the proposed *Environment Bill 1992*;
19. Consideration should be given to becoming a member of the *Convention on International Trade in Endangered Species of Wild Fauna and Flora*;
20. Moratoriums to protect species and habitats be considered.

## 2.8 Protection of National Heritage

### Statutory Background

The *Cook Islands Amendment Act 1950* (amending the *Cook Islands Act 1915*) makes provision for native antiquities. The Act defines native antiquities to include:

native relics, articles with ancient native tools and according to native methods, and all other articles or things of historical or scientific value or interest and relating to the Cook Islands, but does not include any botanical or mineral collections or specimens (s. 2).

The Queen's Representative may acquire on behalf of Her Majesty, native antiquities and provide for their safe custody. The removal of antiquities from the Cook Islands is prohibited without first offering them for sale to the Queen's Representative. Anyone who exports antiquities without the written consent of the Queen's Representative commits an offence and is liable to a fine of up to \$200. Notice of an intention to export antiquities must be given by the exporter to the Collector of Customs at least 24 hours before shipment. Any antiquities entered for export without complying with the legislative are deemed to be forfeited and the antiquities will vest in Her Majesty for the benefit of Cook Islanders. The Queen's Representative, on making inquiries may cancel the forfeiture.

Antiquities may be required to be copied by photography or cast as a condition of the permission to export them. Any copies made will be the property of Her Majesty and held for the benefit of Cook Islanders (s. 8(2)). Any dispute arising as to whether any article or thing comes within the scope of this part of the Act will be determined by the Queen's Representative whose decision will be final.

The *Ministry of Cultural Development Act 1990*, (repealing the *National Arts Council Act 1981-82*) establishes a separate Ministry of Cultural Development from what used to be the Cultural Division in the Ministry of Internal Affairs and Conservation. The principal objectives of the Ministry are to:

- (a) preserve and enhance Cook Islands cultural heritage;
- (b) encourage cultural art forms;
- (c) present, where appropriate, the varied elements of ancient and contemporary Cook Islands art and cultural forms;
- (d) maintain the unique cultural national identity of the people of the Cook Islands (s. 4(1)).

Some of the principal functions of the Ministry are to encourage, promote, support and develop the standards in the arts and all forms of artistic activities; oversee the activities of the Library and Museum, Archives, Anthropological Services, National Arts Council, Constitution Celebrations, Audio-Visual Recording Unit; charge fees for admission to land or buildings under its control; and publish and disseminate information relating to the arts.

The Act also establishes a National Arts Council and a Cultural Development Fund. The Minister of Cultural Development is responsible for the Ministry's policies (s. 5) and has the power to appoint, with the concurrence of Cabinet, advisory and technical committees to provide advice on the functions of the Ministry.

## Conclusion

It appears that the protection of historic sites, monuments, historic buildings and their surroundings is part of the responsibility (through the Anthropological Services) of the Ministry of Culture. The Conservation Service (Agency for the Environment) will also have similar responsibilities with regard to the protection of historic sites under the proposed *Environment Bill 1992*. As the protection of national heritage is varied in nature, different safeguards would apply to secure the protection of the different components that form part of the nation's heritage. New buildings and other forms of economic development pose real dangers to historic sites and monuments and to buildings of historic and architectural importance. Such areas should be actively protected by legislation against damage, destruction and pollution that would impair their value and authenticity.

Section 29 of the *Ministry of Cultural Development Act* gives power to the Queen's Representative to make regulations by Order in Executive Council "as may be necessary or expedient for the purposes of giving full effect to the provisions of this Act". It is suggested that the above matters be given consideration, as some of the areas discussed, e.g. historic buildings, could merit specific legal protection. Should this be adopted, corresponding changes would need to be made by amendments to the *Land Use Act 1969*, the building laws and regulations and the proposed *Environment Bill* to avoid conflicting responsibilities.

### Recommendation on the Protection of National Heritage

21. That assessment be made of the existing historic buildings in the Cook Islands with a view to ensuring their preservation. Where a specific system for the preservation of historic buildings is instituted, the provisions in the building legislation, the *Land Use Act* and the proposed *Environment Bill* would need to be examined and harmonised with any provisions made to safeguard the national heritage.

## 2.9 Tourism

With over 30,000 tourist arrivals and about 30 establishments offering nearly 700 rooms, tourism is the biggest industry, the primary generator of economic growth and the largest single income earner in the Cook Islands. Estimated to be worth approximately NZ\$30 million per annum, the importance of the tourism industry in the country's economy will continue to increase as the present government is obviously committed to further growth in this sector. The Cook Islands is a member of the Tourism Council of the South Pacific (TCSP), a regional body assisted by the European Development Fund of the European Community. In its "Guidelines for the Integration of Tourism Development and Environmental Protection in the South Pacific" the TCSP praises the Cook Islands environmental legislation (*Conservation Act 1986-87*) as a model for other Pacific Island Countries in the following terms; "There is no doubt that any island Pacific nation wishing a thorough overhaul of its environmental legislation would do well to look at the Cook Islands' model".

Tourism development for the future has been outlined in the Tourism Master Plan. Legislation relating to tourism underwent a review in 1989 and the *Environment Bill*, if enacted, shall provide

even more comprehensive legal tools for environmental protection by introducing Environmental Impact Assessment requirements.

## The Tourism Master Plan

The present government's recognition of the need for further development in the Tourist Industry has led to a thorough study, funded by the Asian Development Bank and carried out under the auspices of the Cook Islands Tourist Authority, which has resulted in the publication of the Tourism Master Plan for the Cook Islands in August 1991. It is a substantial document, containing a wealth of information about the country, but most importantly, taking seriously into account the environmental aspects of tourism development. It is in fact the only such plan that addresses environmental issues; it was endorsed by the Cook Islands Government in December 1991. The Plan recognises the close link between development and conservation of the environment, and clearly states the Tourist Authority's intention to continue to be actively involved in the fundamental issue of sound environmental management. Without an "attractive" environment the tourist industry cannot prosper. Recognising that resources must be used sustainably if the nation is to progress, two main environment-related objectives have been identified by the Tourism Master Plan:

- The need to rehabilitate resources that have been degraded through over-exploitation, and to a certain degree pollution, such as sand beaches, lagoons, forests etc., upon which tourism clearly depends and which support the traditional culture of the island;
- the need, from here on, to manage the environment in a sustainable manner to avoid the errors of the Past.

To support these objectives the Tourism Master Plan stresses the need to undertake environmental awareness programmes; ensure that development projects are fully evaluated in terms of their socio-environmental consequences, and strengthen the capabilities of the Cook Islands Tourist Authority and the General Licensing Authority.

## Statutory Background

In December 1989, the *Tourist Authority Act* was enacted to "reconstitute the Tourist Authority and to establish a Tourist Advisory Committee as bodies within the Cook Islands". The primary objective of the Authority is to: Encourage and promote the development of tourism in the Cook Islands in a manner which is appropriate to the interests of the Cook Islands as a whole and of its people at large". The Tourist Authority is primarily funded by the Government.

The following functions of the Tourist Authority are of some relevance to environmental concerns:

- to acquire by purchase, lease, sublease or otherwise and to dispose of any land or interest in land other than the fee simple in such land, with or without any building;
- to contract for the erection or provision of accommodations on acquired land;
- to participate financially in any company dealing with promotion of tourism, tourist accommodations, travelling, recreation and entertainment;
- to make recommendations regarding standards to be complied with by tourist establishments, scenic attractions and recreational facilities.

One of the main changes in tourism legislation by the review carried out in 1989 is the removal of responsibility for licensing of tourist establishments from the Cook Islands Tourist Authority and the creation of a new body, the General Licensing Authority, to take over this regulatory function. (*General Licensing Authority Act 1989*). The Authority's powers include:

- setting conditions in respect of any licence to be granted;
- recommending standards;
- issuing licences;

In determining the issue of a licence, the Authority must have regard to:

- (a) The desirability of increasing the amount and improving the standard of accommodation and restaurants for the public, tourists and holidaymakers;
- (b) The convenience of persons who will be entering or staying on the land or in the building or premises with which the Authority is concerned;
- (c) The desirability of improving the standard of motor vehicles and other transport used, by the public, tourists and holidaymakers.

Paragraph (a) should be used effectively for ensuring a balanced, sustainable development of the tourist industry in the Cook Islands through controlling the number of tourist establishments allowed to function, their size and standards. Thus the General Licensing Authority can have a major role in implementing the Cook Islands policies on tourism.

## **Tourism and Conservation Legislation**

Although environmental concerns are considered, no specific environmental protection as such is included in the Acts and it is suggested that the legislation be assessed in the light of the strong directions given for environmental matters to be taken into consideration in the Tourism Master Plan.

The urgent need to pass the new *Conservation Act* is recognised by all interested parties in the Cook Islands. Its inclusion of establishment of protected areas, species protection and pollution control and Environmental Impact Assessment are of particular interest for achieving sustainable tourism development. In the interim, Environmental Impact Assessment guidelines should be established for tourism projects.

## **Conclusion**

The Cook Islands have the right blend of all the natural and socio-cultural features to make it an outstanding destination for tourists. Provided these assets are not destroyed through uncontrolled development, the tourist industry will continue to prosper and thus strengthen the nation's economy. One must however be realistic and keep in mind that the Cook Islands' land mass is small and will not support uncontrolled, mass tourism. Efforts should be directed towards making it a desirable, high quality tourist destination for a select type of traveller, eager to learn about the Polynesian ways and ready to participate in keeping the country as the natural paradise that it always has been. This can be achieved through appropriate tourism legislation coupled with vigorous environmental legislation aimed at preserving the nation's resources while allowing controlled tourist development; in other words, optimising rather than maximising the tourism sector.

The Cook Islands has good potential for further tourism development. Ecotourism in particular should be further investigated. The existing tourism legislation coupled with the conservation measures should allow for the development of such tourism without jeopardising the intrinsic values of the natural environment of the Cook Islands.

### Recommendations on Tourism

22. The *Tourist Authority Act* and the *General Licensing Act* be assessed in the light of the environmental directions given in the Tourism Master Plan;
23. That Environmental Impact Assessment guidelines be established in the interim and applied to tourism projects (e.g. hotel construction) before approval is given to implement the projects;
24. Other destinations within the Cook Islands which have potential for Ecotourism be investigated.

## 2.10 Agriculture and Forestry

### Agriculture

Agriculture in the Cook Islands falls into two main categories: subsistence agriculture and commercial agriculture, though in some cases this distinction is becoming less clear as more subsistence farmers, especially on Rarotonga, are turning to commercial agriculture.

Cook Islands agriculture has been built on a pattern of small family-based units. These units form the basic institution in agricultural production. The agricultural sector is characterised by small size agricultural holdings (averaging 1.2 hectares) and a complex traditional land tenure system. Some 67 per cent of all householders are agriculturally active (Cook Islands Census on Agriculture: 21). The main subsistence agricultural activities involve the growing of coconuts, bananas, citrus, some pineapple, root crops such as taro, tarua, yams, sweet potatoes cassava and vegetables. The crops are grown in rotation leaving the land to lie fallow for short periods of six months to a year in Rarotonga but a little longer in the outer islands. The fallow period for cash crops is only one season.

Subsistence agricultural practices pay little attention to environmental safeguards (Hoskins, pers. comm.: 23 Mar 92) but the Department of Agriculture has responded to this situation by providing advice and information to farmers based on a 'management menu'. Essentially this is a manual of agricultural management principles and practices which provide guidelines on such matters as the control and eradication of plant pests and diseases and the application of pesticides, designed to assist and direct farmers to adopt sound methods of agricultural practices to minimise risks to the environment.

In recent years, the traditional methods of farming practices are being replaced by mechanised methods. This is particularly noticeable in Rarotonga, where land clearing and preparation by tractors is recognised as an inevitable process in commercialised agriculture but the full impact of the use of this method on surface land and fragile ecosystems is unknown. It is however possible for mechanised farming to be carried out with minimal impact on the ecosystems and made

compatible with efforts to minimise damage to the environment. Commercial agriculture involves cash cropping for the domestic market with the main export crops of taro, pawpaws and vanilla.

## **Agricultural Land**

Agricultural development faces a number of constraints: distance from markets, irregular shipping to transport agricultural produce from the outer islands, communication, marketing and competition with more developed agricultural countries in export products. Recent housing development is imposing ample strain on land considered prime for agricultural purposes. As there is no national policy on land use planning, the use of customary land is at the discretion of landowners.

## **Statutory Background**

The *Land Use Act 1969* makes provision for the zoning of land primarily for agricultural purposes (s. 5(f)) but due to the complexities of the land holding system, and the landholder's right to make fundamental decisions about the use of their land, the *Land Use Act* has not been used for this purpose.

There are a number of statutes, regulations and Local Government By-Laws that regulate and control agricultural activities. In 1990, a Land Use Capability Guideline for the island of Atiu was developed jointly by the New Zealand Department of Scientific and Industrial Research and the Cook Islands Government Survey Department. Although the main purpose of the pilot study was to assess soil erosion, the implications of the study have enormous relevance for agriculture. The pilot study recorded soil types, gradient of the land, and other land use capability information which is now being made available (as the data is analysed and recorded) to farmers on Atiu on request. Land Use Capability Guidelines are expected to be developed for all islands.

## **Council By-Laws**

The *Outer Islands Local Government Act 1987* permits Island Councils to make by-laws. The by-laws cover the planting of land, coconut, copra, export of tomatoes, fruit packing and improvement of stock etc. Whilst the by-laws primarily regulate farming activities and control the quality of agricultural products, by analogy the same language in the by-laws extend to protection of the environment.

## **The Importation of Plants and Animals**

Due to the fragile nature of the atoll soils of the Northern Cook Islands and the dependency on domestic and export agricultural products, there are a number of statutes and regulations designed to protect plants and animals from introduced diseases and pests. The importation of plants into the Cook Islands is regulated by: the *Plants Act 1973*, the *Plant Introduction and Quarantine Regulations 1976* and the *Plant Introduction and Quarantine Amendment Regulations 1980* and *1985*.

The *Plants Act* (which is under review by the Office of the Solicitor General) binds the Crown. In order to protect the Cook Islands from the introduction of plant pests and diseases which could destroy agricultural crops, the Director of Agriculture may define any area under his or her control or, with the consent of the appropriate Minister, establish quarantine stations on Crown land for the detention of imported plant materials. The Director may give directions on the regulation, management and control of quarantine stations and the disposal or treatment of plant material while in a quarantine station or in transit, and specify the length of time the plant material is to be



quarantined. The control of diseases and pests in crops for export is also provided for under the *Plants Act*.

Although the *Plant Act* includes extensive provisions to prevent the introduction of pests and diseases, experience has shown that this has been difficult to completely control, as a certain amount of plants escape detection through unchecked luggage. A way to deal with this situation is for the Department of Agriculture to develop a nursery and grow a large range of plants under controlled conditions that would meet the domestic market and reduce the necessity for plants to be smuggled into the country (Hoskins, pers. comm: 23 March 92).

The *Copra Act 1970* provides for the inspection and grading of copra for export. Where copra is found on inspection to be underdried, infested with insects or unfit in any way it will be rejected for export.

The *Plant Introduction and Quarantine Regulations 1976* and amendments provide the details and the prerequisites for introducing plant material into the Cook Islands (Part III). The introduction of any plant must be made in accordance with the terms and conditions and the standards that are set out under Part II of the Regulations.

## **Animals**

The *Animals Act 1975* provides for the control of animal and animal diseases. Under the *Animals Act* any land, including Crown land with the consent of the Minister, could be set apart as a quarantine ground under the control of the Director of Agriculture for the detention of imported animals. No one is permitted to remove any animal from the quarantine grounds without the written consent of the Director. Animals may only be introduced through those ports declared by the Minister by way of notice in the Gazette.

Under the *Animal Importation Regulations* animals imported may be detained under surveillance for 30 days. The *Animal Diseases Prevention Regulations* control animals, products and by-products and farm-related machinery brought into the Cook Islands by persons arriving by air or sea. The Regulations also make provision for amenities to be provided for the dumping of refuse at ports of entry, facilities for storage and incineration at ports of entry, and amenities for the cleaning of vehicles, machinery and equipment arriving from overseas.

## **Wandering Animals**

The *Wandering Animals Act 1976*, designed to reduce and prevent damage to the environment, risks to human health and animal safety, provides for animals to be secured and for pigs to be kept in enclosures. Animals are not permitted to wander or trespass and must be properly secured and fenced or securely tethered at all times.

## **Leasing System**

The *Short Term Crop Leases Act 1966* makes provision that anyone wishing to grow short term crops is deemed to have a valid and enforceable lease. The Act applies to all land and includes native freehold land, European land and Crown land. Leases are conditioned by the inclusion of environment protection stipulations in line with the covenants and terms in the Schedule to the Act.

## **Control of Agricultural Chemicals**

Agricultural chemicals are used to control unwanted pests such as the fruit fly (*Dacus melanotus* & *Dacus xanthodes*), Spiral White Fly, Mites, Indian Myna bird and diseases such as Anthracnose and Phytophthora. The use of chemicals to control agricultural diseases and pests

is controlled by the *Pesticide Act 1987*. The uncontrolled use of pesticides could be potentially hazardous to natural resources, fragile ecosystems and water sources from chemical run-off. No pesticide can be imported into the country unless registration is granted by the Board. The Act imposes a duty on Customs Officers to assist in the enforcement of this provision.

## **Biological Pest and Disease Control**

Although there is adequate legislation in place to prevent and control the introduction into the Cook Islands of pests and diseases and the use of agricultural chemicals, the Ministry of Agriculture has been conducting research for a number of years into biological controls at the Totokoitu Research Station on Rarotonga. The non-chemical means of control involves identifying particular pests in the environment that have the ability to suppress or terminate other pests.

## **Conclusion**

The law and by-laws regulating agriculture need to be reviewed, as some by-laws in particular, date to 1916 and contain provisions that may not be relevant to the needs of a modern agricultural industry.

Environmental protection is also dependent on adherence to specific land use planning and the requirements to provide environmental protection and not on a regulatory regime designed to further agricultural development. Reforms in current agricultural practices however do indicate a trend to include environment protection measures within the basic framework of agriculture.

The laws regulating agricultural activities need to be examined and updated where necessary with environmental goals in mind. The focus on the environment has also changed, at least in degree, the nature of law. Laws that are silent on environmental protective measures, particularly those developed in the early 1920s and still in force, provide insufficient guidance and is unable to assert authority to resolve persisting environmental degradation and damage. It is therefore recommended that existing laws be strengthened to deliver the range of environmental protective measures necessary to prevent or minimise the risks to the environment and fragile ecosystems caused by agricultural activities.

## **Forestry**

The Forestry sector is located within the Ministry of Agriculture and operates within the broad responsibilities of the Ministry for Agriculture and Forests. There is no statute or by-law that provides for forestry in the Cook Islands. Amongst its responsibilities, Forestry manages trial forest species programmes in an effort to determine a viable timber supply for domestic needs. The *Cook Islands State of the Environment Report 1992* describes the current forest cover in the interior of Rarotonga and those found in the cloud community above 400 meters.

From an environmental perspective, any legislation contemplated for forestry would need to be compatible with the *Land Use Act 1969*, any conservation legislation and in line with a comprehensive statement of national forest management objectives.

The *Environment Bill 1992* provides for the protection, conservation, management and control of forests as part of the Agency's responsibilities. It would appear that this function would significantly overlap with the responsibilities of the Forestry sector. As the Forestry Sector is part of Ministry of Agriculture and Forests, it is suggested that these overlapping management responsibilities be assessed and areas of conflict eliminated to avoid confusion.

The statement of Forest Principles at the United Nations Conference on Environment and Development (UNCED) in Brazil in 1992 was an attempt to reach the first global consensus on the management, conservation and sustainable development of all types of forests. They should be examined in relation to formulation of forestry legislation.

### **Recommendations on Agriculture and Forestry**

25. A review be carried out on all the laws that regulate agricultural activities with the view to updating old laws to reflect modern and current agricultural practices;
26. The existing laws providing for and regulating agricultural activities be strengthened in order to deliver the range of environment protection measures necessary to prevent or minimise the risks to the environment and fragile ecosystems caused by agricultural activities;
27. Consideration be given to the possible incorporation of a number of Acts into a single *Agricultural Act*;
28. The *Land Use Act* be applied for the purpose of zoning agricultural land.
29. The development of any forestry legislation needs to be compatible with the *Land Use Act 1969*, any conservation legislation (e.g. proposed *Environment Bill*) and in line with a comprehensive statement on national forest management objectives; a Code of Logging, Environmental Impact Assessment and measures to prohibit fires be considered and included as part of the legislative package for forestry.
30. The proposed *Environment Bill* be examined to cure any overlapping management responsibilities in relation to forests between the Agency for the Environment and the Ministry of Agriculture and Forests.
31. The United Nations Conference on Environment and Development *Statement of Forest Principles* be examined and principles incorporated where appropriate when formulating forestry laws.

## **2.11 Fisheries**

Traditional Cook Island life and culture are tied intimately to the sea. Components of the Cook Islanders subsistence lifestyle, such as the right to fish, are as necessary to them today as they were many years ago. Despite the growth in trade and the prevailing commercial culture, the sea and its resources still shape the subsistence life of many Cook Islanders. Customary fishing practices are not uniform, nor have they remained static with changes brought about by a developing commercial culture. Customary fishing rights and practices differ significantly from one area to another.

Marine resource exploitation has been identified by the Cook Islands Government as a 'frontline' industry and the primary sector for economic growth. The main objective is to increase self-sufficiency in food and protein production and to accelerate development in areas with the

greatest potential for import substitution and export promotion. The greatest potential for rapid growth lies in the country's lagoon fisheries, particularly with pearl shell and black pearl culture.

## **Statutory Background**

The Ministry of Marine Resources was established in 1984 under the *Ministry of Marine Resources Act 1984*. The Act makes extensive provision for fisheries management and development. A fishery can only be designated by the Minister for Marine Resources on the recommendation of the Secretary, after taking into account the scientific, economic, environmental and other relevant considerations regarding the importance of the fishery to the national interest, and if the fishery requires management and development measures for effective conservation and optimum utilisation.

Plans for designated fisheries in the fishery waters i.e. waters of the territorial sea, the Exclusive Economic Zone (EEZ) and other internal waters must:

- identify each fishery, its characteristics and the present state of its exploitation;
- set out the objectives to be achieved in the management of each fishery;
- outline the management and development strategies to be adopted;
- designate those fisheries for which licensing or other management measures may be established;
- specify, where applicable, the licensing programme to be followed for other fisheries;
- set out the limitations, if any, to be applied to local fishing operations and the amount of fishing to be allocated to foreign fishing vessels; and
- take into account any relevant traditional fishing methods or principles.

Fisheries plans and reviews require Cabinet approval before implementation.

Where the preparation of fisheries plans and reviews affect lagoon fisheries over which Island Councils have jurisdiction, the Act requires the Ministry to consult with them and the Local Fisheries Committee in the island concerned. Where no local committee has been appointed, any local fishermen likely to be affected must be consulted.

## **Key Issues**

### **Fisheries Management**

Local Fisheries Committees on any island are appointed by the Secretary for Marine Resources. The function of the Committee is to advise on the management and development of fisheries in relation to the island. The Act requires representatives on the committee to be drawn from the various commercial and subsistence sectors, fish farmers, sport fishermen and tour operators. The functions of the Committee are to advise the Secretary of Marine Resources on management and development of fisheries on the island and to make recommendations to the Island Council to adopt or amend by-laws regulating the conduct of fishing operations and the issue of fishing licences for any designated fishery.

The Island Councils have the power to manage fishery resources by declaring closed and open seasons for the whole or part of the designated fisheries. During the closed seasons no one is

permitted to fish for the species or in areas specified in the declaration. During the open season, fishing for any species in the areas specified in the declaration is permitted.

The Island Councils have the power to issue fishing licences to persons engaged in fishing operations in any designated fishery; conditions consistent with any applicable by-law may be imposed by the Island Council. The Minister for Marine Resources has ultimate supervisory powers under this section of the Act to affirm, vary or reverse decisions made by the Island Councils after consultation with them.

## Scientific Research

Scientific research operations in the fishery waters can only be allowed by the Minister on the submission of a research plan. Authorisations may exempt the vessel or persons engaged in research from the requirements of any fisheries management and conservation measures, but these exemptions must be specified and conditions may be attached to safeguard any fish species.

## Destructive Fishing Methods

The *Cook Islands State of the Environment Report 1992* records the destructive fishing methods practised in the Cook Islands (57-58). The use of derris or 'ora papua roots (*Derris elliptica*) and barringtonia or 'utu seeds to stun fish occurs wherever these plants are found. On some islands, by-laws are enforced with fines of up to \$200 if people are found using such methods for fishing. Although rarely used, dynamiting has been reported in some areas on Rarotonga and Aitutaki. The use of scuba gear for spear fishing has been a matter of concern to the Conservation Service.

The *Marine Resources Act* prohibits the use of any explosive, poison or other noxious substances for the killing, catching or for disabling fish, which are subject to fines of up to \$ 10,000 and/or a two months imprisonment term.

## Aquaculture

The Cook Islands Government Property Corporation may lease or grant a licence over Crown land (including areas of lagoons, foreshore, and sea-bed) that is vested in the Corporation, for the purposes of aquaculture.

The Mitiaro Aquaculture project under the Ministry of Marine Resources is a joint project with UNDP and the FAO/South Pacific Aquaculture Development Project (FAO/SPADP). The project, commenced in 1989, aims to culture milk fish and mullet in the Mitiaro lake. The *Marine Resources Act* empowers the Queen's Representative to make Regulations by Order in Executive Council for aquaculture, access to land leased for aquaculture and to waters surrounding such land and to further regulate or prohibit either generally, or in any specified fishery, any aquaculture operation.

## Protection of Particular Species

The *Cook Islands State of the Environment Report 1992* points out that over-harvesting of fishery resources, particularly clams in Aitutaki, is a problem. Destructive fishing methods and overfishing will lead to the depletion of the local fish resources unless active intervention by Government and Island Councils occurs. Regulations may prescribe measures for the protection of trochus, pearl and pearl-shell, turtles, green snails, clams and lobsters. As noted previously, the *Trochus Act 1975* was repealed by the *Marine Resources Act 1989*. It is important that any protective and conservation measures for trochus previously offered under the 1975 Act not be overlooked.

## **Quarantine**

The *Marine Resources Sector Report 1992* points out that the hatchery complex in Aitutaki allows for all incoming marine species from overseas to be quarantined. Before the quarantine/ hatchery facility was built, the Cook Islands had introduced one species of clam, trochus, green snails and several species of fish with no quarantine precautions. It is anticipated that the local clam species (*Tridacna maxima*) will be spawned at the hatchery. The resultant juveniles will be seeded on to the reefs within the Cook Islands which have been over-exploited in the past by subsistence fishing.

## **Pearl Farming**

The *Cook Islands State of the Environment Report 1992* states that the pearling industry, particularly for pearl shells, has been part of the Northern Group since the 1860s and the overharvesting beyond sustainable levels of production has caused the industry to decline (at 57). The Manihiki Pearl and Pearl Shell By-laws 1991 make provision for pearl farming only on the island of Manihiki. A Pearl Shell Farming Permit from the Island Council must be obtained first for the farming of pearl shells and the collection of spat. In granting the permit, the Council may impose conditions and restrict the period in which pearl shells in the lagoon can be farmed.

## **Trochus**

Trochus was introduced to Aitutaki from Fiji in 1957. Since then the species have multiplied to such an extent that commercial harvesting was introduced in the 1980s. Currently about 25 tonnes of shells are harvested annually. The Ministry of Marine Resources plays a critical role in stock assessment and management and offers advice to Island Councils on harvesting and quotas. The *Marine Resources Sector Report 1992* points out that trochus is a valuable resource for Aitutaki and although it has been seeded in most of the Cook Islands, it has yet to firmly establish a population size sufficient for harvesting. As a sedentary resource, trochus is very vulnerable to over-exploitation. The fishery is therefore closely regulated and harvested only once per year. A quota is applied, based on the results of stock assessment surveys.

## **The Exclusive Economic Zone (EEZ)**

The *Territorial Sea and Exclusive Economic Zone Act* which entered into force on 1 October 1979 makes provision for the demarcation of the Cook Islands marine spaces such as the territorial sea, internal waters, and the exclusive economic zone (EEZ) and declares the right to control and regulate the exploitation of its marine resources. The Act also declares that the bed of the territorial sea and internal waters are vested in the Crown (s. 6).

## **Foreign Fishing**

Cook Islands sovereignty over its fishery waters gives it the right to regulate and control fisheries and other resources (e.g. minerals) in the area. The 1989 *Marine Resources Act* provides the legal framework to permit the exploitation of the fisheries resources of the EEZ as well as the continuing requirement for the protection and conservation of marine resources. It has been recognised that the survival of any fishing industry is dependent on the opportunities to exploit fisheries resources in broad geographical areas which include both the high seas as well as some of the more attractive and economically viable sites located in the EEZ of island states.

The exploitation of fisheries resources by foreign vessels is permitted under the statutory provisions of the *Marine Resources Act* but the Act gives the Ministry of Marine Resources a great deal of flexibility to shape plans for the exploitation of these resources to meet the particular needs

of the Cook Islands. The Ministry can regulate the activities of foreign vessels in Cook Island waters and prohibits foreign fishing vessels.

No foreign fishing licences will be issued with respect to any foreign fishing vessel unless the Cook Islands Government is a party to the Access Agreement, but this does not apply to a licence or authorisation issued for test fishing operations, or to a locally based foreign fishing vessel used for scientific research or any related activities. The Minister has discretion however, in the absence of an access agreement, to issue a licence to a foreign fishing vessel if the applicant provides sufficient financial and other guarantees required to fulfil all the obligations under the *Marine Resources Act*.

Locally-based foreign vessels are not permitted to fish without a valid licence. Terms and conditions may be imposed in the licence and contravention of any condition could render the master, owner and charterer liable to a fine of \$100,000.

## International Treaties

The Act authorises the Minister for Marine Resources to enter into international, bilateral and multilateral access agreements with other countries providing for fisheries access or for other related activities provided for under the Act. The Act prohibits fisheries allocation under access agreements to exceed a level that is inconsistent with the conservation and management of fisheries resources and that adversely affects fishing. The agreement must also be consistent with any fisheries plans. The Minister is given power to enter into related agreements to implement any access agreement or to promote fisheries cooperation, including amongst other matters, the harmonisation of joint exploitation and development programmes as well as programmes designed for the conservation and management of the resources.

The *Treaty on Fisheries between the Governments of Certain Pacific Island States and the Government of the United States of America* was signed by the Cook Islands. It states that parties may permit fishing vessels of the USA to fish for tuna in the EEZ of each of the Contracting Parties subject to the terms and conditions of licences issued by the Director of the South Pacific Forum Fisheries Agency. One of the objectives of the Treaty is to maximise the benefits flowing from the development of the fisheries resources within the EEZ and fisheries zones of the Pacific Island Contracting Parties.

The *Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific (Driftnet Convention)* was signed by the Cook Islands in November 1989. This immediate ban was due to the damage done by foreign vessels using driftnet fishing to the albacore tuna as well as other fisheries resources, plus the marine environment and the economy of the South Pacific Islands. Driftnet fishing activities are prohibited in the Cook Islands fishery waters and attracts a maximum fine of \$250,000.

## Conclusion

The 1989 Marine Resources Act encourages economic efficiency and at the same time ensures that environmental factors and resource protection and conservation measures are taken into consideration. The 1989 law has significantly reformed fisheries planning and management, based upon concepts of sustainability ensuring the continued viability of fisheries. For environmental purposes, the *Marine Resources Act* is considered to contain a satisfactory balance between economic and environmental measures.

The Ministry of Marine Resources also has responsibilities for the management of marine areas and marine resources under the *Marine Resources Act 1989* and it is recommended that the relevant provisions of the proposed *Environment Bill* be further assessed in the light of the responsibilities of the Ministry of Marine Resources to avoid conflicts over management of marine resources that may arise.

### **Recommendation on Fishing**

32. That the Environment Agency's management responsibilities in the proposed *Environment Bill* for Cook Island waters and water resources be assessed in the light of the management responsibilities of the Ministry of Marine Resources over the same areas and resources to avoid any conflicts that may arise.

## **2.12 International Conventions and legislation**

### **International Environmental Conventions**

*Convention on the Conservation of Nature in the South Pacific 1976 (Apia Convention)*

*Forum Fisheries Agency Convention 1979*

*United Nations Convention on the Law of the Sea, Montego Bay, 1982*

*Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea, 1986*

- *Protocol for the Prevention of Pollution of the South Pacific Region by Dumping, Noumea, 1986*
- *Procol Concerning Cooperation in Combating Pollution Emergencies in the South Pacific region Noumea, 1986*

*Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific 1979*

*South Pacific Nuclear Free Zone Treaty 1985*

*Treaty on Fisheries between the Government of Certain Pacific Island States and the Government of the United States of America*

*United Nations Framework Convention on Climate Change, New York, 1992*

*Convention on Biological Diversity, Rio de Janeiro, 1992*

### **Statutes and Regulations**

*Airports and Airport Authorities Act 1968-69*

*Aitutaki Fisheries Protection By-laws 1990*

*Animals Act 1975*

*Animal Disease Prevention Regulations 1982*



*Animals Importation Regulations*  
*Building Controls and Standards Act 1991*  
*Building Controls and Standard Regulations 1991*  
*Conservation Act 1975*  
*Conservation Act 1986-87*  
*Cook Islands Act 1915*  
*Cook Islands Amendment Act 1950*  
*Cook Islands Constitution Act 1964*  
*Cook Islands Constitution Amendment (No. 9) 1980-81*  
*Cook Islands Constitution Amendment Act 1965*  
*Cook Islands State of the Environment Report 1992*  
*Copra Act 1970*  
*Dangerous Goods Act 1984*  
*General Licensing Authority Act 1989*  
*Harbour Control Act 1971-72*  
*House of Arikis Act 1966*  
*Land Use Act 1969*  
*Land Use Capability Guideline 1990*  
*Manihiki Pearl and Pearl Shell By-laws 1991*  
*Marine Resources Act 1989*  
*Marine Resources Sector Report 1992*  
*Ministry of Agriculture Act 1978*  
*Ministry of Cultural Development Act 1990*  
*Ministry of Marine Resources Act 1984*  
*National Building Code*  
*Noise Control Act 1986*  
*Outer Islands (Aitutaki Paua) By-laws 1988*  
*Outer Islands Local Government Act 1987*  
*Outer Islands Local Government Act 1988*  
*Peace, Order and Good Government Ordinance 1918 No. 1 (Mauke Island Council)*  
*Pesticide Act 1987*  
*Plant Introduction and Quarantine Amendment Regulations 1980 & 1985*  
*Plant Introduction and Quarantine Regulations 1976*  
*Plants Act 1973*

*Proposed Environment Bill 1992*

*Proposed National Water Authority Bill*

*Public Health Regulations 1987*

*Rarotonga Harbour Control Regulations 1974*

*Rarotonga Local Government Act 1988*

*Re-Use of Bottles Act 1988*

*Short Term Crop Leases Act 1966*

*Territorial Sea and Exclusive Economic Zone Act 1977*

*Tobacco Products Control Act 1987*

*Tourism Master Plan*

*Tourist Authority Act 1989*

*Wandering Animals Act 1976*

*Water Supply Ordinance 1958, Aitutaki*

*Waterfront Industry Act 1973-74*

## **CHAPTER 3**

# **FEDERATED STATES OF MICRONESIA**

## **3. FEDERATED STATES OF MICRONESIA**

### **Condensed Version of Legal Review**

*Conducted by Elizabeth Harding*

#### **3.1 Introduction**

The Federated States of Micronesia (FSM) is made up of four highly autonomous states, each with their own government and legislative system, with an overarching national system. In the full legal review, each main environmental field is dealt with under the national government and each of the States. In order to keep this Consolidated Report within reasonable limits, the national and state issues are dealt with together in the following sections. However, in an attempt to retain the flavour of the original review, immediately after the section on the national constitutional and administrative structure, each state is also briefly introduced in its own right, with particular environmental problems indicated where appropriate.

#### **Geography and People**

The Federated States of Micronesia consists of 607 high volcanic islands and low-lying coral islands and atolls extended over more than one million square miles of the Tropical Western Pacific Ocean. Part of the east-west Caroline Archipelago, the nation's Exclusive Economic Zone spreads from approximately one degree south to 14 degrees north latitude and 135 degrees to 166 degrees east longitude. FSM's total land area, however, encompasses a mere 270.8 square miles. Approximately 65 islands are inhabited by a population of just over 120,000.

FSM thus hosts a wide variety of island types and groupings, as well as a diverse population and cultural heritage, politically divided into States: Chuuk, Kosrae, Pohnpei and Yap. The easternmost State of Kosrae consists of five closely-situated mountainous islands comprising just over 40 square miles of land, and hosts a 1990 population of 7,369. Pohnpei State, with a population of over 33,000, claims the highest mountain peak in FSM (791 meters) on its single, large volcanic island. Twenty five smaller islands within a barrier reef and 137 coral atolls complete the total land area of 133 square miles. Chuuk is the most populous State, with 49,163 people in residence in 1990. Chuuk includes seven major island groups comprising a land mass of 49 square miles. Yap State has a population of just over 10,000 and a land area of 48 square miles, including 44 large high islands, seven smaller islands, and approximately 134 outer islands (First National Development Plan: 7-9; Scheming 1991; Table 3.1.1.1)

#### **Environmental Treaties**

Many intriguing legal questions have arisen over the last 15 years surrounding FSM's gradual emergence as a free and independent nation from its former status as three of the six districts within the Trust Territory of the Pacific Islands (TTPI). The present position, stated in the draft "Declaration Regarding Treaties Formerly Applied" states:

- FSM considers the application of all international agreements entered into by the United States and made applicable to FSM by the United States pursuant to the TTPI Trusteeship to have ceased; and
- with regard to bilateral treaties applied to FSM, that FSM shall examine each treaty and communicate its views, and in the meantime, FSM will continue to observe the terms of each treaty, provisionally and reciprocally, when not inconsistent with the letter or the spirit of the FSM Constitution; and
- with regard to multilateral treaties previously applied, during the period of FSM review, any party to the treaty may rely on the terms of such treaty as against FSM, reciprocally, when not inconsistent with the letter or the spirit of the FSM Constitution.

In addition to the conventions which apply to the FSM through former Trust Territory arrangements, it is signatory in its own right to a number of international Conventions and treaties relating to environmental concerns.

## **3.2 Constitutional and Administrative Structures**

The FSM has been a fully free and sovereign nation since the Compact of Free Association between the Government of the United States of America and the Government of the Federated States of Micronesia (Compact) came into effect in November 1986. The United Nations Security Council terminated FSM's Trusteeship status in December 1990 (considered by FSM as a legal recognition of established fact). In September, 1991, the General Assembly of the United Nations at its 46th Session adopted a Resolution admitting FSM as a member nation.

The fundamental law of FSM is contained in its Constitution of 1979. The Constitution sets forth a democratic system of government that contains aspects of both Western and traditional governing structures.

### **National Level**

#### **National Constitution**

Environmental declarations in the FSM Constitution include:

- Prohibition of testing, storing, using, or disposing of radioactive, toxic chemical, or other harmful substances within FSM, without the express approval of the National Government
- requirements that net revenue derived from ocean floor mineral resources be divided equally between the National Government and the appropriate State Government; and
- transitional provisions keeping statutes of the former Trust Territory in effect, including environmental statutes and subsidiary regulations, except to the extent three such statutes are inconsistent with the Constitution.

While installing western concepts of individual rights and freedoms, the National Constitution equally recognises traditional aspects of governance. The deep Micronesian respect for and recognition of traditional management structures is embodied throughout the National Constitution. As with many other developing Pacific countries, this recognition coexists with an historic respect for the traditions of the people regarding protection and conservation of the land, sea and air. Indeed, Article V not only honours the function of traditional leaders "as recognised

by custom and tradition", but in Section 2 permits the traditions of the people of FSM to be protected by statute. If challenged as violative of civil rights protection embodied in Article IV, the "protection of Micronesian tradition shall be considered a compelling social purpose warranting such governmental action".

Traditional land alienation protection is embodied in Article XIII. Non-citizens may not acquire title to land or waters in FSM; lease agreements for the use of land for an indefinite term by a non-citizen, a corporation not wholly owned by citizens, or any government, is prohibited (Article XIII, Sections 4 and 5 (as amended in 1991)). Again, constitutional support for traditional and communal land tenure systems often translates into increased regard for sustainable use and customary protection of the environment.

## **Administrative Structures**

The Department of Human Resources has followed the National Government lead in environmental protection, linking it to health and sanitation efforts. The term "environment", however, has come in the past decade to include many areas in addition to public health protection. A broad array of differing environmental concerns, therefore, now crop up within other Departments in a relatively unstructured fashion. With little linkage between Departments regarding these emerging environmental issues, and little funding available to start new programs and Divisions, a coherent National Government response to varied environmental issues has been difficult to formulate.

Responsibility for environmental protection concerning nature conservation, biodiversity, tourism, sanitation and cultural resources is currently split between various Departments. The Office of Administrative Services hosts the Division of Archives and Historic Preservation. The Office of Planning and Statistics prepares development plans and goals, often without reference to the conservation and long-term sustainable management of natural resources. The Department of Resources and Development has been granted oversight of marine and land-based resources. The Department of External Affairs often represents FSM at regional and international intergovernmental meetings concerning environmental issues such as global warming and biodiversity. Additionally, the Department of Human Resources must stretch its budget to include attention to the nation's pressing educational and medical needs as well as establishment of a system of environmental controls.

## **Global Warming Resolution**

On June 5, 1991, the Seventh Congress of FSM passed a Resolution expressing serious concern over the threat to FSM posed by the effects of global warming. The Congress stated that continued unrestricted release of carbon dioxide, methane, nitrous oxide and other greenhouse gases into the Earth's atmosphere will accelerate the process of global warming and climate change, with possible catastrophic consequences to FSM. By this legislative declaration, FSM joins many other low-lying and high island nations in the developing Pacific in the attempt to influence and educate the world community regarding the specific dangers to island states of unregulated harmful atmospheric emissions.

Resolution 7-24 gave warning that FSM citizens stand to be among the first on Earth to become victims of sea-level rise, intensified storms, salt water invasion and destruction of marine life as a consequence of industrial and agricultural activities in other nations. It urged the President, the Department of Human Resources and the Department of External Affairs to work with the newly-formed "Alliance of Small Island States" to encourage broader expression of island views

for the United Nations-sponsored negotiations for the global *Framework Convention on Climate Change*.

This resolution underlines the seriousness with which the government of the FSM views environmental issues, both within its own borders, as well as regionally and globally.

## **State of Kosrae**

The Constitution of the State of Kosrae dates from 1984. The Kosrae Constitution follows basic tenets of western democratic legal and governmental structures.

Although patterned after western legal concepts and institutions, the Constitution also incorporates some aspects of Kosraean cultural traditions. The Preamble declares that Kosraeans are one, as a people, in their language, in their traditions, and in their family and communal life, and that this way of life has survived the "assaults of colonisers and the ravages of time", and promises to preserve Kosraeans' traditions and communal spirit. The Constitution establishes the Kosraean language as the sole official language of the State, although English may be used in governmental matters. Emerging democratic institutions established in this document co-exist with provisions praising a more cooperative, communal approach to government.

A provision protecting Kosraean cultural heritage allows the State Government to protect the State's traditions as may be required by the public interest. Any stated rights may be superseded "when a tradition protected by statute provides to the contrary". The Constitution also provides that the Judiciary is instructed that court decisions "shall be consistent with this Constitution, State traditions and customs, and the social and geographical configuration of the State".

## **Environmental Provisions**

The Kosrae Constitution contains a number of powerful and explicit environmental statements. The Preamble speaks of the "bounty and beauty of our island and its waters", and pledges to "preserve our natural riches". Article XI, entitled "Land and the Environment", declares at Section 1 that: "A person has the right to a healthful, clean, and stable environment". The Section also requires the State Government to protect, by law, Kosrae's environment, ecology, and natural resources from impairment. Section 2 makes a strong anti-pollution assertion by declaring:

There may be no nuclear, chemical, gas or biological weapons, or radioactive material hazardous to public health or safety, within the State. No hazardous waste or other hazardous substance may be disposed of within the State except as expressly authorised by State law.

Section 3 of Article XI allows the use of real property to be regulated by law for purposes of public health and well-being, preservation of places of cultural or historic value, and island beauty. Section 4 makes the waters, land, and natural resources within the marine space of the State public property, and Section 6 designates all rivers and streams as public property.

The Environmental Protection Board was saved from Trust Territory times to serve as the Kosrae State Government's preeminent administrative body for environmental control. The Board, although still in legal existence, has not been active since 1988. There is a current proposal to replace the Board with a "Development Review Commission"; see below.

## **State of Pohnpei**

The Constitution of Pohnpei took effect in 1984. In the Preamble, the people of Pohnpei pledge to protect and maintain the heritage and traditions of each of the islands of Pohnpei, and to live and work together in a peaceful union of their individual cultural pasts.

As with the other States, although the Constitution is primarily a document embodying Western legal principles, the recognition of traditional ways and values is also incorporated. The Government of Pohnpei is required to protect the customs and traditions of Pohnpei. In anticipation of possible conflict between this and other provisions, the Constitution allows statutes to be enacted to uphold custom. In the event that a statute is challenged as violative of other Constitutional rights, it shall be upheld upon the Pohnpei Supreme Court's determination that the statute has reasonably protected an existing, regularly practised custom or tradition. The Constitution also protects both the responsibility and authority of parents over their children, and acknowledges the duties and rights of children "in regard to respect and good family relations as needed".

The Pohnpei language is kept as one of the two official languages of Pohnpei (the other being English). A further declaration refers to the importance of tradition in peoples' lives, in which the Government of Pohnpei is required to establish comprehensive plans for the identification, preservation and administration of places, artefacts and information of historical and cultural importance.

## **Environmental Provisions**

The Pohnpei Constitution contains a number of explicit environmental statements. Article 7 states "The Government of Pohnpei shall establish and faithfully execute comprehensive plans for the conservation of natural resources and the protection of the environment".

Under the terms of this Review, and under the broad definition of "environment", protection of culture and heritage is included. The peoples of Micronesia are enveloped in a tradition that respects, even reveres, the surrounding earth, air, and water. Customary practices are frequently harmonious with principles of environmental protection and sustainable development. Article 7 thus further requires the State Government to execute plans to save cultural resources for the benefit of the public.

Finally, Article 13, Section 2 provides for strict control of hazardous materials and harmful substances. Unless a majority of the people of Pohnpei vote by referendum to give permission, the introduction, storage, use, testing, or disposal of certain hazardous materials are prohibited within any part of Pohnpei State.

## **Local Government**

Article 14 establishes 11 local governments; Kapingamarangi, Kitti, Kolonia Town, Madolenihmw, Mwokil, Net, Ngetik, Nukuoro, Pingelap, Sokehs, and Uh. Each government may establish its own constitution, not inconsistent with the State Constitution, and may provide a functional role for traditional leaders. Many of these municipalities have differing languages, traditions and physical environments. Just as the four States of FSM act autonomously in most matters from the National Government, so too do the local governments operate independently from State Government in many matters, especially in matters relating to customary practices.



## **State of Chuuk**

The Chuuk State government enacted its Constitution in 1989. Again, although it is based to a large extent on western legal principles, custom and tradition is also recognised. It provides that existing Chuukese custom and tradition shall be respected and protected by statute. Traditional leaders are recognised and permitted to play formal or functional roles in government. Traditional rights over all reefs, tidelands and other submerged lands are recognised. It is stated, however, that the Legislature may regulate their reasonable use.

## **Environment and Land**

The Constitution states that the Legislature shall provide by law for the development and enforcement of standards of environmental quality and for the establishment of an independent state agency vested with the responsibility for environmental matters. The State government may take an interest in land only for a specified public interest purpose prescribed by statute. Negotiations with landowners for voluntary lease, sale or exchange must be fully exhausted before government may appropriate private land. The courts have the power to determine the good faith of negotiations, the necessity for acquisition and the adequacy of compensation offered. Once the public use for which land was acquired has ceased it is to be returned to the landowner or successors.

## **Local Government**

The Constitution provides for state and municipal levels of government in the State of Chuuk. Thirty-nine municipalities are identified. Provision is made for the creation of new municipalities by the Legislature. The jurisdiction of municipal governments extends to the sea area within the surrounding reefs of the islands which are included within the municipality. Municipal constitutions may be adopted, which are to be democratic and may also be traditional. The powers and functions of a municipality with respect to its local affairs and government are superior to statutory law. Although not provided for in the Constitution, there are 11 Regional Development Authorities which assist and support planning and development efforts of the municipalities.

## **Key Issues**

The State Constitution does not adequately define the roles and functions of municipal government. There is a need for clear definition of their functions. At present municipal governments play a negligible role in environmental matters. The State government is considering delegating responsibility for management of solid waste disposal sites to municipal governments. If this occurs the precise function and power to be exercised must be clearly stipulated.

## **State of Yap**

The Constitution of the State of Yap places great emphasis on the conservation of traditional heritage and preservation of the environment. The Preamble speaks of the Yapese peoples' desire to live in harmony with each other and with the environment. It recognises traditional heritage and village life as the foundation of Yapese society, and commits the Government to an integration of modern technology with traditional ways, so as to benefit both present and future generations.

Although dedicated in large measure to Western legal principles, the Constitution gives priority of place to tradition and custom. Article III, titled "Traditional Leaders and Traditions", establishes a Council of Pilung and a Council of Tamol, both of which perform functions concerning tradition and custom. The Article requires that "due recognition shall be given to

traditions and customs in providing a system of law, and nothing in this Constitution shall be construed to limit or invalidate any recognised tradition or custom".

The Councils of Pilung and Tamol may disapprove a bill by returning the proposed law to the Legislature for appropriate amendment within 30 days. A disapproved bill may be amended to meet the Councils' objections and be resubmitted for Council approval. Traditional leadership is thus granted a specific and powerful means to influence the governance of the Yapese people in matters of custom.

Respect for tradition and customary ways is dealt with in provisions on health and education. The Yap State Government is responsible for the protection and promotion of public health, which may include the traditional practice of medicine. In creating State Government responsibility for public education, the Constitution requires that the traditions and customs of the people of Yap be taught in public schools.

## **Environmental Provisions of the Constitution**

Environmental protection and customary protection are linked in the Yap Constitution. Article XIII, titled "Conservation and Development of Resources", requires the State Government to promote the conservation and development of agricultural, marine, mineral, forest, water, land and other natural resources. Article XIII also includes respect for customary land ownership and environmental protection, and that title to land may only be acquired in a manner consistent with traditions and custom. Agreements with foreigners for the use of land may not be for more than fifty years. It also bans the testing, storing, use or disposal of radioactive or nuclear substances within Yap State. It again recognises traditional rights and ownership of natural resources and areas within Yap's marine jurisdiction, both within and beyond 12 miles from shore. It ensures that no action may be taken to impair these traditional rights, with the exception of State Government action providing for conservation and protection of natural resources within 12 miles from island baselines.

Article XIII further provides for the protection of both the environment and indigenous peoples' rights, stating that only enactment of a statute, or permission of the appropriate persons who exercise traditional rights of ownership, may allow a foreign fishing, research, or exploration vessel to take natural resources from anywhere within the marine jurisdiction of Yap State.

## **Local Government**

Article VI of the Constitution provides for a local tier of government. Political subdivisions may be established by the Legislature; each subdivision shall exercise such powers as may be conferred by law. The Municipality of Rull, a Yap local government, has recently demonstrated that local governing entities can play an important role in environmental protection. Rull has recently enacted a local Ordinance restricting gillnet fishing mesh sizes.

### **Recommendations on Government Environmental Responsibilities**

1. For more effective environmental enforcement, clarify National and State constitutional jurisdictional issues through issuance of a Joint Attorney General Opinion between the National Government and each of the four States to disentangle competing jurisdictional claims in 15 separate areas of environmental law.
2. For more effective administrative oversight and prevention of duplicative efforts, place administration of all environmental controls in a central agency, either within the National Government or linked to the Government by statute. (The benefits of placing this entity within Government include continuity (especially if the Department of Human Resources is retained as the responsible agency) and access to Government resources. An independent statutory agency offers the benefits of a separate legal status from Government, useful when Government is itself an environmental violator, plus the ability to move quickly and without burdensome bureaucracy in response to environmental degradation.)
3. For more effective legal oversight of National environmental provisions, establish a position for an environmental attorney, either in the Attorney General's Office if administrative control is within the National Government, or as Legal Counsel to an independent statutory agency, if one is authorised.
4. To better liaise with State Governments and allow more local voice in National environmental decision making, reinstate the concept of the Federated States of Micronesia Environmental Protection Board originally envisioned in FSMEPA.

## **3.3 Systems of Land Tenure**

Each of the States of the FSM have somewhat different land tenure systems, with either a predominantly matrilineal or patrilineal system of inheritance, but with variations. A common thread is that both the national constitution and that of each State makes it illegal to transfer land to foreigners. An understanding of land tenure systems is important in gaining an understanding environmental management in each State. Each State system is briefly summarised below.

### **State of Kosrae**

Kosraeans have traditionally enjoyed a close-knit, subsistence life with intimate ties to the land and sea. As with most of the developing Pacific, customary patterns of land rights and inheritances on Kosrae abide to this day, frequently colouring a person's status within her or his society. Land rights and privileges are extremely important to the people of Kosrae. Land issues are often litigated. Recognition of the traditional systems of landholding is integrally linked to the success or failure of State Government land use and environmental protection measures.

Kosrae is the smallest State in FSM, both in land area (Approximately 43 square miles) and population (6 607 in 1986). The land is easily able to support the number of human residents; most

of the mountainous, forested interior is uninhabited. An island grouping of great beauty, each land area is named. Names are determined either by the land's spatial orientation, to commemorate past events or myths, or to designate ecological zones.

Traditional land tenure was hierarchical. The absolute ruler (Tokosra) held all rights to land. Chiefly titles were assigned by the king for the administration of approximately 57 districts. Although succession of the king was nominally matrilineal, the chiefs had considerable voice in the selection.

The chiefs appointed "collectors" (Mwet suk suk), who gathered tribute, one-half of the food going to the king and one-half to the chief. Commoners held land rights subject to the king and chief. The system has grown more flexible as kingly and chiefly rights have deteriorated over time.

Ownership concepts were and are quite different from western thoughts about land. A commoner landholder rarely forbade anyone from crossing her or his land, or from gathering, or hunting, although permission was required to cut a tree or take a cultivated plant. The extension of land title to coastal, reef and lagoon areas is unclear; land rights could be extended, however, by filling in land formerly covered by water.

Inheritance is patrilineal, although in the event that all male descendants are deceased (moving in a pattern from the eldest to next-eldest male sibling, then first-born son of the eldest male sibling to next-born son of the eldest male sibling, and so on), succession may pass to the eldest female. Land acquisitions could be through inheritance, good deeds, dowry, acts of love, gift, purchase, or exchange. Dowry gifts of land (Tuka) from a woman or her family to her husband transfers all rights of ownership to her husband.

The Constitution of the State of Kosrae includes certain requirements regarding the acquisition and use of land. Real property uses may be regulated in the public interest for a number of public health and environmental interests. The State Government may acquire interests in private land for a public purpose without the consent of the landowners, but with payment of fair compensation and a showing that the land and the interest are "highly suited" to their intended use. Only FSM citizens who are domiciled in Kosrae, or a corporation which is wholly owned by such a citizen, may acquire title to land in the State, although acquisition and utilisation of interests in real property may be restricted or regulated by other law.

## **Current Status**

No land use planning legislation has yet been enacted. The Land Commission, a State agency, registers title to land in the name of one person. The Commission began its work in the early 1980's; more than one-half the occupied land is registered, although less than one-half of the land in Kosrae is claimed. The Commission provides a panel of three persons for administrative resolution of land disputes. There is a right of appeal from the administrative decision to the State Court, although the process is often slow and cumbersome.

Land Commission policy prevents the registration of approximately eighty percent of the middle of Kosrae, as the ownership of that land is in dispute. The Legislature is currently contemplating a legislative document which would return that land to the traditional owners. Primarily mountainous and not farmable, the designation of this land as a nature reserve or protected watershed forest would provide excellent species and natural resources protection.

Land is mostly private in Kosrae. The Capitol Building, however, rests on public land, the six main rivers are public property and all land below the high water mark is public. The latter is very important for future environmental protection efforts, as it allows State Government reef and coast conservation measures to be carried out primarily on public land. Private landowners frequently resist the initial stages of government environmental oversight of private land.

## **Pohnpei**

The importance of custom in the life of the people of Pohnpei State cannot be overemphasised. Traditional lineage placement colours all social and cultural arrangements; socio-economic status is often closely linked to a person's standing in traditional land inheritance patterns. The deference to custom is especially clear in regard to the subject of land rights and inheritances, a person's most valuable asset and an area of abiding cultural significance. Indeed, in an island society, often harbouring scant land-based resources, a person's land rights and privileges have always been and continue to be closely guarded and hotly contested. No analysis of current constitutional and statutory responses to the overriding issue of land tenure can be complete without a brief explanation of customary practices.

The Island of Pohnpei is a high volcanic island with an area of about 129 square miles. Traditionally, the island was divided into five states, or tribes (wehi): Uh, Madolenihmw, Kiti, Sokehs, and Net (Riesenberg 1968: 8). Each district was originally politically independent, with its own customs and dialects; present-day local municipalities reflect these original traditional units.

Each district, or tribe, was headed by two lines of chiefs, the "Nanmwarki" and "Naniken", who were the first in a series of ranked titleholders. Although the title system passed matrilineally, there were aspects of patrilineal land inheritance, which increased with foreign contact. For example, the "Nanmwarki" and "Naniken" were often in an alternating father-son relationship, with each "Nanmwarki" the son of the present or previous "Naniken" and the father of the next "Naniken" (Fischer 1958: 84).

The system of governance was feudal, with three levels:

- "Nanmwarki" and "Naniken" heading the five districts;
- 15 to 37 sections in each district, headed by section chiefs; and
- the farmsteads in each section, run by one biological or extended family (Fischer 1958: 85).

In theory, all land formally belonged to the "Nanmwarki" and "Naniken", who received tribute regularly and whose rule was absolute (Riesenberg 1968: 8).

Kapingamarangi and Nukuoro, two Polynesian outlier atolls within Pohnpei State, embrace different land tenure systems. All land, except sacred and community land, is individually owned, by both men and women. Kapingamarangi and Nukuoro land may be inherited or received as a gift from any family member. The landowner controls use and inheritance of the land, although, with permission, family members and friends may take the land's produce (Emory 1965:119-132).

## **Constitutional Provisions**

The present system of land tenure in the free, self-governing State of Pohnpei is controlled by Article 12 of the Constitution of Pohnpei. Article 12 states that no land may be leased for more than 25 years, unless the land is leased from the Government or the Legislature provides otherwise (Sections 1 and 4). Further, one may only hold a permanent interest in real property if one is a citizen (pwilidak) of Pohnpei (Section 2); indefinite term land-use agreements are prohibited (Section 3); land may not be sold except as authorised by statute (Section 5); and the Government may only take interests in land for public purposes after consultation with the local government, negotiation with the landowners, and an offer to pay either just compensation or exchange the land for land of comparable value (Section 6).

## **Legislation**

### ***Public Trust Lands Distribution Act of 1980***

This Act provides for the distribution of public trust land to qualified beneficiaries by the Public Lands Authority. An Act drafted to effect a fair and peaceful transition from land practices carried out by the former Japanese and United States Administrators, the Act transfers legal title on certain lands to state residents who have developed the land, or to their successors.

The purpose of the Act is to distribute lands held in trust for the people of Pohnpei State to beneficiaries of the trust who have developed the lands for agricultural purposes "pursuant to leasehold or other use agreements issued for that purpose by the Government of Japan or the Trust Territory Government". The Act was amended in 1987 to extend the time for application to the Public Lands Authority to December 1, 1987.

### ***Public Lands Act 1987***

This Act establishes a division within the Department of Lands called the Division of Management and Administration of Public Lands, and transfers the Pohnpei Public Lands Trust to this Division. The Pohnpei Public Lands Trust Board of Trustees is continued and recognised as trustee to all rights, title and interest to public lands in Pohnpei for the benefit of the people of Pohnpei. The Board is now comprised of nine Trustees appointed by the Governor with the advice and consent of the Legislature.

The Board is deemed the successor the Public Lands Authority relative to the use and disposition of Trust properties, but all rights, interests and liabilities of the former Authority, not a part of the Trust, are assumed by the Executive Branch of the Pohnpei Government.

### ***Deed of Trust Act of 1987***

This Act sets out a system of land transactions using a legal conveyance called a "Deed of Trust". The Act is intended to provide for a satisfactory method of securing the financing of improvements to real property by the US, acting through the Farmers Home Administration, the Department of Housing and Urban Development, and the Veteran's Administration.

## **Chuuk**

Chuukese people have a deeply rooted attachment to their land. Most Chuukese are loathe to give up land tenure except in extreme circumstances. In Weno almost all of the land is privately owned. The State government owns or leases only 240 acres of the 4,600 acres of land on the island. If people are forced to surrender their interest they often retain some reversionary rights.

The predominant form of land acquisition in Chuuk is matrilineal. Under this system land will pass to the male and female children of a woman and to the children of her daughters and female descendants, but not to the children of her sons and male descendants. The great majority of land transfers occur prior to death so transfer by will is rare. Real property may be owned by individuals or family lineage groups (clans). Land owned by the Chuukese includes dry land, mangroves, coastal reefs and isolated coral heads in lagoons. Improvements such as structures, trees, and fish may pass independently of the land or reef on which they are found.

The State Constitution recognises traditional rights over all reefs, tidelands and other submerged lands. It also permits the government to appropriate private land for public purposes upon payment of adequate compensation. Interestingly, the Constitution also provides that when

the public purpose ceases to exist the land is to be returned to the original owner or the successor in title. This provision reflects the Chuukese customary recognition of reversionary rights. Traditional law as to reversionary rights is extremely complex and includes a general view that an original landowner has the right to buy back the land in certain circumstances. For example, if a seller sold land to a buyer who was in need of land at a particular time (for instance to pay debts) then the seller has a right to repurchase subsequently.

The State Constitution permits government acquisition of land for public purposes. The State Government has an ever-growing need to acquire land to assist in the building of infrastructure and public utilities. The State Government currently owns approximately one percent of land in Chuuk, but this is filled land only. Leasing costs to the government are very high and are increasing.

## **Land Disputes and Registration**

While traditional land tenure is firmly entrenched, customary rules and laws governing that tenure are far from clear. There are many disputes as to land ownership which are frequently not resolved by customary law as there is disagreement about which customary rules or laws apply in each case. If disputes are not resolved by traditional methods they must be dealt with by the courts.

There is no statutory or regulatory requirement for people to register their land. The Division of Land Management in the Department of Commerce and Industry is responsible for handling the government's land needs. The role of the Office of Land Management is to determine the land needs of government and to return lands no longer required to their original owner. In addition, the Office negotiates government leases for terms of 15 years with rentals to be re-negotiated every five years. Surveys of land to be leased and of lands generally are carried out and negotiations for easements conducted. Foreigners requiring leasehold interests in land are also assisted by the Office which encourages private landholders to become joint partners in foreign investment projects.

### **Recommendations on Land Tenure for Chuuk**

5. There is a need for the State Government to consider using its Constitutional powers of land acquisition more frequently, due to the shortage of government-owned land and the high cost of leasing or acquiring easements, which greatly impairs the Government's ability to provide essential infrastructure and public utilities.
6. There is a need for a comprehensive program of land survey and registration, including registration of easements and leases. This need must be balanced against the strength and flexibility of customary landholding interests. An attempt should be made by the State Government, in close consultation with customary leaders, to record traditional land tenure and to ascertain the scope and substance of customary rules and law relating to land. This process is an essential precursor to physical planning and the development of policies regarding appropriate land uses.
7. Attention should also be given to more clearly defining the roles and functions of the Land Commission and the Office of Land Management in order to avoid unnecessary duplication of functions.

## Yap

Yap is recognised as a bastion of tradition in Micronesia. Nowhere is this tradition more strongly felt than in matters of land tenure. The people of Yap ardently identify with their land. The extended family and the land it occupies is inextricably interwoven.

The traditional unit of land ownership in Yap is known as "tabinaw", defined as "that which is the land", a term synonymous in Yapese with the word for "family" or "household". The tabinaw estate consists of one or more house platforms for the extended family, as well as its associated taro pits, fishing lands inside the reef, stone fish weirs, coconut plantations, yam gardens, grassy uplands and wooded lots. A tabinaw may also include a local community building.

The oldest male member of the family is traditionally the head of the tabinaw household. He is, however, a trustee for the estate rather than an owner. His position confers only limited rights to dispose of the estate or to prevent members of the extended family from living on and from estate proceeds. Inheritance in tradition is predominantly patriarchal. In Yap tradition there are only very limited and restricted forms of transfer of land from one tabinaw (extended family) to another. An outright sale to a foreigner is not allowed in Yapese tradition.

Consistent with the national Constitution, the Constitution of the State of Yap also prohibits the outright sale of land to non-citizens of the Federated States of Micronesia, but allows non-citizens to enter into agreements for the use of land for a term not exceeding 50 years. The Constitution further provides that land title may be acquired only in a manner consistent with traditions and customs, which lends strength to the traditional concept that the tabinaw remains intact among members of the extended family. The Constitution also guides the Legislature's actions regarding the State's compulsory acquisition of land, with State takings of private property for public purposes being allowed, with the proviso that there be just compensation, good faith negotiations, and consultation with appropriate local governments prior to the taking of private lands.

## 3.4 Environmental Planning and assessment

### National

#### Key Issues

#### Zoning

Increasing development and population pressures highlight the urgent need to address the complex issue of land use regulation and physical planning. Associated matters such as mapping, survey, delineation of boundaries and registration of land titles need to be examined in light of traditional land tenure which greatly inhibits physical planning regulation and control.

In the future, zoning could play a significant role in identifying, creating and managing protected areas such as watersheds, historic sites and the critical habitat of endangered species. Physical planning and zoning requires a coordinated, cooperative approach by the National Government with the States and municipal authorities.

#### Earthmoving

The *Earthmoving Regulations* appear to require all persons, including government bodies who engage in earthmoving activities in the FSM, to obtain a permit from the National Government.



However, the practical application of the Regulations is not widely understood. The Department of Human Resources receives a few applications for earthmoving permits from Pohnpei State and very few from the other three States.

### ***Environmental Impact Assessment (EIA)***

The FSMEPA applies its EIA provisions only to projects of the National Government or its agencies or to projects funded wholly or in part by the National Government. The Act does not provide EIA planning guidelines for projects and activities at a State or municipal level. Accordingly, there is no legislative structure for a coordinated and consistent method of EIA at these levels.

Administrative systems are inadequate to properly implement and enforce the Regulations. Co-ordination between Government agencies at the National level is often on an unplanned, case-by-case basis.

## **Legislation**

### ***FSMEPA Subsidiary Regulations - Earthmoving***

The Regulations provide that permits must be obtained in relation to earthmoving activities from the Secretary of Human Resources. Earthmoving is defined to include activities of a continuous nature such as dredging or quarrying which disturb or alter the surface of land, including reefs and lagoons. Earthmoving also applies to subdivision and development of land, and the moving, depositing or storing of soil, rock, coral or earth.

### ***Environmental Impact Assessment (EIA)***

These EIA Regulations of 1989 require the National Government and its agencies to submit an Environmental Impact Statement (EIS) to the Secretary of Human Resources prior to taking any major action significantly affecting the quality of the human environment.

The Regulations provide for a two tier EIA process. An Initial Assessment is conducted for projects which do not appear to have significant environmental impact. A standardised check-list is appended to the Regulations to facilitate the evaluation. If the project proponent concludes that there will not be a significant impact and the Secretary agrees, then the EIA process is completed.

If, however, there is a significant impact, then a comprehensive EIA is required. An Appendix to the Regulations lists examples of impacts designated as significant.

It should be noted that the *Foreign Investment Act* (32 FSMC) provides for an indirect, peripheral EIA function. Under this Act the Secretary of Resources and Development when considering whether or not to grant a foreign investment permit must take into account whether the proposed activity will have an adverse environmental impact.

## **National and State Responsibilities**

There is a good deal of confusion between the National Government and State Governments regarding jurisdiction on various environmental issues. A case in point is the question of jurisdictional authority regarding the recently-enacted *National Government Environmental Impact Assessment Regulations*. By letter of December 2, 1988 to the Secretary of the National Department of Human Resources, Kosrae Governor Yosiwo P. George reiterated his belief that the National Government was constitutionally prohibited from conducting environmental oversight of projects occurring in Kosrae. He opposed the imposition of National Government

environmental standards in Kosrae (while allowing National Government technical assistance to be provided), and affirmed that the final decision on whether or not a project should go forward was a prerogative of the State. This issue must be resolved in all environmental areas throughout FSM.

### **Recommendations on Environmental Planning and Assessment - National**

8. Clarify which aspects of environmental planning and control are within National and State jurisdictions and identify areas of concurrent jurisdiction. Areas of municipal jurisdiction also need to be identified. Clarification of this issue may well require policy decisions in addition to legal interpretation of the Constitution. Once jurisdictional issues are resolved, attention may be given to the development of National and State legislation which is appropriate, clear and enforceable.
9. Even if there are no legislative changes made, there is a need for improved administrative structures and systems to co-ordinate, implement and enforce existing legislation and regulations. Consistency and uniformity of National and State environmental controls should be encouraged.
10. There is a clear need for all projects, both private and government, to be subject to environmental impact assessments (EIA) reviews.
11. Physical planning, including building controls, should be addressed by legislation and regulation.

## **Kosrae**

### **Legislation**

Kosrae Code Section 11.201 *Proposed land use legislation* requires that the Governor submit proposed legislation regulating land use to the Legislature within one year following the effective date of the Compact of Free Association. No proposed legislation has yet been submitted.

*Regulations on Fill and Construction Projects Below High Water Mark* establish procedures by which land below the high water mark may be filled and built on. No substantive environmental review is required.

### **Key Issues**

The State of Kosrae has recognised the need for unified environmental oversight of development projects to prevent the degradation of precious natural resources. Such oversight must include setting zoning standards, examining the impact of accelerated erosion and sedimentation on reefs and coastal areas, and requiring specific environmental impact assessments, preferably funded by the project proponent.

### **Recommendations on Environmental Planning and Assessment in Kosrae**

12. Pass legislation providing for (a) land use planning; (b) analysis of earthmoving activities' effects on reef, cultural and coastal zones; and (c) specific environmental impact assessment requirements to be provided by development project proponents before construction commences.

## **Pohnpei**

### **Legislation**

The *TTEQPA Subsidiary Regulations - Earthmoving* regulate earthmoving activities in the State of Pohnpei. The Regulations require that all earthmoving activities within the State of Pohnpei be conducted so as to prevent accelerated erosion and accelerated sedimentation. People wishing to engage in earthmoving activities must set out erosion and sedimentation control measures in a plan, and must receive a State Permit before embarking on their planned activity.

### **Key Issues**

The *Earthmoving Regulations* are generally implemented only to curb the most blatant unauthorised dredging and fill activities. Although the Regulations have been quite effective in the recent past, currently the National Government and the State of Pohnpei are operating two regulatory and permitting systems with the same legislative instruments. Perhaps representatives from the State may wish to consider a Memorandum of Understanding, or similar document, with the National Government Department of Human Resources to set forth a single earthmoving permitting system

Pohnpei's draft *Environmental Protection Act* recognises the urgent need for assessments of environmental impacts. The draft Act requires Environmental Impact Statements to be prepared before issuance of permits for any public or private project that may significantly affect environmental quality. The Act further requires that regulations set forth criteria for their development and for the payment for their preparation. Regulations should be considered in this vital area of environmental control.

Presently, *National Environmental Impact Assessment Regulations* apply in Pohnpei State whenever any Project Proponent receives funding from the National Government for a specific project with environmental impact. This includes FSM projects, FSM/State Projects, or State projects funded by the National Government.

### **Recommendations on Environmental Planning and Assessment in Pohnpei**

13. Draft Pohnpei - specific Environmental Impact Assessment Regulations.
14. In conjunction with State and Municipal planning officials and other affected Department officials, State environmental officers should participate in the development of more comprehensive zoning standards, especially regarding the fragile and often over-utilised coastal zone.

## Chuuk

### Legislation

The State Constitution calls for the creation of an independent EPA and the enactment of appropriate environmental protection laws and regulations.

The 1989 MOU delegated to the State Government the power to apply the *National Earthmoving Regulations* to activities in Chuuk. There was no corresponding delegation of the Environmental Impact Assessment Regulation.

There is no zoning legislation or regulation in Chuuk. The MOU also delegated to Chuuk the National Building Construction Permit Program.

The National legislative requirement for Foreign Investment Permits (32 FSMC) ensures that some environmental impact assessment of proposed developments and projects for Chuuk takes place. However, this assessment is done at the National level and only when a Foreign Investment Permit is required.

### Key Issues

Although the State Government has the power to apply the *National Earthmoving Regulations*, many projects proceed without permits being granted. The administration of the Regulations is haphazard. There is very little, if any, enforcement. In view of the considerable dredging, sand mining and land clearing activities in Chuuk, the Regulations need to be applied and enforced to limit environmental damage.

Zoning and physical planning are not implemented in Chuuk. Rapid urbanisation and population pressures necessitate a legislative response. Further, there is no legislative or regulatory basis for Environmental Impact Assessments in relation to developments and activities in Chuuk.

#### **Recommendations on Environmental Planning and Assessment in Chuuk**

15. Allocate the following tasks to the newly-created State environment agency:
  - examining State needs for environmental protection legislation and regulation and advising the State Government accordingly;
  - liaising with the National Government to determine which environmental protection functions the State should administer;
  - advising the State government as to the operation and implementation of National environmental laws and regulations within the State.
16. Strengthen physical planning within the State Department of Commerce and Industry.
17. Review and amend the National-Chuuk State Memorandum of Understanding to detail more clearly which environmental protection functions are the responsibility of the State and National Government.
18. Institute Environmental Impact Assessment requirements in Chuuk.

## Yap

### Legislation

#### ***Earthmoving***

Draft Regulations for the control of earthmoving and sedimentation have been authored recently, again based on old *Trust Territory Regulations* of the same name. The draft Regulations currently are undergoing a process of criticism and review. Under the draft Regulations all earthmoving activities must be conducted in such a way as to prevent accelerated erosion and acceleration of sedimentation. There is a requirement that an erosion and sedimentation control plan be prepared by an expert and filed with the Environmental Protection Agency if a permit is needed. Permits are required for all earthmoving activities except for ploughing or tilling for agricultural purposes or for building one or two family residences.

#### ***Environmental Impact Assessment***

The *Environmental Quality Protection Act* provides for compulsory environmental impact studies. All persons must include an environmental impact assessment study in accordance with the Agency's regulations in all development proposals. The environmental impact statement must be made to the Agency before the developer takes any action significantly affecting the quality of the human environment. Environmental impact assessment regulations had not been promulgated at the time of this review.

#### ***Zoning***

The Yap State Code regulates the issuance of building permits. These provisions require a person to obtain a permit from the Planning Commission before building any permanent structures. The Commission is given 60 days in which to issue a permit. No guidance is provided regarding environmental factors that could mitigate for or against issuing such a permit.

### **Recommendations on Environmental Planning and Assessment in Yap**

19. Amend the draft Regulations for Earthmoving and Sedimentation in accord with the 1991 reviews of the Regulations by the Office of the Attorney General. Enact the regulations as soon as practicable.
20. Enact environmental Protection Agency Regulations offering specific environmental impact assessment controls and requirements for all development projects pursuant to Yap State Code Title 18, Section 1509. This effort should be coordinated and merged, if possible, with a proposed new system of development review recently submitted by the University of Oregon Micronesia Program.
21. This proposed coordinated development review process needs to be coordinated with the environmental impact assessment system established under the *Yap Environmental Quality Protection Act*. Extensive consultation with the Departments and agencies responsible for implementation of this proposal is essential, as is the considered development of clearly worded and easily understood procedures.

22. Code provisions regarding the issuance of building permits remain silent on specific assessment criteria or environmental zoning requirements. The provisions refer to the Yap Islands Proper Master Plan Area, an area not yet defined. Guidance for the Commission is required, perhaps in the form of Regulations. Proper planning criteria and guidelines for both the public and the Commission are desirable. Coordination with the Environmental Protection Agency is also necessary.

## 3.5 Water supply and Water Quality

### National

The FSMEPA is the controlling legal document for the protection of marine waters, fresh waters and public water systems within FSM. FSMEPA Section 10 gives the Secretary of Human Resources general power to protect the environment and prohibit pollution or contamination of waters within the Federated States.

### Key Issues

#### ***Public Water Systems***

The current Regulations rely on a narrow definition of a public water supply system, which does not authorise environmental oversight of systems smaller than 15 service connections, private hotel or housing development systems, or bottled water. Many systems of water delivery to the public are available in FSM; during times of drought the public may rely on private water delivery systems which are not currently overseen by environmental personnel.

Further, the Regulations contain no protective provisions restricting polluting activities near bodies of water or aquifers which provide water for public consumption or to protect the public's water supply by regulating the digging, construction and abandonment of wells.

Although FSMEPA recognises geographic and other differences as a factor in development of secondary drinking water standards, the Trust Territory Regulations do not. Economic and technological difficulties are also referred to in the parent Act, but the present standards do not reflect this concern or permit flexibility in its performance standards.

#### ***Marine and Fresh Waters***

Marine waters play a vastly important role in the traditional FSM lifestyle and in the National Government's economic plans for the future. Additional drafting and enforcement efforts may control environmental degradation before pollution becomes an impediment to local subsistence and foreign fishing ventures. Further technical and monetary assistance is required to accomplish this goal.

The current *Trust Territory Regulations* provide inadequate groundwater protection, especially essential in atoll communities. Further, pollution control requirements are scant, and oil pollution prevention measures are wanting.

### **Recommendations on Water Supply and Water Quality - National**

23. Revise the *Trust Territory Public Water Supply Systems Regulations* to create FSM-specific criteria, including, but not limited to, expanding the definition of "public water supply" and requiring well-drilling permits to insure uncontaminated supplies of water.
24. Revise the *Trust Territory Marine and Fresh Water Quality Standard Regulations* to create FSM-specific criteria, including, but not limited to, enhancing groundwater protection and pollution prevention and control measures.
25. Fund technical and laboratory assistance programs to enable further testing of public, coastal and offshore marine waters.

## **Kosrae**

### **Legislation**

The Kosrae Constitution prohibits the fouling of public rivers and public water supplies. However, there are no Kosrae State public drinking water, marine water quality, or fresh water quality standards in existence. National minimum standards for public drinking water and marine water quality, adopted from *Trust Territory Regulations*, are followed.

### **Recommendations on Water Supply and Water Quality in Kosrae**

26. Fund technical and laboratory assistance programs to enable further testing of public, coastal and offshore marine waters.
27. Draft marine, fresh and public drinking water standards appropriate for Kosrae (but not less than Constitutionally-mandated national standards); or, enter into a written cooperative agreement with the National Government Department of Human Resources to administer National standards.

## **Pohnpei**

### **Legislation**

The purpose of the *Trust Territory Public Water Supply Systems Regulations* is to establish certain minimum standards and requirements to ensure that water supply systems are protected against contamination and pollution and do not constitute a health hazard.

The purpose of the *Trust Territory Marine and Fresh Water Quality Standard Regulations* is to identify the uses for which the various waters of Pohnpei shall be maintained and protected, to specify the water quality standards required to maintain the designated uses, and to prescribe requirements necessary for implementing, achieving and maintaining the specified water quality.

## Key Issues

Water quality monitoring in Pohnpei is currently performed by the Sanitation Section of the Division of Public Health within the State Department of Health Services. Public drinking water monitoring is limited to testing for chlorine, bacteria and turbidity. Overall monitoring of the water delivery system is attempted, but insufficient funds and inadequate staffing levels prevent comprehensive oversight.

### Recommendations on Water Supply and Water Quality in Pohnpei

28. Fund technical and laboratory assistance programs to enable further testing of public, coastal and offshore marine waters.
29. If Pohnpei State is granted or delegated authority to enact and enforce pollution regulations, re-draft *Trust Territory Public Water Supply and Marine and Fresh Water Quality Standards Regulations* to update them and make them Pohnpei-specific.

## Chuuk

### Legislation

The Public Water Supply System Notice of Intent Program and the Public Water Supply System Emergency Construction Permit Program were delegated by the national government to the State in 1989. However, certain water control powers are reserved to the National Government, including public water supply system operator certification, public water supply system variances and exemptions, and the public water supply system plan and specifications approval program.

### Administrative Structures

The Department of Public Works is responsible for assessing statewide water resources and needs and for expanding the existing Weno water system. Freshwater resources are limited and deteriorating in quality. Weno's water system is supplied by wells and supplemented by river water. High islands in Chuuk lagoon have small spring water-supplied systems for individual settlements and also use private wells. However, overpumping of some wells has resulted in salt water intrusion. There are also rainwater catchment tanks on private properties and community structures. The Department maintains infrastructure and detects and repairs leaks in the Weno water supply system. The Department leases land upon which pumps, wells and sewers are located.

### Key Issues

The current control of water quality is ineffective. There are no State water quality standards set. Often sewerage and water pipes are laid in the same trench. Tap water is generally not drinkable. In some rural areas bacterial and soap contamination from toilets and domestic washing activities threatens the quality of well water and contributes to contamination of ground water. The water distribution system is also inadequate, with frequent limitations on availability. People rely on private catchment tanks and supplementary pumps. Public access to river water is constrained by private land ownership rights. Landowners often require high payments for access to and use of their land.



### **Recommendations on Water Supply and Water Quality for Chuuk**

30. Establish an independent state environment agency pursuant to Article XI, Section 1 of the Chuuk State Constitution.
31. Develop and enforce state pollution control policies, regulations and standards, with special emphasis on prevention of petroleum spills and the dumping of hazardous wastes.

## **Yap**

Draft *Water Supply System Regulations* for the State of Yap have been completed. The draft Regulations are modelled on the *United States Trust Territory Public Water Supply Systems Regulations*. These relatively complex regulatory controls require increased infrastructure and monitoring capabilities before full compliance is possible. It is therefore recommended that technical training and laboratory assistance programs be funded in order to enable further testing of the public water supply.

## **3.6 Pollution Control and Waste Management**

### **National**

#### **Legislation**

The *Federated States of Micronesia Environmental Protection Act (FSMEPA) 1984* provides for the protection and enhancement of the environmental quality of the air, land and water of FSM. The Act declares a continuing policy to work in close cooperation with State and municipal governments to "foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfil the social, economic, and other requirements of present and future generations" (FSMEPA, s. 2(1)).

The Act recognises that each person within the Federation has a responsibility as a trustee to succeeding generations to contribute to the preservation and enhancement of the environment (FSMEPA, s. 2(2)). In contrast to the present national administrative structure, the concept of "environment" here includes reference to "important historic, cultural and natural aspects of our Micronesian heritage" (FSMEPA, s. 2(2)(d)), and assures safe, healthful, productive, and aesthetically and culturally pleasing surroundings (FSMEPA, s. 2(2)(b)).

FSMEPA is the pre-eminent legal instrument for the control of pollution in FSM. A "pollutant" is broadly defined as "one or more substances or forms of energy which, when present in the air, land, or water, are or may be harmful or injurious to human health, welfare, or safety, to animal or plant life, or to property, or which unreasonably interfere with the enjoyment by the people of life or property" (FSMEPA, s. 3(4)).

To implement environmental degradation controls on such "substances or forms of energy", FSMEPA established an Environmental Protection Board within the Office of the President. In keeping with the National Government's recognition of the strong, federated State system, the Board was composed of five members: "one member from each of the four States of the Federated States of Micronesia and one member to be appointed by the President" (FSMEPA, s. 4(1)). In

1987, all powers and functions of the Board were transferred in 1987 to the administrative head of the National Department of Human Resources (the Secretary).

The Secretary is given sweeping general powers to protect health, welfare and safety, and "to abate, control, and prohibit pollution or contamination of air, land, and water" (FSMEPA, s. 10). Specifically, the Secretary is authorised to adopt, approve, amend, revise, promulgate, repeal and enforce environmental protection regulations. Further, in the control of pollution, as well as in the control of other environmental degradations, the Secretary is to administer a regulatory permit system.

## **Key Issues**

Implementation and enforcement of environmental goals in the Federated States is no easy task. Micronesian geography mitigates against enforcement; far-flung islands and atolls create difficult communication problems. A further constraint is the oft-mentioned strong cultural tradition of customary landowning that resists governmental control of land use through environmental regulation. Stronger local participation in environmental decision-making, coupled with increased conservation funding and facilities, will go far toward creating an FSM pollution control policy that links customary controls with modern preservation practices.

Present FSM national environmental law contains the beginnings of an umbrella system of regulatory control. The FSMEPA is administered by the Department of Human Resources, and contains eight subsidiary regulations, six of which are documents saved from Trust Territory times. Appointment and funding of a lead agency responsible for all aspects of oversight, and committed liaison and enforcement efforts remain essential for the realisation of a fully effective system of legal controls.

### **Solid Waste**

Increasing population pressures and increasingly available non-biodegradable materials have exacerbated FSM's solid waste disposal problems. Hazardous wastes, such as PCB's, are insufficiently contained, thereby contaminating both land and coastal waters.

### **Toilet Facilities and Sewage Disposal**

Sewage facilities remain inadequate in most areas of FSM, despite recent improvements in sewerage systems in some localities. Like solid waste issues, sewage disposal issues vary from locale to locale, requiring significant State and municipal participation in efforts to avoid environmental degradation.

Regulatory revisions are necessary at the National Government level, again requiring significant State and municipal input. Present regulations are not adequate to address the burgeoning problem of sanitary and environmentally safe sewage disposal in FSM.

## **Recommendations on Pollution Control and Waste Management – National**

32. Develop a comprehensive national waste management plan to include National Government policies and priorities, as well as State-specific projects for rural sanitation, waste water treatment and solid waste disposal.

33. Revise the *Trust Territory Solid Waste Disposal Regulations* to make them FSM-specific, including, but not limited to, simplification of the permitting process, enhanced protection and procedures concerning the disposal of hazardous wastes.
34. Revise the *Trust Territory Toilet Facility and Sewage Disposal Regulations* to make them more reflective of FSM needs, including, but not limited to, inclusion of simple septic tank and pit latrine designs, and incorporation of adequate standards for septic tank and pit latrine materials and installation.

## **Kosrae**

### **Legislation**

Chapter 4 of Title 7 of the Kosrae State Code establishes the Kosrae Environmental Protection Board in 1985. The Board has not been functional since 1988. Its legal powers and duties remain, however. The Board consists of seven members who serve a four year term. Broad powers and duties are prescribed, including the ability to: protect the environment; abate and control pollution; prevent contamination of air, land and water; adopt and enforce regulations; adopt environmental protection programs; collect information and develop reports; enter property for purposes of inspection; issue cease and desist orders; and order a pollution party to abate and remove polluting matter.

The Kosrae Code prohibits littering on property, or dumping waste matter in or on a public or private road, or dumping waste matter in parks or other public property, or dumping waste matter on private property without the owner's permission. It further makes it unlawful to deposit rocks or dirt on roads or on property without the appropriate authority's consent.

The Kosrae Code requires that the State Department of Health Services provide toilet standards, and restrictions on the disposal of human excrement outside a toilet. The section further requires that inhabited dwelling places have toilets.

Specific State regulations follow Micronesia-wide Trust Territory thinking regarding appropriate environmental health matters. KC 7.402 suggests adoption of regulations relating to: primary and secondary drinking water, classifying air, land and water according to present and future uses; pesticides control and certification of applicators; and pollutant discharge permitting. Board enforcement powers are set out in the Kosrae Code, including issuance of a cease and desist order; imposition of a civil penalty up to \$10 000 for each day of violation; or commencement of a civil action to enjoin the violations

A proposal for an Act in 1991, ready for resubmission to the Kosrae State Legislature, is part of a larger proposed Kosrae Island Resource Management Program (KIRMP). The resulting Kosrae Island Resource Management Program is designed to:

- formally review proposed development projects;
- help improve the coordination between Kosrae's government and private sectors in supporting wise development; and
- help to protect Kosrae's natural and cultural resources from being needlessly destroyed by unwise development (Dahl 1991).

The proposed Program requires implementation by legislation. The current draft amends the Kosrae State Code to establish a Development Review Commission to replace the EPB. The proposed Commission will be responsible for overseeing the use and protection of Kosraean resources, "balancing the needs of economic and social development with those of environmental quality and respect for our traditional ways" (LB No. 5-58, Section 1). The Commission will be composed of five members, appointed by the Governor, who serve terms of two years. Commission powers and duties include:

- generally protecting the environment and abating pollution and contamination of air, land and water;
- adopting and enforcing regulations, including those regarding primary and secondary drinking water systems, regarding classes of air, land and water uses, pesticides pollution and certification of applicators, and issuance of permits for the discharge of a pollutant;
- adopting a development permit system regarding construction projects which may significantly affect natural or historic resources;
- collecting information and reports;
- entering public or private property to inspect;
- issuing cease and desist orders and abatement orders to violators of environmental laws or regulations;
- devising land use plans; and
- acting as an agent of the FSM Environmental Protection Board pursuant to written agreement approved by the Governor.

A Technical Advisory Committee is charged with providing technical guidance in the review of development project proposals, and coordinating the regulatory, review and permitting powers of its member bureaus with the powers of the Commission. Environmental impact studies are required for all development proposals significantly affecting the quality of the human environment.

## **Key Issues**

A great deal of effort and years of cooperative action went into the creation of the KJRMP and its enabling legislation. Indeed, the very effort itself furthered peoples' recognition of the fragile nature of Kosrae's environment and the need for an effective system of environmental and resource controls.

The Bill as it is now written encompasses the duties of the ECB and adds important land use and planning functions. Land use plans are still quite a controversial item in Kosrae. Government plans could pre-empt traditional land uses, and landowners in custom are not yet familiar with that level of government oversight. It has also been suggested that existing Government bodies, such as the Land Commission, the Department of Conservation and Development, or the Office of Planning and Budget might be better suited to the actual development of such plans.

The Technical Advisory Committee's role and functions should be clarified, and perhaps the State Government employees sitting on the Committee could be given additional power to guide Commission decisions and set permit requirements. Currently, the Committee is an advisory body only. If given more authority, it may be the ideal body to extend environmental protection to include natural resource management as well as environmental health and sanitation protection.

The inclusion of historic preservation language recognises the appropriate placement of cultural protection within the auspices of environmental oversight, but possible overlaps with State HPO powers might be examined. Environmental impact studies are required only for proposals

affecting the quality of the human environment; those that affect other species or their habitats will presumably remain unexamined.

The Division of Environmental Health and Sanitation within the department of Health Services currently handles waste management issues. No State standards have been enacted, and thus FSM National standards are followed. In Kosrae, most residences have an outside "house" which includes a toilet and shower. Wells are generally not productive in Kosrae, and almost none are in current operation.

### **Recommendations on Pollution Control and Waste Management in Kosrae**

35. Devise legislation for a statutory environmental oversight authority with full regulatory and permitting power in regard to the environmental health and natural resource protection and management. Such legislation should include specific environmental impact study requirements, cultural heritage protections, establish a Board, Commission, or Committee with interdisciplinary membership and regulatory power, and should specify a broad spectrum of required environmental health and natural resource regulatory instruments.
36. Develop a State-specific project for rural sanitation, waste water treatment and solid waste disposal.
37. Draft solid waste and toilet facilities regulations with standards appropriate to Kosrae (but not less than Constitutionally-mandated national standards); or, enter into a written cooperative agreement with the National Government Department of Human Resources to administer National standards.

## **Pohnpei**

### **Legislation**

The State of Pohnpei continues to enforce the *Trust Territory Environmental Quality Protection Act* and its underlying Regulations. The TT EQPA, originally passed in 1972, was amended five times between 1972 and 1978 to create a strong legislative statement on behalf of the environment. Creating a Board with a mandate to enact controls on a broad range of environmental concerns, the Act sets forth an all-inclusive public policy at Section 502:

The people, plants and animals of the Trust Territory of the Pacific Islands are dependent upon the air, land and water resources of the islands for public and private drinking water systems, for agricultural, industrial and recreational uses, and as a basis for tourism. Therefore, it is declared to be the public policy of the Trust Territory of the Pacific Islands, and the purpose of this Subchapter, to achieve, maintain and restore such levels of air, land and water quality as will protect human health, welfare and safety and to the greatest degree practicable prevent injury to plant and animal life and property, and as will foster the comfort and convenience of its people and their enjoyment of the environment, health, life and property, and as will promote the economic and social development of the Trust Territory of the Pacific Islands and facilitate enjoyment of its attractions.

Seven Regulations setting forth environmental health protections were enacted during Trust Territory times. Six of those Regulations remain as law in the State of Pohnpei: *Trust Territory Air Pollution Control Standards & Regulations*, *Trust Territory Pesticides Regulations*, *Public Water Supply Systems Regulations*, *Marine and Fresh Water Quality Standard Regulations*, *Trust Territory Solid Waste Regulations*, and *Toilet Facilities and Sewage Disposal Regulations*. A seventh *Trust Territory Regulation*, concerning Earthmoving controls, has been superseded by a *State of Pohnpei Earthmoving Regulation*. Some of these are dealt with further below.

Disagreement among the State legal community regarding the ability of the State to save a Trust Territory enactment without a specific legislative instrument (or even with one), and the urge to draft environmental protection legislation particularly appropriate to the State of Pohnpei, both led to the 1991 submission of a Bill to create a Pohnpei Environmental Protection Agency, Board and Advisory Council.

The proposed *Pohnpei Environmental Protection Act (PEPA)* was drafted and submitted to the Second Pohnpei Legislature at its Seventh Regular Session in 1991. The Bill, following the trend of many recent environmental proclamations, sets out a sweeping public policy statement in defence of a broadly-defined natural environment:

The Government of Pohnpei, recognising the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth and redistribution, cultural change, resource exploitation, and new expanding technological advances, and recognising the critical importance of restoring and maintaining environmental quality for the overall welfare and development of man, declares that it is the continuing policy of the Pohnpei Government...to create and maintain conditions under which man and nature can exist in productive harmony, and fulfil the social, economic and other requirements of the present and future generations of Pohnpeians (PEPA, Section 2(1)).

In concert with present world environmental thought, the last two clauses above address the goal of sustainable development. Recognising the need to consider traditional cultural relations (PEPA, Section 2(2)) and to work in close cooperation the National Government, each municipality of Pohnpei, and the public and private sector (PEPA, Section 2(3)), the State of Pohnpei pledges to act as trustee of the environment for the current and future generations of Pohnpeians. "Man" is used throughout the document to denote both male and female human beings.

The Act creates an independent governmental agency, the Pohnpei Environmental Protection Agency. The Agency's Board of Directors is composed of seven members, FSM citizens and residents of Pohnpei, appointed by the Governor for staggered terms of four years. The Agency's management is headed by an executive officer designated by the Board.

Powers of the Agency include the protection of the environment and the abatement, control, and prohibitions of pollution or contamination of air, land and water through the establishment of regulatory and permitting systems. Allowable regulations include but are not limited to the following areas: earthmoving, environmental impact assessments, water supply systems, pesticides, sewage, solid waste, marine and fresh water quality, air pollution, groundwater, and hearing procedures for the Board.

In the administration of a permitting system controlling discharges of pollutants into the air, land or water, the Agency is required to submit copies of permit applications and environmental impact assessments to a number of State Government agencies for comment. Environmental impact assessments are required for public or private projects "that may significantly affect the

quality of the environment to include the land, water and air" (PEPA, Section 9(2)(b)). The inclusion of private projects is an important new step, as the National Government limits environmental impact assessments to public projects only.

Enforcement provisions allow a variety of enforcement actions by the Agency, including issuance of a cease and desist order, issuance of an abatement order, imposition of a civil penalty, pursuit of a civil action for an injunction or monetary damages, and setting a public hearing on the violation. Civil penalties are low (\$100 per day for each day of violation), but the amounts go into an "Environmental Quality Fund" until \$50 000 is reached, after which the penalties are deposited into the Pohnpei Treasury. This provision is quite important, allowing the Agency control of penalty funds for emergency response to environmental accidents and for program support.

The *Trust Territory Air Pollution Control Standards & Regulations* (Trust Territory Code (TTC) Title 63, Chapter 13, Subchapter VIII) were enacted on 25 June 1980. The purpose of these Regulations is to control the quality of air by setting clean air quality standards and by preventing or controlling the emission of air contaminants at their source. The Regulations specify monitoring, record keeping and reporting requirements for operators of air contaminant sources.

*TTEQPA Subsidiary Regulation - Pesticides* in effect since August 1, 1980, establish a system of control over the importation, distribution, sale, and use of pesticides by persons within Pohnpei.

The purpose of the *Trust Territory Solid Waste Regulations*, also in use by the National Government is to establish minimum standards governing the design, construction, installation, operation, and maintenance of solid waste storage, collection and disposal systems.

The *Trust Territory Toilet Facilities and Sewage Disposal Regulations* establish minimum standards for toilet facilities and sewage disposal to reduce environmental pollution, health hazards, and public nuisance from such facilities.

## **Key Issues**

### ***Allocation of Powers between the National Government and Pohnpei State***

Pohnpei State government officers believe that Pohnpei State has the clear authority to regulate its environment. Because the word "environment" does not appear in the allocation of powers sections of the National Constitution, the State may argue that all environmental authority rests with the state. (Powers not expressly delegated to the National Government are considered state powers, pursuant to Article VIII, Section 2 of the National Constitution.) Even if the National Government's exclusive power to promote education and health by setting minimum standards (National Constitution, Article IX) is interpreted to include environmental regulation, the State may argue that it is fully free to set any standards higher than those set by the National Government. This issue has not yet been litigated.

### ***Passage of a Pohnpei Environmental Protection Act***

Bill No. 569-91, the *Pohnpei Environmental Protection Act*, was passed by the Legislature in 1991 by a large margin. The Governor at that time, the Honourable Resio S. Moses, did not approve the measure, however, and a subsequent attempt at a legislative override narrowly failed. Resubmission of the Bill to the State Legislature is planned.

The development of an independent Agency is a very strong statement of the State's desire to protect its environment. An autonomous entity may usually move more quickly in response to emergency situations, and environmental enforcement efforts are also often enhanced. Essential

liaison and outreach functions are specifically delineated. It is hoped that concerns raised during the first political viewing of the document may be addressed, and that the Bill finds its place in the statutory enactments of the State of Pohnpei.

### **Trust Territory Air Pollution and Pesticides Regulations**

Currently, the National Government and the State of Pohnpei operate two regulatory and permitting systems with the same legislative instruments. Perhaps representatives from the State may wish to consider a Memorandum of Understanding, or similar document, with the National Government Department of Human Resources to set forth a single permitting system, thereby avoiding duplication of effort and subsequent over-consumption of scant monetary resources. Such a cooperative effort is certainly anticipated by the *Federated States of Micronesia Environmental Protection Act*, Section 12, which authorises delegation by the National to State Government by way of "written cooperative agreement".

Increasing population pressures and increasingly available non-biodegradable materials have exacerbated Pohnpei's solid waste disposal problems. Solid waste issues differ between localities; municipal governments must play a primary role in the development of waste management strategies. Private and communal land ownership systems require active landholder participation in any government-initiated solid waste reduction proposals. Sewage facilities remain inadequate in many areas of Pohnpei, despite recent rehabilitation of sewerage systems in some localities. Maintenance is a problem, as is compliance with current Regulations.

### **Recommendations on Pollution Control and Waste Management in Pohnpei**

38. Modify and reintroduce the Bill for a Pohnpei Environmental Protection Act
39. Enter into a "written cooperative agreement" with the National Government Department of Human Resources to avoid duplication of regulatory and permitting efforts. This agreement should include provisions on pollution, water quality, waste management, zoning, earthmoving and EIAs.
40. Fund a position for a State environmental legal officer, either within the Department of Health Services or within the newly-created Pohnpei Environmental Protection Authority, with authority to draft regulatory instruments and enforce them.
41. If Pohnpei State is granted or delegated authority to enact and enforce pollution regulations, re-draft Trust Territory Air Pollution and Pesticides Regulations to update them and make them Pohnpei-specific.
42. Develop a State-specific project for rural sanitation, waste water treatment and solid waste disposal.
43. If Pohnpei State is granted or delegated authority to enact and enforce pollution regulations, re-draft Trust Territory *Solid Waste and Toilet Facilities and Sewage Disposal Regulations* to update them and make them Pohnpei-specific.



## **Chuuk**

### **Administrative Structure**

There is no administrative unit designated to have specific responsibility for pollution control of air, water and land. Several State Government bodies have responsibilities for matters such as waste water disposal, which have pollution control elements. The Department of Health Services also has certain pollution control functions, particularly with regard to sanitation. The State Transportation Division is responsible for oversight of aspects of water pollution such as fuel and oil leaks from vessels, and the dumping of trash into the harbour.

Responsibility for the broad range of issues embraced by the term "waste management" is scattered among several state administrative units. The Department of Planning and Statistics is charged with formation of a Waste Water System Development and Improvement Program to improve sanitation of rural waste water systems.

The Department of Public Works is responsible for the establishment of effective solid waste disposal systems and assists the Visitor's Bureau in disposing of trash it has collected. The Department also works with municipal governments and provides technical assistance on solid waste systems. The Department is required to be involved in the preparation of a long-term water and sanitation development plan. The Facilities Management Improvement program proposes the extension of waste water collection lines and the extension of the system to more households in the Weno area.

The Department of Health Services is responsible for ensuring sanitary conditions for the State. The Chuuk Visitor's Bureau operates a garbage collection and disposal program. Trash bins are provided for some government agencies and public areas free of charge.

### **Legislation**

There is no Chuuk State legislation specifically regarding pollution. In the absence of state laws the State Attorney General is of the opinion that National pollution laws may be applied by the State government.

### **Key Issues**

Efforts must be made to enact state pollution control laws and regulations. "Pollution" must be broadly defined. Responsibility for pollution control should be allocated to a government administration unit which will liaise with other government authorities having related responsibilities, so as to avoid duplication. Clear, enforceable pollution policies and regulations must be developed. The responsibility of municipal governments for pollution control must be identified and power delegated accordingly.

At present, pollution control is effected on a case-by-case, reactive basis. For example, there are no regulations or policies in respect to petroleum and other spills. When a small oil spill recently occurred, the State Government ordered the responsible company to cease its operation and clean up the spill. This direction, however, had no identifiable statutory basis other than the State's Constitutional obligation to protect the land and waters of the State.

Water and land pollution are probably the most pressing forms of pollution requiring immediate attention. In land fill areas all kinds of toxic materials such as plastics and car bodies are simply bulldozed into the water. Surplus chemicals are dumped directly into the water. Sewerage and waste water also find their way directly into the water surrounding the State. The sunken warships

in Chuuk lagoon are laden with tons of deteriorating chemicals and explosives which have major pollution potential.

Intensive local land use and growing urbanisation, particularly in Weno are generating pollution problems from gasoline, solid waste, PCB's, chlorine, sewerage, pesticides and fertilisers.

The State Constitution (Article XI, Section 1) expressly provides for the government to make laws for the development and enforcement of standards for environmental quality and for the establishment of an independent state environment agency. The Government should exercise these powers by establishing an effective, strong environmental protection agency (EPA). A State EPA was disbanded; a Task Force has been established to examine environmental controls.

Although the Visitor's Bureau has conducted "clean-up" programs, the problem of public litter is still acute. Empty oil containers dumped directly into water cause damage to the marine environment. It should also be noted that the majority of people in Weno cannot afford to pay the Visitor's Bureau to collect their garbage. Other than the separate collection of aluminium cans, there is no system for sorting garbage.

Garbage dumps are frequently sited at water's edge with the inevitable leachate seepage into the water. Garbage placed in the dump sites is bulldozed into the water, causing further environmental damage. Hazardous waste is often placed in the dumps. Sewerage and waste water from residences drains directly into the lagoon. In Weno, approximately 40 to 50 per cent of homes are connected to a sewer; the rest of the State is not. Many people deposit solid waste and excreta directly into the water surrounding the islands and atolls.

There are no controls at all for pollution caused by chemicals used in the processing of crops, meat and fish. Roads are often sealed with waste oil products. There is also no regulation of the disposal of human remains. Bodies are buried directly into the ground on private land.

Chuuk State requires precise clarification of National powers delegated under the Memorandum of Understanding and a new assessment of whether additional National powers should be delegated or new State laws and regulations enacted.

### **Recommendations on Pollution Control and Waste Management in Chuuk**

44. To alleviate confusion and avoid duplicative effort, the National and State Governments need to hold discussions in order to determine which pollution control responsibilities properly belong to the National Government and which to Chuuk State.
45. Fund technical and laboratory assistance programs to enable the State to conduct appropriate levels of water testing.
46. Draft marine, fresh and public drinking water standards with standards appropriate to Chuuk (but not less than Constitutionally-mandated national standards).
47. Delineate responsibility for all aspects of waste management, and consolidate these responsibilities within one department.
48. Develop a State-specific project for rural sanitation, waste water treatment and solid waste disposal.
49. Draft solid waste and toilet facilities regulations with standards appropriate to Chuuk (but not less than Constitutionally-mandated national standards).

## Yap

### Legislation

#### ***Environmental Quality Protection Act 1987***

Yap State has enacted its own environmental protection legislation, passed by the Legislature in late 1987. The stated public policy underpinning the *Yap State Environmental Quality Protection Act* (the Act) proclaims the State's desire to cooperate with National Government and Municipal Governments, as well as other concerned organisations, in order to create and maintain conditions under which human beings and nature may co-exist in productive harmony for the benefit of present and future generations.

The Act establishes the Yap State Environmental Protection Agency, which consists of a five-member Board of Directors and a full-time executive officer assisted by supporting staff. The State Governor appoints the Board members and also provides the Agency with necessary technical and legal assistance from within the State Government offices. The Agency may, however, retain the services of its own independent legal counsel. The Agency has the power and responsibility to control and prohibit pollution of air, land and water. For these purposes it may make regulations and adopt and implement systems, plans and programs for monitoring pollutants and restricting pesticide use. It is empowered to issue permits for controlling pollutants and is given wide powers of entry into private property to carry out its duties. The Agency must report annually to the State Legislature.

The Agency is given powers of enforcement against those who transgress any of the provisions of the Act. The enforcement action may include orders to stop or clean up or abate the effect of any pollution. Civil penalties of up to \$10 000 per day may be imposed against violators of the Act.

Public hearings may be conducted regarding alleged violation of the Act. Severe penalties of up to \$ 10 000 or six months imprisonment, or both, may be imposed for making deliberate false representations on applications to the Agency. This provision is designed to thwart any developer who does not truthfully alert the Agency to a potential environmental hazard in its permit applications or required environmental impact assessment study.

Agency Regulations are currently being promulgated in the areas of pesticides, public water systems, sewage, and earthmoving.

The *Draft Pesticides Regulations* have been formulated, and, if passed into law, shall replace the former Trust Territory Pesticides Regulations.

#### ***Trust Territory Solid Waste Regulations 1979***

The purpose of these Regulations is to establish minimum standards governing the design, construction, installation, operation, and maintenance of solid waste storage, collection and disposal systems.

#### ***Draft Toilet Facilities and Sewage Disposal Regulations***

These draft Regulations establish minimum standards for toilet facilities and sewage disposal to minimise environmental pollution, health hazards and public nuisance.

### **Disposal of Petroleum Products**

Yap State Code, Title 18, Chapter 4, Section 401 prohibits releasing or disposing of any petroleum product into the sea, lagoon, or an adjacent shoreline. A December, 1991, amendment to the petroleum disposal provisions makes it unlawful for any person to release or dispose of any petroleum product in or on the waters of a State Fishery Zone.

### **Oil Spills**

Yap State Code, Title 11, Section 805 creates an offence for the intentional or negligent spillage of oil. An intentional spill carries a maximum fine of \$25,000 or 60 days imprisonment. A negligent spill in excess of 50 gallons carries a fine of \$25,000.

### **Key Issues**

Issues of National/State jurisdiction plague attempts at coherent pollution control efforts. Currently, the National Government and the State of Yap plan to operate two regulatory and permitting systems with similar legislative instruments. Representatives from the State may wish to consider entering into a Memorandum of Understanding, or similar document, with the National Government Department of Human Resources to set forth a single permitting system, thereby avoiding duplication of effort and subsequent over-consumption of scant monetary resources. Such a cooperative effort is certainly anticipated by the *Federated States of Micronesia Environmental Protection Act*, Section 12, which authorises delegation by the National to State Government by way of "written cooperative agreement".

Increasing population pressures and increasingly available non-biodegradable materials have exacerbated Yap's solid waste disposal problems. Solid waste issues differ between localities; municipal governments must play a primary role in the development of waste management strategies. Private and communal land ownership systems require active landholder participation in any government-initiated solid waste reduction proposals.

### **Recommendations on Pollution Control and Waste Management in Yap**

50. Enter into a written cooperative agreement with the National Government Department of Human Resources to avoid duplication of regulatory and permitting efforts. This agreement should include provisions on pollution, water quality, waste management, zoning, earthmoving and EIA's.
51. Develop a State-specific project for rural sanitation, waste water treatment and solid waste disposal.

## **3.7 Biodiversity and Wildlife Conservation**

### **National**

#### **Legislation**

The Marine Species Preservation Chapter of Title 23 provides for the control of destructive fishing methods, prohibiting the catching, possession, or sale of any fish or other marine life by means of explosives, poisons, chemicals or other noxious substances. In recognition of customary practices,

destructive fishing methods do not include use of local roots, nuts, or plants which have the effect of stupefying but which do not kill fish or other marine life.

Limits are also set on the taking of hawksbill, green and sea turtles. It forbids the taking or killing of hawksbill turtles, sea turtles, or their eggs while on shore. The legislation also prohibits the taking or molestation of artificially planted or cultivated sponges, and sets size and seasonal limitations on the taking of black-lipped mother-of-pearl oysters. Penalties are trifling; violators are liable to a fine of not more than \$100 or to a term of imprisonment for not more than six months, or both.

Chapter 2 of the *Trust Territory Endangered Species Act of 1975* provides for the protection of endangered species of fish, shellfish and game. It declares the indigenous plants and animals of the FSM to be of aesthetic, ecological, historical, recreational, scientific, and economic value, and states that the policy of FSM is to foster the well-being of these plants and animals, including the prevention of the extinction of any species. To date, no conservation programs or habitat acquisitions have been effected under the Act.

The Act prohibits, with certain exceptions, any person from taking, engaging in commercial activity with, holding possession of, or exporting any threatened or endangered species of plant or animal listed by regulation.

The Act, in anticipation of FSM ratification of the *Convention on International Trade in Endangered Species* (CITES), prohibits imports into the Federated States of any species which is listed by CITES. It further allows for a listing by regulation of CITES prohibitions. A permit is required for importation of exotic plants and animals. The FSM Government may confiscate any endangered species of plant or animal, or any weapon, gear, or vehicle used for the purpose of violating the Act. Violators shall be liable to a fine not exceeding \$10,000 or to a term of imprisonment not exceeding one year, or both.

The *Fish, Shellfish and Game: Endangered Species Regulation*, under the *Endangered Species Act of 1975*, lists endangered species of the Trust Territory and their ranges. This Regulation is subsidiary to the *Endangered Species Act*. The Act provides for further subsidiary regulations to be issued by the Director of Resources and Development. No such regulations have yet been issued.

## **Key Issues**

### ***Protected Areas***

Much work remains to be done in the protection of species and development of nature preserves. Currently, there are very few legally established protected areas in FSM, nor is there appropriate legislation for this purpose.

Nature conservation and protected areas should be elements of an overall National Conservation Policy. Such a policy should guide FSM development along sustainable paths, and serve as a formal declaration of the importance of conservation to FSM. Strong State participation is essential in the development of this planning document. The policy might call for comprehensive protected areas legislation and organisational changes to provide for the effective administration of the proposed legislation.

### ***Conservation of Living Resources***

FSM's abundant terrestrial and marine resources suffer from rapidly increasing human population levels and their consequent infrastructure and development demands. Additional conservation

efforts are necessary to adequately protect, conserve and manage FSM's living resources. Principles of sustainable development must be more vigorously incorporated in all development proposals and in the environmental community's responses to those proposals. Terrestrial and marine flora and fauna conservation efforts must be more fully incorporated into large-scale government development projects.

Aquaculture, mariculture, and aquarium fish harvesting activities will increase in the next decade. There is the potential for over-exploitation of marine resources such as trochus and black-lip mother-of-pearl oysters. Regulatory controls are required. All regulatory controls, however, must take into consideration takings for traditional purposes.

Enforcement efforts under the present legislative framework for species conservation is not adequate. Enforcement is hampered by the vast geographical distances within FSM, by the lack of updated information on the species inhabiting FSM and which species require protection, by the jurisdictional confusion between National and State Governments, and by the ubiquitous lack of funding and training which plagues most environmental efforts in the FSM.

### **Recommendations on Biodiversity and Wildlife Conservation – National**

52. FSM presently requires more comprehensive nature preservation legislation, both in regard to species preservation and protected areas. Any system of protected areas must maintain traditional rights and practices. All protection must first be recognised as appropriate and desirable by customary landowners. Because of the innovation of governmental regulatory control over private, customarily-held lands and waters, public hearings, public education, and close interaction between National and State Departments is the proper starting point for the introduction of a comprehensive network of protected areas.
53. Provide additional funding and training to promote effective management and enforcement of living resources legal protection.
54. Coordinate legislative efforts to conserve living resources.
55. Revise the *Endangered Species Act*. At present, the Act is inadequately specific and insufficiently inclusive. Include an expanded listing of FSM endangered and threatened species.
56. It is recommended that FSM become a signatory to the *Convention on International Trade in Endangered Species Convention* (CITES).

## **Kosrae**

### **Legislation**

Kosrae Code Section 11.1601 *Endangered species*;  
Kosrae Code Section 13.524 *Endangering a species*

Section 11.1601 authorises the Director of the Department of Conservation and Development to set forth endangered species and provide for their protection by regulation. Section 13.524

makes it a misdemeanour to endanger any species set forth by regulation. The misdemeanour is punishable by imprisonment for up to 12 months or a fine not exceeding \$1,000, or both.

### **Endangered Species Regulations**

These Regulations classify four species of giant clam as endangered. A Giant Clam Sanctuary is also designated to provide sanctuary for the species and to promote the expansion of the Giant Clam population in Kosrae. The Sanctuary is located at the "depressed area in the reef flat on the seaward side of the Lelu causeway adjacent to the island Yenar".

The Code also prohibits a person from bringing a psittacine bird (including parrots, parakeets, or love birds) into Kosrae without specific case-by-case approval by the Department of Health Services. It also places seasonal, place and size limits on the taking or killing of Hawksbill turtle, sea turtle, or sea turtle eggs, black-lip mother-of-pearl and trochus, except as authorised.

Catching, possessing or selling marine or fresh water aquatic life caught with explosives, electrical charges, poisons, chemicals, or other killing substances is also prohibited. Fish or other marine life may not be procured on Sundays.

### **Key Issues**

No current legislation exists which protects marine and terrestrial areas by contemplating the establishment of nature parks or preserves. Specific instruments protecting specific species are enacted, but they are scattered and incomplete. The Division of Land Management within the Department of Conservation and Development has set the development of conservation and wildlife sanctuaries as a future priority.

### **Recommendations on Biodiversity and Wildlife Conservation in Kosrae**

57. Consolidate and expand species protection legislation; increase penalties; include fruit bat protection; create related habitat protection.
58. Draft legislation relating to the protection of marine and terrestrial areas, perhaps as State parks or preserves, in consultation with affected State Department, Divisions, Boards and Commissions.

## **Pohnpei**

### **Legislation**

Regarding establishment of parks or nature preserves, one State Park has been established at the "Spanish Wall" in Kolonia, and another park is proposed for the top of Sokes Mountain. Both would be administered by the Parks Division of the Department of Land. There is presently no specific legislative regulatory instrument establishing State nature preserves, although it is a State priority to create such an instrument for public lands.

The following Acts concern the conservation of living resources:

### **Act Regarding Exportation of Certain Crabs and Lobsters**

This Act makes it unlawful to export mangrove crabs, coconut crabs and lobsters, and sets penalties for violation at imprisonment for no more than two years or fines of not more than \$1,000, or both (PL No. 2L-223-71).

### **Act Concerning Fresh-Water Shrimp Harvesting**

This 1972 Act prohibits the harvesting and sale of fresh-water shrimp with explosives, chemicals, poisons, and other substances deleterious to aquatic life. The list of proscribed substances includes common bleaches and plant materials. Penalties are slight; violation of the Act warrants fines of not more than \$100 or imprisonment for not more than six months, or both (DL No. 3L-40-72).

### **Designation of State Bird Act**

This short Act designates the *Trichoglossus rubiginosus*, or Pohnpei Lorikeet, locally known as "Serehd", as the State Bird for the State of Pohnpei. The Act forbids the hunting or killing of any Pohnpei Lorikeet. Penalties include a fine of not more than \$500 or imprisonment for not more than one year, or both.

### **Marine Resources Conservation Act of 1981**

This Act regulates and protects five marine species: Trochus, Black Coral, Bumphead Parrotfish (Kemeik in Pohnpeian), Grouper (Maud, Mwanger, Sammerip, Sawi, or Sawipwiliet in Pohnpeian), and Mangrove Crab (Elimong in Pohnpeian). The Act sets taking, processing, marketing and commercial harvesting limitations, establishes seasons for taking, and prescribes criminal and civil penalties. Trochus harvesting procedures were amended in 1989.

### **Key Issues**

Pohnpei presently requires more comprehensive nature preservation legislation. Some conservation proponents suggest splitting species preservation and protected areas into two separate initiatives. This bifurcated approach would allow full legislative and administrative attention to each of these crucial areas.

In Pohnpei, parks may most easily be established on public lands, as more than 50% of Pohnpei land is public. Establishing parks on private land may be difficult; customary landowners often resist government regulatory structures thought to encroach on traditional rights and practices. Any system of protected areas must maintain traditional rights and practices to the extent possible; all protection must first be recognised as appropriate and desirable by customary landowners.

Presently, the Department of Land, Parks & Recreation Division has administrative authority over the development of protected terrestrial areas. Legislation could designate a parks system under the *Public Lands Act*. Nature preserve language is also present, however, in the *Forest Management Act* and the *Pohnpei Watershed Forest Reserve and Mangrove Protection Act*. Again, different administrative Divisions and Departments have similar legislative authority.

As for species protection, a number of Acts cover some species, while other species remain unmentioned. Penalties are frequently insufficient. Legislative consolidation of species protection and introduction of related habitat protection is desirable.



## **Recommendations on Biodiversity and Wildlife Conservation in Pohnpei**

59. Enact legislation to create an umbrella environmental protection organisation, with power to establish controls regarding natural resources conservation and environmental health areas. This would eliminate duplicative efforts and administrative confusion by defining environmental protection responsibility in one organisation. If no umbrella organisation is desired, then create an environmental advisory body, comprised of representatives from all government Departments, to coordinate biodiversity and environmental health efforts.
60. If no umbrella environmental organisation is desired, enact original legislation for the creation of State parks or nature preserves, or create parks under the *Public Lands Act*, the *Forest Management Act*, or the *Pohnpei Watershed Forest Reserve and Mangrove Protection Act*.
61. If no umbrella environmental organisation is desired, and if species protection is considered a State function pursuant to a Joint National-State Attorney General Opinion, enact comprehensive legislation for the consolidation of species protection and introduction of related habitat protection at the State level.
62. Additional funding and training is required to promote effective management and enforcement of current living resources legal protections; legislative efforts to conserve living resources should be coordinated with National and municipal Governments and updated.

## **Chuuk**

### **Administrative Structures**

Several of Chuuk's newly-created administrative units have responsibilities which could contribute to biodiversity conservation. The Department of Marine Resources is committed to marine resource assessment, management and planning. The Department of Agriculture is involved in a program to establish a Tol Island Bird Reserve in concert with local residents and United States government agencies. The Department of Agriculture has a policy of ensuring protection and controlled development of mangrove forests through identification of protection classifications such as coastal parks, recreation areas and wildlife sanctuary areas. An essential adjunct to this process is the zoning of areas for timber extraction and land fill.

The Department of Health Services designates protection of the habitat of rare and endangered species as one of its concerns. Further, if the Department of Health Services does achieve its objective of establishing an EPA, then this body may be given authority to regulate biodiversity conservation.

### **Legislation**

There are no present State legislative instruments regulating the protection of marine and terrestrial areas or the conservation of living resources.

## Key Issues

There is inadequate resource assessment data available in all areas of biodiversity conservation. Data is required for the accurate identification and listing of endemic species of flora and fauna, including endangered species and their habitat. Other than research regarding the Chuuk poison tree and the Chuuk Greater White-eye, very little has yet been done to gather data on endangered species. Further, marine and terrestrial areas with significant conservation values should be identified.

Chuuk State has made an attempt to create a protected conservation area on Tol Island in Chuuk Lagoon. Two rare and endangered species, the Chuuk Greater White-eye and the Chuuk Poison Tree are found on Tol Island. The local community is interested in creating a reserve to protect an area of remnant native forest and an important watershed. Discussion favourable to the introduction of a Natural Heritage Areas Bill, however, has not yet resulted in a draft document.

Habitat and species destruction is occurring with frightening speed through land clearing, dredging, dynamiting, uncontrolled waste disposal and pollution. Fragile terrestrial and marine ecosystems such as reefs and mangroves are under continuing and relentless threat by uncontrolled development are not subject to EIA.

### **Recommendations on Biodiversity and Wildlife Conservation in Chuuk**

63. Develop policies, administrative structures, legislation and regulatory controls regarding biodiversity conservation. Accumulate resource assessment data. Appropriate policies and controls may not be formulated if knowledge of the resources to be protected is inadequate.
64. If a State EPA is established, extended its powers to encompass biodiversity conservation. Such an agency could spur conservation measures by coordinating efforts between government departments and agencies whose activities have an impact on biodiversity conservation.
65. Develop EIA processes to address the impact of a development project or proposal upon endemic flora and fauna, their habitat, and upon the natural terrestrial and marine environment. Any approvals granted for development should include conditions to minimise impact and ensure rehabilitation whenever possible.
66. Undertake physical planning and zoning to control development and divert it away from environmentally sensitive areas. Zoning could also be used to designate and limit activities within protected areas such as watershed areas and in-shore reefs.
67. Regulate the reasonable use of traditional tidelands.
68. Draft legislation to protect native flora and fauna with particular emphasis on protection of endangered species, following a decision between the State and National Government regarding the appropriate jurisdiction for the protection and control of native flora and fauna.

## **Yap**

### **Legislation**

There are presently no specific legislative regulatory instruments establishing Yap State nature preserves or parks. The existing legislation is limited, therefore, to conservation of living resources. The Yap State Code provides a limited hunting season for wild pigeon from 1 October to 31 December.

The commercial sale of coconut crabs is banned in Yap State, and there are restrictions on the taking of coconut crabs with a shell of less than 3 inches across.

The Yap State Code provides for protection of trochus. The Governor may designate seasons and restrictions on the size and catch of trochus. Sadly, many areas of Yap have extremely depleted trochus populations. This provision is necessary to allow the reintroduction of trochus in Yap State.

The Yap State Code prevents the taking or harvesting of "any species which has been seeded or planted" by the State Government.

The Code also permits the Governor to declare a temporary moratorium prohibiting the taking or harvesting of marine life upon being convinced that the population of the marine life area is in imminent danger of dropping below a minimum desirable maintenance level. The Governor is given power to restrict the taking, hunting, purchasing or selling of fruit bats by restricting the season for so doing.

### ***Coastal Zone Management Plan***

In November 1991, a draft marine resources and coastal management plan was prepared for the Marine Resources Management Division of the Department of Resources and Development.

In December 1991, Section 815 of Title 11 of the Yap State Code was enacted, regulating reef and environmental damage. The Section creates a penalty of 60 days imprisonment, or a \$250,000 fine, or both, if a person causes damage to a coral reef or damage to any part of the natural environment that is important to the maintenance of a coral reef, including its seagrass areas and mangroves. It was designed to penalise persons responsible for oil spills or shipwrecks causing damage to reefs. It excludes damage caused to the reefs when FSM citizens exercise their traditional rights to fish or carry out other activities. It further excludes those persons who have complied with the environmental impact assessment requirements of Section 1509 of the Conservation and Resources Section of the Yap State Code.

Yap State Code, Title 18, Section 404 provides for penalties to be paid to the State Government by any person who is found in a civil proceeding to have transgressed the provisions of Sections 402 and 403 relating to reef damage or petroleum spills.

### ***Marine Emergency Response Act***

The Yap State Code on Conservation and Resources was recently amended to create a Marine Emergency Response Board. The purpose of the legislation is to create an interagency emergency response team. The team is designed to be equipped to train and intervene in order to mitigate potential threats to the marine environment caused by a marine emergency event such as a shipwreck or an oil spill. The jurisdiction for this law includes the 12 mile Yap State Fishing Zone and the State's internal waters.

### **Recommendations on Biodiversity and Wildlife Conservation in Yap**

69. In conjunction with the National Government, and pursuant to jurisdictional requirements set forth in the Joint Opinion of the Attorneys General of FSM and of the four States, enact comprehensive legislation for the consolidation of species protection and introduction of related habitat protection at the State level.
70. Redraft and expand the Code provisions relating to the protection of turtles. (Marine Resources Management Division is currently working with the two Councils of Chiefs to develop suitable recommendations for new legislation in this area).
71. The recently drafted Marine Resources and Coastal Management Plan should be reviewed by all State conservation and environmental departments and agencies, and should be considered for final drafting and implementation.
72. Both National and Yap State environmental leaders have recently been assessing the benefits and appropriateness of using traditional enforcement systems, including Chiefs and community leaders, rather than the western judicial system of enforcement. Preliminary consensus favours using the western judicial system for oversight of larger-scaled, non-traditional activities. Smaller-scaled traditional activities should be subject to the traditional system of enforcement.

## **3.8 Protection of National Heritage**

### **National**

#### **Legislation**

Environmental concerns are broadly defined in this Review to encompass cultural heritage protection, as well as environmental health and natural resources concerns. Current environmental philosophy links the celebration of the past to a grounded understanding of appropriate paths toward future development. Under this proposition, the protection of cultural heritage and traditional ways is integrally bound to a respect for the physical world. Recognition of traditional ways often opens a wellspring of knowledge regarding the sustenance and appropriate use of the world's resources.

#### **Administrative Structures**

The administrative body charged with the preservation of cultural resources is the Office of Administrative Services, which established the Division of Archives and Historic Preservation in 1988. Presently, the Division is staffed by one Historic Preservation Officer (HPO). This officer provides technical and financial assistance to the four States. The States, in return, conduct field work for the National HPO. As of September, 1992, the Division employed a staff archaeologist, to further assist the States in the identification and preservation of State historic sites.

*The United States Parks Service provides 95% of the Division's funding, which is then distributed to the States. State historic preservation programs are required to submit monthly reports to the National HPO detailing their preservation activities and challenges.*

## **Legislative Authority**

Title 26 of the FSM Constitution states that it is the policy of FSM to protect and preserve the diverse cultural heritage of the peoples of Micronesia and to identify and maintain areas, sites and objects of historical significance.

"Cultural attribute" is broadly defined to mean all aspects of local culture, tradition, arts, crafts, all social institutions, forms of expression and modes of social interaction. "Historical property" is defined to mean sites, structures, buildings, objects and areas of significance in local history, archaeology or culture.

"Historical artefact" means an object produced by human beings 30 or more years previously.

The Title provided for the establishment of an Institute for Micronesian Culture and History. The Institute was to be guided by an Advisory Panel comprising State representatives and experts in Micronesian history and culture. The Institute was never established and in 1987 the relevant section was repealed. In its place, the Director of Administrative Services was charged with oversight, identification, conservation and protection of historic properties and cultural attributes within the FSM.

The Director's function is to provide professional assistance to historic and cultural preservation programs in the States and to all levels of government, private business and foreign governments operating in FSM. He or she is also to advise the National Government concerning public and private actions which may affect historic properties and cultural attributes. Overall, the Director has broad legislative powers to facilitate protection of historic and cultural heritage.

Title 26 provides a scheme for historic preservation which includes requirements to provide plans and studies for all undertakings to the Director to determine the effects of these undertakings on historic properties and cultural attributes. If the Director determines that significant effects are likely, he or she shall institute consultations with the proponent, relevant agencies, State preservation programs and the public to clearly identify the historic properties or cultural attributes subject to impact. The Director has an obligation to eliminate or mitigate harmful effects on historic and cultural heritage. Proponents of undertakings must consult with various bodies when so requested by the Director.

If a project which has been the subject of consultation proceeds and there is a threat of immediate and irreparable harm to an historic property or artefact, the undertaking is to be suspended and not resumed until the approval of the President has been obtained. The President is the final arbiter of conflict between a proponent of an activity and the Director in regard to perceived threats to historic and cultural heritage.

The Title makes it an offence to move an historic artefact within FSM and outside the country in interstate or foreign commerce without approval of the relevant State's Governor and two-thirds of its Legislature. It is also an offence to damage or destroy historic property within the control and jurisdiction of FSM without approval of the President and Speaker of Congress. Requests to the President for permission to export or damage historic property or artefacts must be referred for approval to the Director of Administrative Services and to the affected States.

The Title also requires that efforts be made to recover and return to the State of origin all historic objects which have been exported from FSM.

## **Recommendations on the Protection of National Heritage - National**

73. All States have significant pre-historic, pre-European and European/Asian historic sites and artefacts. These sites are found on land, inter-tidal zones and sub-marine areas. FSM also has a vast wealth of intangible cultural heritage; intangibles like community practices, information or ideas are often exchanged and celebrated through oral traditions. National Government recognition of these rich resources is growing. Recent efforts have been encouraging, but additional funding and interaction with State Governments is required before a fully developed system of cultural protection is in place. The planned Joint National-State Attorney General Opinion regarding allocation of powers between National and State jurisdictions on environmental matters should help the formation of policy regarding the appropriate level of interaction between the States and National Government regarding historic and cultural protection.
74. Enhance legislative protections; amend Title 26 to prohibit the movement of cultural and historic artefacts for non-commercial purposes. This would alleviate the current practice of removing certain artefacts from their sites for research purposes.
75. Revise, enact and enforce the Draft Regulations. Amendments to the Regulations might address the need for recording and interpretation of those sites which are destroyed by necessary development. The penalties for violation of Title 26 and the Regulations must be commensurate with the great national importance of historic and cultural conservation. The current fines of between \$200 and \$1,000 are not adequate.

## **Kosrae**

Environmental concerns are broadly defined in this Review to encompass cultural heritage protection, as well as environmental health and natural resources concerns. This cross-disciplinary approach is appropriate in the developing Pacific, as the preservation of cultural traditions often leads to a renewed recognition of and dedication to early environmental management skills. Further, the environment itself is often an actual cultural resource. This is especially true in cultures closely linked by subsistence to the land, air, and sea. Kosraean cultural identity remains strong, although many aspects of traditional knowledge and traditional skills are slowly eroding with the introduction of western material and behavioural substitutes.

There is very little cultural preservation legislation in current force in Kosrae. The administrative body charged with the preservation of cultural resources in Kosrae is the Division of History and Culture within the Department of Conservation and Development. This Division liaises with the National Government's Historic Preservation Office (HPO), and conducts Kosrae State's historic preservation programs. Current plans include preservation and documentation of significant cultural and historic sites, monuments, and oral traditions.

## **National Historic Preservation Office**

The National HPO provides assistance to the State of Kosrae and channels United States Park Service Funds to Kosrae State as well. The State of Kosrae in response, may conduct fieldwork for the National HPO. In 1992, the National HPO planned to hire a staff archaeologist to assist Kosrae in the identification and preservation of State historic sites.

## Legislation

Kosrae Code Section 11.1401 *Impact review* and Section 11.1402 *Regulation*, within the Chapter entitled "Antiquities", requires impact reviews and regulations protecting antiquities and traditional culture.

The Code states that before the State Government may undertake, assist, participate in, or license action that might affect the land or waters of the State, the Division of History and Culture must consider the action's impact on antiquities and traditional culture. The Division must then report its findings to the Governor, Legislature, and involved State agencies.

The Code also instructs the Director of the Department of Conservation and Development to state the "classes of structures, artefacts, or other objects which constitute State antiquities" by regulation. Regulations shall further provide for authorisation of use of antiquities for "scholarly research, museum display or educational purposes".

### Recommendations on the Protection of National Heritage in Kosrae

76. Draft a State Act and Regulations for the protection, classification, and disposition of prehistoric and historic land and marine cultural resources; define "cultural resources" broadly, including oral traditions and non-tangible resources; establish research and scholarship guidelines; coordinate efforts with the National HPO and other interested State agencies.
77. Establish a trust or other legal entity on behalf of the landowning families associated with the series of basalt ruins and structures on Lela; negotiate a long-term lease arrangement with the trust or other entity for the rehabilitation and preservation of the structures.

## Pohnpei

The administrative body charged with the preservation of cultural resources is the Historic Preservation Division within the Pohnpei State Department of Lands. This Division administers *Pohnpei's Cultural Preservation Act*, liaises with the National Government's Historic Preservation Office (HPO), and conducts Pohnpei's state Historic Preservation Office programs. The Pohnpei State Historic Preservation Division is currently planning to establish a State Museum and incorporate legislative protections for Nan Madol.

The National HPO provides assistance to the State of Pohnpei and channels United States Park Service Funds to Pohnpei State as well. The State of Pohnpei, in response, conducts fieldwork for the National HPO. In 1992 the National HPO planned to hire a staff archaeologist to further assist Pohnpei in the identification and preservation of State historic sites.

The cultural heritage of Pohnpei represents both the foundation upon which rests modern Pohnpeian society and the identity of the Pohnpeian people. Pohnpeian cultural identity is reflected in the Pohnpeian language and its unique oral traditions. Although oral traditions are frequently associated with natural features of the landscape, such as natural depressions, large coral boulders, or lengthy stretches of land, traditions also respect an intangible heritage. Intangibles like community practices, information or ideas are often exchanged and celebrated through oral traditions. One of the many tasks of the Historic Preservation Division within the State Department of Lands is the recording and archiving of the body of oral traditions of the islands and atolls of Pohnpei.

## Nan Madol

Nan Madol, translated as "Places In Between" (and sometimes called the "Venice of the Pacific" in tourist brochures), is a collection of 92 human-made islets covered by megalithic architecture and cross-cut by waterways. The subject of a 1,000-year span of active construction and modification, the basalt stone structures are dated from approximately 500 AD to mid-1500 AD (Nan Madol Brochure, Archaeology Section). Covering an area of approximately 200 acres off Pohnpei's south-east coast, Nan Madol is perhaps Pohnpei's most distinctive cultural treasure.

The site has been plagued with land disputes, site destruction by natural forces and looting by human visitors. Further, transportation difficulties inhibit access to the islets. Despite several attempts at site clearance, no structured restoration plans are underway. Although Nan Madol is prominently mentioned in the Pohnpei State Development Plan of 1987-1991, the Municipality of Madolenihmw Physical Master Plan of 1991, and the Trust Territory of the Pacific Physical Master Plan of 1968, none of the recommendations contained in those documents have yet been implemented.

A private, non-governmental organisation called the Nan Madol Foundation has just been incorporated with the purpose of funding cultural, historical, protective, educational and research activities related to the site. The Foundation's first priority is to sponsor development of a Nan Madol Master Plan to control the locale's physical development, management and preservation. Legal issues of jurisdiction, control and site use will be addressed in the Plan. Future Foundation activities include supporting a Nan Madol Environmental Impact Assessment, funding restoration and site preservation efforts, and urging ethnographic and archaeological research. Eventual production of educational materials is also a goal.

### **Recommendation on the Protection of National Heritage in Pohnpei**

78. State legislation should be enacted immediately to preserve and protect the actual site and surrounding environment of Nan Madol.

## Chuuk

### **Administrative Structures**

The Department of Commerce and Industry is responsible for cultural heritage conservation. It's charter is to document and record important cultural and historic sites as well as to record intangible heritage such as oral traditions, culture and history. The Department is also responsible for recording and interpreting cultural and historic sites which are being destroyed. One of the Department's major programs is to review and issue permits for all construction projects, so as to protect cultural and historic heritage sites.

The Department of Health Services has as one of its programs the protection of major archaeological sites. The Chuuk Society for Historical Investigation and Preservation is a non-government organisation concerned with the protection of marine and land-based historic sites as well as environmental issues generally. The Chuuk Visitor's Bureau is also involved in cultural heritage protection. It has developed five shelters and trails to historic Japanese sites on Tonowas, Weno and Fefan Islands.



## Legislation

Legislation exists which declares the approximately 80 submerged wrecks in the Chuuk Lagoon to be a war memorial and historic site. Removal of artefacts from the wrecks is prohibited and divers must have permits and be accompanied by licensed guides.

A draft Bill has been prepared for the enactment of the *Chuuk State Historic Preservation Act*. The Bill recognises the importance of physical cultural and historic heritage as well as the intangible heritage in traditions, arts, crafts and songs. The Bill proposes the establishment of an Historic Protection Office (HPO) within the Department of Commerce and Industry whose principal objectives shall be to protect and conserve places of historic and cultural interest including intangible heritage. All government agencies engaging in activities which may have an impact upon cultural or historic heritage must consult with the HPO to mitigate damage. The HPO would also have the power to issue cease and desist orders in the event of damage to items of historic or cultural heritage. The HPO would have wide-ranging responsibilities for surveying, recording and protecting historic and cultural heritage.

The Bill also establishes a Review Board which would review all requests for permits and land leases for areas which have cultural or historic heritage significance. There is also power to make cease and desist orders in the event of an activity having a damaging impact on historic or cultural heritage.

## Key Issues

Presently, there are inadequate controls in Chuuk State for protecting items of historic or cultural heritage. The Regulations protecting the wrecks in Chuuk Lagoon are rarely enforced. Historic and cultural heritage preservation is centred around the wrecks in Chuuk Lagoon, while neglecting land-based sites and artefacts such as lighthouses, gun emplacements and items of Chuukese cultural and historic heritage.

### Recommendations on the Protection of National Heritage in Chuuk

79. The draft *Chuuk State Historic Preservation Act of 1991* should be reviewed and submitted to the Legislature. Amend the Bill to ensure that the HPO or the Review Board is involved in all projects or developments affecting cultural or historic heritage. Increase fines proposed for breaches.
80. Administer and enforce the diving permit system for Chuuk Lagoon. Attach rigorous permit conditions prohibiting damage and removal of artefacts. Undertake a broad study of the wrecks in the lagoon to provide a basis for regulations and to indicate the most appropriate methods to protect these items of historic heritage. An effective EIA process will ensure that the impact upon cultural and historic heritage from minor and major development projects will be addressed, mitigated, and avoided where possible.

## Yap

### Legislation

Historic preservation provisions exist in the Yap State Code, as well as in the State Constitution. These "Preservation of Culture" Code provisions are prefaced by the findings of the Legislature that:

- Yap people have an ancient and distinguished history, and have played an important role in the history of Micronesia;
- Sites, structures, buildings, objects and areas of historic and cultural significance have been damaged and objects have been removed from Yap;
- Traditions, arts, crafts, stories and songs of historic and cultural significance are in danger of being lost;
- The spirit and direction of the State of Yap are founded upon and reflected in its historic past.

This body of legislation makes it mandatory for the Yap State Government to implement a program to identify, protect and preserve historic properties and historic culture.

An Historic Preservation Office is established pursuant to the "Preservation of Culture" Code Sections. Code Title 5, Chapter 4, Section 405 requires the State Government, before permitting, assisting or engaging in any activity which may have an impact on historic properties, to notify the Yap Historic Preservation Office. Upon notification, the Office must analyse any activity which is likely to have an impact on traditional culture. The Office must increase beneficial effects and eliminate or mitigate any harmful effects to historic properties or traditional culture from the proposed activity.

The Yap Historic Preservation Office has other powers and duties, set out in Section 407. Among them are the promotion and establishment of a State Historic Park System and its administration, and the conduct and support of archaeological surveys for identification of historic property. There is provision for the Councils of Pilung and Tamol to be involved in the process in an advisory capacity to the Office.

Under this legislation, no person may wilfully remove historic property from Yap or disturb, damage or destroy such property without the express written permission of the Governor, a local member of the Council of Traditional Chiefs, and a Historic Preservation Officer. A maximum fine of \$2000 or one year in jail is provided for violations against these historic preservation provisions.

Historic Preservation authorities have identified two major unresolved environmental issues during the course of their work. First, many cultural sites are not adequately protected from destruction by earthmoving or vandalism. Second, many culturally important sites have not yet been surveyed. They issues should receive priority attention in future work plans developed by the Historic Preservation Office.

## **Yap Institute of Natural Science**

The Yap Institute of Natural Science is a non-governmental organisation founded in 1975. Two full-time workers staff the organisation; villagers also work with the Institute. The Institute is dedicated to maintaining indigenous integrity through sustainable use of local resources and through the exploration of traditional cultural and scientific knowledge. The Institute has an important role in the promotion of public education regarding both cultural and environmental issues.

## **3.9 Tourism**

### **National**

There is no existing legislation for tourism at the National level.

### **Key Issues**

FSM's tourism industry is small and developing slowly. Tourism development is hindered by the Constitutional prohibition against sale of land to non-FSM citizens, by traditional land tenure systems, and by the consequent difficulty to negotiate and acquire long-term leases. The Government also recognises the value of slow growth in this area; significant cultural and natural resources are protected by emphasis on small-scale, community-oriented, ecologically sound tourism.

Because of the potential impact of tourism on the environment, there is a need to initiate planning now. While tourism depends on the nurture of strong natural and cultural values, it can have negative impacts on those values. Mechanisms should be developed to encourage tourism while at the same time assessing and controlling its impacts upon the socio-cultural and environmental systems of FSM. As tourism often has repercussions upon traditional community life, it is vital that tourism development occurs with extensive public consultation. Traditional cultural, historical and social values and practices must be respected and considered when planning development of this industry.

As tourism develops in FSM, increasing pressures will be placed on the natural environment, historic and archaeological sites and on infrastructure such as water, sewerage, roads, power and waste disposal. Physical planning and zoning will be necessary to identify the most appropriate areas for tourism development. If properly planned, revenue from tourism may be used for environmental protection, conservation of historic and archaeological sites and the provision of infrastructure.

### **Recommendations on Tourism - National**

81. Create a National Tourism Development Plan, in consultation with the four States, including an emphasis on small-scale, low impact ecotourism.
82. Enact legislation providing for tourism development coupled with effective, enforceable controls, including EIA requirements, so as to limit cultural and environmental impacts.
83. Introduce licensing or permit systems for tourism development so that proposal proponents pay for development of infrastructure necessary for their projects.

### **Kosrae**

There is no existing legislation for tourism at the State level. The Division of Tourism within the Department of Conservation and Development is the administrative agency charged with management of tourism in Kosrae. Tourism is a new industry in Kosrae, with enhanced prospects

following the upgrading of the State's airport. The number of total visitors to Kosrae in 1987 (after jet service was initiated) was 1,870. Although Kosrae is host to many stunning natural and cultural attractions, tourism at present is a low State Government priority. Community concerns include recognition of tourism's potential for infringing on customary and traditional lifestyles as well as concern regarding large-scale tourist facilities' potential for degradation of the surrounding environment. There is, however, great potential for small-scale village tourism and ecotourism.

### **Recommendations on Tourism in Kosrae**

84. Establish a Tourism Review Board that includes environmental protection advisers.
85. To better protect the environment, focus tourism efforts on small-scale village tourism and ecotourism.
86. Include legal environmental protection requirements in all handouts and pamphlets to visitors.

## **Pohnpei**

There is no existing legislation for tourism at the State level. The Pohnpei State Tourism Commission is the administrative agency charged with management of tourism in Pohnpei. Tourism is a low State Government priority; less than \$100,000 has been appropriated for the Commission's work in 1992. The number of visitors to Pohnpei is not high; the total number of visitors arriving in Pohnpei State in 1990 was 11,218, only 6,451 of whom were tourists.

The visitor industry is plagued with incomplete facilities and infrastructure, poor maintenance and servicing of tourist attractions, and transportation difficulties. Additionally, land tenure disputes between National, State and Municipal Government, and between Government and landowners, create unstable conditions for infrastructure development. In any event, property leases may not extend beyond 25 years, so long-term tourism facility development is often not feasible. There is, however, great potential for small-scale village tourism and ecotourism. Requiring little infrastructure, these ventures rely on hardy travellers who enjoy pristine natural surroundings. Beautiful mountains, forests, and coral reefs, plentiful terrestrial and marine species, a mild tropical climate, and stunning cultural attractions such as Nan Madol could certainly create a satisfactory visitor industry. Well-enforced, comprehensive environmental protections create the potential for small-scale and ecotourism development.

### **Recommendations on Tourism in Pohnpei**

87. Include environmental protection advisers within the Pohnpei State Tourism Commission.
88. To better protect the environment, focus tourism efforts on small-scale village tourism and ecotourism.
89. Include legal environmental protection requirements in all handouts and pamphlets to visitors.

## **Chuuk**

Apart from the legislation which protects the historic wrecks in Chuuk Lagoon, there is no legislation which is specifically oriented toward tourism. Diving in the lagoon is regulated by requiring divers to have permits and be accompanied by licensed guides.

The Chuuk Visitor's Bureau is responsible for encouraging tourism, and maintaining the beauty of the state for the benefit of residents and tourism. The Bureau is a quasi-governmental body operated by a Board of Directors nominated by the Governor with the advice and consent of the State Legislature.

### **Key Issues**

Tourism, particularly diving, is Chuuk's principal source of foreign revenue. The tourism potential of Chuuk has not yet fully been explored. Chuuk's extensive natural wealth, both in its marine and terrestrial environments, provides a perfect basis for the development of ecotourism. All tourist activities need to be developed and managed so as to minimise impact on the environment and on the lifestyle of the Chuukese people.

Diving in Chuuk Lagoon has already resulted in damage to the submerged wrecks and to the coral surrounding them. Diving practices have to be consistently monitored and controlled to minimise damage to the wrecks and to reefs.

### **Recommendations on Tourism in Chuuk**

90. Review and broaden functions and responsibilities of the Visitor's Bureau. Transfer the responsibility for garbage collection to one of the government bodies already concerned with waste management and disposal, such as the Department of Health Services or Public Works. The Bureau's activities should include long-range tourism development planning.
91. While marine-based tourist activities predominate, the terrestrial natural environment and Chuuk's rich cultural and historic heritage should be examined for their tourism potential. Chuuk's natural environment lends itself particularly well to low impact ecotourism. It is necessary and advisable to link ecotourism with biodiversity conservation through the creation of protected areas such as reserves or parks.
92. Liaise with municipal governments and local landholders to minimise the impact of tourism on the lives of local residents. Local communities may participate in tourism promotion by making private areas with natural or cultural conservation values accessible to tourists. Financial returns from tourism might encourage local communities to accept protection of areas with high natural or cultural heritage conservation values.
93. As tourism is one of Chuuk's growth industries, its development must be subject to rigorous environmental impact assessment so that impact on the natural and social fabric of the State is benign. Proponents of development projects aimed at tourists should be required to assess the impact of their projects on existing infrastructure, as well as on natural and cultural resources. Developers' payment for the provision of the infrastructure and services necessary for their projects may be an effective method of improving Chuuk's existing infrastructure without resort to government funding.

## 3.10 Agriculture and Forestry

### National

#### Legislation

Title 22 - *Agriculture and Livestock* creates the Coconut Development Authority (CDA) and defines its powers. The CDA assists in marketing copra and transporting it from production areas throughout FSM. It administers subsidies allocated by Congress and promotes development of alternative value-added products from coconuts, such as oil, soap and shampoo.

The *Plant and Animal Quarantines Regulations 1991* provide for specified ports of entry to FSM, inspection of plants and animals entering FSM, plant and animal quarantine permits, inspection and treatment of conveyances at ports of entry and quarantine treatments of plants and animals.

There is no national legislation specifically addressing forestry and related issues. The *FSMEPA Environmental Impact Assessment and Earthmoving Regulations* are rarely applied to forestry activities.

#### Key Issues

There is a need for all agricultural projects and developments to be subjected to EIA and for legislation and regulations to prevent soil erosion, manage waste water, avoid pollution, and minimise sedimentation of streams. This legislation should also address issues of watershed, coastal and river management.

As urban development increases, forestry resources are threatened. There is no legislative mechanism for the control of land use to protect forests, mangroves and watershed areas. There is inadequate resource assessment data available in respect of forestry, which makes identification of species requiring protection difficult. Management and planning of forestry activities is also hampered by the lack of resource data.

#### Recommendations on Agriculture and Forestry - National

94. Draft legislation and regulations requiring soil conservation and erosion control. Consistent State legislation should be encouraged. Enactment of appropriate and enforceable EIA legislation is also necessary to regulate problems associated with agro-forestry developments and practices.
95. Improve communication and coordination between National and State administrative bodies on agricultural matters.
96. Extend the EIA process to forestry activities. Draft legislation for protection of forests, mangroves, watershed areas and land use planning. Harvesting and use of forest products should also be regulated in accordance with sustainable development principles. Development of agro-forestry and forestry industries in Federated States of Micronesia must occur in conjunction with EIA and conservation legislation.

## **Kosrae**

The Division of Agriculture and Forestry within the Kosrae State Department of Conservation and Development controls agricultural and forestry development issues. Although there is meagre present legislative environmental oversight of agriculture and forestry efforts, continued development in these two key fields require concomitant protective instruments.

### **Recommendations on Agriculture and Forestry in Kosrae**

97. Coordinate with the Division of Environmental Health and Sanitation, or a statutory environmental oversight authority, regarding development and enforcement of *State Pesticides Regulations*, preferably to be drafted after National/State environmental jurisdictional issues are settled.
98. Draft statutory instruments, or subsidiary regulations pursuant to legislation creating a statutory environmental oversight authority with power regarding natural resource protection and management, regarding protection of watersheds and mangrove forests.

## **Pohnpei**

### **Legislation**

The control of Pohnpei State agricultural policy rests within the Division of Agriculture in the Department of Conservation and Resource Surveillance. Coconut, pepper, and rice development programs rest on Trust Territory legislative instruments designed to subsidise these three crops. The legislation is cited as Public Law 55-66, 8/31/66 (Copro); PL 83-67, 5/3/67 (Pepper); and PL 121-68, 4/16/68 (Rice).

#### ***Forest Management Act of 1979***

This Act provides for the orderly management of Pohnpei's forest resources by creating and maintaining an effective and comprehensive system of regulation of and assistance to the development of forest land. The Act enables the Governor to appoint a State Forester who serves as administrative officer of the Division of Forestry. It further enables the Legislature to set apart government lands as Forest Reserve lands in order to maximise the benefits to the public of timber, water, wildlife, and forage, as well as to set aside Watershed Reserves on public land.

#### ***Pohnpei Watershed Forest Reserve and Mangrove Protection Act of 1987***

This Act dedicates and vests the use and management rights in certain public trust lands to the State Government to protect watershed forests and conserve mangrove forests in Pohnpei. At Section 3(1), the Legislature states that many thousands of hectares of public trust land have highly erodible soils that should not be cleared of forest cover or used for farming because such uses would endanger the watersheds of Pohnpei. The ringing declarations of the value of environmental protection continue: at Section 3(2), the Legislature finds "unique and valuable plants and animals that require legal protection to assure their continued survival" in Pohnpeian forests; at Section 3(3), the Legislature states that mangrove forests benefit the people by providing the basis for healthy fisheries; and at Section 3(4) they state the "[t]he conservation,

protection and wise management of Pohnpei's forests in perpetuity is of material benefit to all the people of Pohnpei" (SL No. 1L-128-87).

## Key Issues

*State Pesticides and Earthmoving Regulations* affect agricultural workers, but as the Regulations are overseen by State workers in a different Division, as well as a different Department, little pesticides control or regulation of accelerated erosion or sedimentation is conducted by the Agriculture Division. Here, development of agriculture is institutionally separated from environmental concerns. Integration of the two concerns leads to sustainable and environmentally-sound development.

## Watershed Legislation

Both the *Forest Management Act of 1979* and the *Pohnpei Watershed Forest Reserve and Mangrove Protection Act of 1987* are very strong legislative statements. It is understandable that some members of the public and Legislature may be initially uneasy with State Government oversight and control of large areas of forest and mangrove.

## Conservation Education

The *Watershed Act* requires education regarding a number of areas of conservation and natural resource protection. This educational requisite is an all-too-infrequent statement in environmental legislation. Uniquely interdisciplinary, environmental protection often suffers in United States-influenced jurisdictions from narrow categorisation as a sanitation or public health discipline. The field further suffers from a lack of public understanding of the profound consequences of environmental degradation. This lack of understanding is entirely natural in a developing State such as Pohnpei, whose overwhelming earthly beauty is practically untouched by significant environmental decay. Development, and its attendant environmental impacts, is inevitable. Only broad public education will effect a change from uncontrolled to sustainable development. The drafting and enforcement of environmental protection legislation, and education about that legislation, assists the process whereby an informed public wisely manages its resources.

### Recommendations on Agriculture and Forestry in Pohnpei

99. Initiate liaison efforts between the Division of Agriculture and the Division of Environmental Protection to achieve goals of sustainable development. Liaison between National and State agricultural programs is also desirable.
100. Redraft and resubmit for public hearing *Forest Management Act* and *Pohnpei Watershed Forest Reserve and Mangrove Protection Act Subsidiary Regulations*.
101. After a review of National and State jurisdictional issues, revise the *Forest Management Act* and *Pohnpei Watershed Forest Reserve and Mangrove Protection Act* to transfer nature park language and species protections to the appropriate authority. If authority for parks, preserves, and conservation of living resources is retained within the Division of Forestry, it may be advisable to create a program specifically for the environmental protection of those species and reserve areas identified.
102. Fund environmental education officers and programs, with particular emphasis on developing programs for primary, secondary, and adult extension courses.



## **Chuuk**

### **Administrative Structures**

The Department of Agriculture, created in 1990, liaises with and assists the Department of Commerce and Industry, which is responsible for the development of small agricultural processing industries. Such industries include slaughterhouses and butchering facilities used to expand intermediary market for agricultural products. As the Department of Agriculture is a relatively new body, its functions are stated in terms of future priorities. The great majority of these priorities are centred around forestry, agro-forestry and related matters.

The Chuuk State Department of Agriculture is responsible for forestry matters. The Department identifies its policies and future priorities in forestry and related matters, as follows:

- to develop and manage mangrove forests by preventing erosion, and by creating regulations to prevent use of mangroves for filling areas, dumping and for firewood; and
- to review current land use policies to determine whether sufficient forested areas have been protected and whether specialty species planting may be integrated within urban development.

The State Department of Health Services states that one of its major programs is the management and control of land clearing and development on steep slopes and in watersheds.

### **Legislation**

Apart from the two national pesticide control programs delegated to Chuuk by the 1989 Memorandum of Understanding (Pesticide Applicator Certifications Program and Restricted Use Pesticide Dealer License Program), there is no legislation in relation to agriculture.

Apart from the *National Earthmoving Regulations*, often insufficiently applied, there is no legislation in respect of forest management or conservation.

### **Key Issues**

Much valuable forest has been destroyed or damaged in Chuuk as a result of clearing for agriculture and urban development generally. The interior forests of the high islands which serve as watersheds are not protected and are increasingly encroached upon by farming and urban development. Previously inaccessible forested areas are being threatened by road construction. Clearing of forests is causing and will continue to cause significant soil erosion. In Chuuk there are only a few mountain top, cliff and ravine areas of primary forest left relatively untouched by urban and agricultural development.

There appear to be no controls on mangrove timber harvesting, which can create disastrous erosion problems. People often use mangroves for dumping garbage and as fill areas. There is no watershed management or protection in Chuuk. Agro-forestry practices and urban development threaten and damage watershed areas daily.

### **Recommendations on Agriculture and Forestry in Chuuk**

103. Examine agricultural practices, to identify future legislative and regulatory needs in areas such as mitigation of soil erosion, appropriate use of fertilisers and pesticides, and safe disposal of resultant waste. Regulate piggery and poultry operations to control appropriate waste disposal and processing methods.
104. Examine land use patterns to identify the most appropriate areas for agricultural development so as to minimise deleterious environmental impact, including clearing of important forest areas for agricultural purposes. Educate landowners regarding practices which are least harmful to the environment.
105. Establish land use guidelines.
106. Review and assess forest resources and forest management priorities.
107. Develop appropriate programs and legislation to ensure sustainable development.
108. Develop practical management and conservation plans for use of mangrove areas.
109. Draft regulations to protect and manage mangrove areas, to prevent erosion in forest areas created by agro-forestry practices, and to protect watershed areas.

## **Yap**

The Yap State Code provides for the establishment of Agriculture Extension Agents. Sixteen of these agents work on Yap Proper and the other four work in the Outer Islands. Their duties are to assist and educate local farmers in coconut planting, thinning and bushing, copra processing, and vegetable and fruit crop production. They also demonstrate new agricultural techniques and assist the farmers market.

Agricultural efforts involving farm and domestic animals must comply with the Yap State Code requirements regarding penning of animals. All animals, other than dogs, fowl and cats, must be fenced under the provisions of the "Regulation of Animals" Chapter of the Code. In the larger population areas, dogs must have dog tags to avoid being impounded or destroyed. Provisions regarding stray or wild dogs should be more comprehensive, in order to address this potentially serious environmental health issue.

## **3.11 Fisheries**

### **National**

#### **Legislation**

*Federated States of Micronesia Code (FSMC) Title 23 - Resource Conservation* relates to marine species preservation and prohibits the use of explosives, poisons and chemicals for fishing.

Title 24 - *Marine Resources* promotes conservation, management and development of the marine resources of the FSM, to generate the maximum benefit for the Nation from foreign fishing, and to promote the development of a domestic fishing industry.

Title 24 creates the Micronesian Maritime Authority (MMA) and defines its role and powers. The MMA regulates the management and exploitation of marine resources within the 200 mile Exclusive Economic Zone, negotiates and enforces foreign fishing agreements, issues foreign fishing permits, and administers the fishing permit system for commercial and non-commercial fishing. The MMA participates in fisheries development ventures in which FSM has a proprietary interest. The title sets a comprehensive framework for the issuing of permits for commercial and non-commercial fishing.

Title 18 - *Territory, Economic Zones and Ports of Entry* establishes the 200 mile extended fishery zone of the National Government and the 12 mile exclusive fishery zones of the States, their islands and atolls. Section 106 states that traditionally recognised fishing rights in submerged reef areas whenever located within FSM fishery zones shall be preserved and protected.

## **Key Issues**

The vital importance of fishing and marine resources to FSM cannot be over-emphasised. Accordingly, while existing legislation does provide quite detailed controls, particularly through the permit and licensing system, the emphasis is more on commercial and economic return than on resource conservation and management. There is little evidence of consistent and stringent application of existing environmental legislative controls.

The principles of sustainable development should be rigorously applied if FSM is to continue to reap benefit from its marine resources. Both National and State Governments appear to have concentrated their efforts in the area of development of marine resources rather than on resource assessment, management and conservation. At present there is evidence that there has been over-exploitation of in-shore species, particularly reef and deep bottom species. In-shore and reef areas which are more accessible are prone to over-fishing and fishing in these areas requires monitoring and regulation which does not occur in any structured form at this time. Very little State regulation of in-shore fishing occurs. Resource data collection and assessment is at a very early stage; steps should be taken to control fishing and protect marine resources until adequate resource assessment data is available.

There is inadequate coordination and communication between the National administrative bodies responsible for fisheries and between the National bodies and their State counterparts. Further, traditional recognised tenure of reefs must be addressed at both National and State levels when developing management and conservation strategies.

No attention has been directed to the issue of responsibility for marine pollution disasters. Present case law suggests that control over marine areas and species within the 12 mile zone belongs to the States, and control over marine areas and species from 12 miles to 200 miles from terrestrial baselines belongs to the National Government (*FSM v. Sylvester Oliver*; 1 FSM Intrm. 469 (Pon. 1988)). If there is no coordination between State and National jurisdictions, marine species protection and emergency response to marine oil spills are severely compromised. Agreement on a coordinated approach to this issue must be reached.

### Recommendations on Fishing - National

110. Once marine resources management plans have been developed to ensure sustainable development, there is a need to introduce standardised marine resources management legislation and regulations to be implemented by both National and State governments.
111. Under Title 24, the Micronesian Maritime Authority has extensive regulation-making powers which have not yet been employed. There is scope to enact regulations to facilitate harvest management and monitoring, for instance. Illegal fishing practices could also be dealt with by Regulation. The *Plant and Animal Quarantines and Regulations* needs to address marine life, particularly in the light of aquaculture development and the introduction of new marine species.
112. There is an urgent need for the enactment and implementation of EIA legislation which would require feasibility studies to be carried out prior to the commencement of any marine development. Land use planning policies and legislation need to be developed to protect the marine environment and its resources. Resource management legislation should be enacted to ensure sustainable development. Legislation and regulations should be introduced to control pollution of marine areas.

## Kosrae

### Legislation

The Kosrae Code, Section 14.1302 *Foreign fishing agreement* permits the Governor, following the Legislature's consent by Resolution, to enter into a foreign fishing agreement for the State's benefit. The terms of the agreement may not include provisions less stringent than National law, unless permitted by the State Legislature.

Kosrae Code, Section 14.1303 *Fishing permit* forbids foreign vessels from fishing in the State's marine space (defined by National law as 12 miles seaward from the State's baseline) unless the vessel has a permit issued pursuant to a State foreign fishing agreement. Permit applications may be no less detailed than those required by National law.

### Key Issues

The Division of Marine Resources within the Kosrae State Department of Conservation and Development is charged with management of marine resources. Legislative instruments protecting, managing and conserving natural resources in Kosrae are scant. The State's first economic development priority is in the marine resources sector, so regulatory instruments or plans protecting resources such as fisheries, aquaculture centres and mangrove areas could ensure that such resource exploitation was sustainable and renewable.

### **Recommendation on Fishing in Kosrae**

113. Approve the proposed Kosrae Island Resource Management Program; extend resource management beyond coastal areas to include full interior and marine jurisdictions. Draft legislative instruments, preferably after National/State environmental jurisdictional issues are settled, for the protection and management of

## **Pohnpei**

### **Legislation**

The *Conservation and Resource Enforcement Act* establishes a Conservation and Resources Enforcement Program within the Department of Conservation and Resource Surveillance. An attempt to strengthen natural resources enforcement capabilities, this Act delegates enforcement authority to the Chief of the Division of Marine and Aquatic Resources and the Chief of the Division of Forestry of the State Department of Conservation and Resource Surveillance.

The *Act Relating to Foreign Fishing in State Waters* of 1979 governs foreign fishing in the waters of Pohnpei State until such time as a Pohnpei State Maritime Authority or other control mechanism is established. As the Constitution of the Federated States of Micronesia established State jurisdiction over interior State waters and waters extending out from land baselines to a distance of 12 miles, this Act controls activity within those waters by requiring permits for all foreign vessels wishing to fish within the State marine jurisdiction. "Foreign fishing" is defined to mean fishing by vessels not registered in the Trust Territory for fishing in State waters, not wholly owned or controlled by citizens, or of foreign registry chartered by citizens (DL No.4L-19-79).

### **Key Issues**

#### ***Environmental Enforcement***

Frequently, state law enforcement officers and prosecutors are so overwhelmed with the vast array of pressing investigative, arrest, and prosecution actions required by law that they cannot attend to every suspected environmental offence. Budgetary and staffing constraints further ensure that environmental prosecutions are given a relatively low priority. This Act only covers fisheries and forestry violations; appointment of a state legal officer with responsibility for all environmental matters may be an additional step toward effective enforcement.

#### ***Coastal and Ocean Management***

There is no comprehensive Fisheries Act in force in the State of Pohnpei. The Office of the State Legislative Counsel, however, has given priority to the drafting of a coastal and ocean management statute. Such an instrument could combine current site-by-site coastal earthmoving scrutiny undertaken by the Department of Health Services with marine management efforts.

### **Recommendations on Fishing in Pohnpei**

114. Liaise more closely with National marine protection officers.
115. Fund additional positions for marine resources surveillance and environmental enforcement.
116. Draft a Coastal and Ocean Management Statute for the protection and management of renewable resources.

## **Chuuk**

### **Administrative Structures**

The Chuuk State Department of Marine Resources, created in 1990, is responsible for marine resource management, development of tuna resources, encouragement of investment in pelagic fisheries and increasing artisanal fisheries. The Department is charged with managing sustainable development of marine resources. The Department is presently encouraging local fishermen to move beyond the reef so as to relieve pressures on inshore marine resources by deployment of additional fish aggregating devices. The Department further plans to reinstitute the culture of giant clams off Falos Island, facilitate trochus re-seeding of reefs, and collect fisheries production data.

The Chuuk Maritime Authority, which is involved in aquaculture and fisheries development, has been incorporated into the Department of Marine Resources. The Chuuk State Department of Commerce and Industry, also formed in 1990, has as one of its objectives the conservation, assessment and management of marine resources.

### **Legislation**

Article IV of the Chuuk Constitution permits government regulation of the use of reefs and tidelands.

FSM Public Law 7-111 (as amended by PL 1-26) authorises the States to establish entities to promote, develop and support commercial utilisation of living marine resources within their jurisdictions. The Act further authorises the States to make regulations for the exploitation of living marine resources.

It is presently unclear whether 23 FSMC Marine Resources applies to the States its prohibition against the use of dynamite and poisons for fishing, controls on trochus harvesting and on the taking of turtles. Some senior State government officials believe that these National provisions do apply to Chuuk.

### **Key Issues**

The marine environment is Chuuk's principal source of subsistence, recreation, tourism and commerce. Chuuk's marine resources cover 180,000 square miles, including lagoons, reefs and a wealth of living marine resources. Marine resource data, an essential foundation to informed environmental judgements, is presently insufficient.

Inshore areas are suffering from overfishing of certain reef and deep bottom species, clams and crustaceans. These areas are also becoming polluted; reefs are being irreparably damaged by the

destructive use of dynamite for fishing. Where fishing permits are required, they are generally granted without scrutiny regarding potential environmental impacts or conditions.

### **Recommendations on Fishing in Chuuk**

117. If it is determined, by issuance of a National-State joint Attorney-General opinion, that 23 FSMC does not apply to Chuuk State, then the State must enact its own legislation: prohibiting the use of chemicals, poisons and dynamite for fishing; controlling trochus harvesting; controlling the taking of turtles; and stipulating acceptable fishing methods for artisanal and commercial purposes. The issue of the taking of turtles might be more appropriately addressed under separate marine species protection legislation.
118. The State Government may wish to use its Constitutional powers to legislate and regulate for the management and protection of in-shore areas. The complex traditional reef tenure systems may be a capable foundation for creating satisfactory environmental regulatory controls. The increasing problems of in-shore water pollution, and the massive damage caused by dynamiting and overfishing, necessitate some level of State Government legislative and regulatory intervention.
119. Educate local communities regarding the importance of marine resource management and conservation. Local communities must be involved in decisions regarding management. Traditional reef ownership and traditional fishing practices could be incorporated into legislation regulating in-shore areas.
120. Place conditions on fishing permits which stipulate methods to be used and the imposition of certain restrictions.
121. Apply rigorous EIA standards so as to ensure sustainable development of marine resources.
122. Transfer responsibilities regarding marine resources to the Department of Marine Resources, from the Department of Commerce and Industry in order to avoid duplication of effort.

## **Yap**

### **Legislation**

The *Fishing Authority Act of 1979* (Yap State Code, Title 18) creates the Yap Fishing Authority, to promote, develop and support commercial use of living marine resources within Yap. Duties include helping establish and operate facilities required for commercial fisheries development which are not suitable for investment by the private sector, as well as establishing and supporting programs to promote and guide fishing cooperative associations.

The purpose of the Fishery Zone provisions of the *State Fishery Zone Act of 1980* (Yap State Code, Title 18) is to promote economic development and manage and conserve living sea resources in Yap State. The State fishing zone is defined from the shore line to 12 nautical miles out to sea. This Act gives the Yap fishing authority additional duties and powers, which include

the power to adopt regulations for the conservation, management and exploitation of fisheries resources, and to regulate the activities of foreign fishing vessels within the zone.

The Act contains detailed provisions for the licensing of foreign fishing vessels and provides steep civil penalties for breaches of foreign fishing permits and related offences occurring within the fishing zone. In addition, criminal penalties may be imposed, including fines of up to \$100000 or 2 years imprisonment, or both, for serious breaches of the Act's provisions, as well as comprehensive fishing vessel and gear forfeiture provisions. The Attorney General and his or her officers are granted wide powers of search and seizure.

The Wildlife Conservation provisions (Yap State Code, Chapter 10, Section 1008) make illegal the use of explosives, poisons, chemicals or other substances to catch fish, with fines between \$100 and \$2 000, or a maximum of between six months or two years imprisonment, or both.

### **Key Issues**

One of the practical problems of conservation and management of fisheries that faces the State of Yap authorities is the overlap of responsibility given to the Yap Fishing Authority and the Marine Resources Management Division of the Department of Resources and Development. This overlapped responsibility requires close coordination between the two agencies pending necessary amendments to the legislation.

#### **Recommendations on Fishing in Yap**

123. Assess the status of reef fish stocks and their availability to the local market; amend the *State Fishery Zone Act* to address possible restrictions on the export of reef fish.
124. Pass State legislation restricting gillnet fishing.
125. Assess reef owners' desire to control spear fishing. Consider prohibiting spear fishing with scuba equipment or flashlights on certain overused reefs.

## **3.12 Mining and Minerals**

### **National**

#### **Responsibilities for Mining and Minerals**

The responsibility for mining of minerals beyond the 12 mile limit of State jurisdiction, such as deep sea sources of cobalt and manganese and any oil which may be discovered, rests with the Marine Resources Division of the Department of Resources and Development. There is no specific national administrative unit responsible for land and marine mining, as, apart from sand coral, the exploration of mineral deposits is at a very early stage throughout FSM. There is no legislation at National or State exploitation of minerals or the environmental problems that may occur as a result of dredging and coral mining.



## **Chuuk**

### **Administrative Structures**

The Department of Commerce and Industry has responsibility for mining and related matters. As the Department has only been in existence since 1990, it has had little opportunity to address mining issues.

### **Legislation**

The *National Earthmoving Regulations* are being used to control dredging and sand mining. Practical evidence of consistent application and enforcement of the Regulations is scarce. There are no State legislative instruments regarding mining.

### **Key Issues**

Sand and coral mining are the only mining activities ongoing in Chuuk State. Chuuk, along with FSM's three other States, has yet to ascertain the extent of mineral deposits such as cobalt, manganese and oil in its marine areas. Exploration and assessment of mineral resources must occur to determine if extraction is commercially viable.

Dredging and sand mining along the shoreline and in lagoons has already caused significant environmental damage and is not at present subject to effective control. The great need for sand and dredging operations for development must be balanced with appropriate, enforceable regulation to protect tidelands and mangroves from unacceptable damage.

#### **Recommendations on Mining and Minerals**

126. Introduce an enforceable permit system incorporating comprehensive EIA provisions for all mining and extractive activities.
127. Designate appropriate areas for mining and dredging.

## **3.13 International Conventions and legislation**

### **International Environmental Conventions**

*International Plant Protection Convention*, with Annex, 1951

*Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof*. Done at Washington, London, and Moscow, 1971

*Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques*, with Annex, 1977

*United Nations Convention on the Law of the Sea*, Montego Bay, 1982

*Agreement relating to the Conduct of a Joint Program of Marine Geoscientific Research and Mineral Resource Studies of the South Pacific Region*, with Annexes. Signed at Suva March 12, 1982, with Related Agreement 1984

*Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985*

*Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea, 1986*

- *Protocol for the Prevention of Pollution of the South Pacific Region by Dumping, Noumea, 1986*
- *Protocol Concerning Cooperation in Combating Pollution Emergencies in the South Pacific Region, Noumea, 1986*

*Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific, including the Protocols and associated instruments to the Convention, 1989*

*United Nations Framework Convention on Climate Change, New York, 1992*

*Convention on Biological Diversity, Rio de Janeiro, 1992*

*United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, 1994*

## **National Legislation**

*Controlled Substance Act*

*Endangered Species Act*

*Endangered Species Regulations (Adopted)*

*Export Meat Inspection Act*

*Federated States of Micronesia Administrative Procedures Act*

*FSMEPA Earthmoving Regulations*

*Federated States of Micronesia Environmental Protection Act (FSMEPA) 1984*

*FSMEPA Environmental Impact Assessment Regulations*

*FSMEPA Subsidiary Regulation - Environmental Impact Assessment (EIA)*

*FSMEPA Pesticides Regulations*

*FSMEPA Subsidiary Regulation - Public Water Supply Systems*

*Fish, Shellfish and Game Regulations (Adopted)*

*Foreign Investment Act*

*International Telecommunications Union Conventions, Regulations and Recommendations*

*Marine and Fresh Water Quality Standard Regulations*

*Plant and Animal Quarantines and Regulations 1991*

*Toilet Facilities and Sewage Disposal Regulations*

*Trust Territory Air Pollution Control Standards & Regulations*

*Trust Territory Endangered Species Act of 1975*

*Trust Territory Environmental Quality Protection Act*

*Trust Territory Marine and Fresh Water Quality Standard Regulations*

*Trust Territory Pesticides Regulations*

*Trust Territory Public Water Supply Systems Regulations*

*Trust Territory Solid Waste Regulations*

*Trust Territory Regulations*

*United States National Environmental Protection Act*

## **Kosrae Legislation**

*Endangered Species Regulations*

*FSM Public Water Supply Regulations*

*National Government Environmental Impact Assessment Regulations*

*Regulations on Fill and Construction Projects Below High Water Mark*

*State Pesticides Regulations*

*Trust Territory Regulations*

## **Pohnpei Legislation**

*Act Regarding Exportation of Certain Crabs and Lobsters*

*Act Concerning Fresh-Water Shrimp Harvesting*

*Conservation and Resource Enforcement Act*

*Deed of Trust Act of 1987*

*Forest Management Act of 1979*

*Marine and Fresh Water Quality Standard Regulations, Trust Territory Solid Waste Regulations*

*Marine Resources Conservation Act of 1981*

*Mangrove Protection Act of 1987*

*National Environmental Impact Assessment Regulations*

*Pohnpei's Cultural Preservation Act*

*Pohnpei Environmental Protection Act of 1991*

*Pohnpei Watershed Forest Reserve*

*Pohnpei Watershed Forest Reserve and Mangrove Protection Act Subsidiary Regulations*

*Public Trust Lands Distribution Act of 1980*

*Public Lands Act 1987*

*Public Water Supply Systems Regulations*

*State of Pohnpei Earthmoving Regulation*

*Toilet Facilities and Sewage Disposal Regulations.*

*Transportation Zone Act of 1987*

*Trust Territory Environmental Quality Protection Act*

*Watershed Act*

*Trust Territory Air Pollution Control Standards & Regulations, Trust Territory Pesticides Regulations*

*Trust Territory Air Pollution Control Standards & Regulations*

*Trust Territory Solid Waste Regulations*

## **Chuuk Legislation**

*Chuuk State Historic Preservation Act of 1991*

*National Earthmoving Regulations*

## **Yap Legislation**

*Draft Earthmoving and Sedimentation Regulations*

*Draft Pesticides Regulations*

*Draft Toilet Facilities and Sewage Disposal Regulations*

*Draft Water Supply System Regulations*

*Environmental Protection Agency Regulations*

*Environmental Quality Protection Act 1987*

*Fishing Authority Act of 1979*

*Marine Emergency Response Act*

*State Fishery Zone Act of 1980*

*Trust Territory Solid Waste Regulations*

*United States Trust Territory Environmental Quality Protection Act*

*Yap State Environmental Quality Protection Act*

## **CHAPTER 4**

### **KINGDOM OF TONGA**

# 4. KINGDOM OF TONGA

## Condensed Version of Legal Review

*Conducted by Mere Pulea*

### 4.1 Introduction

The Kingdom of Tonga consists of 171 islands divided into three major island groups, the northern group (Vava'u/Niuas), the central group (Ha'apai) and the southern group (Tongatapu/Eua). The islands, scattered in a broken chain over 362,500 square kilometres of sea, have a total land area of approximately seven hundred square kilometres.

The total population recorded in the 1986 census was 94,535 with an average annual growth rate of 0.49 per cent during the period 1976-1986. The sharp decline in the rate of population growth since 1966 (1.51%) is largely due to the combined influence of lesser natural increase and heavy emigration (*Sixth Development Plan*: 61). Without this emigration the population would be far greater than stated above. The population growth rate has far-reaching implications in relation to the scarcity of land resources to support the population and for the conservation of resources for future use.

### Environmental Law in Tonga

Environmental law in Tonga is not codified in one single comprehensive statute, perhaps mainly due to the slow pace of development of the law in this area. However, there have been various proposals to improve the environmental provisions by a number of pieces of legislation. Environmental provisions are found scattered through a range of legislation such as that providing for public health, land, fisheries and water. The oldest source is the public health laws. The changing nature of environmental law and the scale of environmental problems have presented particular challenges and difficulties - one being that of costs, particularly technical and scientific.

This Review for Tonga uses a broad definition of environmental law, to include law concerned with the physical environment and natural resources and those laws which facilitate the sustainable development of natural resources. The public health laws which address nuisances and direct threats to health are considered to be no longer adequate to protect the environment. A distinct body of law recognised as "environmental" is emerging to protect not only human health but the very systems which sustain life and to address the needs of future generations.

The Review also highlights the problems and the country's capacity to implement the existing and future developments of its environmental laws.

### Tonga Development Plans

Tonga's five yearly Development Plans outline the national development, social and environmental objectives to be pursued and achieved through each Plan period. For example, the

*Sixth Development Plan* (1991-1995: 75) sets out the Government's objectives with regard to natural resources as follows:

- to improve the pattern of land allocation among competing uses or activities such as settlement, agriculture, mineral exploitation, industry and tourism;
- to safeguard the natural resources and heritage of the Kingdom, preserve the social and cultural functions that relate to the environment, and enhance the contribution of natural resources to economic and social progress;
- improve the management of natural resources in order to attain optimum levels of exploitation, and allow sustainable development.

Environmental policies, and the awareness of the need to balance these with economic development, have emerged through several avenues. Most notably, Tonga's significant contributions to, and active participation in, international and regional environmental fora and the establishment of the Environmental Planning Section within the Ministry of Land, Surveys and Natural Resources. A number of sectoral studies on environmental issues have contributed significantly to an understanding of national environmental issues. Solutions proposed in such studies often require Government-administered programmes to ensure that the environmental initiatives are carried out effectively.

## **Proposed Bill**

The *Land Use, Natural Resource and Environmental Planning Bill*, proposed through the Ministry of Land, Surveys and Natural Resources, has been designed to put in place a framework for land use planning to regulate proposed new developments.

The proposed Bill provides a framework for development planning which aims to prevent the making of arbitrary land use decisions. Any proposal to develop land or change its uses must be considered within the guidelines set by Government and the law. The proposed Bill includes "Planning Schemes" as a key component. Planning Schemes, in defined areas, must take into account land uses and the characteristics of the area as a whole and provide guidelines for future development in that area. Details are provided in the Bill for the preparation of planning schemes. Part VI of the Bill provides for Development Applications and the detailed information required for Environmental Impact Assessment (EIA). Procedures are also set out for objections by persons whose rights are affected by any proposed development and other matters that must be taken into account in assessing an application. Provisions in the Bill will ensure efficient land use and the enhancement of the environment brought about by the preservation of amenities, historic buildings, sites and landscapes as part of the national heritage.

## **4.2 Constitutional and Administrative Structure**

Tonga is the only remaining Kingdom in the Pacific. The Constitution prescribes a constitutional government under His Majesty King Taufa'ahau Tupou IV his heirs and successors. The Government is divided into three bodies:

1. The King, Privy Council and Cabinet (Ministry)
2. The Legislative Assembly
3. The Judiciary.

The King appoints the Privy Council to assist him in the discharge of his important functions. The Privy Council is composed of the Cabinet, Governors and any others the King sees fit to call to the Council. The Cabinet, or Ministers of the King, consists of the Prime Minister, Minister of Foreign Affairs, Minister of Lands, the Minister of Police and any other Ministers appointed by His Majesty. It is the King's prerogative to appoint Ministers and their office is held at the King's pleasure or for such time as specified in their commissions. A Minister may hold two or more offices. There are two Governors appointed in the Kingdom - the Governor of Ha'apai and the Governor of Vava'u. Governors are appointed by the King with the consent of the Cabinet. The Governors hold office at the King's pleasure, and by virtue of their office, hold seats in the Legislative Assembly; they do not have the power to make laws, but have the responsibility to enforce them in their Districts.

## **Administrative Responsibility for Environmental Matters**

The Ministry of Lands, Survey and Natural Resources is the main environmental policy-making body and works in close cooperation with a range of Ministries such as Health, Agriculture, Forestry, Fisheries and Central Planning.

Responsibility for environmental matters is concentrated in the Environmental Planning Section in the Ministry of Land, Surveys and Natural Resources. The Section, staffed by 5 members and 10 casual labourers, is headed by an Ecologist and Environmentalist. The 10 casual labourers assist the 2 appointed Park Rangers in the general maintenance of existing parks and reserves and the implementation of other field projects.

Environmental responsibilities also lie with other Government Ministries such as the Ministry of Agriculture and Forestry (MAF). MAF is responsible for the exploitation and conservation of natural resources through the various Divisions of Livestock, Research, and Quarantine and Quality Management.

Most forest activity in Tonga is associated with agriculture. Although Tonga has a limited forest cover, there has been a long term commitment to establish an exotic plantation forest on the island of 'Eua. The *Forests Act 1961* enables the King in Council to declare forest reserves or reserve areas. Activities within forest reserves are regulated by the Minister for Agriculture and Forestry.

The Ministry of Fisheries, created in 1990 as a separate Ministry from the Ministry of Agriculture and Forests, has responsibility for the conservation, management and development of fisheries.

The Ministry of Health is responsible for public health, the management and control of sanitation and solid waste disposal, and together with the Village Water Committees, the monitoring of rural water supplies and water quality.

The Inter-departmental Environmental Committee (IDEC) was established during the Fifth Development Plan period (1985-90) and entrusted with the preparation of a comprehensive Environmental Management Plan with support from ESCAP. The Report, published in 1990, describes the current environmental problems and proposes solutions.

## **4.3 System of Land Tenure**

Land, particularly in Tongatapu, is becoming increasingly scarce and land allocation in some environmentally sensitive areas such as mangrove swamps and lagoon areas is not uncommon.



As this trend is not likely to change, a regime for environmental conservation, encompassing not only pollution control but also land use planning and the exploitation of natural resources on a sustainable basis, becomes imperative. As the issue of land allocation is central to the very existence of the population in small island states, the land tenure system has important implications for environmental management of natural resources.

The two most distinctive features of land tenure in Tonga are that land rights are granted solely to individuals, and every male Tongan over sixteen years is entitled to eight and one-quarter acres of agricultural land and a small town allotment to build his house (Maude, *et al*: 114).

## **Land and the Constitution**

Part III of the Constitution reaffirms the principles of land holdings established earlier. Clause 104 declares that "all land in Tonga is the property of the King and he may, at pleasure, grant to the nobles and titular chiefs or matapules one or more estates to become their hereditary estates". It is unlawful for anyone to sell any land but they may lease it in accordance with the provisions of the Constitution, and mortgage it in accordance with the *Land Act*.

"Land" is defined in the *Interpretation Act 1903*, as amended, to include "the hereditary estates of nobles and matapules, tax and town allotments, leaseholds and interests in lands of every description. The Royal Estates are not included within this definition.

There are several types of estates: Royal Estates belonging to the King; Royal Family Estates held jointly by the Royal Family; Hereditary Estates belonging to the nobles and a few matapules; and Government Estates under the direct control of the Minister of Lands. About sixty per cent of the population live on hereditary estates (Maude, *et al*, p 121). There are also tax and town allotments, which are life interests subject to conditions, teacher's allotments, leases, and reservations of land for public purposes.

Two land-related problems that are becoming increasingly apparent with the scarcity of land, particularly in Tongatapu, are that environmentally sensitive areas such as mangrove swamps and lagoon areas are being reclaimed to provide allotments. In addition, tax allotments are being subdivided to provide for town allotments. Both of these "encroachments", being inevitable results of development, could have far-reaching and negative environmental consequences for existing land resources if precautions are not taken to minimise their impacts.

## **4.4 Environmental Planning and Assessment**

One of the main features of planning for towns and the countryside is the development plan made by the local planning authority, which sets out the strategy for development of an area. 'Development' is defined to include changes of land use as well as physical development requiring planning permission from a local planning authority before being carried out. Planning permission effectively grants a right to develop (in accordance with the terms of the permission). Application procedures require planning permission from the local planning authority, and consultations with other bodies such as Public Health, the Water Board etc. usually take place. The local planning authority then decides on grounds of planning policy, national development plans and policies set by Government before granting or refusing permission.

Although Tonga does not have a single piece of legislation which addresses physical or environmental planning, it does have a number of laws which incorporate controls over the use of land as well as the design and form of the built environment. Although land use laws do not

directly address environmental protection, there are some environmental provisions which effectively provide for environmental protection. The range of laws that address land use have a broader role in bringing about economic and social development. The continued expansion of the agricultural and commercial sectors and the increase in population of Tongatapu, as a result of drift from the outer islands, has put added pressures on land capacity. This has major implications for physical planning, land use and amenities, and the location and design of new developments.

In this section, all laws which control and regulate the use of land and the built environment (i.e. all structures), address permissibility of development, change the existing uses of land, and laws relating to the development of buildings will be considered within the framework of planning legislation.

A *Land Use, Natural Resources and Environmental Planning Bill* was first drafted in 1982 by the Department of Lands, Survey and Natural Resources and the Bill has been revised a number of times. The Bill is awaiting an independent review before consideration is given for its resubmission to Parliament.

## **Policies on Development**

Pro-development economic policies and one of the national objectives for the *Sixth Development Plan* (1991-95) aim to achieve sustainable economic growth conducive to a higher, per capita income. The Plan states that the objective for "higher economic growth could conflict with other objectives". This is contrary to the concept of sustainable development. The integration of economic and environmental development at the policy, planning and management levels is described in chapter 8 of *Agenda 21* and the international community, in adopting *Agenda 21*, is urged to ensure that this integration is achieved.

The economic development strategy for the Plan period is to generate economic growth and employment opportunities with special emphasis on the export and tourism sectors. During the Plan period, the Government will review its existing policies to ensure that economic growth is not unduly constrained. In addition, the Government will place special emphasis on the provision of law and order and the protection of the environment.

## **Statutory Background**

Land use is central to economic development in Tonga and environmental issues in connection with land use have become a vital concern, with increasing competition for land and the migration of people from the outer islands to Tongatapu.

There are a number of statutes which regulate and control land use and development. The power to impose conditions relating to environmental protection is also capable of creating some form of control over activities relating to land use. Land use planning is of importance in many areas of the environment, particularly for pollution control and the siting of waste disposal, industry and small businesses.

Although there are no land use planning laws in place in Tonga, nor formal national land use planning policies, some flexible land use planning policies in place are inferred. This is particularly so at the sectoral level within the Ministry of Lands, Survey and Natural Resources where there is a presumption in favour of development.

## **Commercial Development**

As the economy cannot rely solely on agricultural development and cottage (handicraft) industries, export industries have been developed in Tonga. With the decline of the copra industry (coconut oil, soaps and desiccated coconut) a number of industrial activities were encouraged. These included the manufacturing of paint, building materials such as concrete blocks, roofing iron, nails, furniture, woollen knitwear, leather garments, footwear, and spectacle accessories.

Development licences granted under the *Industrial Development Incentives Act 1978* totalled 380 up to 1990. The land area approved by the Ministry for Lands for the establishment of the Small Industries Centre is designated solely for the different categories of industrial enterprises. Whilst no formal land use planning and zoning legislation exists, the area designated through administrative decisions can be viewed as an enterprise zone scheme where the *Industrial Development Incentive Act* offers fiscal and administrative advantages for those involved as well as automatic planning permission.

## **Planning and Building Control**

The power to control the use and development of land and buildings within a two mile radius of a Post Office in urban areas is vested in the Cabinet and the Medical Officer for Health, under the *Public Health (Building) Regulations*. The Regulations only apply to principal towns and within a radius of 2 miles from the Post Offices of Nukualofa, Pangai (Ha'api) or Neiafu (Vava'u) (rule 2). Any site within these areas used for building purposes is subject to the permission of Cabinet and the approval of the Medical Officer of Health (rule 4). The plans and material used for any building is also subject to the approval of the Medical Officer but buildings of Tongan native materials within the scope of section 6(3)) of the *Town Regulations Act 1903* are exempted from these requirements (rules 4 and 5).

Under the *Town Regulations Act 1903* it is mandatory for every male Tongan reaching the age of 21 years to build a dwelling house on his allotment. The house may be built of either Tongan or non-Tongan materials.

Legislation designed to manage and protect Tonga's natural and cultural resources may be considered as part of planning law. Protected area legislation may have, in the past, been considered as an overlay to the traditional planning legislation, but it should now be regarded as an integral part of it.

## **Environmental Impact Assessment**

Existing laws regulating such activities as mining, waste disposal, agriculture, buildings, roadworks, airport construction, wharves and piers describe and permit the various projects carried out by Government and the private sector. However, the actual, cumulative or potential impacts of these projects on the environment is given little attention. There are, and have been, few legal requirements for environmental impact assessment, except in limited circumstances, to protect the environment.

In Tonga, there is currently no legislative support for EIAs conducted through the Land and Environmental Planning Section in the Ministry for Lands, Surveys and Natural Resources (MLS&NR). An EIA policy which has been in place since 1985, however, enables the Central Planning Department to pass on all development proposals for assessment by the Environmental Planning Section in the Ministry of Land, Surveys and Natural Resources.

## Controls over the Littoral Zone

The *Land Act 1936* makes provision for control over development within the littoral zone. Under section 22(1)(e) of the Act, the King, with the consent of Privy Council, may make regulations to regulate the cutting and taking of timber, sand, stone, metals and materials from Crown land or any holding. The control of other types of coastal developments can be found in the *Tourist Act 1976*, where the Minister responsible for tourism is empowered to license, regulate and control accommodation, restaurants and other tourist facilities.

## Proposed Land Use, Natural Resource and Environment Planning Bill

For planning purposes the Bill incorporates provision for the establishment of a planning authority with extensive responsibilities for the preparation of planning schemes for town and district areas. In addition, regional, maritime and national planning schemes may also be developed. The whole planning process enables orderly and desirable development to take place with controls applied through a permit process. This Bill requires an independent assessment to determine the problems associated with particular sections, and to assist the Ministry for Land, Surveys and Natural Resources to redraft those portions of the Bill which lack the required support. An independent assessment of the Bill is recommended.

### Recommendations on Environmental Planning and Assessment

1. An independent assessment be made of the proposed *Land Use, Natural Resources and Environmental Planning Bill* to identify and segregate those elements of the Bill that are currently unacceptable and to propose alternative measures to achieve the aims and purposes of the Bill.
2. As the *Land Use, Natural Resources and Environmental Planning Bill* contains provisions for EIAs, it is recommended that, in the interim, EIA Guidelines be developed to secure the integration of environmental measures in the decision making process for projects. It is further recommended that the Guidelines be implemented by the Environmental Planning Section until the status of the proposed Bill is determined.

## 4.5 Water Supply and Water Quality

Fresh water supplies in Tonga are mainly from ground water lenses with the exception of 'Eua and Niuatoputapu where the freshwater supply is obtained from spring outflows on top of impervious rocks and in Tofua and Niuafou'ou where fresh water sources are found in lakes in volcanic craters. The main fresh water source in some of the smaller islands is through roof catchment of rain water.

Tonga's *Sixth Development Plan* points out that freshwater resources are limited in supply and during the Plan period the demand for water could be so high that the resource "might cease to be

sustained by natural recharging". A number of problems identified in the *Sixth Development Plan* include damage to freshwater lenses by over-pumping of wells causing salt water intrusion and the over-exploitation of thin lenses in some islands which has resulted in the pumping of saline water for domestic use; existing water regulations are poorly enforced. The regulations have failed to protect national water resources against possible depletion; and the legislation allows only minimal control of water pollution and does not set standards for the construction and protection of wells and sanitary facilities.

## **Institutional Structure**

Water supplies in Tonga are managed by three distinct authorities, the Department of Public Health, Ministry for Health, the Hydrogeology section of the Ministry for Lands, Survey and Natural Resources, and the Tonga Water Board. The Ministry for Health is responsible for the water supplies in rural areas in conjunction with the Village Water Committees in each village. The Tonga Water Board is responsible for water supplies in the 4 urban areas of Nuku'alofa, Pangai-Hihifo, 'Eua and Neiafu; and the Hydrogeology section of the Ministry of Land, Surveys and Natural Resources is responsible mainly for managing the ground water resources by controlling the drilling of wells, the rate of water pumped from underground water lenses and monitoring, testing and maintaining the quality of the water.

## **Tonga Water Board**

The Tonga Water Board established as a body corporate under the *Water Board Act 1966*. The regulation and control of water supplies are detailed in the *Water Supply Regulations*. Water is not supplied unless it is metered except where the Tonga Water Board otherwise directs. The Tonga Water Board is also responsible for the erection and maintenance of fountains, baths and washing places for public use and fire hydrants on or near streets. The selling of water supplied by the Tonga Water Board is prohibited except with the Board's authority, and the wasting of water is also prohibited.

## **Tonga Water Supply Master Plan**

This Plan reviews the responsibilities and capabilities of organisations involved in the development and operation of water supplies and the management of water resources. The Plan not only provides an extensive analysis of the existing water legislation and the responsibilities of various agencies and Government Ministries dealing with water, but also makes recommendations to strengthen and improve the present institutional arrangements and to amend the legislation accordingly.

### **Recommendations on Water Supply and Water Quality**

3. Legislation be considered to clearly detail the responsibilities of the Ministry of Land, Surveys and Natural Resources to control and protect water resources.
4. Recommendations made in the *Tonga Water Supply Master Plan* to improve the present institutional arrangements and to amend the legislation should be considered with a view to implementation.

## 4.6 Pollution Control and Waste Management

The *Environmental Management Plan for the Kingdom of Tonga* (ESCAP 1990: 139) states that municipal dumps in Tongatapu and Vava'u are located in mangrove swamps and that there is no inventory of hazardous materials which might be dumped into the mangroves and that there are no controls of any sort. Paint residues, pesticide containers, batteries containing lead, plastics of all descriptions and all by-products of industrial activities and urban wastes are disposed of in the dumps. Leachates and other toxic substances such as pesticides applied by the Health Department on the Popua (Nuku'alofa) dump flow towards Fanga'uta Lagoon thereby contaminating the area. In some areas, rubbish is thrown into the sea and onto the foreshores. The dump in Nuku'alofa is frequently burning and the resultant fumes and smoke, containing a wide range of carcinogenic substances, cover urban residential areas (p 140). The Management Plan highlights the difficulties in dealing with an unending stream of municipal rubbish. The management and control of wastes is primarily the responsibility of Government, but both the public sector and industry have an important role to play in waste management. The role of Government is defined through a framework of legislative and institutional controls.

### Solid Waste

The Ministry for Health is in charge of municipal solid waste management, including waste pick-up, dumping and maintenance of the dump site. There are no regulations to regulate what should or should not be deposited in the dumps. Legislation covering solid waste is the *Garbage Act 1949* and the *Public Health (Refuse Dumping Ground) Regulations*. Part V of the *Public Health Act 1913*, as amended, provides some remedies for a host of environmental problems under the law of public nuisance. The Medical Officer or Sanitary Inspector is empowered under the Act, for reasons of public health and safety, to abate the nuisance either through direct action or through resort to the courts for an order compelling the person who created or maintains the nuisance, to abate it.

### Hazardous Waste

According to the *Environmental Management Plan for the Kingdom of Tonga* (ESCAP 1990: 142), pesticide containers present a major danger as some of the plastic drums are used for catching and holding rain water. Veterinary and hospital drugs, chemicals, fabric dyes, old paint, asbestos, photochemicals and other hazardous wastes common to Tonga need to be carefully disposed of and especially regulated. There appears to be no specific regulation dealing with the disposal of this material. The Environmental Management Plan deals with this specific matter and recommends the establishment of a *Hazardous Materials Act*.

### Sanitation

One of the most significant hazardous waste issues in countries constrained by shortage of land is the location of sanitary disposal sites near the centre of population. The Environmental Management Plan states that all sewage in Tonga is disposed of by latrines (wet or dry) or septic tanks. This includes wastes from public toilets, hotels and public buildings, industrial sites and households. Because of the serious risks to health and the environment posed by minimally controlled sanitary disposal sites, it is suggested the regulations be expanded to include more

control with regards to securing the waste disposal sites from animal and unauthorised human intrusions.

## **Pollution**

Air pollution from vehicles in Tonga is not strictly controlled. It is suggested that regulations be made to include control vehicular emissions.

In relation to water pollution, in the past insufficient focus has been afforded to the different types of pollution in the waterways and the effect of pollution on the marine and coastal resources. In recent years there has been a dramatic response in some countries to protecting the marine environment from human activities and from the disposal of industrial, chemical and sanitary wastes. The discharge of toxic pollutants and refuse from land or ships is just one area where legislation has intervened to prohibit or restrict the disposal of wastes into the marine environment.

The *Harbours Act 1903* addresses various aspects of dumping rubbish, ballast, earth or refuse into the harbour without the permission of the Harbour Master.

The *Continental Shelf Act 1970* makes provision for the protection, exploration and exploitation of the continental shelf and to prevent pollution resulting from such works.

## **Draft Marine Pollution Bill**

A comprehensive *Marine Pollution Bill* for Tonga, to prevent the actual release or threat of hazardous substances such as oil and other pollutants, sewage and other waste matters into the marine environment, was drafted in 1992. This well-structured Bill would meet Tonga's international obligations under the following Conventions:

- *Convention for the Prevention of Pollution from Ships, 1973;*
- *Convention on the Protection of the Natural Resources and Environment of the South Pacific Region, 1986;*

## **Litter**

There is no specific law to control or regulate the disposal of litter in public places such as on streets and in shopping areas except for those provisions on litter found in the *Parks and Reserves Act*.

### **Recommendations on Pollution Control and Waste Management**

5. Categories of waste be specifically defined e.g. abandoned motor vehicles, wrecks, hazardous wastes with stringent controls imposed over disposal facilities such as sludge dykes and dumping grounds.
6. The *Public Health (Dumping Grounds) Regulations* be amended to include the requirement for an environmental impact assessment to be carried out before a dumping site is declared and that restoration measures be made a specific requirement when a disposal site is declared closed.

7. Consideration be given to the enactment of a *Hazardous Materials Act*.
8. Regulations to the *Public Health Act* be expanded to include more control with regard to securing waste disposal sites from animals and unauthorised human intrusions.
9. Traffic regulations be amended to include the control of emissions from vehicle exhaust outlets.
10. The *Marine Pollution Bill* be given urgent consideration with a view to implementation.
11. An Act specifically dealing with litter be considered. Littering in public places such as streets, public grounds, shopping areas and other public places should be made an offence.

## 4.7 Biodiversity and Wildlife Conservation

Biodiversity conservation is one of the most difficult environmental issues facing small Island States as often it poses choices between environmental protection and economic development, and conflict between landowner rights and the government's growing role in its stewardship responsibilities. The *Convention on the Conservation of Biological Diversity* provides a framework to ensure national and international action to conserve biological resources and to curb the destruction of ecosystems, biological species and habitats. Biological conservation includes all species of animals and plants and the ecosystems of which they are a part.

### Protected Areas

#### Statutory Background

The *Parks and Reserves Act 1988* provides for the setting up of both Land and Marine Parks and Reserves, or a combination of the two. This Act may be described as perhaps potentially one of the most important pieces of environmental legislation presently enacted in the Kingdom of Tonga.

The Act provides for the setting up of a Parks and Reserves Authority whose members and numbers may be appointed and determined at regular intervals by the Privy Council. At present, a Parks and Reserves Authority has not been established in terms of section 3(1) and the Minister of Lands is therefore the "Authority".

#### Types of Protected Areas

The Act sets out the three types of protected areas that may be established, namely parks, land reserves and marine reserves.

Section 8 deals with land reserves and states they shall be administered for the protection, preservation and maintenance of any valuable feature of such reserves. Entry and restrictions are to be strictly in accordance with any conditions the Authority may impose.

Section 9 deals with marine reserves: "Every marine reserve shall be administered for the protection, preservation and control of any aquatic form of life and any organic matter therein."



Section 10 requires every reserve to be clearly demarcated and fenced and the plan of the same to be posted on a notice board erected on a vantage point in the reserve. This section relates to land reserves as opposed to marine reserves. Marine reserves however should also be clearly demarcated to show the public the area within which the marine reserve falls.

The Act authorises the Authority to make regulations prescribing conditions and restrictions the Authority considers necessary for the protection, preservation and maintenance of natural, historic, scientific or other valuable features of any Park or Reserve;

It is recommended that consideration be given for Regulations to be made under the Act.

Section 6 sets out the powers of the Authority. Apart from powers to erect signs, fences, buildings etc., to enter into agreements and to do other miscellaneous things, the Authority has the power to "issue warnings and notices, either to the public at large or to any persons or class of persons, in any manner it may deem fit" (para. (e)).

Section 6(c) allows the Minister, as the Authority, to issue warnings and notices to an individual person in any manner the Authority may deem fit". In view of perceived problems in formally charging people using the offence provisions, this particular provision may be extremely useful in devising a system of dealing with people who breach the provisions of the Act, without actually charging them with an offence. This provision coupled with the powers to "appoint any person either permanently or temporarily for any purpose which the Authority may consider necessary" could enable "honorary ranger" type appointments i.e. appointing local people in the area as honorary rangers. They would have responsibility for the area. Such persons could be provided with some form of warrant and could be authorised to issue warnings in the name of the Minister, notifying any offender that any further breach of the law may result in a prosecution. This could be a cost-effective measure for policing parks and reserves, especially those that are isolated and difficult for the Minister's staff to visit regularly.

This particular issue and other related issues are addressed in the *Environmental Management Plan for the Kingdom of Tonga* at Chapter 12 para 2.8 page 163. They are worth referring to here.

2.8.1: In the past, funding for park development was based on Western concepts of parks and reserves. The bigger the park the better. Parks were developed for wildlife or for tourism. People who happened to be in the vicinity were either transplanted or told the area was off-limits. Repeated experience throughout the Pacific has shown that this technique only works if enough manpower and funds are available to patrol the park constantly and levy high fines or prison terms against offenders.

2.8.2: Previous park and reserve designations in Tonga have been difficult because of a lack of funds and personnel. This is much less of a problem if the community is willing to assist in park development. A park after all, begins by designation of an area as special and then taking steps to delineate and manage the resource. In many cases the community work can be done on a voluntary basis (the Boy Scouts of Vava'u have routinely made and maintained trails on Mount Talau at no Government expense).

2.8.3: There is no format at present for the involvement of the public with the parks and reserves programme from either an educational or active participation standpoint. Consequently there is no means by which any of the potential participants can become involved with park development.

This Review recommends that consideration be given to the involvement of the community, particularly landowners, in the protection and management of Parks and Reserves.

## Offences

The *Parks and Reserves Act* provides that an offence is committed if a person, without authorisation, alters damages, destroys, removes or in any way interferes with any feature whether organic or inorganic in any reserve or park. It is therefore illegal, for example, to fish in a marine reserve. One of the main rationales of a marine reserve is to protect, preserve and conserve marine life in its various forms. The prohibition against taking any marine life (fish, shellfish, etc.) seems to be honoured in the breach, and that people generally are either unaware of the prohibition or choose to ignore it. It is not possible to comment as to whether this is a general or specific problem relating only to particular beach reserves. If the problem relates to all marine reserves it would defeat the whole purpose of a marine reserve. A widespread public education programme is necessary to properly inform people of what is permissible in a marine reserve.

## Declaration of Parks and Reserves

In 1979, five areas were declared parks and reserves according to the provisions of the Act.

In the *Environmental Management Plan for the Kingdom of Tonga*, Chapter 12 at para 1.0, the role of parks and reserves and protected areas in Environmental Management is:

1.0.1. to prevent depletion or extinction of valuable species of wildlife or wildlife communities and enrich and improve production of land and marine resources;

1.0.2. to protect areas or items of importance for the Tongan cultural heritage and provide the people of Tonga and visitors with places of recreational, educational and scientific importance.

It should be noted that there is provision for creating forest reserves under the *Forest Act*. Section 3 of that Act provides that the King in Council may declare any unalienated land to be a forest reserve or a reserved area.

## Conservation of Species

The conservation of various species and the creation of protected areas for the preservation of wildlife are often balanced against commercial development of natural resources and the needs of increasing population. In Tonga, there have been early attempts at wildlife conservation as indicated by legislation passed as far back as 1915. In 1990, the Report on the Environmental Plan for the Kingdom of Tonga makes the observation that "there is little knowledge about rare or endangered birds" in the Kingdom of Tonga. "The megapode populations are certainly very low, being endangered by cats, dogs and pigs". This section examines the extent to which the current law permits or requires protection of wildlife species and habitats.

## Birds and Fish

Prior to the coming into force of the *Fisheries Act 1989*, the *Birds and Fish Preservation Act* was described as "an Act to make provision for the Preservation of Wild Birds And Fish". The *Birds and Fish Preservation (Amendment) Act 1989* which came into force the same day as the *Fisheries Act 1989* has however, deleted the words "and fish". Thus, various references throughout the Act and Schedules relating to fish are repealed or deleted.

The title to this Act does not indicate the extent of the provisions of the Act. Not only does the Act protect birds but it also sets up protected areas.

Section 7 sets out the prohibitions within the protected areas under the Act. It declares that no person may within a protected area and without the prior consent in writing of the Prime Minister: discharge any effluent, noxious liquid or substance; erect any harbour, wharf, pier, jetty or other building works temporary or permanent; cut, damage, remove or destroy any mangrove; erect any fish fence, set any fish trap, or trawl for fish or engage in fishing for commercial purposes; and carry out any drilling or dredging operations.

As noted above, the provisions relating to fishing have been repealed, presumably now to be dealt with in the *Fisheries Act 1989*. The definition of "Fisheries Waters" in that Act includes lagoons. There is provision in Section 22 of the Act for the Minister, by Order published in the Gazette, to declare any area of the fisheries waters to be a reserved fishing area for subsistence fishing operations. However, it was not possible during the Review to establish whether any such Gazette Orders have been made with respect to the area protected by the Second Schedule. (The Order may specify the types or classes of vessel that may be allowed to fish in such areas and the methods of fishing that may be used). Further, it appears that the previous protection afforded by the provision of Section 7(iv) relating to fishing in protected areas for commercial purposes and the setting up of fish fences and traps in such areas, now repealed, has been lost.

Under the *Fisheries Act 1989*, section 59 empowers the Minister to make regulations, among other things, prescribing fisheries management and conservation measures including mesh sizes, gear standards, minimum and maximum species sizes, closed seasons, closed areas, prohibited methods of fishing gear and schemes for limiting entry into all or only specified fisheries, and regulating the setting up of fishing fences. These regulatory powers are sufficiently wide to provide for protection in the lagoon.

"Protected bird" is defined in the Act to "include all such birds whether imported into, or indigenous to, the Kingdom, and the eggs and progeny of any such birds as are mentioned in Schedule 1 hereto". There are 11 birds listed in the schedule all but two of which, the Land Bird and the Wild Pigeon, have year-round protection. The two others are protected from 1 May to 31 January in each year.

The Act creates offences in relation to killing, shooting, catching, buying or selling any protected bird. The bird, and any boat, net, gear and equipment used in connection with the catching of the bird may be forfeited to the Crown, and provides for police or fisheries officers to inspect and search any baggage, package, vessel or vehicle for protected birds.

### ***Convention on International Trade in Endangered Species***

Tonga is not a party to this Convention and as a result does not share in the major benefits which the member nations enjoy. The Convention is designed to govern trade in endangered, threatened or exploited species. A specimen includes any animal or plant whether alive or dead and any recognisable part or derivative. The various species are graded according to whether they are endangered, threatened or exploited by trade. Trade is defined to mean export, import, re-export or introduction from the sea. The Convention is therefore concerned with the regulation of the trade in species across national borders.

The aim of the Convention is to protect species which are endangered, threatened or exploited by trade, and therefore, domestic legislation which reflects the Contracting Party's responsibilities under the Convention should be designed to give effect to that aim.

The domestic legislation of member countries which gives effect to the Convention does not necessarily set out to protect indigenous species within the country itself. It is possible that rare indigenous or local species do not feature in the CITES schedules, especially if they are not

threatened by trade. There is a procedure set out in the Convention whereby the species of a member country can be included in the Schedule or Appendix to the Convention.

There are also provisions in the Convention that relate to specimens bred in captivity. Those provisions can be of considerable benefit to member nations where legitimate breeding programmes are being undertaken. Such a programme being undertaken in Tonga at the Bird Park. If Tonga was a member of CITES it would considerably facilitate the legitimate movement of birds and eggs produced in captivity. That in turn would ensure the continued survival of rare and endangered species. It should be noted that the Convention applies to both fauna and flora and that if Tonga were to become a party to the Convention it would be required to regulate the present tourist trade in items made from black coral as they appear in the schedule of species threatened by trade.

The *Environmental Management Plan for the Kingdom of Tonga* makes the recommendation that it would be advisable to update the list of protected birds and include animals in the title of the *Birds and Fish Preservation Act*. In addition, it seems that the present penalties under the Act are very low. Bird smuggling is a very lucrative trade and some rare birds fetch as much as US\$20,000 on the international market. Because of the high monetary value of rare and endangered bird species on the international market, highly organised international smuggling rings are active in most countries. Tonga with its many islands and valuable bird species would be an attractive target for such international bird smugglers. For this reason, penalties require drastic revision and there should be provision for imprisonment on conviction. At present, imprisonment only arises in default of payment of a fine.

The value which the Kingdom of Tonga places on its rare and endangered bird species and animals should be clearly reflected in strong legislative provisions that are designed to deter would-be smugglers from endeavouring to smuggle birds out of the Kingdom. In addition, the legislation should also protect other endangered wildlife.

### **Recommendations on Biodiversity and Wildlife Conservation**

12. Consideration be given to enacting regulations authorised by the Act.
13. Entrance fees for Parks and Reserves recommended in the 1990 *Report on Environmental Management for the Kingdom of Tonga* be considered.
14. Continuing public education programme on Parks and Reserves and the participation of landowners in the management of Parks and Reserves be considered.
15. Further legal opinion be sought with a view to the possible redrafting of section 11 of the *Parks and Reserves Act*.
16. The list of protected birds be updated.
17. Consideration be given for the Kingdom of Tonga to become a party to the *Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*.
18. The penalty system under the Act be revised and strengthened and that imprisonment on conviction be made part of the penalty system.
19. The title and substance of the *Birds and Fish Preservation Act* be amended to include animals.

## **4.8 Protection of National Heritage**

### **Statutory background**

Legislation to protect of the cultural heritage of Tonga is limited to the *Preservation of Objects of Archaeological Interest Act* (Act No. 15 of 1969) Cap. 90 1988 Revised Edition Laws of Tonga. The term "Objects of Archaeological interest" is defined as:

any structure, erection, memorial, tumulus, cairn, place of interment, pit dwelling, trench, fortification, irrigation work, mound, excavation, cave, rock, rock drawing, painting, sculpture, inscription, monolith, or any remains thereof, fossil remains of man or animals or plants or any bed or beds containing such fossil remains thereof, or any object (or any remains thereof) which is or are of archaeological, palaeontological, anthropological, ethnological, prehistoric, or historic interest.

The Act provides that no-one is able to search for any object of archaeological interest unless authorised by a permit issued by the Committee on Tongan Traditions. The Committee must be satisfied that the applicant is competent both by training and experience to carry out an exploration or excavation. Conditions can be imposed on the permit to protect the site or object from injury, removal or dispersion. When an object is discovered, whether by permit or otherwise, the Committee must be notified without delay, and the object may be required to be delivered to the Committee. The Act also provides that objects may not be removed from the Kingdom without a permit; such a permit may be granted for scientific or display purposes.

It was not possible during the period of the Review to ascertain when the Committee last sat, and no regulations appear to have been made under the Act. While the term "objects of archaeological interest", is widely defined, the emphasis of the legislation is on objects of archaeological interest and archaeological sites. As a consequence, culturally important artefacts or antiquities are not necessarily covered by this legislation. These items can form an extremely important part of a nation's cultural heritage and it is imperative that some legislative protection is in place to ensure that these cultural treasures are not lost.

### **Trade**

It can be noted that in Nuku'alofa there are vendors stalls catering mainly to tourists and selling items of black coral, shells, carved bone etc. However there are also on display, artefacts and antiquities such as pre-European adzes, axeheads and whalebone weapons with traditional carving. These are not reproductions produced for the tourist trade but are genuine early artefacts for sale to tourists and therefore destined to leave the country. The vendors sell them as early artefacts and will also give a history of where they have been found.

In view of the high prices that artefacts from the Pacific region fetch in international markets, legislators should not be oblivious to the need for effective laws and prohibitions which will ensure that these artefacts are not easily removed. While certain cultural items are listed in the Second Schedule of the *Customs and Excise Act* as prohibited exports, that list is by no means exhaustive and does not apply to all artefacts and antiquities.

Legislation to protect artefacts and antiquities need not be complex, and should not be difficult to draft. In the interim, steps need to be taken to make vendors aware of the importance of the artefacts, to ensure that the artefacts remain in the country. At present, while they may not be committing an offence in selling the article, they may commit an offence under section 5(2) of the Act if it can be shown that they originally discovered the object.

At the same time, the Customs Department should be made aware that while these particular artefacts are not prohibited and restricted exports under Part II of the Second Schedule of the *Customs and Excise Act*, (which contains a list of specific items of Tongan culture which may not be exported), it could be argued that they fall within the definition of "objects of archaeological interest" and therefore fall within the prohibition of section 6(1) of the *Preservation of Objects of Archaeological Interest Act* relating to removal from the Kingdom.

## Archaeological Sites

Tonga is rich in archaeological sites, but there is an ongoing need to ensure that these sites are protected. There is however no provision in the *Preservation of Objects of Archaeological Interest Act* for the recognition, preservation or protection of archaeological sites as such. The need to protect sites is implied in that a permit is required before an excavation or surface operation can take place. However there should be a clear declaration in the legislation that archaeological sites are to be protected. When the present Act is closely analysed, it reveals very few protection mechanisms and may be described more as an Act designed to permit archaeological investigation and removal of objects.

It is suggested that the Act be strengthened by placing the emphasis and thrust on preservation of archaeological sites. It would also be useful to provide for a register of archaeological sites to ensure that they are identified and protected, especially those which may be less well known or important. Some of the more important sites are protected by means of other legislation, such as the *Parks and Reserves Act*, or by *Royal Declaration*. An example of the latter is the Ha'amonga Trilithon Historic Reserve established in 1972 under a *Royal Declaration*.

## Historic Buildings and Sites

Another aspect of heritage protection that is lacking is the protection of historic buildings and sites. While there may be some incidental protection for these places under the *Preservation of Objects of Archaeological Interest Act 1969* there would be many important historic buildings or sites that are not protected. Historic buildings and historic sites require their own heritage protection legislation and there should be some means of identifying and registering such places. Any planning legislation would also need to make provision to ensure their protection. That protection should extend to places which have special significance from a spiritual or cultural point of view.

It is interesting to note that the draft *Land Use, Natural Resource and Environmental Planning Bill* (1990 Version) has various provisions which relate to the protection of historic places and sites.

Regulations may provide for the rehabilitation of exploited areas, preservation or conservation of any land, marine area, object or building having historic, scientific, architectural, archaeological or other value, interest or appeal, and the control of layout, design, construction, maintenance and demolition of buildings.

In addition, Schedule II of the Bill, "Matters for Town Planning Schemes" include provision for the preservation and/or conservation of: the amenities and facilities in the town; any coral reef, tree, bush, mangrove swamp or other plant or landscape of scientific wildlife or historic interest, or of visual appeal; and any buildings, objects and areas of architectural, archaeological, historic, scientific or other interest, or of any visual appeal.

It is clear that historic places or sites could easily be included under the draft Bill. Under Schedule V "Matters for Maritime Planning Schemes" among the matters that may be included are the preservation and/or conservation of structures, objects and areas of historic or other interest, or of visual appeal.

In Schedule VI "Matters for a National Planning Scheme" and Schedule VII "Matters for Environmental Assessment", there are provisions to include historic places and historic sites.

The above provisions in the draft Bill would certainly prove useful in putting in place some form of heritage protection in relation to historic places and sites, including sites having special cultural or spiritual significance.

The Bill has been in draft form for a number of years now. It is a Bill which does not seem to have found favour and acceptance, perhaps because of its size and complexity, and, for that reason may be considered an inappropriate system of planning and resource management. The fact that such legislation would be breaking new ground, dealing with land usage, which of necessity will impose restraints upon landowners would probably be an additional reason for a certain amount of legislative reluctance. It should however be pointed out that while the proposed Bill deals with land, the underlying system of land usage is not at risk.

There are no land use planning statutes in Tonga. While some incidental statutory and non-statutory administrative constraints exist, they cannot be said to be significant. In reality, such legislation by its very nature must necessarily be detailed and reasonably comprehensive. The drafters of the latest version have kept the provisions reasonably straightforward, and have proposed an administrative structure that seems workable and appropriate. This approach should be pursued, perhaps with some streamlining of its features rather than that some other model should be proposed.

If however, the Bill does not proceed in its present form, then it is important that the heritage protection provisions contained in that draft are not lost sight of and that in addition to an *Environmental Protection Bill*, an *Historic Places Protection Bill* should also be given serious consideration. While in the end result what can be preserved or protected may be limited, it is important that the principle of heritage protection is firmly entrenched in the nation's laws.

### **Recommendations on Protection of National Heritage**

20. There should be a separate *Protection of Antiquities and Artefacts Act*, and an *Historic Places Protection Act*. Alternatively, a separate comprehensive *Heritage Protection Act* should be considered, which would cover all categories such as antiquities, artefacts, sites of special cultural and spiritual significance and historic places.
21. There should be greater protection for archaeological sites. Provision needs to be made for the protection of all archaeological sites as a primary objective of the legislation. While archaeological examination and excavation must also be provided for, the legislation must set out clear guidelines. A register of archaeological sites should also be established.
22. The inclusion of heritage protection in planning legislation should "dovetail" with any existing or future heritage protection legislation.

## 4.9 Agriculture and Forestry

Tonga's *Sixth Development Plan* (1991–1995) states that agriculture has always been the principal sector of the Kingdom's economy and that it is the primary source of livelihood of over two thirds of the population.

The degree of independence on agriculture in Tonga varies greatly within the island groups. In Tongatapu it is relatively heavy, in the main island (Vava'u), Lifuka and Foa Islands (Ha'apai) and 'Eua it is moderate, while in the rest of the islands, which are small and remote, subsistence agriculture is practised (Fakalata: 21).

The 750 square kilometres of land area in Tonga is generally fertile and combined with a favourable climate provides the potential for a highly agricultural sector (Halavatau and Asghar). Except for Vavau, Niuafouu, Niuatoputapu, Tafahi, Eua, Kao and Tofua, the land is either flat or gently undulating. While topography does not restrict cultivation, poor drainage is a problem in some areas and some of the soils in Haapai Group are sandy in nature.

Tonga has a limited forest cover. Wood resources comprise natural hardwood forest, an exotic plantation forest and trees grown through agroforestry schemes. Although a systematic inventory of Tonga's remaining natural forest is yet to be carried out, it is estimated that this area is around 4,000 hectares, a large part found on 'Eua (Forest Reserve). Small primary forests still exist at Toloa in Tongatapu, the eastern ridges and cliffs of 'Eua and on the steep slopes and hill tops of Vava'u. About 350 ha of forest outside the crater of Tofua are considered exploitable. The islands of Tafahi and Kao have cloud forests on steep slopes and other sizeable natural forests are found on Niuatoputapu and Late (*Sixth Development Plan*: 154/5) in areas that are generally inaccessible for harvesting purposes. Extensive cultivation and the need for firewood and building materials are largely responsible for the dwindling of this resource.

### Statutory Background

There is no single comprehensive piece of legislation which regulates agricultural activities in Tonga. There are, however, a number of specialised pieces of legislation which have evolved over the years. For example the *Noxious Weed Act 1903*, the *Copra Act 1926*, the *Animal Diseases Act 1979* and the *Plant Quarantine Act 1981* provide for and regulate specific activities relating to agriculture. Viewed together, this group of legislation provides a reasonably comprehensive regulatory programme to protect and advance the objectives of agriculture. These statutes control and regulate different sections of the agricultural environment. There are a number of individual issues relating to agriculture which are dealt with by separate legislation, such as pesticides. One of the gaps is the lack of specific legal provisions for soil conservation, although in practice the Ministry for Agriculture and Forests do offer advice in this area. The real question is whether the scale of environmental problems confronting the agricultural sector can be adequately addressed by environmental law.

The *Forests Act No. 7 of 1961* provides for the setting aside of areas as 'forest areas' or reserved areas, the control and regulation of such areas as well as the regulation of forest produce and other related matters. The *Forest Act* establishes Forest Reserves and Reserved Areas. These areas are protected by a range of prohibited offences. Section 4 of the Act sets out the activities that are prohibited; however, some activities can be authorised by permit. Reserved Forests or Forest Areas are essentially established and reserved for future and present productive use. Forest Reserves and Forest Areas established for this purpose must be distinguished from Nature Forest Reserves. The *Forest Act* does not appear to prescribe the establishment of Nature Reserves as a



separate category within the forest system. Nature reserves are protected from commercial use and stricter controls are applied to maintain and conserve the natural system's fauna and flora.

Section 4 of the *Parks and Reserves Act 1977* is wide enough to include nature reserves in forest areas. However, it is still considered necessary for management purposes, that this category of forest be reflected within the framework of the *Forest Act* and that the *Forest Act* be amended accordingly. The two broad categories of forests, i.e. those that are considered for economic and commercial reasons and those where timber harvesting is prohibited for environmental and conservation reasons should equally have separate components in forestry legislation.

Section 4 of the *Forest Act* provides for the Minister, with the consent of Cabinet, to make regulations in a number of specific and important areas. One such area provides for the prohibition and control of fire. As one of the principal causes of deforestation is fire, particularly during the drier periods, it is suggested that specific regulations embodying fire preventive measures be considered.

### **Recommendations on Agriculture and Forestry**

23. Environmental factors should be taken into account during inspections carried out in connection with applications for agricultural leases.
24. All existing laws regulating agricultural activities, including pesticide legislation, be reviewed.
25. Nature reserves be considered as a separate category within the forest system and that the *Forests Act* be amended accordingly.
26. Clear distinctions be made in the *Forests Act* between those categories of forests that are reserved for economic and commercial reasons and those forests where timber harvesting is prohibited for environmental and conservation reasons.
27. EIA provisions be included within the *Forests Act*.
28. Regulations be enacted under the *Forests Act* and in particular those measures that relate to forest conservation and protection, and fire prevention and control.

## **4.10 Fisheries**

Tonga's *Sixth Development Plan* describes fishing activities as among the "sectors of the economy demonstrating the highest growth potential" (*Sixth Development Plan*: 135). A large proportion of the population, particularly in the outer islands, is dependent on fisheries as its main source of livelihood. Tonga's Exclusive Economic Zone (EEZ) brings approximately 700,000 square kilometres of ocean under its national jurisdiction (*Sixth Development Plan*: 135). The declaration of the EEZ will not only make a significant impact on the national economy but also on the laws relating to the management of marine resources. Appropriate and adequate laws and scientific research would need to ensure the sustainable management of marine resources.

## **Statutory Background**

The *Fisheries Act* came into force in 1989. The Ministry of Fisheries was established in 1991.

The new 1989 *Fisheries Act* brought significant changes into effect to manage fisheries resources. This section focuses only on those aspects of the *Fisheries Act* which relate to fisheries conservation and those aspects of the *Whaling Industry Act* which provide protection for whales. The *Whaling Industry Act* has been repealed but will be discussed in this chapter for comparative purposes.

## **Fisheries Conservation Management and Development**

Section 3(1) of the *Fisheries Act 1989* requires the Director to progressively prepare and keep under review plans for the conservation, management and development of fisheries in the waters. Fisheries waters are defined as the territorial waters of the Kingdom, internal waters including lagoons and such other waters over which the Kingdom of Tonga from time to time claims sovereign rights or jurisdiction with respect to the marine living resources by legislative enactment or Royal Proclamation.

### **Management Plans**

Any fishery plans prepared by the Department of Fisheries must indicate the present state of exploitation of the fishery, the objectives to be achieved in its management and development, the management, licensing and development of measures to be applied, the statistical and other information to be gathered about the fishery and the amount of fishing, if any, to be allowed to foreign fishing vessels. In the preparation and review of each fishery plan, the Director is required to consult with any local government authority and with local fishermen concerned. Each fishery plan and each review must be submitted to the Minister for approval. The legal requirements for the management of fisheries indicates the necessity for biological and statistical information before any assessment of the state of exploitation of the fishery is possible.

### **Licensing of Vessels**

Local fishing vessel licences are only valid for the areas endorsed on the licence. The fisheries, methods of fishing, type and quantity of fishing gear will also be endorsed on the licence.

Where a local fishing vessel is used in contravention of any condition of the local fishing licence, the master, owner and charterer of that vessel is each guilty of an offence and will be liable upon conviction to a fine not exceeding \$500.

Regulations may be made by the Minister to prescribe different classes of local fishing vessel and the areas or distances from shore within which each class of fishing vessel may operate.

The Act provides for the establishment of local committees from professional fishermen of the fisheries concerned, to consult and advise the Minister on the number of fishing vessels to be allowed to fish in certain areas or fisheries and the allocation of licences. The involvement of Local Committees is intended to facilitate a process for shared information between Government and the local community, and to assist in the resolution of problems likely to arise over the resources. It also provides the opportunity for licences to be withheld until environmental factors have been taken into consideration.

A valid commercial Sport Fishing Vessel Licence is necessary before any fishing vessel can be used for reward or hire for the purposes of sport fishing in the fishery waters.

The Act enables the Kingdom of Tonga to enter into bilateral or multilateral access agreements or arrangements providing for the allocation of fishing rights. Any rights allocated must not exceed the total resources or the amount of fishing allowed for the appropriate category of foreign fishing vessels under the fishery plan. Any agreement or arrangements made must include provisions establishing the responsibility of the foreign party to take all measures to ensure compliance by its vessels with the terms and conditions of the agreement and the laws in force relating to fishing in the fishery waters.

The Act does not permit the use of foreign fishing vessels for fishing or related activities, except for marine research or survey operations if authorised by the Minister, without a valid licence. The Minister is empowered by the Act to issue a foreign fishing vessel licence under a bilateral agreement and authorise the vessel to be used in the area of the fisheries waters for fishing and related activities as specified in the licence.

### ***Fishing Licences***

Every fishing licence may be subject to general and special conditions. The Registrar or, in the case of a foreign fishing vessel, the Minister, may attach to any fishing licence such special conditions as he or she may think fit relating to the type and method of fishing; the area in which such fishing is authorised; the target species and amount of fish authorised.

### ***Prohibited Fishing Methods and Gear***

The Fisheries Act provides that any person who permits uses or attempts to use any explosive, poison or noxious substances to kill, stun, disable or catch fish; or carries, possesses or is in control of explosives, poisons or noxious substances to take fish is liable on conviction to a fine not exceeding \$1,000 and/or up to two years imprisonment.

It is an offence for anyone within the area of the fisheries waters to use or have prohibited gear on board any fishing vessel or to indicate an intention to use any fishing gear that does not conform to the prescribed standard. A person convicted of any of these offences is liable on conviction to a fine of up to \$50,000.

### ***Reserved Fishing Areas***

The Minister may, by order published in the Gazette, declare any area of the fisheries waters to be a reserved area for subsistence fishing operations and may specify the types of vessels allowed to fish that area and the fishing methods that may be used. A person who fishes in an area in contravention of any order is liable on conviction to a fine of up to \$50 000.

### ***Whaling***

One of the more significant problems in fisheries regulation in Tonga is in relation to whaling. The Whaling Industry Act was repealed by the *Fisheries Act 1989*. The only direct reference to whales in the new *Fisheries Act* is in the regulation-making power which provides for regulations for prohibiting fishing for whales or other marine mammals. The limited protection of whales previously afforded by the *Whaling Industry Act* has been lost. While there is some potential protection in regulations that may be made under the regulations to the *Fisheries Act 1989*, those regulations can only be made with respect to prohibiting fishing for whales. It would seem that some wider protection is required. The importance of conservation measures in respect of whales and marine mammals generally is such that legislation capable of standing alone is warranted to ensure that the proper protection and conservation of these species. It is suggested that a *Marine Mammals Protection Act* which not only sets up prohibition against the capture, taking, killing, etc. of whales but also puts prohibitions in place concerning parts and derivatives of whales, teeth and other parts which are sought after would be appropriate legislation at this time. Suitable

prohibitions need to be in place to ensure that whales are not endangered by people seeking to profit from these parts.

It might be necessary to have some legislative mechanism in place to regulate whale watching especially as tourism in Tonga increases. As noted above, whale watching has become a thriving industry in different parts of the world and to protect the mammals it has been necessary to frame strict regulations regulating the activity.

No fisheries regulations have been declared, but there is a draft set of regulations in circulation. Perusal of the draft regulations indicate that there are no regulations that replace the protection offered to whales under the *Whaling Industry Act*, or the protection offered to turtles under provisions of the *Birds and Fish Preservation Act*, now repealed by the *Birds and Fish Preservation (Amendment) Act 1989*.

### Recommendations on Fisheries

29. Protection of whales under the repealed *Whaling Industry Act* be incorporated in the proposed *Fisheries Regulations*. It is further recommended that consideration be given to a stand-alone legislation to protect marine mammals such as a *Marine Mammal Protection Act*.
30. Legislative mechanisms be considered to regulate whale watching.
31. Specific protection be considered for turtles in the *Fisheries Regulations*.
32. Prohibition with respect to fish fences, fish traps and trawling in the protected areas be included in the *Fisheries Regulations*.

## 4.11 Mining and Minerals

There are at present no known commercial deposits of valuable minerals in Tonga, nor is there any proven hydrocarbon resource. Oil exploration commenced in the late 1960s in Tongatapu and although no viable commercial quantities have been found, interest in oil exploration continues to remain active.

### Statutory Background

Under the *Minerals Act 1949*, all minerals are deemed to be the property of the Crown. Where minerals are found in land other than Crown land, the Minister of Lands is required under section 7 of the Act to pay the landowners such royalties and compensation as are determined by His Majesty in Council. Royalties refer to payments received by the owner of land from a person licensed or, in this case, the Crown, to take minerals from it. Compensation is the term used for a payment made for loss or damage to a person's property resulting from the exploitation of minerals.

Licences and leases under the *Minerals Act* are restricted to Tongan and British subjects and to Tongan companies or to a British company registered in some part of the British Commonwealth. The management personnel and a percentage of local staff are also restricted to Tongan and British subjects as His Majesty in Council may prescribe.

## **Petroleum Mining**

The *Petroleum Mining Act 1969*, as amended, prohibits the exploration or mining for petroleum on any land except by virtue of an exploration licence or a petroleum agreement under the Act.

His Majesty in Council may issue an exploration licence with respect to the whole or any part of an area of land provided that a petroleum agreement has not been entered into with respect to the same area of land. His Majesty is not prevented from issuing more than one exploration licence with respect to the same area of land.

The major environmental theme in these regulations is to require petroleum companies to reduce pollutants associated with exploration and production activities. Thus regulations may be made to prevent fires in areas where oil drilling is being carried out and to establish safety areas around any petroleum reserve installations erected on the seabed. However, no safety area around petroleum installations erected on off-shore land may exceed 500 meters in radius. The Regulations have a number of significant environmental conditions that prevent or minimise pollution and require the reduction of waste associated with petroleum exploration and production.

The model *Petroleum Agreement* appended to the *Petroleum Mining Act* contains provisions for preventing and minimising the effects of pollution. Under the Agreement a Company is required to undertake adequate compensation to those persons injured or whose property has been affected by pollution occurring as a result of explorations, and to adopt the measures stipulated by the Government of Tonga to prevent or reduce the effects of pollution.

The potential for accidental discharges to the surface water, fire, marine pollution, fumes and other air pollutants is significantly greater during the loading and unloading phases. The major emphasis of the detailed *Petroleum Regulations* is therefore on the safety aspects of carriage, loading and unloading of petroleum and storage.

## **Sand Mining and Limestone Quarrying**

Sand and limestone quarries at present constitute the only minerals of commercial value in Tonga. Sand is surface-mined from beaches in large quantities for use as an aggregate for cement, road sealing and for covering graves. The *Environmental Management Plan for the Kingdom of Tonga* (ESCAP 1990: 27-35) states that the environmental impact of the present sand mining from beaches is perfectly obvious as many of the popular beaches have been stripped of sand down to beach rock. On Tongatapu and Vava'u most of the sand is mined by the Ministry of Lands, Survey and Natural Resources and then sold to the public. A great deal of sand is also taken by private individuals. The *Land (Removal of Sand) Regulations 1936* prohibits the taking or the removal of sand from the foreshore within the limits of the harbour, from Crown land or any other holding without a written permit signed by the Minister of Lands.

Limestone rock is used for road construction and maintenance. Sand aggregate is used for cement and home and building construction. Quarrying is carried out by digging, blasting and ripping the foraminiferous and fossil coral from hillsides. Currently there are 12 limestone quarries on Tongatapu, of which one Government quarry is exhausted. Of the 6 quarries in Vava'u, one (Oloua) is abandoned and another (Talau) is nearly exhausted.

## Conclusion

The *Minerals Act* is considered by mining authorities to be good mining law by mining industry standards. The inadequacy of environmental provisions in this legislation may be due to the fact that it dates back to 1949. Since then, perceptions and technology have changed considerably. The effect of mining activities on natural resources has become an important consideration. Damage assessments, soil restoration provisions, protective measures to prevent or reduce pollution from mining wastes and Environmental Impact Assessments are now recognised as key components of a modern mining legislative framework. It is therefore suggested that these aspects be considered in any further amendments to the *Minerals Act*.

The *Environmental Management Plan for the Kingdom of Tonga* (ESCAP, 1990: 30) suggests solutions for exhausted quarries that "with a little forethought, the quarries could be carved in such a way that the end product, after limestone is removed, would be of use to the community as, for example, an industrial site, sports area, amphitheatre or boat harbour".

### Recommendations on Mining and Minerals

33. The *Minerals Act 1949* be reviewed for the purpose of enacting amendments to incorporate environmental controls, such as a requirement for EIAs.
34. Recommendations made in the *Environmental Management Plan for Tonga* (ESCAP 1990) with regard to exhausted quarries be given consideration with a view to implementation.

## 4.12 International Conventions and Legislation

### International Environmental Conventions

The Kingdom of Tonga had not signed any of the major international environmental conventions as of 1992.

### Statutes and Regulations

*Animal Diseases Act 1979*

*Birds and Fish Preservation Act 1934*

*Constitution of Tonga 1875*

*Continental Shelf Act 1970*

*Copra Act 1926*

*Diseases of Plants Regulations 1964*

*District and Town Officers Act*

*Fisheries Act 1989*

*Forests Act 1961*

*Forest Produce Regulations 1979*

*Garbage Act 1949*

*Government Act 1903*

*Harbours Act 1903*

*Industrial Development Incentives Act 1978*

*Interpretation Act 1903*

*Land Act 1936*

*Land (Quarry) Regulations*

*Land (Removal of Sand) Regulations 1936*

*Minerals Act 1949*

*Noxious Weeds Act 1903*

*Parks and Reserves Act 1976*

*Pesticides Act 1976*

*Petroleum Act 1959*

*Petroleum Mining Act 1969*

*Petroleum Mining Regulations 1985*

*Plant Quarantine Act 1981*

*Preservation of Objects of Archaeological Interest Act 1969*

*Public Health Act 1913*

*Rhinoceros Beetle Act 1912*

*Sanitary Superintendence Regulations*

*Tourist Act 1976*

*Town Regulations Act*

*Water Board Act 1966*

*Water Supply Regulations*

*Whaling Industry Act 1935*

## **CHAPTER 5**

# **REPUBLIC OF THE MARSHALL ISLANDS**



# 5. REPUBLIC OF THE MARSHALL ISLANDS

## Condensed Version of Legal Review

*Conducted by Elizabeth Harding*

### 5.1 Introduction

The Republic of the Marshall Islands (RMI) consists of 29 atolls and five low-elevation islands in the north-west equatorial Pacific, forming two almost parallel archipelagic chains between four degrees and 14 degrees North and 160 degrees and 173 degrees East. With its Exclusive Economic Zone the Republic's total marine area exceeds 750 000 square miles. Its entire land area, however, comprises just under 70 square miles. The atolls range from quite small to very large, with Kwajalein Atoll encompassing the largest lagoon on earth (2 173km). Twenty two atolls and four islands are inhabited by a population approaching 50 000.

The people of the Marshalls share with all peoples of the Pacific a deep and abiding respect for the land and the sea, elements of which have provided them daily sustenance for thousands of years. This fragile natural environment has been well-tended in customary practice, providing a basis for subsistence living and for economic, social and cultural well-being. RMI now faces threats to this natural resource base, including rapidly increasing population, rising material expectations, demands for economic growth, and the depletion or degradation of natural resources. A pressing need for comprehensive environmental management has arisen to ensure that RMI's island and atoll resources are used in ways that can be sustained and to further ensure that significant resources are adequately protected.

### 5.2 Constitutional and Administrative Structure

Over 2500 years ago, Micronesian sailors and navigators arrived and settled in the Marshall Islands (called by them "Aelon Kein Ad", or "our islands"). A government structure emerged based on the reciprocal rights and obligations of a tiered society. This social and governance system encompassed the four strata of traditional society: the Iroijlaplap (Paramount Chief of certain lands); the Iroijedrik (Lesser Chief of certain lands); the Alap (person in immediate charge of a piece of land); and the Dri Jerbal (worker on certain land) (*Trust Territory Reports (TTR)* 1969; Vol. I: 725). The Marshallese customary system of decision-making and dispute resolution continues to this day alongside RMI's more recent, constitutionally-mandated system of democratic governing principles.

The European influence on the Marshalls can be traced to the Treaty of Tordesillas between the Kingdoms of Spain and Portugal in 1494, in which Spain was ceded ownership of Micronesia in its entirety. Four centuries later, as the German government expanded its trading interests, disputes in the region between Spain and Germany culminated in a settlement by Pope Leo XIII. The 1885 settlement allowed the Imperial German Government to purchase the Marshalls from Spain for \$4.5 million (*Annalen der Hydrographie* 1886: 151). Following the Spanish-American War in 1898, a further bilateral agreement clarified the status of Ujelang and Enewetak Atolls as German.

In October, 1914, Japan captured the Marshalls from Germany, and the Japanese flag was hoisted over the Marshall Islands. In 1920, the League of Nations gave Japan a Mandate to administer the Marshalls. Japan administered the Marshall Islands until the outbreak of World War II in the Pacific, during which the United States captured the Marshalls from Japan.

The United Nations and the United States Congress approved a Trusteeship Agreement in 1947 creating the Trust Territory of the Pacific Islands and incorporating the Marshall Islands as one of six districts. The Agreement entrusted the Micronesian Islands previously administered by the Japanese under the 1920 Mandate to the United States as Trustee. The United States Department of the Navy administered the Trust Territory from 1947 to 1951, at which time administration was transferred to the United States Department of Interior. By referendum, the Marshalls voted for establishment of a constitutional government based upon a constitution adopted by the *Marshall Islands Constitutional Convention* on December 21, 1978. The Government of the Marshall Islands was officially established in 1979. The name of the nation was proclaimed in March 1982 to be the Republic of the Marshall Islands.

Although self-governing since 1979, RMI has been a fully free and sovereign nation since the Compact of Free Association between the Government of the United States of America and the Government of the Republic of the Marshall Islands (the Compact) came into effect on October 21, 1986. The United Nations Security Council terminated RMI's Trusteeship status in December 1990, and in September, 1991, the General Assembly of the United Nations at its 46th Session adopted a Resolution admitting RMI as a member nation.

The Republic of the Marshall Islands is a newly-independent constitutional democracy. The fundamental law of RMI is contained in the Constitution of the Marshall Islands, effective May 1, 1979. The Constitution sets forth a democratic system of government that contains aspects of Commonwealth, United States, and traditional governing structures.

In recognition of the tenth anniversary of RMI's Constitution, the Republic held a Constitutional Convention in Majuro from February to April, 1990. Although a wide range of amendatory language to the Constitution was offered, only two amendments received the required two-thirds majority of votes cast in a referendum of all qualified voters. These two amendments ensured that the Marshall Islands be always referred to as a Republic, and clarified the area of the Republic's control to be within the traditional boundaries of the archipelago of the Marshall Islands.

## **Legislative Powers**

The RMI legislative power is vested in the Nitijela (Parliament). The Nitijela consists of 33 members elected from 24 atolls and islands for a term of four years. A general election was held in November, 1991. Elections are conducted by secret ballot under a system of universal suffrage for all citizens who have attained the age of 18 years. Every qualified voter who has attained the age of 21 years is qualified to be a candidate for election as a member of the Nitijela.

## **Executive Powers**

The President is the Head of State of the Marshall Islands. The President is a member of the Nitijela, elected by a majority of the total membership of the Nitijela by secret ballot at its first meeting after each general election.

The executive authority of RMI is vested in the Cabinet, headed by the President. The President selects a Cabinet by nominating not less than six nor more than ten other members of the Nitijela to be Ministers and Cabinet members. The President allocates among the members of the Cabinet such portfolios as may be necessary so that members of the Cabinet have primary responsibility for the Departments and functions of government.

Most Ministries carry, to a lesser or greater extent, responsibilities for various aspects of environmental and natural resource conservation. The Ministry of Health and Environment, Ministry of Resources and Development, and Ministry of Internal Affairs incorporate major environmental responsibilities within their ascribed portfolios.

## **Traditional Aspects of the Constitution**

The deep Marshallese respect for customary law and recognition of traditional management structures is embodied throughout the Marshall Islands Constitution. The Preamble to the Constitution speaks of the Marshallese pride in "their own distinctive society." That pride is articulated in Article III, which establishes a traditional governing Council of Iroij, and Article X, which clearly enunciates the preservation of certain traditional rights.

The Council of Iroij established by Article III consists of 12 Irojlaplap (Paramount Chief) representatives, five from the Ralik (west, or sunset) chain and seven from the Ratik (east, or sunrise) chain of atolls and islands. The Council meets when the Nitijela assemble, usually sitting two to three times a year. The Council functions as an advisory body to the Cabinet, and may request the reconsideration of any Nitijela Bill which affects customary law, traditional practice, land tenure, or related matters.

Formal statutory declarations of customary law are reserved for the Nitijela, which is given constitutional authority in Section 2 of Article X to declare, by Act, the customary law in the Republic or any part thereof. This codification may include any provisions which "are necessary or desirable to supplement the established rules of customary law or to take account of any traditional practice". If, in the opinion of the Speaker of Nitijela, a Bill takes up matters of traditional practice or customary law, a joint committee of the Council of Iroij and the Nitijela must be afforded a reasonable opportunity to make and publish a report on the matter before the Bill may proceed.

Constitutional deference to traditional and customary rights is further evident in regard to the status and distribution of land and landholdings.

## **5.3 Systems of Land Tenure**

The importance of custom in the life of the Marshallese people cannot be over-emphasised. Traditional lineage placement colours all Marshallese social and cultural arrangements; socio-economic status is often closely linked to a person's standing in traditional land inheritance patterns. The deference to custom is especially clear in regard to the subject of land rights and inheritances, a person's most valuable asset and an area of abiding cultural significance. Indeed, in an atoll society harbouring scant land-based resources, a person's land rights and privileges have always been and continue to be closely guarded and hotly contested. No analysis of current constitutional and statutory responses to the overriding issue of land tenure can be complete without a brief explanation of customary practices.

## **Interests and Responsibilities**

In the Marshalls, land is divided into sections of varying width which run from lagoon to ocean, called "wetos". These strips divide the islets of each atoll into parcels roughly two to five acres in area. The wetos are held communally by lineage, or "bwij" members. Bwij members work and clear land for horticulture and generally, live on their own land holdings (Tobin 1956: 9).

Each member of the bwij holds one of several interests in the piece of land. Many of the interests are contingent upon a number of circumstances, including the fulfilment of obligations to those holding other interests. The four recognised classes of interests in land are:

- the Iroijlaplap (Paramount Chief of certain lands) is the acknowledged owner and final distributor of all land interests under his jurisdiction. He need not be a member of the bwij inhabiting the land. Indeed, many of his holdings may be traced to former war victories or promises of protection. (Dunlap 1977: 501). His word on land disputes is definitive. A portion of the produce of the land is offered to the Iroijlaplap as his entitlement;
- the Iroijedrik (Lesser Chief of certain lands) is a sub-chief who acts as an intermediary between the Iroijlaplap and the Alap and Dri Jerbal. There is no Iroijedrik for the Ralik Chain of atolls;
- the Alap (person in immediate charge of a piece of land) is the head of the bwij and is therefore in charge of the land and the workers on the land. The Alap represents the bwij in all negotiations with the Iroijlaplap or Dri Jerbal. She or he also collects a share of the food or money produced from the land (Tobin 1956: 12);
- the Dri Jerbal (worker on certain land) is the person who plants, clears and makes improvements on the land. In return, the Dri Jerbal and his or her immediate family live on the land and enjoy most of the fruits of their labour;

## **Matriilineal Succession ("Kora in Wonwon")**

The majority of land in RMI is inherited matrilineally. Bwij members trace descent from a common Alap ancestress. The senior sibling in the senior lineage founded by a female ancestor serves as lineage head, or Alap, followed by all of the surviving brothers and sisters in chronological order. After all siblings have been Alap or have died, the next generation succeeds. The next generation Alap is the oldest child of the oldest daughter of the original lineage founder, followed by that child's siblings. The children of the founder's male children are excluded (Tobin 1956: 16-18).

In general practice, a person's ability to function as Alap is taken into consideration when a decision of succession is made. A female Alap, therefore, may find herself a titular head of the bwij, with the actual decision-making powers in the hands of her brothers or male relatives.

## **Traditional Land Alienation**

In custom, there have arisen a number of alternative means to transfer lands. Generally, these land alienations result in the creation of new lineages (Dunlap 1977: 504). A sampling of these categories of permanent land transfers are briefly listed by their Marshallese names:

- Ninnen land is given by a father to his offspring, often just before his death. This form of patrilineal descent is a popular mechanism allowing a father to provide for his children

in a matrilineal society. A new lineage is created consisting of the man's issue, not beholden to the old line. True to the Marshallese concept of communal ownership of land, unanimous consent of the original lineage is required for this type of transfer. Often, the prevailing matrilineal succession patterns are used to pass rights within the new lineage;

- Imon Atto or Imon Tutu land is given to a person, man or woman, who performs personal services for the Iroijlaplap or the child of the Iroijlaplap;
- Imon Aje land is literally "gift land", offered to a man or woman by the Iroijlaplap as thanks for their services. The land rights may pass in a traditional matrilineal succession or may pass patrilineally as Ninnen land;
- Kodaelem land is given by the Iroijlaplap to a man who sailed with him and performed the difficult task of bailing the outrigger for him. This type of land could be passed on through either the man's son or daughter, at his discretion (Tobin 1956: 39);
- Metak in Bum land (literally "pain in the heart" land) is given to a former wife by the Iroijlaplap as a form of alimony. The land remains in the lineage;
- Moroinkot land was given by the Iroijlaplap for bravery in battle to certain deserving warriors. The recipient alone could decide to give the land to the lineage for matrilineal succession or pass it down through the paternal side. The original recipient's decision was binding;
- Kotra or Mo land is land in which all interests are owned personally by the Iroijlaplap. The Iroijlaplap may dispose of the land absolutely, with no other consents required;
- Kitdre land is given by a man to a woman as a marriage gift. The gift, along with other customary Marshallese land transfers, requires unanimous consent of the bwij and the Iroijlaplap;

## **Transition to Independence**

The Marshallese land tenure system endured through the Marshalls' years of colonial occupation. The Germans encouraged individual land ownership over lineage ownership, as well as supporting patrilineal inheritance patterns. The Japanese also favoured individual rather than communal ownership of land, but allowed the Marshallese landowners to divide and dispose of their lands in their traditional ways. The American administrators expected that an increase in individual land ownership and patrilineal succession would evolve naturally (McGrath and Wilson 1987:204).

The American administration attempted to protect Marshallese land interests by upholding customary land law. The first Trust Territory Code at Section 101 clearly states that the Code adopts "the customs of the inhabitants of the Trust Territory" as long as there is no conflict with statutory enactments. As the statutory enactments within the Code are largely silent regarding real property (with the significant exception of prohibiting ownership of land by non-Trust Territory citizens), the Code drafters seemed to intend the withdrawal of the full imposition of Anglo-Saxon notions of land ownership on the Marshallese people.

## **Constitutional Framework**

The Marshall Islands Constitution unequivocally preserves traditional rights of land tenure. Article X of the Constitution declares that nothing in the Article II Bill of Rights "shall be

construed to invalidate the customary law or any traditional practice concerning land tenure or any related matter in any part of the Marshall Islands, including, where applicable, the rights and obligations of the Iroijlaplap, Iroijedrik, Alap, and Dri Jerbal."

Article X further states that no person with land rights under customary law or traditional practice may alienate or dispose of that land without the approval of the Iroijlaplap, Iroijedrik and, where necessary, the Alap and the Senior Dri Jerbal. This language is a key element of current efforts to preserve a communal way of life, for only the consent of all representatives of every interest in the land will allow the land to be validly transferred. This language also, of course, can impede quick transfers of real property and encourage protracted, complex land litigation.

## **Judicial Response**

In anticipation of the inevitable land disputes, the Constitution mandated a special judicial body called the Traditional Rights Court. Established under Article VI, this Court consists of a Chief Judge and two Associate Judges. Each judge is appointed for a five year term and is selected in such a manner that all the classes of land rights and landholdings are represented.

This special court is established to review substantial questions relating to titles or to land rights or to other legal interests depending wholly or partially on customary law and traditional practice. The jurisdiction of the Traditional Rights Court may be invoked only if a court certifies that a substantial question within its jurisdiction has arisen. The resolution of a certified question must be given substantial weight in the certifying court's disposition of the matter, but the resolution is not deemed binding unless the certifying court concludes that justice so requires.

## **Legislative Response**

Traditional management structures attending to customary land issues are incorporated by the Constitution into the legislative system, as well. The Council of Iroij, described in 5.2 above, Constitutional and Administrative Structure, was established to ensure that decision-making powers over land remained with the hereditary, traditional chiefs of the Republic. The Council of Iroij, therefore, may consider and advise the Nitijela and Cabinet on any bill which affects customary law, traditional practice, land tenure, or related matters.

## **Conclusion**

Land is considered by Marshallese to be their most valuable asset (Tobin 1956: 3). Land ownership rights, present and future, determine a person's place in Marshallese society; land disputes continue to be the root cause of almost all immediate and extended family schisms. With land matters so preeminent in the minds of RMI citizens, it is no wonder that many Western development schemes dependent on quick acquisition of land are viewed with caution. Traditional Western concepts of individual, absolute land ownership and consequent individual determination of land development frequently encounter a slower, consensus-building approach to land use based on communal decision-making. These encounters between Western and Marshallese attitudes towards land ownership and development often result in lengthy delays between a development concept and its reality.

Just as many development schemes are slowed by questions of land ownership, so too is governmental regulatory oversight hampered. Environmental oversight of private communally-owned land, the exercise of which essentially instructs landowners in the allowable

uses of their own property, has remained unpopular in many traditional circles. Strong resistance to zoning and other "intrusions" onto private land continues to the present time.

Well-meaning government entities concerned with land use and environmental protection must focus on customary land issues in order to function effectively. These agencies must embark on significant public education efforts designed to promote the positive aspects of planned land development. Such efforts will require an extended process of community consensus building. Laws enacted without that foundation risk public rejection.

## **5.4 Environmental Planning and Assessment**

### **Administrative Structures**

The National Environmental Protection Authority (RMIEPA), created by statute in 1984, is an independent authority legislatively linked to the Ministry of Health Services and fully-funded by the RMI government. In recent years, the RMIEPA has emerged as the preeminent agency responsible for environmental protection and management.

The day-to-day management of RMIEPA is overseen by the General Manager. Twelve employees are responsible for numerous program activities, including public education, laboratory analyses, pollution control, nature preservation, and regulatory oversight of solid wastes, earthmoving, water quality, toilet facilities, and pesticides activities. Broad policy directions are provided by five "Members of the Authority" who function as a Board of Directors.

RMIEPA is charged with a wide array of environmental tasks that affect a number of the environmental areas discussed in this Review. It has been given expansive objects, powers, functions and duties. The breadth of its mission requires RMIEPA to interact with all government Ministries, and public and private bodies on a national and international basis. This requirement for an interdisciplinary, multi-level approach to environmental management often stretches RMIEPA's resources beyond their fiscal and technical limits. Although RMIEPA's mandate extends far and wide, in many arenas RMIEPA's touch is of necessity very light indeed.

### **Office of Planning and Statistics (OPS)**

The Office of Planning and Statistics is divided into a Planning Division, Statistics Division and a Plan Implementation Division. It is within the President's portfolio and operates under the purview of the Chief Secretary, and is headed by the Chief Planner, who participates on a number of government Boards. The Chief Planner is an active Member of the Environmental Protection Authority. The codification of zoning requirements has been the responsibility of the Physical Planning Unit under the Office of Planning. In existence from 1984-1987, the Physical Planning Unit accomplished the passage of the *Planning and Zoning Act 1987*. That Act required Local Council Planning Commissions to be created. At present, however, there is no Physical Planning Office at the national government level and the Local Councils have no physical planners.

### **National Environmental Protection Act 1984**

This Act has developed as the primary legislative tool for environmental protection and management in RMI. It establishes RMIEPA as an independent statutory authority, subject to the political direction of the Minister of Health Services. The objectives of the Authority are quite broad, including:

- the study of the impact of human activity on natural resources;

- the prevention of degradation or impairment of the environment;
- the regulation of individual and collective human activity in such manner as to ensure to the people safe, healthful, productive, and aesthetically and culturally pleasing surroundings; and
- the preservation of important historical, cultural and natural aspects of the nation's culture and heritage, maintaining at the same time an environment which supports multiplicity and variety of individual choice.

The Authority has broad general powers to regulate, as well as to acquire property, expend monies, borrow money, accept grants, prosecute offenders, and enter into establishments for an array of purposes. Regulations may be made with respect to: primary and secondary drinking water, pollutants, pesticides and other harmful chemicals, hazardous waste, including the storage and disposal of nuclear and radioactive waste, the preservation of important historical, cultural and natural aspects of the nation's heritage, and other aspects of the environment as may be required.

Functions and duties of the Authority include formulating the following, in consultation with the appropriate Ministries: a Land Use Scheme, a policy of management and conservation of RMI's natural resources, a system of rational fisheries and aquatic resources exploitation, and appropriate soil conservation programs.

The Act provides for an Environmental Advisory Council, appointed by the Minister of Health Services, consisting of 11 members representing all major national Ministries and one member each from private industry and the general public. The Council was intended to function as an adviser to the Authority. To date, the Minister has not yet appointed the members of the Council and it is not a functioning entity.

### **Enforcement powers**

Adequate enforcement of environmental statutory provisions and subsidiary regulations is a pervasive problem in RMI as well as in many other parts of the developing Pacific. Although fiscal and technical constraints remain troublesome for RMIEPA, the legislative enforcement powers delineated in Part VII of the *National Environmental Protection Act* are flexible and strong. Enforcement options include Cease and Desist Orders, civil monetary penalties (a fine) not exceeding \$10,000 for each day of violation, civil proceedings in court to restrain violations, or a combination of these actions.

The importance of the Authority's power to assess monetary penalties becomes apparent when considered from the standpoint of judicial enforcement. Without an administrative civil penalty assessment, if a person fails to comply with a properly issued Cease and Desist Order, the remedy is to seek judicial enforcement of the Order. If the court upholds the Order and issues an injunction prohibiting further violations, the violator is in no worse position than if he or she had obeyed the Order in the first place. Aside from the possibility that he or she will be assessed costs for the lawsuit, the violator has little incentive to obey the Authority's Order.

As an alternative to out-of-court administrative remedies, the Authority may sue for damages arising out of the violation (for example the costs it incurs to repair damage caused by violations). Such court-imposed damages, however, may not adequately serve to penalise violators. In addition, recovery may require the Authority to first incur costs. The Authority may also request that the court impose its own civil penalty. It is likely, however, that there will be wide divergence and little consistency in the amount of penalties various judges are willing to assess for what may be similar violations. Fines kept within the control of RMIEPA are standardised, following explicit civil penalty assessment policy guidelines. From the standpoint of consistency and



timeliness, use of the administrative process for enforcement has often been found preferable to filing suit in court.

## **Environmental Impact Assessment**

The *National Environmental Protection Act* Part IV delineates general rules as to governmental action regarding environmental impact assessment. It requires that all Ministries and agencies of government, in all matters in which there is or may be an environmental impact, shall "include in every recommendation or report on proposals for legislation and other major governmental action significantly affecting the human environment, an environmental impact statement..." Government is also given the responsibility of using an approach to decision-making that takes "traditional wisdom" and "environmental values" into account when considering development projects.

Section 34 of the Act requires the responsible government official to submit a detailed statement on: the environmental and cultural impact of the proposed action; any adverse unavoidable environmental effects of the proposal; alternatives to the proposed action; the relationship between local short-term uses and the maintenance and enhancement of long-term productivity; and irreversible and irretrievable commitment of resources necessitated by the proposed action.

Before making the impact statement, the responsible official must obtain the comments of the interested public and all departments of government having jurisdiction or expertise in the area. Further, the public must be given a reasonable time to inspect the statement before the government completes its decision-making process.

## **Coast Conservation Act 1988**

This Act is a strong environmental statement that makes provision for a survey of the coastal zone and the preparation of a coastal zone management plan, regulates and controls development activities within the coastal zone, and makes provisions for the formulation and execution of schemes for coast conservation.

"Coast conservation" means the protection and preservation of the coast from sea erosion or encroachment of the sea, including the planning and management of development activity within the coastal zone. "Development activity" is defined as any activity likely to alter the physical nature of the coastal zone in any way, including the construction of buildings and works, the deposit of wastes or other material from outfalls, vessels or by other means, the removal of sand, coral, shells, natural vegetation, sea grass or other substances, dredging and filling, land reclamation and mining or drilling for minerals, but does not include fishing. The "coastal zone" is defined as the area lying within twenty-five feet landward of the mean high water line and two hundred feet seaward of the mean low water line. Although narrow, this zone covers much of the usable and desirable territory of the 70 square miles of RMI. The narrow, ribbon-like atoll land masses in RMI are, to a great extent, comprised of coastline falling within the meaning of this Act's "coastal zone".

The Director of Coast Conservation (who under the Act may be the General Manager of the Environmental Protection Authority), is responsible for submitting a comprehensive Coastal Zone Management Plan within three years of the date of operation of the Act. The Director may also issue permits for proposed development activity consistent with the Management Plan, and may require a permit applicant to furnish an environmental impact assessment relating to the development activity.

## **Planning and Zoning Act 1987**

This Act requires every local government Council under its purview to establish a Planning Commission and a subsidiary Planning Office. The Act applies to the local government Councils of Majuro Atoll and Kwajalein Atoll, the two most heavily populated atolls, and any other local government Council that may be declared to be governed by the Act by the Minister of Interior and Outer Islands Affairs.

The Commission is designed to function as an advisory body to the local government Council in all matters relating to planning and zoning. It consists of the Mayor, two other members of the Council and two landowners from the local Council area. The Planning Office functions under the Council for the administration of the day-to-day affairs of the Commission. Little statutory direction is offered concerning the status of the landowners and the role which they should play in Council deliberations. Clarification as to whether the landowners should represent the Iroij, Alab, or Dri Jerbal class interests would be helpful.

Majuro Atoll, home to roughly two-fifths of the Marshallese population, may, under Part II of this Act, be divided into zones prepared by the local Council in consultation with the Government Chief Planner. The zones' objectives include promotion of a harmonious interrelationship of land use, the preservation of the natural landscape and environment, and identification of appropriate locations for recreational areas and parks. Zoning areas may be divided into the following zones: Residential, Commercial, Industrial, Resort, Public, and Watershed. Building permits, sorely needed in Majuro, are also contemplated in Part III. Indeed, as the urban population expands and the resultant building boom surges ahead, the need for appropriate zoning and building codes has become increasingly urgent. Building codes and zoning divisions have yet to be implemented.

## **Key Issues**

### **Environmental Impact Statements - *National Environmental Protection Act* Requirements**

Although the *National Environmental Protection Act 1984* requires environmental impact assessments on proposed government development projects, very few have been issued. RMIEPA continues to liaise with government Ministries in an attempt to increase awareness of this aspect of the Act. Indeed, promotion of the concept of the desirability of environmental impact assessments has emerged as one of RMIEPA's most important functions. Although RMIEPA's role in national environmental planning and assessment has increased as its public posture has grown, the Authority still suffers from being included too late in the process of government assessment of major projects. National government is often overburdened by potential development projects, so that many projects never receive the required environmental scrutiny. Environmental oversight is impeded as well by the lack of a functioning Environmental Advisory Council. A great deal of legal and administrative work remains to be done within RMIEPA and government Ministries before a strong national assessment program is put into place.

The legal requirements for an environmental impact statement found in the *National Environment Protection Act* take care to include opinion drawn from a broad range of governmental and non-governmental sources. Such an interdisciplinary approach seems an excellent method of assessing environmental impacts of large government projects. This aspect of the *National Environment Protection Act*, however, has rarely been invoked.

The *National Environment Protection Act's* wording is vague in regard to exactly what sort of proposal requires an environmental impact statement. The statute requires a statement "in all

matters in which there is or may be an environmental impact" (*National Environment Protection Act*, Section 33), and it requires such a statement to be included "in every recommendation or report on proposals for legislation and other major governmental action significantly affecting the human environment" (*National Environment Protection Act* Section 33(c)). The breadth of these requirements mitigates against their serious undertaking.

Further, the *National Environment Protection Act's* specific requirements for the statement's contents are also insufficiently spelled out. The length and detail of the document are left to the author's discretion, compared, for example, with the very specific requirements spelled out in United States environmental impact assessment regulations. Further, there are no distinctions made between requirements for large-scale and small-scale development projects.

Finally, the government official responsible for drafting the environmental impact assessment and obtaining the comments of the public and departments of government is not adequately defined. Is the Minister of Government whose Ministry is proposing the action responsible, or is his or her Secretary the responsible party? Frequently, large-scale government development projects are funded by outside sources. Regardless of whether these sources are international aid donors or private for-profit enterprises, they generally have access to greater technical and monetary resources than does the host government. Perhaps they, then, should bear the financial burden of producing an environmental impact statement on the proposed project. The *National Environment Protection Act* does not adequately address these issues.

### **Environmental Impact Assessment and Coastal Zone Plan - *Coast Conservation Act* requirements**

The *Coast Conservation Act 1988* has not yet been implemented, partly because of the limited resources allocated to environmental efforts and partly because it is such a new initiative for the RMI. The breadth of RMIEPA's mission and lack of adequate funding has impeded the Authority from specifically attending to this Act's requirements. Although the General Manager of RMIEPA is required to submit a comprehensive Coastal Zone Management Plan within three years of the Act's effective date, development of such a plan has yet to begin.

It is becoming increasingly clear that fragile coral reefs are at risk in the urban areas of Majuro and Kwajalein Atolls. Adequate legal protection is required. Regulations under the *Coast Conservation Act* are especially necessary in two areas: to prescribe the categories of development activity which may be engaged in within the coastal zone without a permit, and to detail the particular requirements of coastal environmental impact assessments. The *National Environment Protection Act* environmental impact assessment requirements are currently as general as the *Coast Conservation Act* requirements; both Acts need regulations setting forth specific standards. Indeed, environmental impact assessment regulations for the two Acts should be drafted in concert, including as many identical provisions as possible, for the sake of consistency and clarity.

### **Environmental Planning and Zoning**

Zoning issues are of increasing importance in Majuro and Ebeye, as those urban areas experience increasing population pressures. Proposed zoning requirements are discussed regularly during many local government meetings. Because of the nature of land ownership in the Republic, even rudimentary zoning requirements remain publicly controversial.

The *Planning and Zoning Act 1987* has not been implemented to date. Presently, no local Councils have planners. Nor do many Councils have the present financial or technical ability to draft and enforce zoning and building codes or ordinances. Because of entrenched principles of customary land ownership, landowners are deeply resistant to government encroachment on private land rights. Although the Act stipulates that two landowners shall be members of the Commission, the status, or class, of the landowning rights are not addressed. Such a clarification is necessary, as the reciprocal rights and obligations of the Iroj, Alab, and Dri Jerbal classes of

ownership are very different from each other (see 5.3, above, for discussion of differing land interests).

### **Recommendations on Environmental Planning and Assessment**

1. Draft environmental impact statement Regulations pursuant to the *National Environmental Protection Act 1984*.
2. Establish Environmental Advisory Council as set forth in the *National Environment Protection Act*.
3. Develop a comprehensive Coastal Zone Management Plan.
4. Draft Regulations pursuant to the *Coast Conservation Act 1988* to prescribe categories of development activity.
5. Implement the *Planning and Zoning Act 1987*.
6. Draft zoning and building code ordinances or Regulations.
7. Clarify status of landowners on Planning Commissions.

## **5.5 Water Supply and Water Quality**

### **Administrative Structures**

The RMIEPA Water Quality Monitoring Program performs the following oversight functions:

- daily monitoring of the Majuro Atoll, Ebeye Island and Kwajalein Atoll public water supply systems;
- monthly monitoring of Majuro and Ebeye coastal waters;
- regular monitoring of school, restaurant, and private catchment systems and wells on Majuro, Ebeye, and other atolls upon request.

The Program operates two water quality monitoring laboratories, one each on Majuro and Ebeye. The Program is staffed by a Consultant, Chief Laboratory Specialist, and two laboratory technicians. The Program is partially supported by technical assistance grants from the US Department of the Interior and reimbursement for laboratory services from the Majuro Water and Sewer Company.

Through a Memorandum of Agreement, RMIEPA houses and supervises the six-person staff of the Division of Environmental Health and Sanitation (DEHS) within the Ministry of Health Services. DEHS functions in regard to water quality include water testing and monitoring, water treatment, and restaurant inspections. DEHS staff work with RMIEPA water quality monitoring and enforcement staff in the oversight of marine and fresh waters of the Republic.

## **Key Issues**

### **Marine Waters**

RMI marine waters are vulnerable to point source and non-point source pollution. One area of concern is leaking PCB-contaminated transformer fluid. RMI has long been aware of the existence of a number of questionable electrical transformers brought to Majuro and the outer atolls during Trust Territory days. The transformers were suspected to contain polychlorinated biphenyl (PCB) fluid, a highly hazardous substance. In 1989, some of those transformers were found to be leaking PCB-contaminated oil directly into Majuro Lagoon. Subsequent RMIEPA enforcement efforts resulted in the provision of a small Majuro Hazardous Waste Storage Facility (a modified shipping container), but PCB contamination remains a problem.

Due to lack of sewage pump-out facilities at the major docks in Majuro and Ebeye, government and private ships regularly discharge waste into lagoon waters.

Cyclogen oil is currently stored in large numbers of rusted, leaking 55-gallon containers on Majuro Atoll and Gugeegue Island, Kwajalein Atoll. This oil poses a significant threat to RMI waters and coastal reefs. At a minimum, immediate containment of the rotted receptacles is required.

Oil spills into marine waters continue to plague the urban centres of Majuro and Ebeye. So far, RMI has escaped catastrophic damage from a large spill, but lack of oil spill prevention and contingency plans leave a gap in current marine water protections.

Planned discharges into marine waters also cause concern in the environmental community. In Majuro, untreated sewage flows directly into coastal waters. The sewage outfall may or may not be adequate in length and depth; further research is required. On Ebeye, the sewage outfall discharges directly into the lagoon and also requires monitoring.

### **Fresh Water**

Surface fresh waters are rare on atolls. In RMI, fresh water resources are limited to sub-surface lenses. These lenses, regularly replenished by rainfall, consist of fresh water floating on a heavier sea-water layer approximately one to eight feet below ground. As these lenses are generally located only on the larger islets of an atoll, most inhabited islands depend on rainwater catchment systems to help meet fresh water needs (Crawford 1991: 3).

Majuro is experiencing a severe shortage of potable water. Despite use of an extensive water catchment system at the international airport and tapping lens wells at the wide tip of the atoll, Majuro's water supply must be strictly rationed. Alternative water systems, such as private wells and rain water catchment systems, must be more fully developed and utilised. Contamination of such systems has been troublesome. The RMIEPA Water Quality Program has received funding to prepare a pamphlet in Marshallese and English on the maintenance and treatment of rain water cistern systems. This pamphlet should prove valuable both in Majuro and on outer atolls entirely dependent on catchments and wells for their fresh water requirements.

Public fresh water distribution on Ebeye Island, Kwajalein Atoll is strictly limited to two periods of 45 minutes daily. Ebeye's public water is supplied through the operation of an Israeli-designed desalination plant. Public water cistern storage capacity is inadequate. Ebeye plans to upgrade water storage by constructing a bermed perimeter around the existing water storage reservoir. On neighbouring Gugeegue Island, a new water processing system is being planned to serve approximately 400 people.

### **Recommendations on Water Supply and Water Quality**

8. Expand funding of RMIEPA Water Quality Testing Program to include outer atolls.
9. Enforce *RMIEPA Marine Water Quality Regulations*.
10. Draft *RMIEPA Fresh Water and Groundwater Regulatory Controls*.
11. Draft *Marshall Islands Pollutant Discharge Elimination System Regulations*.
12. Continue to request waiver of US prohibition against the import and disposal of PCBs.

## **5.6 Pollution Control and Waste Management**

### **Administrative Structures**

RMIEPA is the national government agency given responsibility for pollution control in RMI. The Authority employs two environmental specialists to monitor compliance with pollution control regulations. The specialists work with the local community and other government Ministries and agencies in an effort to explain and enforce newly-enacted pollution control initiatives. The RMIEPA Legal Counsel negotiates or takes legal action on behalf of RMIEPA in the event that a legal settlement is required. Every effort is made to interact with the local community and settle environmental pollution issues out of court. An administrative scheme of regulatory oversight and enforcement of anti-pollution environmental standards has been developed by RMIEPA. This scheme of enforcement involves four steps, implemented through the use of standardised forms:

1. A written Record of Investigation is compiled by the RMIEPA office staff, including the specific complaint, names of all persons interviewed, instructions given by the investigator, photographs taken at the scene, possible violations of the law, and all other relevant data;
2. The General Manager may issue a written Notice of Violation, which requires immediate remedial action and places the violator on notice that she or he is subject to Authority action for non-compliance;
3. The Authority meets to issue a Cease and Desist Order and impose a civil penalty. The Cease and Desist Order specifies the violation, requires the violator to remedy the situation, requires a meeting with a representative of the Authority, states the amount of the daily fine for the violation, and informs the violator of her or his right to attend a public hearing to present oral and documentary evidence challenging the factual basis for the Order. The Order takes effect upon issuance;
4. The Authority conducts a public meeting after each Cease and Desist Order is issued. At that meeting the Authority issues a written decision setting forth its findings of fact with respect to the violations. The Authority's decision will either uphold or dissolve the Cease and Desist Order and imposition of fines. Accompanying the Authority's decision is a notice informing the violator of her or his right to petition the court for review within 30 days.

This system of environmental oversight allows the Authority to maintain control over how its Regulations are implemented and enforced. Although not yet tested in the courts of the Republic, the Authority believes that the courts will be willing to restrict their review of Authority actions to the question of reasonableness and will uphold the power of the Authority to impose fines.

The Ministry of Public Works is the national government agency responsible for the collection and disposal of solid waste. A solid waste disposal facility located on Majuro Atoll, and appropriately named "The Island Dump", is managed by Public Works personnel. Public Works staff are responsible for daily coverage, compacting, grading, and guard duty at the disposal site. Plagued by inadequate funding and sporadic equipment failures, the Ministry has ceded control of solid waste collection on Majuro to the Majuro Atoll Local Government Council (MALGOV).

RMIEPA, through its enabling legislation, is granted oversight authority for waste management efforts. RMIEPA issues Solid Waste Disposal Facility Permits, and monitors both public and private landfills. Two environmental specialists work with the General Manager, the Ministry of Public Works, MALGOV, and the local community in the control and management of solid wastes. The RMIEPA Public Education Office also works toward better public participation in waste reduction efforts.

The Division of Environmental Health and Sanitation functions in regard to waste management include solid waste disposal oversight, water-seal toilet construction and training, and inspection and enforcement of *RMIEPA Toilet Facilities and Sewage Disposal Regulations*.

## Key Issues

RMI shares the fate of many developing Pacific nations in its present inability to control increasing land and sea pollution. RMI lagoons and shorelines are becoming spoiled by urban wastes. Overcrowding and poor sanitary conditions on more populated atolls exacerbate this problem.

Implementation and enforcement of environmental goals in the Marshall Islands is no easy task. Marshallese geography mitigates against enforcement and far-flung atolls create difficult communication problems. A further constraint is the oft-mentioned strong cultural tradition of customary landownership that resists governmental control of land use through environmental regulation. Dispute over whether government or customary landowners control intertidal areas increases the uncertainty of environmental control and enforcement.

RMI is moving toward expanded environmental participation by traditional landowners. Stronger local participation in environmental decision-making, coupled with increased conservation funding and facilities, will go far toward creating an RMI pollution control policy that links customary controls with modern preservation practices.

## Local Governments

Although local government Councils may consider and develop ordinances in regard to environmental and pollution control matters, most local Councils do not have the present capacity to fulfil that function. Limited administrative, planning and management capacity and low levels of revenue generation prevent most outer island local governments from effective consideration of environmental problems.

Transportation, communication, and resource restraints have limited industrial development on most atolls and islands of the Republic. As development increases, problems of pollution associated with burgeoning infrastructure and commerce shall, inevitably, also increase. The

Republic has a chance to put legislative instruments in place in the outer atolls and islands now, before development-related pollution problems have escalated to unmanageable proportions.

## **United States Army Kwajalein Atoll Draft Alternate Environmental Standards**

The Compact of Free Association between the United States and RMI guarantees the United States thirty years access to certain areas of Kwajalein Atoll within the Marshall Islands for a fixed price. The United States has there established the Kwajalein Missile Range, a US missile testing facility under the control of the US Army Strategic Defence Command. The facility is located on Kwajalein Island and ten other mid-corridor islands of Kwajalein Atoll, the facility is presently known as United States Army Kwajalein Atoll (USAKA). This facility conducts many operations of a highly technical nature. The presence of the USAKA facility within RMI poses a number of pollution control challenges.

Under Title One, Article VI of the Compact, the United States and Marshall Islands Governments have pledged to "promote efforts to prevent or eliminate damage to the environment and biosphere and to enrich understanding of the natural resources of the Marshall Islands."

To carry out this policy, at Section 161(a)(4) of the Compact, the US agreed to develop appropriate mechanisms, including regulations or other judicially reviewable standards and procedures, to regulate all USAKA activities in RMI which would require the preparation of a US Environmental Impact Statement. The alternate standards must account for the "special governmental relationship" between the RMI and the US, technical support from appropriate US environmental agencies is required in the development of the standards and RMI must be given the opportunity to comment during their development.

Reciprocally, the Marshall Islands, under Section 161 (b) of the Compact, has an obligation to develop and enforce comparable environmental protection standards and procedures. RMI is currently fulfilling that obligation through the RMIEPA Legal Project discussed above.

In 1989, the US Army completed an Environmental Impact Statement (EIS) for ongoing and planned activities at USAKA. The EIS identified several existing areas where improvements were needed to achieve substantial conformance with the US statutes mentioned in Section 161 (a) of the Compact. The USAKA EIS process accelerated the effort to develop alternate standards under Section 161 (a). As a result of the EIS process, the US Army requested the Strategic Defence Command (SDC) to take the lead in developing alternate standards for US Government activities at USAKA.

A "Project Team" was therefore formed in 1990 to propose initial alternate standards. The Team is managed jointly by the US Environmental Protection Agency (USEPA) and the US Strategic Defence Command (USASDC). Team members include representatives from USEPA, SDC, USAKA, the US Department of Defence Strategic Defence Initiative Organisation, General Counsel's Office (SDIO/GC), the US Fish and Wildlife Service (USFWS), and the US Army Corps of Engineers, Pacific Ocean Division (CEPOD). In addition, the SDC manages the efforts of supporting agencies (including USAEHA and Teledyne Brown Engineering) to develop requested data and technical information. The Marshall Islands, through the RMIEPA, has participated in Project Team discussions and decision-making during all phases of the project.

The Project Team has worked for the past year to prepare an integrated set of standards and procedures that would reflect the substantive standards of a number of US government and RMI statutes and regulations. In certain areas new standards are proposed to provide additional protections for the fragile and limited environmental resources of RMI. In other areas, procedural



mechanisms are proposed to ensure full review of environmentally important activities while simplifying many of the administrative provisions of existing US government regulations.

## **RMI Nationwide Radiological Study**

Between 1946 and 1958, the United States government tested 23 bombs and other nuclear devices at Bikini Atoll and 43 at Enewetak Atoll in the northern Marshall Islands. In 1954, a thermo-nuclear weapon over 1,000 times more powerful than the bomb used at Hiroshima was tested. Bikini and Enewetak were evacuated. The unexpected bomb yields during the 1954 test (the "Bravo Shot"), however, irradiated the land and people of two additional northern atolls, Rongelap and Utrik. Sixty-six atmospheric tests of nuclear devices on these remote northern atolls took their toll; to varying degrees, groundwater and soil were rendered too radioactive to support human life.

The Compact of Free Association at Section 177 establishes a compensation fund for damage resulting from the nuclear testing program. In 1990, RMI used a portion of those funds to establish a nationwide radiological study. The study is designed to provide an unbiased scientific interpretation concerning the potential health effects among the RMI population and the effects to land productivity and value as a result of bomb test-related radioactive fallout.

The study shall also provide a complete and unified set of data describing the degree of radiological contamination at all atolls. RMI has never before established the extent of fallout throughout the nation or determined past and present levels of radiation. As well as being useful to the Nuclear Claims Tribunal in adjudicating damage claims, the data should inform anti-pollution and hazardous waste disposal efforts in the Republic.

## **Solid Waste**

Increasing population pressures and increasingly available non-biodegradable materials have exacerbated Majuro and Ebeye's solid waste disposal problems. Additional government attention to public landfills and community attention to littering problems are necessary. Communal land ownership systems require active landholder participation in any government-initiated solid waste reduction proposals.

Over the past four years RMIEPA has conducted periodic community meetings with local government, civic and landholding leaders to organize regularly-scheduled clean-up campaigns. These meetings have provided valuable outreach for RMIEPA programs and have increased community awareness of solid waste disposal and reduction issues.

The two largest landfills in RMI are the Majuro and Ebeye disposal facilities. The "Majuro Dump" has been in operation since 1989. Permitted by RMIEPA, the dump has undergone two expansions. The disposal facility currently comprises 23,000 cubic yards along the oceanside of a long, narrow islet in central Majuro Atoll. Buttressed by gabions along the ocean perimeter and fenced on the other three sides, the dump is neither lined nor adequately covered. RMIEPA Permit requirements of daily sand coverage, prohibitions on burning, and restrictions on gabion placement are only infrequently followed.

The Ebeye landfill is also inadequately maintained. Located near lagoon and ocean waters, leaching is inevitable, and wind-tossed debris frequently finds its way into surrounding waters. Unprotected by fencing, liner or cover, the dump is also vulnerable to human scavenging.

## **Liquid Waste**

Recent improvements in sewerage systems on Majuro, Ebeye and Gugeegue have resulted in increased public access to saltwater toilet flushing systems. Sewage facilities remain inadequate in most areas of RMI. Many urban and rural households rely on substandard septic tanks, absorption fields and pit latrines. Large percentages of both urban and rural households have no toilet facilities. Widely-practised customary habits of using beaches and shorelines as toilets increase coastal water pollution problems.

## **Waste Reduction**

Aluminium recycling is in its infancy in RMI. Although over seven million cans per year find their way to the Republic, recycling is currently handled on a voluntary basis in support of a school consortium fund-raising effort. RMIEPA has requested monetary support from SPREP to buy an aluminium can crusher. Further solid waste reduction needs include programs for recycling or disposal of waste oil and automobile battery fluid.

### **Recommendations on Pollution Control and Waste Management**

13. Bolster RMIEPA pollution control efforts with additional funding and training to allow inter-atoll travel and effective advice to local governments.
14. Monitor potential noise pollution issues.
15. Enact and enforce Draft *RMIEPA Clean Air Regulations*.
16. Review Draft USAKA Alternate Environmental Standards to ensure effective environmental oversight of US military activities on Kwajalein Atoll.
17. Draft *Radiation Regulations*.
18. Enforce existing litter enactments.
19. Draft local ordinances requiring mandatory deposits on aluminium cans.
20. Expand *RMIEPA Solid Waste Regulations* to provide more explicit hazardous waste standards.

## **5.7 Biodiversity and Wildlife Conservation**

### **Administrative Structures**

Although the Marshall Islands Marine Authority (MIMRA) is given statutory authority to conserve and manage the living resources of the Republic, the Authority has devoted much of its initial energy to the development of commercially viable fisheries activities. Concurrently, RMIEPA has been given the authority to regulate and preserve natural aspects of the nation's heritage, but pressing urban environmental issues in Majuro have taken the bulk of the agency's time. The protection of both marine and terrestrial areas, therefore, has not received priority attention by governmental agencies in recent years. Species protection has also been limited.

The need for a national resource conservation policy has become urgent. Discussions are now being held between the Ministry of Resources and Development, MIMRA, and RMIEPA to determine the best administrative placement of a resource conservation unit.

## **Key Issues**

### **Protected Areas**

Much work remains to be done in the protection of species and development of nature preserves. Currently, there are no legally established protected areas in the Marshall Islands, nor is there any legislation for this purpose.

At the request of the Marshall Islands, in 1988 a multidisciplinary team of scientists and planners conducted a field survey of the biological diversity and ecosystems of six atolls and one island in the northern Marshall Islands. The primary objective of the survey was the assessment of the ecological condition of the atolls and island with a view toward determining their suitability as candidates for a system of protected areas in the Marshalls. "The Northern Marshall Islands Natural Diversity and Protected Areas Survey" pointed to a number of northern atolls which would benefit by designation as a National Preservation Area as well as World Heritage Sites.

Bokak, Bikar, Taka, Wocho, Rongerik and Erikub Atolls, and Jemo Island were all noted to harbour endangered species, natural ecological systems, or historic sites worthy of preservation. Bokak, or Taongi, Atoll was considered to have the most outstanding ecological value. Isolated and uninhabited, "it is a rare and possibly the only example of a completely natural, unaltered, semi-arid atoll ecosystem remaining in the world today" (Thomas 1988: vi). This Survey, in conjunction with increasing environmental awareness on the part of the Marshallese people, has led to new interest in establishing Taongi (Bokak) Atoll and Bikar (Pikaar) Atoll as National Preservation Areas.

The Survey further proposed that nature conservation and protected areas should be elements of an overall National Conservation Policy. Such a policy should guide RMI development along sustainable paths, and serve as a formal declaration of the importance of conservation to RMI. The Survey also calls for comprehensive protected areas legislation and organisational changes to provide for the effective administration of the proposed legislation.

The recent unauthorised grounding of a Japanese fishing boat on Bokak Atoll highlights the need for protected areas legislation. Currently unprotected by specific legal language, the atoll may well have sustained a level of environmental damage that could not have been adequately recompensed. As it was, an out-of-court settlement with RMIEPA both compensated for environmental damage and provided RMIEPA seed money for its initial efforts to discuss protective procedures with northern landowners.

### **Conservation of Living Resources**

In an atoll ecology, terrestrial resources are scant and marine resources are abundant. Both resources suffer from rapidly increasing human population levels and their consequent infrastructure and development demands. Additional conservation efforts are necessary to adequately protect, conserve and manage RMI's living resources. The principle of sustainable development must be more vigorously incorporated in all development proposals and in the environmental community's responses to those proposals. Terrestrial and marine flora and fauna conservation efforts must be more fully incorporated into large-scale government development projects.

Aquaculture, mariculture, and aquarium fish harvesting activities will increase in the next decade. Uncontrolled harvesting activities create the potential for over-exploitation of marine resources such as trochus, black-lip mother-of-pearl oysters, and perhaps giant clams. Regulatory controls are required. All regulatory controls, however, must take into consideration takings for traditional purposes, much like language currently found in the *Marine Resources Act*.

Enforcement efforts under the present legislative framework for species conservation is not adequate. Enforcement is hampered by the vast geographical distances within RMI, by the lack of updated information on the species inhabiting RMI and which species require protection, and by the ubiquitous lack of funding and training which plagues most environmental protection efforts in the Republic.

### **Recommendations on Biodiversity and Wildlife Conservation**

21. Draft legislation for the administration and protection of marine and terrestrial areas.
22. Establish a Nature Conservation Unit within MIMRA or RMIEPA.
23. Offer additional funding and conservation training to MIMRA staff.
24. Re-draft *Endangered Species Act* and enhance subsidiary Regulations.

## **5.8 Protection of National Heritage**

### **Administrative Structures**

#### **Ministry of Internal Affairs**

The Ministry of Internal Affairs (IA) is the government agency responsible for the oversight of cultural affairs. The Historic Preservation Office (HPO) is located in IA, as is the Division of Cultural and Environmental Heritage. The Division's main implementing arm is the Alele, Inc., a non-governmental body employing a staff of approximately 20. The Secretary of IA acts as Chairman of the Alele Board of Trustees as well as the designated Historic Preservation Officer of the Republic. The Minister of IA serves as Chairman of the Advisory Council for Historic Preservation.

Alele, Inc. is a non-profit private corporation chartered in 1970, with quasi-government status granted in 1980. Its mission is to promote and conserve Marshallese culture, language, and oral traditions. Its seven-member Board of Trustees is comprised of four members elected from the Alele membership, and three ex-officio slots: the Secretaries of Education and Social Services, and the Secretary of IA, who chairs all meetings.

In 1976 the Historic Preservation Office (HPO) of the Marshall Islands District was organised under the Division of Lands and Surveys, Department of Resources and Development. In 1980 the HPO was placed under the Department of Island Affairs, the predecessor of the present Ministry of Interior and Outer Islands Affairs. The Historic Preservation Office, established as part of IA by national Act in 1991, continues to receive direct block grant funding from the US National Parks Service. The HPO, for purposes of administration, is accorded "state" status with

the National Parks Service, thereby making the RMIHPO answerable to the US Parks Service in all funding matters.

Nitijela Resolution 100, passed in 1990 by the 11th Constitutional Regular Session of Nitijela, provided for the creation of the HPO within the Ministry of IA. The Resolution stated the need for an HPO, declaring that "the cultural and historic properties and resources of the Republic, which include submerged resources, form a fragile, finite and non-renewable resource that are subject to damage and destruction by patterns of modern land use, development and foreign impact, and which are therefore in need of preservation and proper management".

## **RMIEPA**

RMIEPA has an abbreviated role in the protection of the cultural heritage of RMI. Having enacted the first Regulations to consider the protection of cultural resources (see *RMIEPA Earthmoving Regulations* below), RMIEPA environmental specialists worked in close coordination with the HPO in the issuance of RMIEPA Earthmoving Permits. Most permit applications were sent to the HPO for comment before being acted on by RMIEPA. As further Regulations pursuant to the *Historic Preservation Act 1991* are drafted, the HPO and RMIEPA are setting out on concurrent regulatory paths, with each office requiring separate sets of permit applications for activities which may have an impact on the nation's cultural resources.

## **Key Issues**

### **Destruction of Historic Sites**

As land needs are critical in an atoll economy, the struggle over which uses a piece of land may be put to are always intense. Frequently, development needs overwhelm conservation needs, and the preservation of historical uses are subsumed by current economic demands. Earthmoving activities in the furtherance of development projects regularly expose archaeological sites. Agricultural earthmoving unearths a great many sites as well.

The HPO is aware that cultural and historic properties may co-exist with modern development, and preservation of such properties may involve creative activities other than static protection, including adaptive use, rehabilitation and data recovery. In order to attempt such creative activities, the HPO has proposed a series of Regulations that would require the HPO to be notified about development and agricultural projects that could put historic and cultural sites at risk.

### **Intangible Heritage**

The cultural heritage of the Republic represents both the foundation upon which rests modern Marshallese society and the identity of the Marshallese people. Marshallese cultural identity is reflected in the Marshallese language and its unique oral traditions. Although oral traditions are frequently associated with natural features of the landscape, such as natural depressions, large coral boulders, or lengthy stretches of land, traditions also respect an intangible heritage. Intangibles like community practices, information or ideas are often exchanged and celebrated through oral traditions. One of the new tasks of the HPO pursuant to the *Historic Preservation Act 1991* is the recording and archiving of the body of oral traditions of the atolls of RMI.

### **Liaison with Local Governments**

Local government Councils are the government bodies most in touch with local traditions and cultural resources. Liaison with these Councils is crucial for a grass-roots knowledge of differing

communities' disparate traditions. The *Historic Preservation Act* recognises this, requiring a Cultural Resource Officer to be appointed by the head of each local government Council. The Officer shall serve as the liaison between the HPO and each local government. In enforcement of historic and cultural preservation controls, it is especially necessary to educate widely and well. Only when local communities take up the cause of cultural preservation will effective enforcement commence.

### **Recommendations on Protection of National Heritage**

25. Further establish the comprehensive regulatory framework devised pursuant to HPA by enforcing the newly-enacted HPA Regulations.
26. Draft a *Historic Parks Act*.
27. Draft a *Historic Shipwrecks Act*.

## **5.9 Tourism**

### **Administrative Structures**

The RMI Tourism Office is currently placed under the Division of Labour, Trade, Industry, and Tourism within the Ministry of Resources and Development. A small unit, the Tourism Office works in coordination with the Ministry of Resources and Development to promote tourism as part of an integrated development system to be encouraged in the outer islands. The Marshall Islands Development Bank, the financial arm of the national government, is also presently making funds available for small-scale outer island tourism development.

On February 22, 1991, Nitijela passed the *Tourism Act 1991*, which establishes a Marshall Islands Visitors Authority. The Visitors Authority shall take over all assets, liabilities, rights, and obligations of the Tourism Office. Although the Visitors Authority is not yet operational, the Tourism Office hopes to have the funds in fiscal year 1992-93 to establish a small Authority, housing a Director, a Secretary, and two Tourism Development Specialists.

### **Key Issues**

Tourism is in its infancy in RMI. Virtually non-existent a mere five years ago, only marginal increases have been noted to date. Very little infrastructure is available to accommodate tourists in RMI except in the urban areas of Majuro and Ebeye, where most arrivals are business visitors.

RMI has good tourism potential, offering a tropical, breezy climate, sheltered lagoons, outstanding coral formations, and plentiful game fish. Additionally, the outer atolls of Mili, Maloelap, Wotje and Jaluit boast numerous World War II relics.

The government is guardedly interested in developing RMI's potential for visitors. Present plans include funding for small-scale outer island development, such as guest cottages or smaller

resort houses, as well as interest in a few large resorts on two or three scattered atolls. Ecotourism has also been mentioned as a possibility for discerning travellers to the Republic.

The Visitors Authority has recognised the need to liaise with local communities to determine local opinions regarding tourism development. Any efforts at promoting tourism are dependent on community acceptance. As outer islands are small, scattered, and difficult to communicate with, a locality's embrace of the tourist facility is essential to its success. The Visitors Authority must coordinate with local Councils, local planning units, and local landowners in order to produce a successful visitor program.

Traditional outer island communities have expressed concerns about tourism's potential for infringing on their customary lifestyles. On more than one occasion in the recent past, local communities have requested that the national government remove unanticipated visitors from their locale. Many traditional Marshallese may feel offended or violated by noisy, intrusive tourism activities. A vital issue in current infrastructure plans is location and frequency of visitor access to villages, many villagers feel more comfortable with facilities located on a separate island from the island housing most residents of the atoll.

### **Recommendations on Tourism**

28. Establish the Marshall Islands Visitors Authority as set forth in *Tourism Act 1991*.
29. Draft Regulations prohibiting taking of artefacts and live shells pursuant to HPA or *Tourism Act 1991*.
30. Draft Regulations licensing resort facilities pursuant to the *Tourism Act 1991*.

## **5.10 Agriculture and Forestry**

### **Administrative Structures**

The Division of Agriculture within the Ministry of Resources and Development is responsible for coordinating agricultural development in RMI. The Chief of Agriculture administers the Division. Supporting services are provided by the Division of Outer Islands.

### **Key Issues**

The 29 atolls of the Marshall Islands, including approximately 1,255 islets, are composed of flat limestone reef materials barely rising above sea level. The soils are nutrient-poor. High average wind speeds, salt spray and high evaporation rates result in high surface salinities which impede the growth of plant life (Crawford 1991: 3). These stressful conditions frustrate agricultural production. Food shortages continue to plague RMI. Producing adequate amounts of food for human consumption from nutrient-poor soil remains a problem in many atolls of the Republic; at present most foods consumed in urban areas are imported.

Although RMIEPA has statutory authority to recommend soil conservation programs, staffing and training limitations have prevented RMIEPA from assuming that role. All present programmatic responses to agricultural issues, such as soil conservation, are managed by the Agricultural Division of the Ministry of Resources and Development.

### **Agro-forestry**

Agro-forestry efforts were hampered until recently by significant declines in international copra prices, creating concomitant declines in the price paid to copra producers by the RMI Government. Recent world price increases, matched by a renewed Government commitment to elevated copra subsidies, has sparked renewed interest in copra production. Only about 16,000 acres of the 22,000 acres under coconut plantation is productive, and of the productive area, 11,000 acres are under senile trees (RMI-OPS 1991: 218).

### **Accelerated Erosion and Sedimentation**

Land degradation as a result of agricultural practices is a problem in RMI. Commonly, agricultural projects do not assess potential environmental impacts. Accelerated erosion and sedimentation from unrestrained earthmoving exacerbates stress on nearby coral reefs. As large-scale agricultural projects begin to be undertaken by the national government in the next five years, erosion and sedimentation impacts will increase. Landowners, used to absolute dominion over land in custom, remain resistant to attempted environmental regulatory oversight of land use, including agriculture.

The RMIEPA Board made a pointed policy judgement to exclude agricultural efforts from their Earthmoving Permit program. The Board felt that progressive public policy dictated the unfettered encouragement of agricultural programs and projects. The Historic Preservation Office, concerned by RMIEPA reluctance to require permits for agricultural earthmoving activities, and motivated by the unprecedented rate of destruction of historical sites, is currently initiating its own permitting system.

### **Agricultural Impacts on Cultural Resources**

Prime settlement land is limited on the atolls of the Marshalls. What has been prime settlement land in the past is still prime land today, leading to a superimposition of archaeological and historic sites by modern structures. The dramatically increased level of physical and infrastructure development poses a serious threat to the well-being of available cultural and historic resources. As indicated above, agricultural earthmoving activities in the wake of development projects regularly expose archaeological sites.

### **Pesticide Pollution**

Pesticides are not yet in frequent use on most atolls of the Republic. When they are used, however, applicators are generally untrained in proper pesticide procedures. Further, many pesticides reach outer atolls in poorly marked containers. Even if containers are the original storage receptacles, often instructions as to hazards are printed in foreign languages. The Majuro Chamber of Commerce, concerned about increased costs, has resisted RMIEPA efforts to require pesticides labels to be printed in English and Marshallese. Many applicators are therefore completely unaware of the name, proper dosages, toxicity level, or dangers to plants or animals of the pesticides they use.



## Quarantine and Import/Export Inspections

The Plant and Animal Quarantine section of the Division of Agriculture is poorly staffed, and under-equipped. Inter-island movement of goods is relatively unfettered. *Quarantine Regulations* are little known and rarely used. Enforcement is infrequent.

### Recommendations on Agriculture and Forestry

31. License earthmoving machinery drivers pursuant to the *National Environment Protection Act* or the *Historic Preservation Act 1991* (HPA).
32. Issue joint RMIEPA - *Historic Preservation Office Earthmoving Regulations*.
33. Enact and enforce Draft *RMIEPA Pesticides Regulations*.
34. Re-draft *Quarantine National Statute and Subsidiary Regulations*.

## 5.11 Fisheries

"Fishery Waters" are defined in the *Marshall Islands Marine Authority Act* to include the waters of the territorial sea, the Exclusive Economic Zone and all internal waters. This gives RMI fishery jurisdiction over approximately 750,000 square miles of ocean. The conservation and extended use of this extremely rich resource is vital to the social and economic well-being of RMI. Fish is now and always has been a prime protein source on the atolls of the Pacific. With food production scarce on many atolls, fishing and its associated skills has provided both fundamental nourishment and a wealth of customs and traditions to the Marshallese.

Despite long-standing customary and traditional links to the sea, the Marshall's consumption demands for fish outstrip its availability on some atolls. Very few Marshallese fish stock the stores in Majuro and Ebeye, despite the commercial viability of such a venture. The commercial aspects of this vital resource are simply not fully developed. Fishing for profit, whether small or large-scale, is still infrequent. Fishing on most atolls is for subsistence purposes, small-scale commercial fishing projects are rare. Although commercial development of the available marine resources has been a high government priority, financial constraints and lack of technical expertise have hampered development.

## Legislation

### Marshall Islands Marine Authority Act of 1988

This Act establishes the Marshall Islands Marine Authority (MIMRA) as the central authority regarding the development and management of fisheries and marine resources. The Act sets requirements for foreign fishing in Part III, including the specific criteria for application, approval, revocation, suspension and variation of foreign fishing licenses.

Part IV of the Act covers activities other than foreign fishing, including the development of local fisheries, the issuance of licenses for local fishing vessels, non-commercial fishing and fish processing, and the requirement for an agreement on the terms and conditions of non-resident investment in fisheries activities. Section 12 of the Act lists fifteen areas for which the Authority

may make regulations, including conservation of the Fishery Waters, protection of fish, operation of domestic and foreign fishing vessels, licensing, pollution, and export of fish. Section 12 further states that all regulations shall become effective upon approval by Cabinet.

In Part VI, the *Marshall Islands Marine Resources Authority Act* prohibits the use of any explosive, poison or other noxious substance for the purpose of catching fish, prohibits the possession of fishing nets or gear not conforming to prescribed standards, and prohibits foreign fishing vessels from engaging in fishing without a license.

### **Marshall Islands Marine Resources Authority (Amendment) Act of 1989**

This recent Act amends the *Marshall Islands Marine Authority Act* by prohibiting the use of a drift net as fishing gear. A drift net is defined as a gillnet or other net which is more than 2.5 kilometres in length, entangles fish or other marine life, and is left to drift in the water without attachment to any point of land or the seabed.

This Act was passed at the same time as the Nitijela's approval of the *Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific*. The Convention and its Protocols was adopted in Wellington, New Zealand in November 1989, at the culmination of a series of international meetings in which RMI participated.

### **Marine Mammal Protection Act of 1990**

This Act provides for the protection of dolphins and other marine mammals captured in the course of commercial fishing operations in the eastern tropical Pacific Ocean by flag vessels of the Republic.

### **National Environmental Protection Act of 1984**

Section 30(1) of the *National Environment Protection Act* requires RMIEPA, in consultation with the Environmental Advisory Council and with the assistance of the Ministry of Resources and Development to recommend to the Minister of Health Services a system of rational exploitation of fisheries and aquatic resources within the waters of the Republic. The section further requires RMIEPA to encourage citizen participation to maintain and enhance the optimum and continuous productivity of the marine waters.

Section 30(2) of the *National Environment Protection Act* allows measures for the rational exploitation of fisheries and other aquatic resources to include the regulation of the harvesting and marketing of threatened species of fish or other aquatic life

## **Key Issues**

### **Economics and Conservation**

Effective use and management of marine resources is the key to the independent economic development of RMI. The principles of sustainable development, allowing improvement of the quality of human life while requiring humans to live within the carrying capacity of supporting ecosystems, are essential here. A traditional way of life, future tourism potential and internal and international fishing ventures all rely on the ability of this resource to be renewable.

Fisheries resources often become non-renewable when plagued by overfishing and pollutants. Because commercial fisheries opportunities in RMI are not fully developed, and because human population pressures are not extreme on most atolls in RMI, impacts from external sources on fisheries resources do not presently overwhelm the resource. Potential impacts, including

fertilisers, coral mining, selective fishing, aquarium harvesting, sewage and pesticides must be closely monitored for future effects.

Marine resources in the Marshalls are vast. Skipjack, yellowfin, and bigeye tuna, all commercially sought, are abundant in RMI waters. Sport fish and game fish, such as marlin, also abound. Over 250 species of reef fish, the majority of which are edible, occur in RMI (Crawford 1991: 6). Marine resources at present, however, are not fully protected. Emphasis in recent years has been on exploitation rather than conservation. Conservation regulations pursuant to the *Marshall Islands Marine Authority Act* have not yet been drafted for either artisanal or pelagic fishing.

## **The Role of MIMRA**

MIMRA is still an evolving statutory body. The setting of clear environmental management goals awaits more regular meetings of its Board and more attention to conservation concerns. The Authority's dual roles as protector and exploiter of the same resources often place it in an awkward position. This is especially true when licensing foreign fishing concerns, an area of great economic importance to the Republic, and one overseen by the Ministry of Foreign Affairs as well as MIMRA. A good deal of committed conservation and development work has been done recently by the Authority in the aquaculture and mariculture areas.

## **Aquaculture Development**

MIMRA has been the pre-eminent government agency in this field, often working in close concert with the private sector. Public and private projects include the spawning and raising of giant clams, harvesting of trochus, and the cultivation of black-lip pearl oysters. Private sector aquaculture efforts have increased in recent years. Private sector aquaculture specialists have requested government regulatory support, both to oversee water quality standards in project areas and to implement a CITES regulatory system to monitor the import and export of endangered species. Both government and the private sector hope that controlled cultivation and harvesting will produce economic benefits through the sustainable exploitation of these resources (Crawford 1991:39).

## **Asian Development Bank Loan**

In December, 1991, a \$7,000,000 loan and technical assistance package to develop a locally-based fishing industry was successfully negotiated between the government of RMI and the Asian Development Bank (ADB). The interest-free loan becomes effective in April, 1992. There is a ten year grace period before start of payments and a 40 year overall repayment term.

A portion of the ADB Loan will be re-lent by the government to the Ebje Ruktok/Rukjenlein Fishing Company, which will use the funds to construct a fishing base as well as a small fleet of fishing vessels at Ebeye Island, Kwajalein Atoll. Other portions of the loan will be used to strengthen the fisheries management capabilities of MIMRA and to establish a Fisheries Training Centre (Marshall Islands Journal 1991: 1).

### **Recommendations on Fisheries**

35. Coordinate Government management of fisheries resources and clarify competing roles of MIMRA, RMIEPA, Marshall Islands Development Authority, and Foreign Affairs regarding management of fisheries resources, the use of internal Memoranda of Understanding is suggested.
36. Draft *Conservation Regulations* pursuant to the *Marshall Islands Marine and Natural Resources Act*.
37. Enforce *RMIEPA Marine Water Quality Regulations*.
38. Draft Regulations regarding harvesting and marketing of endangered or threatened species (in concert with re-draft of the *Endangered Species Act*) pursuant to the *National Environment Protection Act* or *Endangered Species Act*.
39. Draft aquaculture Regulations pursuant to the *National Environment Protection Act*, *Marshall Islands Marine and Natural Resources Act*, or the *Coast Conservation Act*, depending on interagency agreement defining the controlling administrative body.

## **5.12 Mining and Minerals**

At present, there are no public or private mining ventures ongoing in the Republic. RMI has, however, recently welcomed international testing and surveying of its potential mineral deposits. Germany, Japan, South Korea, the United States, and the People's Republic of China have each surveyed or are currently surveying various land and marine areas within the Exclusive Economic Zone of RMI. A current United States survey is assessing geomagnetic fields in deep-sea trenches within RMI. As the RMI harbours approximately 70 square miles of coral atoll land and over 750,000 square miles of ocean, it is not surprising that RMI mineral reserves are found largely under the sea.

The Republic has encouraged recent exploration of its deep-sea mineral potential, and results have indicated rich reserves of cobalt, nickel and manganese deposits. The sea mounts within RMI's Exclusive Economic Zone have been found to contain some phosphate deposits and extensive deposits of manganese crust. In May, 1989, a report issued by the University of Hawaii at Manoa and the East-West Centre declared that RMI was one of the Pacific's most promising areas for manganese crust deposits with likely commercial potential.

Future commercial potential, however, depends on the development of a profitable system of deep-sea mining technology, or a rise in world cobalt prices. The technology is not yet available and present efforts at deep-sea mining have therefore encountered overwhelming cost barriers. RMI leaders are hopeful that innovative mining techniques will soon become available and that mining ventures within the Republic will become a reality within the next decade.

RMI mineral deposits with future commercial potential are not found exclusively in marine environments. Land-based mineral explorations have unearthed surface phosphate deposits on six or seven atolls scattered throughout RMI. Commercial viability is questionable. Both land and marine environments require specific, additional legal protections before mining activities commence.

The RMI government encourages private sector exploration and development of seabed minerals. Investors interested in commercial development of such reserves may expect significant incentives offered by a cooperative government. Legislation has been enacted to exempt a recently

formed seabed mineral mining consortium from taxes, duties, imports and charges, provided the consortium pays royalties to the government.

Current government plans include participation in a project to test the Continuing Line Bucket (CLB) system of mining high-cobalt metalliferous oxides. This CLB system claims to leave no surface toxic residue and thereby protects the marine environment in the vicinity of the mining activities. The enterprise will be undertaken by the Mining Panel of the United States - Japan Coordinating Program in Natural Resources.

The government is presently applying for funding to undertake a geological survey and feasibility study in regard to surface phosphate mining. If funded, the study shall include information regarding the necessary restoration and replanting of excavated land areas. Current government thought is to fill land from which phosphate has been removed with dredge material.

### **Recommendations on Mining and Minerals**

40. Draft Regulations for the conservation, management and control of mineral resources pursuant to the *Marshall Islands Marine and Natural Resources Act*.
41. Draft a National Mining Act.

## **5.13 Conclusions**

A review of the environmental law in the RMI reveals that a significant body of law is already in legal effect or in draft form in the Republic. The existence of such law in a newly-independent developing country is creditable. Although much of the environmental law cited has been drawn from Trust Territory legislation adopted by the Nitijela, a number of major environmental initiatives have been proposed and enacted by the present RMI government. Such initiatives include national legislation designed to protect marine, terrestrial, historic and cultural resources. Cabinet has also acted favourably in all instances when considering subsidiary environmental regulations.

A good deal of environmental legislation has recently been proposed at the regulatory level. Further efforts to fill in regulatory gaps and to make former Trust Territory legislation responsive to present RMI needs will aid establishment of a comprehensive legal framework in defence of the fragile RMI environment. Additional needs include the pressing need to institute legislative and administrative systems for the protection of marine and terrestrial areas and for the conservation of living resources. Enhanced land use management systems and environmental impact regulations are also required.

In preparing this Review the consultant has been aware of the conflicting and often competing environmental management responsibilities dispersed between different government agencies and embodied in widely varied legislative instruments. Good faith efforts toward common conservation goals are sometimes overshadowed by gaps or overlaps in areas of environmental responsibility.

National and local governmental agencies charged with environmental responsibilities may wish to interact with greater frequency, so that knowledge may be shared on a regular, non-emergency basis. Environmental concerns regarding specific development proposals could

then be discussed with other private and governmental entities at an earlier point in time. When considering development proposals, a focused, group presentation by agencies with an environmental interest could promote greater awareness of conservation issues.

Further, government and private sector confusion about existing environmental protection legislation indicates the need for additional emphasis on public information and education about legal requirements and processes in the environmental arena. Additional staff training is also necessary before effective enforcement of existing legislative instruments becomes a reality.

## **5.14 International Conventions and Legislation**

### **International Environmental Conventions**

*International Convention on Civil Liability for Oil Pollution Damage (as amended), Brussels, 1969*

*International Convention for the Prevention of Pollution from Ships, London, 1973*

- *Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, London, 1973*

*United Nations Convention on the Law of the Sea, Montego Bay, 1982*

*Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985*

- *Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987*
- *London Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, London, 1990*
- *Copenhagen Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, Copenhagen, 1992*

*Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea, 1986*

- *Protocol for the Prevention of Pollution of the South Pacific region by Dumping, Noumea, 1986*
- *Protocol Concerning Cooperation in Combating Pollution Emergencies in the South Pacific Region, Noumea, 1986*

*United Nations Framework Convention on Climate Change, New York, 1992*

*Convention on Biological Diversity, Rio de Janeiro, 1992*

### **Legislation and Regulations**

NOTE: " • " indicates subsidiary Regulations to the legislative instrument listed above it

*Animal and Plant Inspection Act*

- Adopted Amendments to Regulations, TITLE 25, Animals and Plants Quarantine Controls; Chapter I; Plant and Animal Quarantines Administration and Enforcement of Emergency Measures
- Adopted Amendments to Regulations; TITLE 25; Animal and Plants Quarantine Controls; Chapter II; Quarantine Procedures and Controls

*Coast Conservation Act 1988*

*Constitution of the Marshall Islands*

*Endangered Species Act*

- Adopted Regulations; Title 45; Fish, Shellfish and Game: Chapter 5; Endangered Species

*Export Meat Inspection Act*

*Historic Preservation Act 1991 (HPA)*

- *Regulations Governing Access to Prehistoric and Historic Submerged Resources*
- *Regulations Governing Land Modification Activities 1991*
- *Regulations Governing the Conduct of Archaeological and Anthropological Research in the Republic*
- *Regulations Governing the Disposition of Archaeologically Recovered Human Remains*
- *Regulations Governing the Taking and Export of Artefacts*

*Land Acquisition Act 1986*

*Littering Act 1982*

*Local Government Act 1980*

*Marine Mammal Protection Act 1990*

*Marine Resources Act*

*Marine Resources (Trochus) Act 1983*

*Marine Zones (Declaration) Act 1984*

*Marshall Islands Marine Resources Authority Act 1988*

- Regulation, Administrative Action and Decree Banning the Import and Export of Certain Yellowfin Tuna or Tuna Products Containing Yellowfin Tuna
- Rules and Regulations on Foreign Fishing Agreements and Fish Processing Establishments

*Marshall Islands Marine Resources Authority (Amendment) Act of 1989*

*National Environmental Protection Act 1984 (National Environment Protection Act)*

- *RMIEPA Earthmoving Regulations*
- *RMIEPA Marine Water Quality Regulations*
- *RMIEPA Solid Waste Regulations*
- *RMIEPA Toilet Facilities and Sewage Disposal Regulations*
- *Marine and Fresh Water Quality Standard Regulations (TTC Title 63, Chapter 13, Subchapter VII)*
- *Public Water Supply Systems Regulations (TTC Title 63, Chapter 13, Subchapter II)*
- *Trust Territory Pesticides Regulations (TTC Title 63, Chapter 13, Subchapter IV)*
- *Trust Territory Air Pollution Control Standards & Regulations (TTC Title 63, Chapter 13, Subchapter VIII)*

*Planning and Zoning Act 1987*

*Public Health, Safety and Welfare Act*

*Public Lands and Resources Act*

*Real and Personal Property Act*

*Tobolar Copra Processing Authority Act of 1992*

*Tourism Act 1991*

## **CHAPTER 6**

### **SOLOMON ISLANDS**



## **6. SOLOMON ISLANDS**

### **Condensed Version of Legal Review**

*Conducted by Ben Boer*

*A Solomon Islander is a unique Melanesian, and whatever laws or regulations are passed should be made to suit the Melanesian lifestyle. Court procedures and/or forms of punishment should also be Melanesian, but with modifications, taking into account the merits of particular circumstances. Too often both expatriates and Melanesians (especially politicians) make the same mistakes over and over again by trying to implant or impose foreign laws and concepts on Melanesians and expect them to adhere to such changes with a wave of the magic wand (Billy Gatu 1977:98).*

#### **6.1 Introduction**

The Solomon Islands encompass six major and approximately 992 smaller islands, atolls and reefs. The islands range from large to small, covered with rainforests to sand (Leary 1991). On these islands approximately 95 per cent of the population is Melanesian, with the remainder comprising of Polynesian, Micronesian, Chinese or Caucasian descent from a 1994 population of 385 811.

The ecological character of Solomon Islands is distinct within itself. The total area is 28 450 square kilometres, with the land area of 27 450 square kilometres. The valuable forest and forest resources are for food, medicine, housing material and various agricultural uses. Solomon Islands contains many rare species including approximately 223 species of birds, 52 species of native mammals, 61 species of terrestrial reptiles and 17 species of frogs.

#### **Environmental Legislation**

Solomon Islands has no comprehensive environmental legislation at the national level. Some provinces have passed legislation to regulate environmental matters. On the whole, this legislation falls short of what is required in terms of modern environmental regulation. The Sector Reports prepared for the NEMS Seminar (Ministry of Natural Resources 1991) indicated concerns about the adequacy of the present legislation governing the sectors, particularly in relation to the environment. Major reviews of some of the environment-related legislation have been undertaken in the past few years. The Environmental Health, Fisheries and Forestry legislation has been recently examined through outside agencies, and drafts of environment legislation have been generated by consultants.

The main recommendation of this Review is the drafting and enactment of a comprehensive *Environment Act*.

#### **Attorneys-General and Legal Advisers**

At national level, legal advice is given by the government by the Attorney-General's Department. No legal officers are specifically designated to advise on environmental matters.

No Provincial Governments have Attorneys-General. (This can be contrasted with for example the Federated States of Micronesia, where each State has its own Attorney-General). The Provincial Governments of Malaita, Temotu and Western have Legal Advisers. In the Provincial Reports on the Environment produced for the National Environmental Management Seminar under the RETA (Ministry of Natural Resources 1991b), a number of provinces identified the lack of a Legal Adviser as hampering the development of policy and legislation, and thus a substantial limitation on achieving environmental goals. The lack of human resources to enforce existing legislation was seen by a number of provinces to be a matter of some concern.

The Provincial Legal Adviser positions (like those of the Public Solicitor) have often been filled by "Volunteer" solicitors from New Zealand, the United Kingdom and Australia. The National government pays a local salary and either it or the Provincial government provides housing. The price for Solomon Islands to obtain such professional human resources is a relatively small one, and is perhaps an opportunity which should be further exploited. All the Provinces should be encouraged to work through the Ministry of Provincial Government in Honiara to obtain their own Legal Adviser. The government may request the volunteer agencies in New Zealand, United Kingdom and Australia to recruit suitable solicitors so these eight positions are filled on a continuing basis. It would be of further benefit if these lawyers could be used to carry out some counterpart training of Solomon Island law students in their university vacations, or train selected government lawyers for a period, particularly in the field of environmental regulation.

## **Conventions which affect Solomon Islands**

Solomon Islands is a signatory to a number of global and regional conventions, as listed at the close of the chapter. As with other countries under review, Solomon Islands has a variable record in the implementation of these conventions, for reasons of lack of information, inadequate staff resources and lack of political will. Two conventions are particularly mentioned here, because they have special relevance for Solomon Islands; they are the *Convention for International Trade in Endangered Species* and the *World Heritage Convention*.

### **Convention on International Trade in Endangered Species 1973**

The *Convention on International Trade in Endangered Species (CITES)* includes a range of provisions to control trade in endangered species of flora and fauna. It places specific obligations on countries which have signed the Convention to ensure that strict controls are put in place on a national level.

Solomon Islands has a number of rare and endangered species of wildlife within its borders. Some of these species have been subject to international trading, both with official permits and, apparently, without permits. It is recommended that as one step to addressing the problem of export of endangered species, Solomon Islands sign this Convention. A further step is the enactment of appropriate legislation (see section on Biodiversity Conservation).

### **Convention for the Protection of the World Cultural and Natural Heritage 1972**

Solomon Islands Government decided to apply for membership of the *World Heritage Convention* in July 1990, (UNCED 1991b:34) and information booklets were prepared. Solomon Islands became the first South Pacific island country to accede to the Convention, on September 10, 1992. The initial proposals are to apply for listing of Rennell Island and Morovo Lagoon (Ministry of Tourism and Aviation 1991a, b and c).

In Solomon Islands, the integrity of some potential World Heritage sites could be destroyed unless adequate management arrangements are made. Management strategies should be developed to take into account the demand for resources, the benefits and disadvantages of tourism and the need for conservation. Such strategies should ideally be developed with close involvement of local customary landowners. There should be a guarantee in the arrangements for management of any World Heritage site for customary owners to benefit from the tourism income generated through visiting World Heritage sites. In order to ensure that the World Heritage Convention is adequately implemented at a domestic level, it is suggested that appropriate legislation be passed as soon as possible. A *World Heritage Properties Conservation Bill* was prepared in 1992.

### Recommendations on International Conventions

1. That Solomon Islands signs the *Convention on International Trade in Endangered Species* as soon as possible.
2. That Solomon Islands enacts legislation for the implementation of the *World Heritage Convention* as soon as possible. Such legislation should ensure that arrangements are made for management of World Heritage properties and, in particular, to include participation in decision making and income sharing by the relevant customary landowners.

## 6.2 Constitutional and Administrative Structure

Solomon Islands became independent of Britain by virtue of the *Solomon Islands Independence Order 1978*. The Constitution and the rest of the legal system is based on British legal concepts; however, it has a distinctly Melanesian flavour, particularly in relation to land matters.

The preamble to the Constitution declares that

all power in Solomon Islands belongs to its people and is exercised on their behalf by the legislature, the executive and the judiciary established by this Constitution;

the natural resources of our country are vested in the people and the government of Solomon Islands.

The preamble also contains a commitment to ensure the participation of the people in the governance of the affairs of the country and to provide, within the framework of national unity, for the decentralisation of power.

Section 114 of the Constitution provides for the country to be divided into provinces, and the National Parliament is charged with making provision for the government of the provinces.

The *Provincial Government Act* was enacted in 1981 after much debate about the division of power between the National Government and the provinces (Larmour 1985:79-87). A good deal of legislative power has been devolved to the provinces through this legislation.

## **Sources of Law**

The sources of law in Solomon Islands are: the statutes of the National Parliament; the Ordinances passed under devolved power in the Provinces; by-laws of Area and Town Councils; the applicable legislation of the British Parliament; the common law and principles of equity derived from the United Kingdom; the rules of precedent developed in Solomon Islands, and customary law of Solomon Islands.

## **Customary Law**

Within the formal British-based legal system of Solomon Islands there has been a degree of acceptance of customary procedures, with specific recognition given in the Constitution and in a range of statutes. In the field of environmental conservation and resource management there appears to be a general need to recognise customary land ownership and the importance of customary matters generally (UNCED 1992b: 29 and 38). There also needs to be a recognition that for conservation purposes, particularly in relation to endangered species, customary practices require a certain degree of regulation, especially where customary ownership problems hinder the adequate regulation of natural resources (e.g. turtle protection in the Amarnon Islands and difficulties in extending the protected areas system). On the other hand, traditional owners sometimes have little opportunity to participate in decisions affecting the utilisation of their resources (e.g. customary reef owners and TAIYO tuna fisheries) (UNCED 1992b: 38, quoting Wilson Liligeto).

The Constitution of Solomon Islands provides that customary law is part of the law of Solomon Islands. However, customary law does not apply if it is inconsistent with either the Constitution or an Act of the Solomon Islands Parliament. Article 75 provides:

1. Parliament shall make provision for the application of laws, including customary laws.
2. In making provision under this section, Parliament shall have particular regard to the customs, values and aspirations of the people of Solomon Islands.

On the other hand, customary law can override rules of common law and equity. Section 76 provides that the rules of the common law and equity have effect as part of the law of Solomon Islands unless they are inconsistent with the Constitution or an Act of Parliament, if they are inapplicable or inappropriate in the circumstances of Solomon Islands, or, in their application to any particular matter, they are inconsistent with the relevant customary law.

Clause 3 of Schedule 3 of the Constitution further provides, in relation to the application of customary law:

1. Subject to this paragraph, customary law shall have effect as part of the law of Solomon Islands.
2. The preceding paragraph shall not apply in respect of any customary law that is, and to the extent that it is, inconsistent with this Constitution or an Act of Parliament.
3. An Act of Parliament may:
  - i. provide for the proof and pleading of customary law for any purpose;
  - ii. regulate the manner in which or the purposes for which customary law may be recognised; and
  - iii. provide for the resolution of conflicts of customary law.

It is clear that the drafters of the Constitution had impressed upon them the importance of custom, especially in regulating land and its use. The challenge now is to construct a land management system which allows for a transition from a subsistence-oriented culture to one which is a mixture of subsistence and a cash economy, in the context of development pressures coming from within as well as outside the country.

## Customary Practice and Customary Ownership

One of the difficulties of ensuring that environmental issues are adequately addressed in the Solomons, as elsewhere in the Pacific, is how to accommodate traditional or customary practices, when there is also pressure for formal regulation of environmental matters to be put into place. The history of environmental regulation in Solomon Islands from earliest times needs to be borne in mind, especially since there are many traditional management practices used by people in rural areas, which could shape some of the legal reforms required in environmental regulation and practice.

In Solomon Islands little effective planning exists at local or national level. Most development decisions are taken on an ad hoc basis rather than on the basis of a coordinated national development plan. Also, development decisions are often taken independently of environmental considerations. The vast majority of the people live in rural areas, with insufficient recourse to formal education. This means that the necessary changes to develop an effective environmental awareness among the people may take a long period to become effective. Further, the provision of basic services such as sewerage and safe drinking water, needs to be kept in mind as a primary consideration, among the many changes that may be required.

It is possible, though not always desirable, to adequately reflect customary law and knowledge in written laws enacted through a formally constituted legislature. There are a number of examples where this has been done both in national and in provincial legislation in Solomon Islands. However, any new legislation enacted at national level to address environmental issues should be drafted in such a way as to be capable of taking into account local customs and practices relating to the exploitation and conservation of resources. Provinces and Area Councils should be able to address local issues through regulations and by-laws which are consistent with the national legislation.

## National and Provincial Governments - Devolution

Another important element of Solomon Islands constitutional arrangements is its division into provinces, of which there are now nine (Choiseul having become a separate province in 1992). In making provision for the government of the provinces, Parliament must also consider the role of the traditional chiefs in that government. The extent to which this requirement has been adhered to is not clear. The only role spelled out for the chiefs by the legislation seems to be that of mediator in customary land disputes under the *Local Courts (Amendment) Act 1985*.

The most important sections of the *Provincial Government Act 1981* concerning environmental regulation are those regarding the devolution of functions from the central government to the provinces. The Minister for Provincial Government may, with the consent of the Provincial Executive, order any matters specified in Schedule 4 of the Act to be matters within the legislative competence of the Provincial Assembly. Additionally, an order can transfer to the provinces a range of statutory functions formerly dealt with by the National Government.

Although legislative competence and the various statutory functions in a wide range of areas are nearly all devolved to the provinces, the actual extent of devolution is not easy to ascertain.

Devolution of power depends very much on the policy of the particular National Government in power, and on the level of resources available to the Provincial Governments to implement the powers given to them. Presently these governments are still almost entirely dependent upon National Government funding. The low level of funding available has apparently been the prime reason why devolution has not worked effectively to date.

## **The Ombudsman**

The Constitution attempts to place the Ombudsman above political influence. The Ombudsman must make an annual report to Parliament, which may draw attention to any defects in the administration or defects in any law which appear to the Ombudsman to exist. The office of Ombudsman is of central importance in environmental matters in Solomon Islands. A number of significant investigations have been carried out by the office in recent years, most notably into the legality of logging practices.

The Ombudsman is given power to refer matters back to public officials where he or she is of the opinion that any official action was: contrary to law; based wholly or partly on a mistake of law or fact; unreasonably delayed; or otherwise unjust or manifestly unreasonable (s. 16 *Ombudsman (Further Provisions) Act 1980*). It is recommended that the *Ombudsman (Further Provision) Act 1980* should be comprehensively reviewed.

The office of the Ombudsman has already proved that it has a significant role in government which can directly and indirectly assist environmental protection in Solomon Islands. It is important that the laws and procedures laid down by Parliament to protect the environment are carried out faithfully and properly by the officials charged with their implementation. For example, various Ombudsman's Reports to Parliament in recent years demonstrated the glaring inadequacies of present law and practices in the forestry sector (6.10 see Agriculture and Forestry).

### **Recommendations on Constitutional and Administrative Structure**

3. That integrated environmental legislation be drafted to cover environmental planning, environmental impact assessment, pollution control, pesticide use, and natural and cultural heritage protection, preferably within one *Environment Act*. In any new legislation enacted, the customary law and practices of Solomon Islanders relating to environmental management should be taken into account.
4. That a concerted effort be made by both the Provincial and National Government authorities to recruit suitable lawyers to enable each Province to have its own Legal Adviser.
5. That the *Ombudsman (Further Provision) Act 1980* be reviewed and amended to bring it into line with comparable legislation in other countries.
6. That the *Leadership Code (Further Provision) Act 1979* be rigorously enforced.

## 6.3 System of Land Tenure

As in many other Pacific countries, the customary land tenure system and traditional land use practices in Solomon Islands have been the basis for management and use of fauna and flora. Traditional practices include seasonal bans on hunting and fishing, tambus (prohibitions) on the killing and eating of particular species and the exclusion of outsiders from communal territory (Eaton 1989:47). These practices do not necessarily arise out of any particular conservation ethic, but more likely come from a straightforward desire to ensure sustainable and continued use of natural resources into the future.

### Land Ownership

Some 87 per cent of land in Solomon Islands is held under customary ownership, much of which is not registered under the *Land and Titles Act*. The balance of the land is mainly held by the government. The *Constitution* of Solomon Islands limits land ownership to Solomon Islanders:

The right to hold or acquire a perpetual interest in land shall vest in any person who is a Solomon Islander and only in such other person or persons as may be prescribed by Parliament (s 110).

A Solomon Islander for the purposes of this part of the Constitution is as defined in the *Land and Titles Act*:

"Solomon Islander" means a person born in the Solomon Islands who has two grandparents who were members of a group, tribe or line indigenous to the Solomon Islands (s 2 *Land and Titles Act* and s 113(2) of the *Constitution*).

Any other person who Parliament allows to hold land can only hold it as a fixed-term interest. The *Land and Titles Act* limits fixed-term interests to 75 years.

### Division of Property Rights

In Solomon Islands, ownership and use of land are often characterised as "primary rights" and "secondary rights". Primary rights can mean collective ownership comprising the right to use, dispose of (in the sense of lease or exchange) and the right to sell the products of the land. Secondary rights can mean a limited form of collective ownership comprising the right to collect the products of the land or use the land as a garden. Other uses must be with the consent of the primary land owner. The secondary right can be a temporary right granted by families and tied to family membership, and can sometimes be granted to strangers.

The case of *Fagui & Another v Solmac Construction Co Ltd* (Commissioner DR. Crome, High Court of Solomon Islands, Civil Cases Nos 44 & 45 of 1982) refers to these rights in the context of considering the meaning of "landowner" in a logging dispute:

It is well established that in custom, land is owned not by a person, but by a line or family or tribe. Other persons, families, lines or tribes may have secondary rights in the land. [This includes] rights to grow crops, make gardens, take the fruit of trees, even to take the trees themselves to make canoes or houses, and so on. The permission of other lines having interests in neighbouring lands may be required, in custom, before a line can develop its own land in case that development affects adjoining land in any way. There are chiefs or big men, but they may only behave in a customary way, and if they give

away or sell interests in customary land against custom it is possible that not only will the dealing be void but the chief may lose his right to be chief.

The word "landowners" in the context of customary land is one which can only be used in a loose and imprecise sense, and I have no doubt that the Company has, by the constant reference to the word, been lulled into a false sense of security in its venture (at 108).

## **Control over Customary Land**

In the Land Titles Act "land" and "customary land" do not include the minerals or any other substances in or under land which is mined by any process. The ownership of these elements remains in effect with the government. Decisions made in relation to customary land by the customary landowners are limited by the provisions of the mining and petroleum legislation. Landowners cannot make decisions by themselves about these resources either in relation to their own exploitation of them or by others. However, they do have specific rights to exclude people from prospecting and mining under the *Mines and Minerals Act 1990*. Thus, if a landowner refuses to grant access to the surface of the land, the mining company cannot obtain a mining license. In addition, landowners can be represented on the Minerals Board whenever an application is being considered in relation to their land (see 6.12 Mining and Minerals).

The definitions of land and customary land make clear that any products of the land such as trees and other vegetation are within the domain of the landowners. Thus any exploitation of forest resources or other vegetation on customary land can only take place with the consent of the landowners. Decisions about the use of land for purposes such as tourism and similar uses are also made by the landowners. Negotiations and bargaining over the use of the resources often takes place between the landowners and a company wishing to exploit a resource in relation to forestry. Those negotiations must take place in accordance with specific rules laid down by the forestry legislation (see 6.10 Agriculture and Forestry).

## **Marine Tenure**

In the traditional system, marine tenure exists in the sense that a group may claim exclusive use of an area of sea, beach or lagoon. Outsiders are excluded and may only fish with the permission of the group. This may be restricted to certain times of the year and be conditional on some form of payment, gifts or a proportion of the catch. Rights to gather shells and other products are safeguarded in a similar way (Eaton 1985:12).

In Solomon Islands, as in many other countries, the land and sea below the high water mark are generally regarded as government land. Customary marine tenures are recognised in the sense that traditional fishing rights are protected in the *Fisheries Act 1972*, so that reef owners can control who fishes in their customary waters, and agreements can be made about the purchase of marine products (see 6.11 Fisheries).

## **Local Courts and Customary Land**

Local Courts are established under the *Local Courts Act* by warrant from the Governor-General. The Local Court deals with a wide range of matters, including disputes over customary land. Appeals from Local Courts over customary land are to Customary Land Appeal Courts (below; and also Campbell 1977).



## The Customary Land Appeal Courts

Customary Land Appeal Courts may be established by warrant of the Chief Justice pursuant to the *Land and Titles Act*. Such courts have jurisdiction over the area or areas of the Local Court as the Chief Justice decides. The Customary Land Appeal Court provisions are found in the *Land and Titles Act*, ss 231, 231A, 231B.

For all purposes relating to land, this court has all the powers of a Local Court. The court is unable to sit unless there is a quorum of five members present.

## Customary Lands Records Bill 1990 and similar schemes

In the document *Land: Proposal for a Government Policy*, (no date, presumed 1990) it is stated that it is intended to introduce satisfactory legislation to stabilise customary land "in all of its cultural essences; a law to underpin the whole heart of Solomon Islands cultural identity". In pursuance of this policy on land, a *Customary Lands Records Bill* has been drafted "to provide for the recording of customary land holdings; to empower land holding groups to appoint representatives to deal with recorded customary land holdings, the establishment of an office of National Recorder of customary land and records offices in the provinces..." (preamble to the Bill).

The Bill sets up an administrative mechanism on both a national and provincial basis to process claims for the recording of customary rights and demarcation of the extent of the boundaries of the customary land of any customary land-holding group. The area must first be declared by the Minister as a Customary Land Record Area for the purposes of the legislation.

The Bill seeks to: provide for registration of customary land boundaries; make provision for recorded land boundaries to be conclusive evidence of the boundaries and the land holding groups entitled to primary rights; make provision for the appointment of group representatives authorised to deal with such recorded land on behalf of the land holding group.

## 6.4 Environmental Planning and Assessment

### Legislation

This section examines the legislation, administrative directions and practice relevant to physical planning and environmental impact assessment. The scope for achieving an integrated approach to environmental planning and assessment is explored, and suggestions are made on how to achieve this objective through legislative change and administrative reorganisation.

The *Town and Country Planning Act 1979* is the primary legal mechanism for the regulation of planning matters at both national and provincial level. It is potentially the basis for a much broader system of environmental planning and protection. Although the Act covers "Country", it is generally applied only in relation to urban areas. There is little in the way of formal planning outside of urban areas in Solomon Islands. The Act is administered through the Physical Planning Division of the Ministry of Agriculture and Lands.

The Act was amended in 1982 to devolve the physical planning function to the Provincial Assemblies and the Honiara Town Council. Under the amendment, each province is intended to have its own Town and Country Planning Board. As well as being responsible for the preparation of a Local Planning Scheme, the Board has wide powers to control development of land in its area.

However, "development" is restrictively defined. The Board does not have jurisdiction over customary lands.

The precise definition of the term "development" is important, because it is only development as defined in the Act that requires consent from the Town and Country Planning Board. Development is defined as the

carrying out of building, engineering, mining or other operations in, over or under any land, or the making of any material change in the use of any buildings or other land.

However there are important exceptions which are deemed not to be "development". The major restrictions are that the Board cannot deal with issues relating to agriculture, fishing and forestry developments in its Province or Council area.

The Minister may order that the development control provisions of the Act apply to any area of Solomon Islands. However, the application of the Act is severely limited by the fact that it does not apply to customary lands; i.e. it cannot apply to some 87 percent of the land in Solomon Islands.

There is no indication in the Act of precisely what environmental and planning matters must be borne in mind when a Town and Country Planning Board is considering an application. There is no requirement in the Act for other public bodies to be consulted, although this does occur informally on occasion. All of these matters may be addressed in Regulations; however, no Regulations have been drafted to date.

Where development has been carried out without the planning permission required under the Act, or against the conditions of the Board, an enforcement notice may be issued. Such a notice can be issued up to four years after the development has been carried out. The enforcement notice may specify what steps must be taken to restore the land back into the condition it was in before the development took place, or for complying with any specified conditions. The notice may require the demolition or alteration of any buildings or works, the discontinuance of any use or the carrying out of any building or other operations. The enforcement notice can only take effect at the expiration of a minimum of 28 days after service of the notice. When an appeal is made to the Local Court against the enforcement notice, the operation of the notice is suspended pending the determination of the appeal. If the appeal is dismissed, or the enforcement notice is varied, another 28 day period is allowed before the notice again becomes effective.

These provisions give Planning Officers very little power to halt development that is being carried out contrary to the Local Planning Scheme. The strength of the enforcement notice provision can usefully be compared with the Stop Notice provision found in the Building Ordinance enacted by Western Province. That provision gives power to an authorised officer to serve a Stop Notice on a Permit Holder, the builder or the owner of the land on which a building is being constructed. This Stop Notice requires building construction to stop immediately, and also acts as an immediate suspension of a building permit where such a permit has been issued.

Appeals from the decisions of a Board lie direct to the Minister. The Minister may allow or dismiss the appeal, or reverse or vary any part of it, whether or not the appeal relates to that part of the decision. The Act provides that the Minister may deal with the application as if it had been made to him or her in the first instance. The Minister's decision is final and conclusive. The Act provides that it cannot be questioned in any proceedings whatsoever.

The *Investment Act 1990* repealed the *Foreign Investment Act 1979*. It is noteworthy that the new Act covers both foreign and *local* investors. Although the Act does not include any direct requirements to take into account environmental matters, such a requirement could be specifically included in the *Investment Act*. Many overseas investors are well acquainted with the need to comply with the environmental laws of the countries in which they invest, and an increasing number have company policies to ensure that they comply and even go beyond compliance with the requirements, as they see it as of benefit.

The *Environment Act* proposed by this Review can address the activities of foreign and local investors by simply requiring all proposals for development from investors to carry out an environmental impact assessment (EIA) at the appropriate level.

The *Investment Act 1990* does not specify precisely who the Minister may appoint to be a member of the Investment Board. In the light of the above discussion, it may well be wise to specify this more precisely. An officer of the Environment and Conservation Division of the Ministry of Natural Resources would be an obvious inclusion. Such a member would be able to advise directly on whether or not environmental considerations ought to be taken into account in the Board's consideration of particular proposals.

## Tourism and Environmental Impact Assessment

The Solomon Islands Tourism Development Plan 1991-2000 has an extensive section devoted to the processes of EIA in relation to both small and large tourism developments (Ministry of Tourism and the South Pacific Tourism Council 1991: 167-172). The plan has also developed guidelines for EIA.

The Report notes that there is no environmental impact legislation in Solomon Islands at present, and recommends that such legislation should be enacted. The Tourism Development Plan includes a comprehensive set of guidelines on EIA. Those guidelines indicate that EIA should be viewed as an integral component of the project cycle, not as an extra (see 6.9 Tourism).

In the absence of national environment legislation, the Western Province draft Ordinance is the broadest instrument for environmental regulation in Solomon Islands. The draft Ordinance's provisions on environment impact assessment are a good model for adoption in new central government legislation. However, in order to ensure that such provisions are adequately administered, it would be necessary to establish a new government Agency or Division, either within the Ministry of Natural Resources or outside it. Such a body should have both the expertise and the resources to implement the environmental impact assessment provisions.

Under this Act special permission is required from a central government agency called the "Research Application Committee" before a person may carry out research work in Solomon Islands. "Research" is widely defined and covers the work involved in obtaining the environmental survey and data collection.

As the law stands, the Provincial authorities cannot solicit and obtain the services of bona fide overseas agencies or experts to do this work for them without first obtaining central government approval. The *Provincial Government Act 1981* (s 35(6)) has a similar effect. While there are sensible reasons to screen so-called "experts", modification of these requirements should be considered so that the Provinces have the power to select and invite outside research assistance to provide information on environmental surveys and data collection. The overall control of immigration and visa provision to foreigners of course needs to remain with the National Government.

### **Recommendations on Environmental Planning and Assessment**

7. That comprehensive Regulations under the *Town and Country Planning Act 1979* be passed to ensure that environmental matters are addressed when applications for development are being considered.
8. That enforcement provisions in the *Town and Country Planning Act 1979* be strengthened. In particular, provision for a Stop Notice, allowing immediate stopping of work, should be included in the legislation.
9. That Ministerial powers in the *Town and Country Planning Act 1979* be clarified and spelled out in Regulations.
10. That allowance should be made for appeals from the Minister's decision on a development application.
11. That all local and foreign development activity requiring approval under the *Investment Act 1990* be subject to an appropriate level of environmental impact assessment, supervised by the Ministry of Natural Resources.
12. That a representative from the Environment and Conservation Division of the Ministry of Natural Resources be added to the Investment Board.
13. That all existing and proposed development which affects or is likely to affect the environment be subject development application procedures and an appropriate level of environmental impact assessment.
14. That a new Division within the Ministry of Forests and Environment or a new Agency be created, to, among its other responsibilities, administer the environmental impact assessment provisions of the proposed *Environment Act*.
15. That consideration be given to devolution of the powers under the *Research Act 1982* to the Provinces and a relaxation of the provisions in the *Provincial Government Act 1981* so as to allow the Provinces to consult with the National Government, for the purposes of obtaining the services of overseas agencies to assist with environment protection in the Provinces.

## **6.5 Water Supply and Water Quality**

The question of water management and water quality in Solomon Islands needs to be urgently addressed. The relevant legislation is out of date and largely inappropriate to present day needs. Although various attempts have been made to introduce new legislation in recent years, no new legislation has been enacted. A United Nations Report (Solanes 1988) found that although the country has several water-related laws, they do not provide a coherent framework for water management and conservation. It stated that the framework needed to be updated and coordinated through the enactment of comprehensive legislation.

### **River Waters Act 1969**

The main legislation, the *River Waters Act 1969*, is meant to "provide for the control of river waters and for the equitable and beneficial use thereof..." (preamble). However, the Act only

applies to areas that are specifically designated. Only six areas have been designated under the legislation since its enactment (Mataniko and White Rivers, Mbalisuna, Ngalimbui, Lungga, Mamara, Guadalcanal). No further areas have been designated since 1984.

Under the *River Waters Act*, unless a permit is issued, a person is guilty of an offence if he or she: diverts water from a river; fells any tree so that it falls into a river or river bed; obstructs or interferes with a river or river bed; builds any bridge, jetty or landing stage over or beside a river; damages or interferes with the banks of any river.

Permits to divert water can be granted under the *River Waters Act*. There is a limitation on the grant of the permit, in the sense that regard must be had to the existing use of the water. Such uses are to be safeguarded "as far as appears practicable".

The *Rivers Waters Act* needs up-dating. The Solanes Report of 1988 contains recommendations for new legislation relating both to river waters and to water supply. A draft Water Law for Solomon Islands is contained in the Solanes Report. The original draft and comments on it are the subject of the *Water Act* (Draft) March 1991 (DePledge 1991). A new *Water Act* setting up a Water Authority has recently been passed by Parliament but is not yet in force. It seems resources to carry out the new law have yet to be allocated to the new Authority.

## **Other National Legislation relevant to Water Management**

### **Local Planning Schemes under the *Town and Country Planning Act 1979*.**

A Local Planning Scheme under this Act may include special areas or zones set aside as water catchment areas. The Scheme can specify what development, if any, is allowed to take place in such a reserved zone. The Act allows this to happen without compensation having to be paid. However, it excludes customary land from that land which the Minister is permitted to declare as a "Local Planning Area".

### **Forest Resources and Timber Utilisation Act 1991**

The *Forest Resources and Timber Utilisation Act*, areas of forest may be reserved in order to conserve water resources. The Provincial Executive under a devolution order has this power because of Schedule 5 of the *Provincial Government Act 1981*. A declaration of an area as a water catchment reserve also specifies the extent to which any rights may be exercised in the area. Thus the right to cut trees may be restricted or banned altogether. Declaration of such areas is endorsed in Western Province's Policy on the Environment.

### **Recommendations on Water Supply and Water Quality**

16. That Provincial Executives be encouraged to exercise their powers to declare water catchment reserves in forests in order to protect watersheds.
17. That new comprehensive water legislation be implemented.

## **6.6 Pollution Control and Waste Management**

With the exception of Western Province, there is no specific legislation or policy dealing with water, land, noise or air pollution at national or provincial level in Solomon Islands. However,

there are provisions in various pieces of legislation and draft legislation which deal with pollution. The *Environmental Health Act 1980* has some reference to pollution matters. Its proposed replacement, the *Public Health Bill 1990* refers more directly to pollution, but only water pollution is specifically mentioned. On the other hand, the *Mines and Minerals Act 1990* has quite explicit and stringent provisions in relation to pollution. Those provisions are dealt with in chapter 14. Given the disparate nature of pollution control provisions, it seems obvious that some consolidation is required.

*The Fisheries Regulations*, provide for offences in relation to pollution of the sea (See 6.11 Fisheries).

## **Western Province**

Western Province has published a broad-ranging and comprehensive Policy on the Environment, covering most aspects of environmental protection and management, including air, water and ground pollution. Part 4 of the Western Province Environmental Management draft Ordinance covers water control, use and conservation. A wide range of activities is prohibited under the provisions, including the discharging, depositing or discarding of any waste into a river or lake. The fine is up to \$1000 or imprisonment up to six months, with a further \$100 for every day the offence continues. The Act provides for a Stop Notice in relation to any activity under this Part, which allows an Authorised Officer to order the activity to cease immediately.

The *Western Province Public Nuisance Ordinance 1991* is primarily directed to the regulation of liquor consumption in public places. Its only provision relating to pollution relates to littering. The Ordinance makes it an offence to litter any public place. Offences attract a fine of up to \$100 or imprisonment for up to one month. The Honiara Town Council has also recently enacted anti-litter by-laws.

The Western Province Coastal and Lagoon Shipping Ordinance 1991 controls marine pollution and is designed to protect the coastal waters and lagoons of Western Province. Section 4 of the Ordinance makes it an offence:

to drop, throw overboard or discharge in coastal waters any litter, rubbish, refuse, garbage or any useless or unwanted materials or equipment or oil or any other hazardous products or chemicals including but not limited to petrol and bilge water or any other matter or thing causing or likely to cause marine pollution.

However it is not an offence to dump or discharge biodegradable materials such as food or sewage into provincial waters. Many households and business premises discharge raw sewage into the sea adjacent to where canoes land and where children swim. However, the discharge of sewage could hardly be banned at this time, despite its serious pollutant effects, since provincial towns including Gizo have no alternative sewage treatment or discharge system.

The Ordinance makes the master or owner of a ship which discharges polluting materials liable to a \$1000 maximum fine. In addition, on conviction the court may require the offender to attend to or pay for remedial action to abate the marine pollution. This is an important power which, for example, enables the authorities to require ship-owners to pay for the costs of cleaning up a serious oil spill. It would be wise for the national environmental legislation to incorporate similar provisions.

## Pollution in Provincial Waters

The draft Fisheries Ordinance for Makira Ulawa Province empowers the provincial authorities to protect provincial waters from pollution. It prohibits dumping of "wastes or polluting matter" into any river, lake, lagoon or other body of water in such a way that it destroys, endangers or alters the ecology of the water. It also controls shoreline activities likely to pollute the adjacent waters.

### Recommendation on Pollution Control

18. That comprehensive provisions controlling water, air and noise pollution be drafted for Solomon Islands and preferably, incorporated into the suggested *Environment*

## Environmental Health

Throughout the country malaria is a very significant community health problem, with its incidence on the increase. In the more populated areas, particularly those with inadequate sanitation or clean water supplies, other serious health problems affect communities.

The *Environmental Health Act 1980* is a short Act which sets up the administration and structure of community health in Solomon Islands. The Minister of Health and Social Services is responsible for administration of environmental health services. The Minister may delegate this administration to any of the eight Provincial Assemblies or to the Honiara Municipal Authority. The provincial authorities are called 'Enforcement Authorities' under the Act. There is provision in the Act that if the Enforcement Authorities do not perform their duties, then the Minister can arrange to have their functions carried out by others, and require the Enforcement Authority to reimburse the Ministry for the costs of doing so. The Enforcement Authority is given power to make its own by-laws under the Act to facilitate the efficient operation of environmental health services. The Enforcement Authorities are required by the Act to carry out a programme of health education and publicity in accordance with directions given to them by the Minister.

The Enforcement Authorities are given the power to instigate their own prosecutions in their area. Any fines levied against offenders are able to be kept by the Enforcement Authority, which may also recover any costs it incurs in remedying any public health nuisance (plus a five per cent penalty) from the owner of the offending premises.

The community health law was comprehensively revised and drafted into new proposed legislation called the *Public Health Bill 1990*. This Bill may be too comprehensive and complicated. It must be remembered that any new legislation must be capable of being successfully implemented, given the existing institutional and administrative structures available. It may be more desirable to move the pollution control provisions of this Bill to a separate *Pollution Act*, or incorporate them into the suggested *Environment Act*.

## Conclusion

In order to combat malaria and tackle other community health problems more effectively, a new Act along the lines of the *Public Health Bill 1990* is highly desirable. However, consideration

must be given to the level of resources available to the Ministry in Honiara and the other authorities in the Provinces before imposing comprehensive new responsibilities and duties on the authorities and the public. Staged implementation of the legislation would seem to be warranted in accord with the level of resources that can realistically be provided. The most important parts of the legislation need to be identified and given priority in such a staged implementation process.

### **Recommendation on Public Health**

19. That the *Public Health Bill 1990*, after suitable amendment and simplification, be enacted, and implemented in stages. Consideration should be given to moving specific pollution control provisions to a separate *Pollution Act*, or incorporating them into the suggested *Environment Act*.

## **6.7 Biodiversity and Wildlife Conservation**

Solomon Islands has at present no system for the conservation of biodiversity, although it has one of the most diverse ranges of species in the Pacific (Leary 1991:13). This section suggests that a system of Protected Areas be established through negotiation between landowners, the Provinces and the National Government in order to more adequately conserve the country's rich biological heritage.

### **International Conventions**

Solomon Islands is a signatory to the *Convention on the Conservation of Nature in the South Pacific* and the *Convention on the Protection of Natural Resources and the Environment in the South Pacific*, as well as the *World Heritage Convention* and the *Biodiversity Convention*, dealt with in the introduction to this Report.

An important provision of the *Biodiversity Convention* worth mentioning in the context of Solomon Islands is the proposed imposition of legal responsibility upon nations for the notification, exchange of information and consultation on activities which are likely to significantly affect adversely the biodiversity of other nations (Art. 14.1(c)). This may allow the Solomon Islands government to exert pressure through diplomatic channels to monitor and prevent environmentally damaging activities of foreign business activities in Solomon Islands.

Of equal importance to the sustainable development of Solomon Islands is the provision which requires compensation to developing countries for the extraction of genetic materials from that country (Art. 15.1). There currently appears to be no control to prevent foreign businesses in the biotechnology trade from extracting and exporting for overseas analysis and use, flora and fauna from Solomon Islands which could be of enormous commercial value. A system to monitor and police this export business so that the economic benefits accrue to Solomon Islands is essential. Perhaps appropriate legislative provision could be incorporated in new wildlife management legislation currently planned for Solomon Islands.

The *World Heritage Convention* applies to both natural and cultural heritage. Signatories to this Convention take on specific obligations to look after World Heritage properties under their control. Signatories are thus obliged to take appropriate legal, scientific, technical, administrative and financial measures, and set up educational programmes to further the cause of heritage



conservation. The *World Heritage Convention* has a good deal of potential to ensure that biodiversity is conserved within world heritage areas nominated in Solomon Islands. Solomon Islands will be in a better position to protect these areas if it enacts a World Heritage Properties Act, a draft of which was produced in 1992.

## **National Legislation**

### **National Parks Act 1954**

This Act allows the declaration of areas as National Parks. The land may be purchased by the government or compulsorily acquired for this purpose. Rights of residence in Parks are restricted and there is a ban on hunting (other than fishing), carrying arms and making fires. Queen Elizabeth II Park near Honiara was declared a National Park in 1965, but it exists today in name only.

### **Wild Birds Protection Act 1914**

Under the Wild Birds Protection Act 1914, the following are protected: Dalakalong Bird Sanctuary, Kolombangara Forest Reserve, Mandoleana Bird Sanctuary, Oema Bird Sanctuary and Tulagi Bird Sanctuary.

Protected areas occupy less than 0.2 per cent of the Solomon Islands land area. Despite their designation as protected areas, most of the areas mentioned do not always function as such (Thistlethwaite 1990:4). Indeed, it seems that they generally do not function as "protected areas" at all.

## **Provincial Legislation**

### **Guadalcanal Province Wildlife Management Area Ordinance 1990**

This Provincial Ordinance gives the Executive power to declare any area in Guadalcanal as a Wildlife Management Area. The Executive can only do this after consultation with local landowners, and with the environmental and conservation authorities of the National Government and with the written consent of the landowners. The Executive must be satisfied that the area to be protected in this way requires management rules for the protection, maintenance, improvement or propagation of any named species of plant or animal which uses the area. The Ordinance makes the landowners responsible for setting out the boundaries of the management area and for putting up notices saying that it is a special area for conservation. The owners are also allowed to make their own rules for the management of the area. These rules must be made only after consideration of customary management practices and in consultation with fisheries, forestry, agricultural or Ministry of Natural Resources officers. The Ordinance provides for these rules to become Regulations under the Ordinance. There is a maximum \$500 fine for breach of these Regulations. The primary responsibility for enforcing this law lies with a "Special Constable" appointed by the Provincial Executive.

### **Makira Province Preservation of Culture and Wildlife Ordinance 1984**

This Ordinance gives the Provincial Executive of Makira Province the power to declare an area to be a protected area in which the "soil, any vegetation or other remains" is protected. A person disturbing them is subject to a \$100 fine or imprisonment. In addition the Ordinance prevents the importation into the Province of toads, outlaws the killing of any wild duck, or killing any fish by

means of diving with a spear or spear-gun within a one mile radius of Ulawa. It also bans the killing of eagles.

### **Temotu Province Environmental Protection Ordinance 1989**

This Ordinance allows the Temotu Province Executive to declare any area used by a "Protected Species" as a habitat or breeding ground to be a Protected Place. Where local landowners are involved, they must give their consent to the designation of the area. They are responsible for setting and marking the boundaries and giving notice to people that the area is in fact protected. A person commits an offence if he or she undertakes any activity which results in adversely disturbing or damaging the Protected Species within the Protected Place or who disturbs the nest, eggs, offspring or habitat of a Protected Species there. The job of policing and prosecuting offenders is left to the police, unlike the Special Constable appointed under the Guadalcanal Province Ordinance for Protected Places referred to above.

### **Santa Isabel Province Wildlife Sanctuary (Amendment) Ordinance 1991**

This Ordinance repealed the Wildlife Sanctuary By-laws originally passed under the *Local Government Act* in 1980. The By-laws establish the Anarvon Wildlife Sanctuary, which consists of four islands and their reefs. Under the By-laws, other sanctuaries can be created in Santa Isabel Province by declaration of the Provincial Assembly.

### **Western Province Policy on the Environment**

This policy endorses the establishment of protected areas in Western Province. It calls for the formation of wildlife, forest, and marine reserves and sanctuaries which "have intrinsic value for education, preservation of species and habitats and natural resources..." and which "are flexible and can be created to provide different kinds and degrees of protection to adapt to local environmental demands and objectives". However, none have yet been established in the province.

### **Simbo Megapode Management Area Ordinance 1990**

The "Simbo Megapode Management Area" under this Western Province Ordinance is a type of protected area in which activities are restricted to protect the habitat of the megapodes. Trees must be preserved, dogs controlled and megapode egg harvesting restricted. The area is customary land and applications for permits to a Management Committee of the customary owners is required before outsiders, including tourists, may enter the megapode fields. The tour operators are not allowed to bring tourists to the fields during the closed season between 1 August and 30 September. The customary landowners collect a small fee for tourist visits and act as guides to the fields. Unfortunately local land disputes have meant that the Management Committee has not functioned as planned.

## **Key Issues**

### **Protected Areas**

A national park system along the lines of countries such as Australia and New Zealand is not a workable model for the achievement of biodiversity conservation objectives in Solomon Islands. As the vast majority of Solomon Islands land is in customary ownership, "National Parks" on the Western model, where the government owns all of the land in the area, is not appropriate, except

for areas already directly under the control and ownership of the Solomon Islands Government. An alternative system is thus required to achieve the same objectives.

A protected areas system could, for example, be adapted to ensure that World Heritage properties intended to be nominated to the World Heritage List by the Solomon Islands Government were adequately managed and conserved. Any World Heritage properties listed could automatically come under the provisions of the Protected Areas legislation, or could be added by Schedule or Regulation.

It is recommended that legislation for the establishment of protected areas be enacted to address the conservation of important ecosystems and environments, in order for Solomon Islands to be consistent with international standards, as found in *Caring for the Earth* and the *Biodiversity Convention*. This legislation must be tailored to the unique conditions of Solomon Islands. Where land or water is in customary ownership and control, title to designated protected areas should remain with the customary owners and agreements negotiated with them in relation to the management and control of the protected areas.

### **The Wildlife Trade**

There is at present no legislation in Solomon Islands to regulate the trade or export activities of traders in wildlife. The wildlife trade from Solomon Islands is a relatively big business with the beneficiaries being largely foreign interests. Among the wildlife exported are frogs, geckos, skinks, lizards, snakes, butterflies, coconut crabs, crocodiles, turtle shells and parrots. Most of the exports go to the United States of America. Solomon Islanders do not seem to derive any significant benefits from this trade.

These problems and the need for them to be addressed by urgent legislative reform were the subject of a joint government, SPREP and Traffic (Oceania) Report (Leary 1990). The recommendations arising from this Report were endorsed by Cabinet in 1991 and appropriate legislation to regulate the wildlife trade is now a priority. Draft legislation has been drawn up to provide for the regulation of trade and export of wildlife. It should be enacted as a matter of urgency.

#### **Recommendations on Biodiversity and Wildlife Conservation**

20. That the Solomon Islands Government introduce a protected areas system for Solomon Islands either through the proposed *Environment Act* or through a separate *Protected Areas Act*; such legislation should provide for negotiated agreements with landowners for the management and control of protected areas
21. That the Solomon Islands government enact a *Wildlife (Import and Export) Regulation Act* as a matter of urgency.

## **6.8 Protection of National Heritage**

As with many Pacific countries, cultural heritage in Solomon Islands covers a broad range of elements, including traditional connections of people with land, places and objects. Intangible heritage refers to the preservation of non-material aspects of a community's culture, including

celebrations, dances, songs, skills, attitudes and ways of thinking. These things can be seen as just as important as the material aspects of the heritage, particularly in the way in which their maintenance can contribute to social cohesion.

At present there is no national scheme for the conservation of cultural heritage. There is a patchwork of national and provincial government laws which go some way to achieving a basic heritage framework. The existing legislation is, with a few exceptions, unenforced. There is no single body to coordinate heritage activities, except the National Museum, which commonly plays some role in the implementation of legislation such as the *Protection of Wrecks and War Relics Act 1980*, at national and provincial levels.

The National Museum presently comes under the Ministry of Home Affairs. However, there is no specific legislation for the establishment and operation of the museum itself. Although a draft Act is held by the National Museum, it has not been made public. Even those things that are easy to protect by legal means are not adequately protected. Very few financial or human resources are put into cultural heritage protection. Some provinces have developed policies on cultural preservation, elements of which are reflected in the provincial legislation (for example, Guadalcanal Province Policy on Cultural Preservation and Development; Western Province Policy on Culture). The policies and practice in these two provinces is wider than the legislation, partly for the reason that, as indicated above, certain aspects of culture and custom cannot be easily protected by legislation.

As noted previously, the Solomon Islands, having acceded to the *World Cultural and Natural Heritage Convention* in 1992, now has specific legal obligations to protect its cultural and natural heritage, both through the enactment of appropriate legislation as well as the setting up of administrative mechanisms and education and training schemes, for protection and management of natural and cultural heritage sites.

## **National Legislation**

### **Protection of Wrecks and War Relics Act 1980**

This Act restricts access to and interference with ships, aircraft and associated objects which were brought into Solomon Islands by or for the use of combatants in World War Two. The Act allows the Minister to designate any area around the site of an aircraft or vessel as a restricted area. Whole areas, for example all of Western Province and Choiseul, have been designated restricted areas. Offences in relation to restricted areas include tampering with, damaging, or removing any part of an aircraft or vessel, or any object formerly contained in an aircraft or vessel, or any other war relics. Excavation, diving or salvage operations for the purposes of exploration or removing objects, or depositing anything which obliterates or obstructs or damages any part of a wreck, are also offences. However, the Minister may issue a license for any of these activities. Licenses can only be granted where people are judged to be competent and equipped to carry out excavations or salvage operations in a manner appropriate to the historical importance of any wreck or war relics. A literal interpretation of the Act may well mean that any diving on a wreck is outlawed. However in practice this important tourist activity is not generally restricted. Areas judged to be dangerous to life or property, (such as munitions dumps and mines), which should be protected from unauthorised interference, can be designated as prohibited areas. The export of any wrecked vessel, aircraft or war relic without the consent of the Minister is also an offence. The existence of this legislation has been essential to prevent foreign entrepreneurs from purchasing World War II memorabilia (for example, aircraft in Shortland Islands) from local people and exporting them out of Solomon Islands.

This legislation is generally satisfactory and seems currently to be enforced, though not vigorously. However, because there have been prosecutions under the Act, stories of them seem to have been passed around and in this way the public seem to have become aware of the Act's provisions.

## **Town and Country Planning Act 1979**

The *Town and Country Planning Act* has the potential to provide for the conservation of cultural heritage, and in particular, the environment of the villages and towns.

The object of the Act is to ensure that land is developed and used in accordance with properly considered policies directed to promoting the welfare of the people. The promotion of the welfare of people is stated as including the preservation or creation of an environment "proper for their needs". It thus seems clear that the framers of the Act wished to ensure that preservation of the environment was an important consideration in formulating planning policies. In the urban context, the welfare of the people can include the preservation of a cultural environment, as expressed in buildings and streets, which are part of the heritage of Solomon Islanders. In the rural and village context, it can include the preservation of landscape and human-influenced environments which are also part of the heritage of Solomon Islanders. It is important to bear in mind that the *Town and Country Planning Act* can only affect non-customary land, and that the Physical Planning Division can only *advise* customary landowners, but cannot *require* them to act in terms of development and conservation issues. Thus, the Local Planning Scheme, which is the main planning mechanism under the Act, can only be made for non-customary land. This is a severe constraint in terms of achieving the potential of the Act as a whole.

Conventional Western models of building regulations that restrict building operations and require permits for additions are not particularly appropriate for a Pacific Island community. The critical shortage of housing in places such as Honiara and Gizo would seem to outweigh the need to ensure high quality house construction standards along Western lines. In any case, any legislation which unnecessarily restricts the construction of traditional leaf houses can be criticised as running counter to the traditions of Solomon Island people. The same could be said in relation to Building Ordinances and by-laws in the principal townships.

The Act provides that the purpose of Local Planning Schemes includes being able to "protect features or areas of social, historical, scenic or architectural importance". When Local Planning Schemes are being drawn up at provincial level, specific provisions could be inserted into local plans to cater for the increased awareness of the importance of heritage preservation for the life of the community.

The inadequacy of enforcement notices under the *Town and Country Planning Act*, referred to above, is particularly important in relation to preservation of the built heritage. If for example a heritage item protected in a Local Planning Scheme, being the subject of conditions in a development permit, was being destroyed, damaged or altered, the only way in which this could be stopped is through an enforcement notice which can only take effect 28 days after it is issued. Damage to heritage items can of course occur in a much shorter period of time.

## **Preservation Orders under the *Land and Titles Act***

The *Land and Titles Act* allows the Minister to make preservation orders over any land that is considered to be of heritage value. Such an order must specify the land to which it applies, and shall prohibit all acts affecting that land, which in the opinion of the Minister injure the public interest. The public interest here means "by reason of the historic, architectural, traditional, artistic, archaeological, botanical or religious interest" attaching to the item.

It would appear to be highly desirable for the provisions of the *Land and Titles Act* relating to heritage to be carefully reviewed and revised. A national heritage policy and in the longer term, a registration scheme for national heritage should be devised and embedded in National Heritage legislation. In addition, in order for such a heritage conservation scheme to work, an education programme for heritage conservation as well as a proper funding mechanism would seem to be necessary.

## **Provincial Legislation**

### **Guadalcanal Historic Places Ordinance 1985**

This Ordinance was the first statute passed in Solomon Islands in relation to heritage protection. It had however been preceded by a Provincial by-law in the Guadalcanal Provincial Assembly ((Establishment of Protected Areas) By-law 1981, made under the *Local Government Act* which was repealed by the Ordinance).

The immediate goals of this Ordinance are:

- To provide landowners and the Guadalcanal Cultural Centre with a means to legally protect sacred, traditional and archaeological sites;
- to require development companies to pay for the survey of all such sites and their physical marking on the ground;
- to institute a scale of penalties that would act as a deterrent to damage;
- to adequately define areas protected under the legislation; and
- to allow provision for the improvement of the legislation without recourse to protracted legislative processes (Roe and Totu 1990).

The Provincial Assembly can declare any place to be a protected place by simple resolution. However, no such declaration can be made without the written request or consent of the bona fide representatives of the relevant landowners. The Provincial Executive is to maintain a Register of Protected Places. The Register must define the boundaries of the place as accurately as possible.

The Provincial Executive may itself declare places to be protected places, in circumstances where immediate action is required. The Assembly must approve any emergency declaration at its next meeting.

Anyone who undertakes any activity, inside or outside the protected place, which results in adversely disturbing or damaging the place, or results in the removal, destruction or defacing of the monuments or marks at the site, is guilty of an offence, with exceptions relating to the exercise customary rights, use in an emergency, to carry out activities necessary for the preservation of the place, or to prevent damage to historical or archaeological remains within it or for qualified and authorised persons to carry out excavation work within it.

The Ordinance provides that any developer, prior to undertaking development activity must, under the direction of the Executive, undertake a site survey to identify, locate and mark all sites of historical, cultural or archaeological significance survey and marking. All sites located are to be treated as protected places until the landowners have been consulted and the Assembly has considered a resolution in relation to the place.

Significantly, revenues from fines are put into a Protected Places Fund, to be used only for the purposes of meeting costs associated with surveys, marking and maintenance of both declared and protected areas.

### **Makira Province Preservation of Culture and Wildlife Ordinance 1984**

The Ordinance provides for the prohibition of sale, except under certain circumstances, of traditional artefacts, the declaration of protected areas and the prohibition of acts in relation to certain species of fauna. The provision in relation to wildlife refers to the import of toads, a prohibition on killing of wild ducks, the use of spears or spear guns in the killing of fish in one mile radius of Ulawa, and a prohibition of killing any eagle without the authority of the Provincial Assembly. Contravention of this Ordinance attracts a fine of up to \$50 and/or imprisonment for up to three months.

By any measure, this legislation is inadequate, both in terms of its scope, the level of penalties and its drafting. It is noted that the legislation has never been used (National Environment Management Strategy 1991a).

### **Santa Isabel Province Preservation of Culture Ordinance 1988**

This Ordinance is of similar effect to the Makira, Temotu and Western Province Ordinances on the same subject. Minor differences are found in the definitions of "protected place" and "traditional artefact", and in the levels of fines that can be imposed. There is no information presently available as to whether the Ordinance is being implemented.

### **Temotu Province Preservation of Culture Ordinance 1989**

This Ordinance follows a similar pattern to that in Makira Province, but is a more modern piece of legislation, being well drafted and more clearly written. The Temotu Provincial Assembly may by resolution declare any place to be a protected place. As in Guadalcanal, such a declaration cannot be made without the written request or consent of the bona fide representative of the owners of the relevant land. The owners of the site are then obliged to carry out marking of the boundaries in order to give reasonable notice to people operating in the area of the existence of that place. The Executive is obliged to establish and maintain a Register of Protected Places, in the same way as in Guadalcanal, except that the Register must include maps marked with the places protected. The Register must be available for inspection at certain times. Emergency powers are granted to the Executive to declare protected places. Any such emergency declaration must be approved by the Assembly at its next meeting.

The *Temotu Ordinance* places quite specific obligations on developers to consult the Register, and to carry out inspections of the land to identify, locate and mark on maps all sites which appear to be, or are said by the landowners to be, of historical, cultural or archaeological significance. On receiving a report from the developer, the province must inform the landowners of the contents of the report. They are then given 21 days to give their consent to registration of any sites as protected places. If they consent, those places automatically become protected places, and will attract the protection given by the Act. However, if the landowners do not respond within the 21 day period, or if they do, but do not give their consent to registration of the site as a protected place, the developer is entitled to proceed with the development. None of the sites may thereafter be declared as a protected place without the consent of the developer. This is a somewhat harsh provision as far as the landowners are concerned. There may well be circumstances where the landowners do not wish to have a site identified and registered, because they wish to keep its existence and location out of the public eye. There is no provision under the Act to cover this situation.

### **Western Province Preservation of Culture Ordinance 1989**

The *Western Province Preservation of Culture Ordinance* was preceded by the Western Council (Establishment of Protected Areas) By-laws 1978 and the *Western Province Protection of Historic*

*Places Ordinance 1986*, which were repealed by this Ordinance. It has many similarities with the Temotu Province *Preservation of Culture Ordinance*.

A provision found only in the Western Province Ordinance is the power of the Executive to require the development activity to cease immediately until the section has been complied with, in circumstances where the developer has not carried out a survey as required. In addition, the landowners may make a private agreement with the developer to protect a place. Where this occurs, it seems that the developer commits no offence if a survey is not carried out.

## Conclusion

The Ordinances as presently drafted provide a very basic scheme of heritage conservation in the Provinces. Some of the features of the Ordinances are quite satisfactory, while others suffer from drafting difficulties. The Western Province Ordinance clearly has some of the best features of all them. It would seem to be desirable to attempt to make all of these Ordinances consistent with each other. Perhaps a Model Cultural Heritage Ordinance could be drafted, providing for identical definitions, registration and enforcement mechanisms. The basic framework could be adopted by all the provinces that wished to have one.

Regional variations, addressed to particular provincial needs, could be addressed in Regulations under the standard Ordinance. Alternatively, provisions for the conservation of National Heritage could be included in the suggested *Environment Act*, or placed in a separate *National Heritage Act*.

It is clear that a national policy on cultural heritage conservation should be developed, whatever legal mechanisms are adopted at national and provincial level to implement it.

### **Recommendations on the Protection of National Heritage**

22. That a National Heritage Policy be developed in consultation with the provinces.
23. That a comprehensive heritage conservation education programme be established to ensure that all Solomon Islanders continue to be aware of their cultural heritage.
24. That provincial cultural heritage Ordinances be made consistent with each other, and that National Heritage provisions be introduced into the proposed *Environment Act*, setting up a Register of National Heritage. These provisions or a separate national Heritage Act could cover both cultural and natural heritage of national and world significance. This system could be administered in the short term by the National Museum, with a view to establishing a Solomon Islands Heritage Commission in the longer term.
25. That a National Heritage Fund, capable of attracting funds from foreign sources interested in conserving the heritage of Solomon Islands, be established in order to finance the development of the National Heritage Policy, the education programme, the Register of Protected Places and Sites, the work of the National Museum and the legislative mechanisms recommended above.



## 6.9 Tourism

The annual number of foreign tourists to Solomon Islands is over 12,000. Many adventurous tourists would seem to be attracted to the largely untouched lifestyles of many Solomon Islanders with their genuine warmth and hospitality as well as to the natural beauty of the landscape and marine life. Divers and those who come to remember the fighting here in the Second World War make up a great many of the tourists. Except in Honiara, the normal tourist hotel facilities are few. However, Solomon Islands may have an excellent tourist potential in further expanding its present fragmented system of small town and village-based tourist accommodation. It seems that many overseas visitors are more interested in visiting the islands and villages than staying in a large hotel in the capital. Such small scale development, if carefully managed, may allow an increase in tourism without many of the undesirable effects tourism has had on society and on the environment in other countries.

A Tourist Authority was created in 1970 having as its main objective the orderly development of tourism. One of its functions is to advise and assist persons wanting to establish tourist facilities. Tourist facilities must be licensed under the Act by the Authority. The government Tourism Policy calls for an overhaul of the existing legislation and for a new *Tourist Development Act*. Such legislation is also called for in a report by the Tourism Council of the South Pacific (1990:12-15).

### Tourist Attractions

Solomon Islands has many areas of unsurpassed natural beauty. It is crucial to the future of the tourist industry that these areas remain intact and not developed for short term gain. Tourism has the potential for economic benefits for Solomon Islands in the long term.

Some parts of Solomon Islands such as Morovo Lagoon and Rennell Island have already been recognised as among the most beautiful parts of the world and have been considered by the Ministry of Tourism and Aviation for possible nomination to the World Heritage List. It is important that great care is taken to preserve all such areas. This may involve the exercise of tight controls over all tourist developments to ensure that no tourist activity is allowed to take place without a full assessment of what the medium and long term effects of the development will be on local people and their environment. The Ministry of Tourism and Aviation (1991 a, b and c) has as part of an education awareness programme produced three booklets related to World Heritage listing for areas in Western Province.

### Nature-Based Tourism

Nature tourism is defined as tourism that promotes and depends on the natural and cultural features of a country, with a tendency to be low-key, making use of existing features rather than building alien structures. It aims to attract tourists who have respect for indigenous people and cultures, as well as for the environment. Lees argues that nature tourism, if done well, can bring benefits of sustainable development to village people, focussing on skills already present in communities, such as building traditional huts for visitors, and knowledge of forests, seas and the environment generally. The system of protected forest areas is seen by Lees to be an essential part of nature tourism, to ensure that the natural resources on which it depends are not damaged or destroyed by other land uses (Lees 1990:75-77).

The potential for nature tourism in Solomon Islands seems to be very good. However, customary land ownership presents a barrier to both conservation and development activities.

There is no legislative framework at present that can adequately provide for the various mechanisms that need to be put in place before such a system will work. A protected forest system, or a more broadly-based Protected Areas system, suggested in the section on biodiversity conservation, above, will require a carefully crafted negotiation process to ensure the close involvement of landowners and the provincial governments in the development of an adequate legislative framework.

## **Tourism at the Provincial Level**

Western Province is the only province with a well developed Tourism Policy. Its guiding principles are:

- Tourism should be developed in a controlled, orderly and sensitive manner.
- Tourism should be developed gradually to:
  - minimise disruptive and adverse social, cultural and environmental impact.
  - enable the Province to monitor and assess the social, cultural and environmental impact of tourism and if necessary, review its policies or their implementation.
- Tourism development should be based on the inherent natural, cultural and historical features of Western Province.
- Tourism development should be on a small to medium scale and should be of high quality.
- Tourism must be appropriate to and compatible with the local culture and environmental setting.
- The Western Province Tourism Policy should complement but not conflict with the National Tourism Policy.
- Tourism development should be considered in an integrated way and not in isolation as it necessarily links and interrelates with many Provincial services and divisions.
- Tourism should be kept in balance with other sectors of the Western Province economy.
- Tourism development should be sensitive and sympathetic to and in accordance with the wishes of customary landowners, and should be to their best economic and social benefit.

All Provinces are able to control tourism by the use of their Business License Ordinances. The Provinces have the means to discourage those types of tourist developments they do not want by either not allowing a license or setting very high license fees for particular tourist business activities. Only those tourist operators that a Province wants are in effect allowed to operate. It would be a pity if high technology tourist facilities found in other countries such as the use of jet skis, were allowed to operate in Solomon Islands. Tourist development, like all foreign and local investment development, needs to be carefully controlled, not only to ensure that the money generated from tourism ends up in Solomon Islands and not overseas, but also because the wrong type of tourist development can harm the environment and the cultural and social interests of the local people.

It is essential for local people to be involved with decisions on whether tourist development should be allowed to take place in their area. Western Province's draft Policy makes it a requirement for the local Area Council to give its approval to any tourist development proposal taking place in its area. Such requirements should ideally be found in all Provinces.

### **Recommendations on Tourism**

26. That new legislation be drafted to control the development of tourism in Solomon Islands.
27. That all Provinces develop a Policy on Tourism compatible with the National Policy on Tourism. An appropriate model would be the draft tourism Policy of Western Province.

## **6.10 Agriculture and Forestry**

*Forests, land and people in the Solomon Islands are inseparably linked together. The forests are a vital part of the country's cultural heritage and contribute to the welfare and economic development of the people. The environment and ecological stability of the islands is conditioned by a protective covering of forest on the higher land, along rivers, coasts, and in many other sensitive areas. Our national survival depends on what we do with our forests. (Forest Policy Statement approved by the Solomon Islands Parliament, 1989, Ministry of Natural Resources 1989).*

### **Agriculture**

More than 80 per cent of Solomon Islanders live in rural areas and obtain the bulk of their diet from subsistence production systems. Apart from eating fish and imported rice, the diet of the great bulk of the population is made up of locally grown products. Coconut and root crops along with whatever vegetables can be grown in this hot climate are the staple food of Solomon Islanders. Consequently the quality of the soil for this subsistence agriculture is important. As the population increases, there is increasing pressure on land to fulfil its role as the basis of traditional food sources for Solomon Islanders.

### **Key Issues**

#### ***Land degradation***

The intensification of agriculture and increasing population density has resulted in shorter fallow periods for the land in some areas. In the past, land has been left for 15 years or so, but now has to be used far more frequently. This results in degradation of the soil which is a serious long term environmental problem. In addition, logging operations also cause soil erosion, soil compaction and loss of soil fertility. The removal of forest cover interrupts the natural process of nutrient recycling and composting of the soil.

#### ***Agriculture Division***

The Agriculture Division, and its Extension Service to the Provinces, has as its main objective the promotion of income-generating agricultural activities. The Division's Officers, while they may have some general knowledge of conservation measures, are generally not trained or directed towards environmental management in their duties. The Division acknowledges this in its part of "Sector Reports on the Environment 1991" (National Environmental Management Strategy Seminar 1991b).

### **Taxation Incentives**

There are various incentives in the *Income Tax Act* to encourage agricultural production in Solomon Islands. There are opportunities for deductions for capital expenditure in the Second Schedule and particularly generous deductions concerning improvements to plantations and livestock facilities in Part II. A sensible but apparently little used provision is contained in paragraph 10 of the First Schedule which allows an agricultural development co-operative society to be exempt from income tax. Another incentive exists under section 37 which allows a set-off against taxable income for export duty paid for producers of copra and rice. The use of these provisions could be extended to ensure that incentives were given for agricultural practices which were shown to be environmentally sustainable.

### **Pesticides and Chemicals**

DDT has been widely used in the past and continues to be used along with Malathion and Fenitrothion for anti-malaria spraying. As yet there has been no assessment of their impact on the environment; (*Solomon Islands State of the Environment Report* 1991:60). It is reasonable to assume that there would be significant traces of these chemicals in water and in food produced in areas where spraying has taken place. There is no easy answer to the use of pesticides to control malaria. Other means of malaria control and prevention need to be investigated to see if the incidence of the disease can be reduced without the use of harmful pesticides.

The Pharmacy and Poisons Act 1941 sets up a Pharmacy and Poisons Board. The Board's inspectors have wide powers in relation to pharmacists or licensed sellers of poisons or medicines to ensure that they are complying with the Act. A license is required for the import of any poison. Poison includes such substances as 1080 pesticide. There are restrictions on the sale of poisons but this Act is really directed at preventing poisons getting into the wrong hands, rather than at the prevention of such substances polluting the environment. The Act is long, complicated and somewhat outdated. More simplified legislation would seem to be warranted. New legislation could set up a simple administrative structure to regulate the import, sale and use of pesticides.

### **Forestry**

The logging of indigenous forest is the most pressing and serious environmental issue facing the Solomon Islands. The activities of logging companies and the rate of logging have aroused much public concern and controversy for some years. In the 1990's the indiscriminate logging of large tracts of indigenous forest by foreign-controlled companies has continued. The economic and social benefits of logging for the Solomon Islands seem to be highly questionable. While the National Government collects royalties and logs are "exports" for the country, it seems obvious that this natural resource is being made available to foreign interests at a substantially undervalued rate. In addition, the social cost to local communities from logging operations on customary lands appear to outweigh attendant financial or other benefits in most cases.

The life of the accessible timber resource (i.e. that which is technically and economically feasible to log) has been estimated to be perhaps as little as 15 years if the maximum allowable cut under existing timber license agreements is taken. (Leary 1991:15). Logging by foreign companies is often the subject of controversy and concern to Solomon Islanders. Land disputes, timber rights disputes, associated social problems and local disillusionment with logging are widespread. This has been recognised by the Forestry Division itself (Ministry of Natural Resources 1991a).

Sustainable management of the forestry resource requires a tight legislative framework and effective administration and enforcement of the Act and its Regulations. At present this does not exist. New forestry legislation is essential.

## Legislation

The *Forest Resources and Timber Utilisation Act* is directed primarily at exploitation of the forest resource, rather than one of sustainable management. The Act came into force in 1970 "to control and regulate the timber industry". It provided for a Conservator of Forests to grant licenses to fell trees and operate timber mills on government land. The authorities were given power to impose a timber levy and declare government-held land as State Forests, or "controlled" to conserve water catchment areas. The Act provided for licenses to be issued for the felling of trees subject to any condition which the Conservator (now Commissioner) imposes. Various offences and penalties were provided for and included a regulation-making power to better carry out the provisions and purposes of the Act.

This first major amendment was to set up a regime to regulate forestry on customary land. The Commissioner of Forests had first to give consent to allow the developer to carry on negotiations.

After inquiry into the identity of the legitimate owners of timber rights and the decision of the Area Committee, an aggrieved person was given one month to appeal to the Customary Land Appeals Court, the decision of which was final. The decision was conveyed from the Area Committee or from the Appeal Court to the Conservator and on to the Minister who was then able to grant the developer a license. This system for granting timber rights on customary land still exists today, albeit in a modified form.

The 1984 amendment provided for Area Councils to decide timber rights on customary land. The amendment provided for the Provincial Executive to participate in the process by first settling with the developer the profit sharing of the venture and the Province's involvement with the venture's management.

Various environmentally sound provisions were incorporated into the amendment. The developer had to agree to conserve river catchment areas, prevent soil erosion, preserve the environment and tambu (sacred or secret) and historical sites, as specified by the Commissioner of Forest Resources. The power to make Regulations was extended to require developers to replant trees, prohibit the felling of protected trees, prevent wastage of timber and ban logging within 50 metres of a water-course or 400 metres above sea level. Regulation-making power was given to establish forest sanctuaries on customary land as well as on government land for the purpose of conservation of flora and of fauna. The Amendment also significantly increased penalties; for example, a maximum fine of \$3,000 was imposed for wasting timber by carrying out operations outlawed in the Regulations.

In July 1990, new but rather complicated procedures were set for the acquisition of timber rights on customary land. These procedures are very important in practice and are set out in summary below.

The developer who wants a logging concession applies on a special form to the Commissioner of Forest Resources to negotiate with the Provincial Executive, the Area Council and the customary landowners.

If and when the Commissioner consents, the Area Council must hold a meeting with the Provincial Executive, the customary landowners and the developer. The legislation does not say how this meeting is to be funded.

At this meeting the Area Council, in consultation with the Provincial Executive, must talk with the customary landowners and the developer and decide:

- whether or not the landowners want to sell their timber rights to the developer;
- whether the proposed sellers represent all the legitimate owners of the timber rights ;
- the nature of the timber rights proposed to be sold;

- profit sharing between the developer and the landowners;
- the Provincial Executive's participation in the developer's logging venture.

Any agreement reached at the discussions at this Area Council meeting must be recorded. A copy of any agreement is then sent to the Commissioner along with the Area Council's recommendation with "particular reference to" the amount of profit sharing, if any, that the developer has agreed on, and its recommendation as to the extent of the Provincial Executive's involvement in the venture.

If agreement is reached at the discussions, the developer is required to "carry out such investigations as are necessary to identify and describe the forest resources on the land and any areas which should be excluded from the application on grounds of environmental or social values". The legislation is silent on what "as are necessary" means, and it does not say that investigations need to be recorded in writing, or given to anyone. No "environmental" or "social" standards are set. There is no penalty set for a developer who does not comply with this provision.

Any person who does not agree with the decision of the Area Councilors regarding who the rightful timber rights owners are, or over what timber rights are to be granted to the developer, has one month to appeal to the Customary Land Appeal Court. There is no provision for late appeals, and the Customary Land Appeal Court decision is final.

The Area Council delivers its decision to the Provincial Executive, which sends it on to the Commissioner and to the developer. The Commissioner must then recommend to the Provincial Executive that it grants approval to the developer but only after the Commissioner is satisfied that the agreement granting the timber rights is in the prescribed form, has been completed in the prescribed manner and any appeal has been disposed of. The prescribed form in the Regulations is a Standard Logging Agreement which includes features designed to safeguard the customary landowners and the environment.

The Provincial Executive, on receiving the Commissioner's recommendation, "may" complete another certificate in prescribed form approving the agreement. The Provincial Executive then sends it back to the Commissioner who must tell the developer and the customary landowners and sellers of the timber rights that the agreement has been completed.

The Minister is given power to make Regulations for: the disposal of waste products; the protection of the environment; the manner and nature of reforestation so as to protect the timber industry; prohibiting or regulating the taking of any specified timber from any customary land; and specifying the amount of timber required to be processed by the developer.

The only Regulations in force under this amendment are the *Protected Species Regulations* of 1990. These prohibit felling or removing mangroves, ebony or ngali nut trees from any land for the purpose of sale. However, a license may still be granted which allows a developer to cut and fell these species. For example, the Regulations do not prevent clearing mangroves, when it is not intended to sell them. The Regulations further state that Rosewood, Ironwood, Kauri, Walnut, Canoe Tree and Rattan are not allowed to be exported until they have been processed unless the developer's license specifically allows it to export them.

The developer, the Provincial Executive, the Area Council and the customary landowners are given the right to obtain advice from the Commissioner or officers about timber rights. The High Court is given exclusive jurisdiction to hear disputes about agreements entered into between the developers and the customary landowners. An "enforcement officer" and a forest officer are given permission to enter customary land to perform their functions under the Act. Finally, all logging licenses and timber rights agreements granted prior to 5 July 1990 are validated by the 1990

Amendment. This provision effectively took away any right to challenge the quantity or conditions of any license prior to the date of the Amendment.

### **Standard Logging Agreement Concerning Timber on Customary Land**

The *Forests and Timber (Prescribed forms) (Amendment) Regulations 1985* provides that "agreements for the sale of timber rights in customary land must be in the form set out the Schedule to the Regulation". The Standard Logging Agreement provisions and procedures in the Regulations are thus compulsory. They are required to be incorporated in the developer's agreement with the landowners. The Schedule does however allow for some terms to be negotiated, including exclusion of certain species, reforestation, wages and conditions, and variation of royalty payments.

The Schedule also sets out a compulsory procedure that the logging company must follow when negotiating with the landowners. This includes making copies of the five year plans and road plans available to each land-holding group. The company must tell the local land and timber rights owners, the Forestry Division and the Province of its plans, intended timing and the terms and conditions of the agreement which the logging company proposes to enter into. All this must happen before any agreement is signed or binding. The negotiations must be carried out in public, with the landowner's legal adviser and representatives from the Province and the Forestry Division present.

Schedule I is part of the Standard Logging Agreement and is required to be attached to every logging agreement. The Standard Logging Agreement, if retained, should be completely redrafted to make it easier to understand.

### **Inadequacies of the Present Legislation**

Logging on customary land is the essence of forestry in the Solomon Islands. As noted, some 87 per cent of Solomon Islands is customary land, and over 90 per cent of large scale commercial forestry takes place on customary land (UNCED 1992:24).

The Area Councils are given the all-important task of making the major and often difficult decision of whether or not to allow a developer to log on customary land. The Area Councilors are the third tier of elected government officials in Solomon Islands, ranking after National and Provincial government members. The Area Councils are created by and beholden to the Provincial Assemblies and its Executives. The Area Councils rely on the Provincial government for their funding and in all matters are subordinate to it. These elected officials are charged, for example, with deciding the participation of the superior body, the Provincial Executive, in the logging venture, as 5C(3)(e) of the Act provides.

### **Knowledge of Customary Land Rights No Longer Required**

The important prerequisite contained in the 1977 Amendment that those deciding timber rights have a particular knowledge of customary land rights in their area, has now been taken out of the legislation. The elected officials on the Area Council may not necessarily have any particular knowledge of customary land rights in their area, yet they have to decide important land rights questions.

In addition, the 1977 provision for the notice of the timber rights hearing requiring persons granting timber rights to attend the hearing if it was considered that they were not the right people to do so, was deleted from the legislation.

### **Lack of Experience and Expertise in Area Councils**

Questions such as who are the customary landowners and who are the people lawfully entitled to grant timber rights, and whether those people are the same, are often extremely complicated and difficult.

It is well established that in custom, land is owned not by a person, but by a line or family or tribe. Other persons, families, lines or tribes may have secondary rights in the land, including rights to grow crops, make gardens, take the fruit off trees, even to take the trees themselves to make canoes or houses, and so on. The permission of other lines having interests in neighbouring lands may be required, in custom, before a line can develop its own land in case that development affects adjoining land in any way (*Fugui v Solmac* High Court Civil Cases No 44 & 45 of 1982: 8).

Experience and expertise in custom concepts combined with legal experience as found in the Customary Land Appeal Court would appear to be necessary to decide customary land cases (comments of Daly CJ, in *Lilo v Ghomo* Customary Land Appeals Court, Case No 14 of 1981). To give this task to elected politicians on the Area Council seems inappropriate.

### ***Jurisdiction of High Court of Solomon Islands***

The High Court of Solomon Islands has "original" jurisdiction to hear and determine any cause or matter arising out of or relating to an approved agreement. The section states that this provision overrides any other contrary law and that only the High Court has this jurisdiction. Thus when disputes arise under the logging agreement, the local landowners must go to the High Court to seek redress instead of being able to use the local Magistrate's Court. Access to of the High Court in Honiara is difficult, despite the ability of the Court to go on circuit. This clearly disadvantages the landowners and assists the developer since the developer will inevitably be represented in Honiara either by one of its officers or by its lawyers. There seems no reason why the Magistrate's Court situated in each Province should not be given criminal and civil jurisdiction to decide disputes arising out of logging agreements. The *Magistrate's Court Act* allows for the Magistrate to have such increased jurisdiction, provided the relevant legislation confers that power.

### ***Rights of Local Landowners Not Fully Protected***

While some customary landowners may welcome logging on their land, the legislation does little to assist those customary landowners who do not consider that they will benefit from the development. Nor does it assist landowners who would wish to vary arrangements agreed to. The logging company is not prevented from canvassing support and currying favour among local supporters before and during the inquiry process. The requirements of bringing notice of what is likely to occur to the attention of the local people is inadequate, as is the public notice of the Area Council's decision. The customary landowner who disagrees has only one month to lodge an appeal to the Customary Land Appeal Court. With difficult communication systems, this time period would not normally be adequate. There is no provision for late appeals.

### ***Non-Compliance with Forestry Regulations.***

If all the compulsory requirements of the Standard Logging Agreement were carried out on logging sites throughout Solomon Islands and the negotiation provisions were tightened up, there would be fewer problems. It would seem that the fine print of the Standard Logging Agreement is not widely understood in local communities or by the landowners. There is also an apparent lack of enforcement by the authorities. Just as seriously, the compulsory provisions in the 1985 Regulations are often not incorporated in the logging company's agreement with the customary landowners. Some agreements inspected in the course of this Review have had the mandatory wording of the Regulations changed or deleted to the advantage of the logging company. It is the logging company which invariably prepares the agreement. It may be assumed that those logging companies which have incorporated unlawful deletions and additions in their logging agreements are responsible for them.

While it may be unrealistic to expect the landowners to have a copy of the 1985 Regulations containing the Standard Logging Agreement wording and carefully compare it with the wording of the Agreement prepared by the logging company, the Commissioner of Forest Resources must



be satisfied that the agreement has been duly completed in the prescribed form before a recommendation can be made to grant approval to that agreement.

### ***Termination of Logging Agreements***

One of the clear inequities of the Standard Logging Agreement is the lack of adequate provision for termination of the Agreement by the landowners. It is a basic rule of contract law that agreements may be terminated when one party fails to carry out the originally agreed bargain. In the case of the Standard Logging Agreement there is an inbuilt bias in favour of one party, being the logging company. If the logging company fails to fulfil its side of the bargain then the landowners *may* require it to cease operations until it remedies the situation. In fact the logging company is given the right to terminate its operations at any time without penalty simply by giving one month's notice even though there is no breach of the Agreement by the landowners. These termination provisions of the Agreement appear to be grossly unfair on the landowners and give the logging company an unnecessary commercial advantage.

### ***Environmental Safeguards Not Compulsory***

Although there is scope for making provision to preserve the timber resource, and to protect the surrounding environment of the logging operation, in practice logging operators do not seem to comply with all the protective mechanisms laid down in the Regulations and Standard Logging Agreement. It would appear that the forestry authorities should be given more power in relation to reforestation and exclusion of species on customary land.

There is no provision for an environmental impact assessment in any accepted sense in the present legislation. Section 5C(v) of the Act, which provides that the developer must carry out investigations to define what areas it should not log on environmental or social grounds, is clearly inadequate. An undefined environmental and social survey which is neither scrutinised nor questioned and is carried out by a logging company motivated by profit, cannot realistically be expected to show the impact of the development on the environment. In addition, the requirement comes too late in the process, since the investigations are only required after agreement has been reached with the timber rights owners. The owners may not have wanted to dispose of their rights if they had known of the full environmental and social impact of the logging operation before they had reached the agreement with the logging company. Moreover the legislation does not say that the developer must tell the landowners the result of the investigations. Indeed, there is no need for the developer to formalise its investigations in a written report or give it to the Commissioner.

Importantly, the legislation does not reflect any attempt at sustainable management of the forestry resource. For example, there are no requirements for the Commissioner to refuse a developer consent to negotiate with customary landowners when the resource may be running out. Indeed, there are no criteria to guide the Commissioner in deciding whether or not to let the developer start negotiating with the customary landowner in the first place.

### ***Monitoring of Operations***

As well as the lack of an effective system of obtaining a license, more problems arise as the logging gets underway. There is no effective legislative or administrative mechanism to control what the logging company does. This is because logging almost invariably occurs in isolated areas where communication with the authorities and the ability to obtain legal advice are often extremely difficult. The result is that the logging company is able to control disputes with local people when they arise, and landowners, who own the resource, are virtually powerless under the present system.

### ***Summary of Present Position***

The legislation contains provisions which could provide safeguards against an unscrupulous logging company or a seller of invalid timber rights. However, in practice, because of the lack of

an effective system the activities of logging companies at both national and local levels, combined with lack of staff to administer it, the present legislation does not work to achieve sustainable forestry management. No local Provincial Officers have specific power or particular expertise to deal with forestry matters. This is of particular concern in Western and Choiseul Provinces, where some 70 per cent of Solomon Islands commercial logging takes place. Similarly, the Area Councils are even more ill-equipped to negotiate or deal with an experienced commercial logging company. Hopefully the establishment of Provincial Timber Inspectorate Units in the Provinces under the guidance of the Forestry Division will be an important contribution to addressing these serious problems.

The forestry legislation is complicated. It is difficult to obtain a copy of the Act and all its various amendments and regulations. The *Provincial Government Act*, the *Land and Titles Act* and the *Local Courts (Amendments) Act 1985* all have a bearing on the *Forest and Timber Utilisation Act*. At present, it is virtually impossible for an ordinary member of the public to find out what all the law is for forestry in Solomon Islands.

There seems to be little enforcement of the existing forestry legislation. A legislative system that leaves compliance with forestry regulation largely to the whim of foreign logging companies cannot hope to protect the environment and achieve sustainability of the resource. Such a situation is not of much benefit to Solomon Islands.

### ***FAO Report on Forestry Legislation***

The Food and Agriculture Organisation Report on Forestry Legislation in Solomon Islands (Fingleton 1990) is the result of a comprehensive examination of the requirements for a national *Forestry Act*.

A draft *Forestry Bill* and *Regulations* are included in the FAO Report. It is based in part on the government's Forestry Policy Statement of 1989. This proposed new comprehensive forestry law aims to satisfy the six fundamental principles of the government's forest policies, which are:

1. protection of the nation's forests, water supplies, soils, animals and plants and forest areas of cultural importance;
2. sustainable use of the forest resources to maintain their value into the future;
3. basic needs of people from the forests must be met - food, water, firewood, building materials, medicines and recreation;
4. development of the forest industry so as to give an increasing supply of forest products, income, tax revenue and business and employment opportunities for Solomon Islanders;
5. participation in decision-making about forests and management between different levels of government and between government and the customary landowners;
6. distribution of the benefits from forests and the responsibility for maintaining and improving these forest resources.

## **Conclusion**

The continuation of small scale subsistence agriculture is vital to the traditional dietary needs of the bulk of the population. There would appear to be a need for more training and direction of the Agriculture Division Officers about the need to stress conservation measures when teaching agricultural methods to local people. As the population increases there will be more pressure on availability of the land for agricultural purposes. The implementation of wise conservation

measures which enable the same land to be used without soil degradation will be increasingly important.

Forestry law reform is urgent. Unless the present unsatisfactory system of logging in Solomon Islands is rectified there is a very real danger of the valuable forestry resource being severely depleted. This potential environmental and economic disaster for the country must be averted with the assistance of a comprehensive new legislative framework whereby the resource can be managed sustainably.

### **Recommendations on Agriculture and Forestry**

28. That all Agriculture Division Officers engaged in fieldwork be specifically trained in environmental management as it affects agriculture.
29. That the *Environment Act* suggested by this Report include provisions for assessing the environmental impact of the use of existing and new pesticides.
30. That the use of pesticides be regulated by the enactment of a *Pesticide Act*; alternatively, that the *Pharmacy and Poisons Act 1941* be comprehensively updated, and to include the importation, manufacture and use of all pesticides.
30. That new comprehensive forestry legislation covering both existing and proposed forestry activities be drafted and enacted as a matter of urgency.
32. The Standard Logging Agreement, if retained as part of a new *Forestry Act*, should be strengthened and completely redrafted.

## **6.11 Fisheries**

Solomon Islands has a vast fisheries resource. The controlled exploitation of the fisheries represents one of the country's most promising prospects for sustainable development and self-sufficiency. The marine environment is also of vital importance for the growth and development of the Solomon Islands tourist industry. But perhaps the sea and its marine resources are of most value to Solomon Islanders themselves as the traditional local environment by which they have lived for generations. The Solomon Islands population is largely settled on the coast, and the reefs which fringe many of the islands are of importance not only for the abundance of food they provide, but also because shells and other marine products for traditional uses as well as a source of income for local people.

Fisheries can be divided into inshore and offshore. There is a large variation in the management and control of the fishery in these two sectors. The concentration of effort by the authorities to date had been in the offshore fishery. This is understandable as this is where the larger volume of fish are likely to be caught and where the financial returns are the greater.

Solomon Islands has some 1.3 million square kilometres of sea under its jurisdiction in its Exclusive Economic Zone (Carew-Reid 1989:11). This abundant fishery, with some 180-200 species, is of high interest to foreign fishing ventures, in particular Japanese and Taiwanese. In 1988, 37 841 tonnes of fish valued at \$84.6 million were exported overseas. This accounted for almost half of the total annual export earnings of Solomon Islands. (Forum Fisheries Agency 1990:124). While present earnings from the fishery resource are regarded as large by Solomon Islands' standards, by international standards the current earnings are small. It is perhaps because

the great value to foreign interests of the exploitation of their inshore and offshore fishery is not realised that licenses for commercial vessels are relatively cheap and easy to obtain. If its value were fully realised, foreign fishing ventures would perhaps be more closely scrutinised and sustainable use of the resources insisted upon by the government.

The offshore fishery has been the subject of study by the South Pacific Commission. It appears that the current total allowable catch of 75 000 metric tonnes is within the limits recommended to allow sustainable use of the offshore fishery. Unfortunately, much less is known about the inshore fishery of Solomon Islands. Comments here are thus directed primarily at the inshore fishery. As the inshore fishery suffers from a lack of survey or scientific information on marine habitats and marine fauna and flora, it is very difficult to plan inshore sustainable management of the resource.

## **National Legislation**

### **Fishery Limits Ordinance 1977**

This legislation fixes the fishery limits of the Solomon Islands at 200 nautical miles.

### **Delimitation of Marine Waters Act 1978**

Section 6 of this Act provides for jurisdiction by Solomon Islands over its 200 mile Exclusive Economic Zone within which it has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources of those waters. The Act sets the territorial seas of Solomon Islands at 12 miles from land.

### **The Fisheries Act 1972**

Administration of the Act is carried out by Fisheries Officers. A Principal Fisheries Officer is charged with promoting the development of fisheries and ensuring that the fisheries resources are 'exploited to what appears to him to be the maximum reasonable extent consistent with sound fisheries resources management'. The Act allows for a Fisheries Advisory Committee to be set up, but this has not been done as yet. Both local and foreign fishing vessels are licensed annually under the Act. Sanctions exist in the legislation for contravention of the licensing requirements. The maximum penalty for contravention of the provisions by the master, owner and charterer of a foreign fishing vessel is a fine of \$250 000.

Other sections of the Act support these licensing provisions, for example, giving power to the Fisheries Officers to stop and search fishing vessels. As is normal with such legislation, the court is given power to forfeit the catch and gear confiscated from a convicted offender.

Some obviously unacceptable fishing methods (e.g. using explosives) are prohibited. In addition the Act empowers the Minister to make Regulations for such things as:

- the conservation and protection of species;
- the establishment of closed seasons
- limiting the catch of any species
- prohibiting all fishing in particular areas
- prohibiting catching certain species in particular areas
- restricting size of nets, types of gear or methods of fishing
- regulating fish exports

## The Fisheries Regulations

In practice these Regulations are the most important part of the legislative system from an environmental point of view. However, the Regulations are hard to follow because of the many amendments without a reprint of the Regulations being available. The Regulations set size limits for crayfish, trochus shell, coconut crabs, crocodiles and turtles. They also prohibit the disposal of offal in the sea within one nautical mile of land.

Construction, equipment and sanitation standards are set for fish processing establishments. For example there is a requirement that no refuse or offal is to be disposed of into the sea in such a way as to cause pollution near a populated area or where local fishing operations are usually carried out.

The Regulations prohibit fishing within 500 metres of low water mark or within one nautical mile of a village. However, this does not apply to bait fishing. Foreign fishing vessels are not allowed to fish on any submerged reef without the prior written permission contained in an agreement with the customary reef owners, Area Council and Provincial Government. This Regulation contemplates that money be paid for permission to fish on submerged reefs.

As a result of environmental concern within the Ministry of Natural Resources over the serious depletion of stocks of crayfish, turtles, trochus shell, coconut crab, pearl oyster and coral, a 1991 amendment to the Regulations was drawn up. The government also imposes a 10 per cent tax on what the exporter states is the value of the export. The return on these activities for Solomon Islands will be even less if the fishing company and exporter have been granted tax concessions by the Investment Board.

The maximum monetary penalty for breach of the Regulations is set at \$100. The 1991 draft Regulations have not increased this amount. It is suggested that it should be increased to a maximum of \$5 000 if commercial operators are to be deterred from breaking the law. The Magistrate's Court must be given specific jurisdiction to impose penalties which are set beyond its jurisdiction.

## Provincial Legislation

Under the *Provincial Government Act 1981* the Provinces may legislate for "Protection, improvement and maintenance of fresh-water and reef fisheries", and "Registration of customary rights in respect of land including customary fishing rights". In addition, the Executive of the Province may provide fishing services for the Province under the *Provincial Government Act*. Under section 3(3) of this Act the area of each Province extends seaward for three nautical miles from the low-water line of each island in the Province.

As a result of this legislative competence most of the Provinces have some sort of provisions controlling fishing activities. Potentially the most worthwhile are their Business License Ordinances. For example, under the *Western Province Business License (Amendment) Ordinance 1989*, Western Province has the power to allow or disallow any particular fishing business. Only those businesses which are run in conformity with the policies of Western Province and comply with all Solomon Islands and Provincial laws can be given a license to operate.

An effective sanction against fishing of endangered species is available to the Provinces by increasing the license fees for trading in such species. For example the cost of a license for "turtle trading" in Western Province has recently been increased to \$1,000 per year and "crayfish trading" at \$800 per year. However, these fees are in practice no deterrent for foreign based exploiters of the resource, who are likely to be making many thousands of dollars every year from the business,

with little likelihood of having to pay any other form of taxation to Solomon Islands on their business activities.

The *Western Province Coastal and Lagoon Shipping Ordinance 1991*, restricts the speed of shipping in harbours and lagoons to six knots. It is designed to protect the coastal environment from the wakes of large ships as well as being a safety measure for smaller vessels. Marine pollution of the sea is outlawed by this Ordinance. However it does not apply to land-based polluters, nor to discharge of sewage into the sea. Sewage discharge is very difficult to restrict even though sewage pollution is a major problem in many areas. For example, Gizo, the second largest town in the Solomon Islands, has no better sewage disposal facility than discharge into the sea. Marine pollution under this Ordinance does however apply to chemical or oil spillages from ships. The maximum fine is \$1,000, which is low by international standards.

The Santa Isabel Wildlife Sanctuary (Amendment) Ordinance 1991 establishes a wildlife sanctuary on four islands in Isabel Province and makes all Fisheries Officers responsible for their protection and management. Rights of residency are restricted in the wildlife sanctuaries.

## **Licenses for Fishing Vessels**

Licenses for local fishing vessels can be obtained through written application to the Licensing Officer and upon payment of a prescribed fee which is at present \$250 per year. To be "local", a fishing vessel must be registered in Solomon Islands and owned by persons domiciled and resident in the country, or owned by a Solomon Islands company having its principal place of business in Solomon Islands.

Foreign fishing vessels may be granted a permit by the Licensing Officer subject to approval by the Minister. Fees for foreign fishing vessels are \$1000 per full year. However these licensing provisions and fees do not apply to the major foreign fishing operators who operate under bilateral fishing access agreements.

The fishing industry in Solomon Islands is dominated by the activities of foreign fishing vessels operating in the Exclusive Economic Zone outside the 12 mile limit. Before foreign interests are given access to this fishery a government-to-government agreement first needs to be negotiated. The two existing access agreements are with Japan and Taiwan.

Solomon Islands is signatory to and participant in the Multilateral Treaty between the USA and South Pacific Forum Countries. Every year some US\$12 million has been distributed between the participating countries. This is made up of an economic development fund, an industry fund, a technical assistance fund, and a grant. Recently, an agreement was reached whereby Pacific Island countries would be paid US\$180 million by the US over a ten year period.

About US\$2.5 million from the technical assistance fund is annually distributed equally between the 16 member countries (except Australia). In addition, each country receives approximately US\$66,000 from the economic development fund. The bulk of the fund is then divided among the signatory countries on a percentage basis according to where the fish are caught.

In order to protect existing fisheries and to avoid conflict with locally based fishing operations, the Fishing Agreements contain provisions for limiting access areas.

## Conventions, Treaties and Agreements on Fishing

The United Nations Convention on the *Law of the Sea* has been signed but not yet ratified by Solomon Islands. This Convention requires States within their Exclusive Economic Zones to:

- determine allowable catch of living resources;
- avoid over-exploitation by insisting upon proper conservation and management measures; and
- ensure that the population reduction of harvested species does not result in irreparable depletion of dependent species.

Upon ratification by Solomon Islands, the government will need to enact national legislation to cater for these and other convention requirements.

Also, the Solomon Islands is signatory to the following fishery Conventions: -

- *The South Pacific Forum Fisheries Agency Convention 1979.*
- *Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific; Related Protocols 1989;* the Convention has been signed but not yet ratified by Solomon Islands.
- *The Lome Conventions 1975, 1980, 1985, 1990;* (these relate to the EEC countries negotiating a fisheries access treaty with the Forum Fisheries Agency).
- *Multilateral Treaty on Fisheries with the United States of America 1988.*
- *Nauru Agreement Concerning Cooperation in Fisheries of Common Interests 1982.*

## Inadequacies under the Present Legislation

Fisheries management and development planning of the inshore fishery are currently inadequate in the Solomon Islands. The main impediment to putting an environmentally sound inshore fisheries development system in place is a basic lack of knowledge of which fish can be exploited without the resource being depleted. The danger is that without this information, and the planning that will be possible when the information is to hand, parts of the fisheries may be depleted forever. It is obvious that foreign exploiters will take the best and most expensive species at the start while few controls are in place. It is therefore imperative that the gathering of data is carried out urgently in order to plan for sustainability of the inshore fishery.

While the Provincial Government has its own marine jurisdiction and some legislative powers under the *provincial Government Act 1981*, the Provinces have little formal technical expertise in fisheries management. The expertise that does exist in the Provinces is that of the fisheries officers employed and paid by central government and seconded to the Provinces.

Devolution of power to Provincial Governments as far as the inshore fishery is concerned may assist better management. Each province has its own individual needs in terms of fisheries management, customary practices and administrative structure, and it may thus be easier to assess and understand local needs at this level. However, to ensure a coherent national policy in environmentally sound fisheries management and development, a national framework of legislation is necessary. It should set national standards while allowing for individual provinces to enact their own inshore fisheries Ordinances.

## **An Increase in Provincial Business License Fees**

If the Provincial authorities knew what species were freely available to be exploited, and which species needed to be protected, they could more easily control fishing through their allocation of provincial business licenses. The potential also exists for the province to earn substantial revenue from the allocation of these business licenses. Currently the money being derived by the provinces from fisheries under the provincial business licenses is rather limited.

## **Inadequate Controls on Inshore Fishery**

The present system allows a foreign national with little or no concern about preservation of the fishery environment to organise local people to harvest species identified as endangered. The foreign national will buy the catch at a price set by the foreigner and arrange to have the catch sold to commercial outlets in Honiara or arrange for export. It seems that little or no income tax is derived by the Solomon Islands government from such business operations. No fishing license fees have been required, although a small business license fee may need to be paid to the Province and the local fishermen themselves will have received some payment. From such payment for the sale of marine products the buyer is required by Section 33A of the *Income Tax Act* to deduct and pay to the Commissioner a ten per cent resident withholding tax. This is unlikely to occur in practice. There may also be a ten per cent export tax on what the exporter states is the value of the catch.

It seems obvious that allowing such business activities to take place is potentially devastating for the future economic well-being of the country. This type of fisheries "development" which does not appear to be positive for Solomon Islands, and underlines the need for the legislation to be revitalised and systems and controls put in place.

## **Customary Fishing Rights**

The Act does not provide for the exercise of customary fishing rights as such. However, the Fisheries Regulations require owners of fishing vessels to enter into agreements with the customary reef owners before fishing operations are allowed. It would be useful if procedures could be provided to find out which persons or groups are the owners, with a mechanism for the settlement of disputes and procedures for negotiation between the customary reef owners and the fishery operators. The *Provincial Government Act 1981* gives legislative competence to the Province to register customary fishing rights. It could be that once various reef owners in the Province have established their tenure, their rights could be registered along with some inventory of the fishing rights agreements entered into, so as to assist collective bargaining to financially assist the reef owners in their negotiations with foreign fishing operations.

The Regulations do not require local fishermen using canoes to obtain permission to enter into agreements with the reef owners before they fish there, but accepted customary practice is to ask permission of the reef owners. Small scale fishing by local people, often at night, encouraged by foreign fishing operators using boats that travel from one area to another to collect and store the fish, has become a problem for local reef owners.

## **No System of Sustainable Management**

Because there is little information about the inshore fishery it is currently not possible to formulate plans or make commercial decisions on the basis of sustainable management. While a developer could be asked to provide some type of environmental impact assessment, there is little expertise within the Ministry of Natural Resources or at the Provincial level to scrutinise that assessment. It appears that the gaps in knowledge and expertise and lack of environmental impact assessment



will be filled in the short term by outside agencies. It would seem important that the knowledge gap and lack of human resources be rectified as soon as possible because the country will be in a much better position to increase its revenue from both inshore and offshore fishing when proper systems and controls are put in place.

Any fears that legitimate developers and new investors will be discouraged by imposition of new controls and increased revenue gathering are probably unfounded. Those fears may stem from a lack of appreciation of the real worth of the fishing resource of Solomon Islands to foreign fishery interests.

It is perhaps this concern by the authorities that foreign fishing ventures and investors will be discouraged from further development of the fishery that the comprehensive revision of the fisheries legislation carried out in 1987 has not yet been implemented.

## Conclusion

The Solomon Islands still has an abundant fishing resource. Its coral reefs, warm waters and inshore fishery resources are an unsurpassed tourist attraction. The abundance of fish in Solomon Islands waters can be compared to the lack of availability of fish in many developed countries where the fishery has been depleted and the marine environment ruined by over-fishing and pollution.

The value and desirability of fish as a source of protein for other countries is increasing. The market demand for fish in these countries cannot easily be met. As storage, processing and transport improvements take place in Solomon Islands, the fishing resource will increase in value. If carefully managed, it can last forever. Sustainable development of the fishery is therefore absolutely vital to the future economic well-being of Solomon Islands.

### Recommendations on Fisheries

33. That further study and data collection in relation to the inshore fishery be initiated.
34. That Regulations under the *Fisheries Act* be updated, particularly in relation to penalties, and to take into account the provisions for limitation and the banning of the collection and export of endangered marine species in the proposed 1991 amendments to the Regulations.
35. That a Multi-Fishery Policy be drafted by the Ministry of Natural Resources in collaboration with the Provinces.
36. That a register of customary fishing rights be established under the Fisheries Regulations.
37. That a register of fishing rights agreements between customary reef owners and fishing operators be established under the Fisheries Regulations.
38. That comprehensive new fisheries legislation be drafted and enacted by the Solomon Islands government, and that the basis for the new fisheries legislation be the Food and Agricultural Organisation Fisheries Legislation Report. Assistance from the Forum Fisheries Agency should be requested in this task.

## **6.12 Mining and Minerals**

This section deals with the environmental implications of mining operations, petroleum drilling and energy use. Both the mining and petroleum legislation has undergone recent revision. There is currently no legislation governing energy use and conservation.

### **Mining**

#### **Mines and Mineral Act 1990**

The *Mines and Minerals Act 1990* was enacted in May 1990 but is yet to be brought into operation pending the gazetting of Regulations under the Act. The Act is administered by the Ministry of Natural Resources through the Geology Division.

The *Mines and Minerals Act 1990* provides that except with the consent of the owner or occupier, reconnaissance, prospecting and mining are prohibited in or on any village, place of burial, tambu or other site of traditional significance, inhabited house or building, any cultivated land or land rendered fit for planting and habitually used for the planting of crops. Town land under the Land and Titles Act also cannot be subject to these operations except with the consent in writing of the owner of the "surface rights". A state forest or controlled forest cannot be subjected to mining unless the permission of the Commissioner for Forest Resources is obtained, subject to any conditions that may be imposed. Land used for public purposes also cannot be mined.

The Minister may, on the advice of the Minerals Board, take any measures as may be necessary: to protect the health and safety of persons; for conservation purposes with a view to preventing waste; to minimise damage to any mineral deposit, land, air, water, vegetation or animal life; or to protect sites of archaeological, historical or geological significance

#### ***Prospecting Licenses***

Before a person can obtain a prospecting license, a wide range of conditions have to be met. Among other things, the application must include a proposed programme for the acquisition of the surface rights from the landowners. If this access cannot be obtained, the application fails. If it is obtained only in relation to part of the land, the application must be amended accordingly. In addition, the intentions of the applicant in relation to environmental protection must be set out. The prospecting license itself, when issued, must set out the programme for environmental protection. During the term of the prospecting license, the license holder is obliged to backfill all excavations and not leave any part of the area unsafe. The Director of Geology may require the license holder to carry out rehabilitation works in relation to roads, stream beds or banks or land damaged as a result of prospecting.

The mining lease application obliges the applicant to provide an environmental assessment with a detailed programme for tailings and waste disposal, progressive reclamation and rehabilitation of lands disturbed by mining, monitoring and minimisation of effects of mining on air, land and water areas.

#### ***Mining Leases***

Before a mining lease is issued, the Minister must be satisfied, among other things, that the mining plan provides for adequate protection of the environment, both inside and outside the mining area.

In carrying out the mining, the lease-holder is obliged to carry out the mining plan as specified in the lease, using appropriate technology and effective equipment, machinery, methods and

materials, with due diligence, efficiency and economy, in accordance with sound conservation, technical and engineering practices generally used in the mining industry.

Alluvial miners have specific environment protection obligations applying to their permits. They must backfill all excavations and not leave any part of the area in an unsafe condition. In addition, they must not pollute or interrupt or adversely affect the flow of any water.

### **Contravention of the *Mines and Minerals Act***

The Act allows the Minister on advice of the Minerals Board to suspend or cancel a permit, license or mining lease when the holder breaches any provision of the Act or regulations, or breaches any of the provisions of the permit, license or lease. The Minister can make regulations under the *Mines and Minerals Act* for the conservation of mineral resources, disposal of waste products and the protection of the environment, providing for the nature and adequacy of restoration plans, the health and safety of persons employed and for the prevention of nuisance.

The Minerals Board is constituted under the Act through appointment by the Minister. Of the nine members, one must be a representative of the Environment and Conservation Division of the Ministry of Natural Resources. In addition, when an application for a permit, license or lease is being considered, the Minister must appoint representatives of the relevant Provincial Government and the landowners.

### ***Mining Regulations 1991***

The draft *Mining Regulations 1991* elaborate on the duties required to be performed by the mineral rights holder. In relation to environmental matters, these include that no reconnaissance, prospecting or mining be carried out within a distance of 25 metres from any place of burial, tambu or other site of traditional significance, and 100 metres away from any inhabited house or building.

In the exercise of mineral rights, holders shall carry out operations with due diligence, efficiency and economy and in accordance with good technical and engineering practices generally used in the mining industry so as to:

- (a) conserve and avoid the waste of the mineral deposits of Solomon Islands;
- (b) result in minimum ecological damage or destruction;
- (c) control the flow and prevent the escape of contaminants, tailings and other matter produced in the course of such operations;
- (d) prevent avoidable damage to trees, crops, buildings and other structures;
- (e) avoid any actions which could endanger the health or safety of persons; and
- (f) avoid harm to fresh water, marine and animal life.

The *Mines and Minerals Act* and its Regulations represent a modern approach to exploration, permitting, licensing and the grant of mining leases. In the absence of general legislative requirements in relation to environmental impact assessment, the *Mines and Minerals Act* includes at least the minimum environmental protection provisions that could be expected. The provisions specifying that an environmental assessment must be done could certainly be tightened up. In the Regulations under the Act, it could at least be expected that the form and contents of an environmental impact statement for proposed mining operations be included.

However, if the government decided to go ahead with the environmental legislation presently under consideration, it may be unnecessary to change the *Mines and Minerals Act*, or its

Regulations to any extent. A new Environment Act could simply specify that all applications for exploration licenses, alluvial mining permits and applications for mining leases be subject to the requirements of the Environment Act, and undergo a specified level of environmental impact assessment, depending on the potential environmental effect of the application under consideration.

### ***The Petroleum Act 1987***

The *Petroleum Act* has a limited range of provisions to achieve environment protection aims.

The Act allows the Minister to gazette a Model Petroleum Agreement which may include requirements in relation to conduct of operations in such a way as to avoid pollution and ecological damage.

The *Petroleum Regulations* authorised under section 41 allow the Minister to make Regulations which can cover a range of environmental matters, including: the safe conduct of operations, and the health and welfare of people; the protection of the environment, including the prevention of pollution, and the preservation of living and non-living resources.

The draft *Petroleum Regulations 1991* cater for a range of environmental matters. Contractors are obliged to carry out their operations in such a manner as to ensure that there will be no "unnecessary" interference with the conservation of living resources of the sea, so that they result in minimum ecological damage or destruction; control the flow and prevent the escape or avoidable waste of petroleum; prevent damage to on-shore lands, and to trees, crops, buildings and other structures; and avoid any actions which could endanger the health or safety of people.

Contractors are obliged under the Regulations to control and clean up any released petroleum or other materials and to repair to the maximum feasible extent any damage resulting from operations, with all costs to be borne by the contractor. If the contractor does not take prompt action, the clean up, repair etc. can be undertaken by the Ministry, at the expense of the contractor. These provisions appear to be adequate to cater for environment protection requirements for petroleum development in the immediate future. However, as with mining, it would be desirable to include specific requirements for environmental impact assessment in this legislation or for the proposed *Environment Act* to cover this sector.

## **Energy Use and Conservation**

The Energy Division of the Ministry of Natural Resources has a draft Energy Policy relating to energy project planning, the management of large scale energy sector projects and the coordination of small scale energy inputs into rural development.

As noted above, at present there is no legislation in relation to energy use and conservation. The Division has an Energy Conservation section whose objects include introducing energy-saving measures and substitution of indigenous fuels for imported fuels. One proposed programme, the Komarindi hydro-electric scheme, had an environmental impact study done in relation to it, but without any statutory controls or requirements suggested.

The Energy Division has prepared a Project Application for an Energy Act for Solomon Islands. This legislation is intended give a legislative mandate for the Energy Division so that it has the authority to ensure security of energy supplies and the promotion of efficient energy use on a national basis. The specific objectives of the proposed Act are to give one government institution the responsibility of setting energy policies and standards, which will control the generation, distribution, pricing and consumption of energy resources (both conventional and non-conventional) within Solomon Islands. It is clear that there is some need for the coordination of energy policy, within a coherent framework binding on all government and non-government sectors. The present approach of energy pricing and standard setting being done by various

departments with no particular coordination cannot lead to good energy conservation. Specific legislation to establish an appropriate framework seems to be an important initiative from the point of view both of economic efficiency and conservation objectives.

### **Recommendations on Mining and Minerals**

39. That in the absence of provisions for environmental impact assessment incorporated in an Environment Act, the *Mines and Minerals Act* be amended to include specific requirements as to the form and contents of environmental impact statements for all proposed mining operations.
40. That the suggested *Environment Act* cover the environmental impact assessment of all proposed petroleum operations.
41. That an *Energy Act* for Solomon Islands be drafted and enacted as soon as possible.

## **6.13 Conclusions**

In a country with some 400,000 people, spread over a vast area, with an inadequate administrative infrastructure at national and provincial level for the protection of the environment, but with many environmental problems in common, it makes little sense for each province to enact its own environment legislation. On the other hand, it is important to recognise that each province has its own individual demands and needs in terms of environmental management, customary practices and authority structures. It should accordingly be possible for legislation to be drafted which sets national standards for environment protection and conservation, with Ordinances and Regulations consistent with a national Act to be drafted to address the individual concerns of the provinces.

If, despite these arguments, national legislation was found to be unacceptable, it would be possible, but more complex and expensive, for uniform environmental Ordinances to be passed by the Provincial Assemblies.

Under either of these options, by-laws could also be passed to address environmental matters at village level. Whatever model is chosen, formal legal consistency between the provinces would be desirable and not difficult to attain. What would be more difficult is to achieve consistent implementation of the environmental laws.

The review of legislation and policy on environment in Solomon Islands indicates that while there is a great deal left to be done, there is already a steady momentum which has built up over the past several years, at both national and provincial level, to enact strong and comprehensive legislation. There is also a good deal of enthusiasm among those working in the various sectors for the drafting of adequate laws. Some of the recent statutes examined at provincial level indicate that there is a real commitment to environmental issues and the conservation of natural resources. The older legislation requires very substantial overhaul. It must also be said that the administration of the present legislation suffers badly from lack of staff and other resources.

The Country Report for Solomon Islands to UNCED Conference emphasises that there is an inadequate legislative framework for resource management and environment protection (UNCED 1992). It became very clear during discussions at the National Environment Management Strategy Seminar in Honiara in November 1991 that there is an urgent need to ensure that national legislation is drawn up. This review of all relevant legislation at national and provincial level confirms and emphasises that perception. It is not just a matter of whether there is a specific threat from a particular development activity such as logging, gold mining or foreign fishing. It is a

matter of whether the Solomon Islands, in keeping with the mainstream of the international community, both in the developing and in the developed world, can put into place the administrative agencies and legal mechanisms which will give it the ability to sustainably develop its environment and to meet the needs of the people both at present and into the future.

Clearly, the shape and contents of modern environment protection legislation has to be geared to the traditions and needs of the country. However, as environmental problems do not recognise national boundaries, it is possible to spell out some principles which are as basic to any scheme of environment protection and resource management in any country.

Environmental protection and resource management legislation should be easily understood, capable of being enforced, and respected by the people at every level. The people must identify with and "own" their legislation, in much the same way as the people should "own" and relate to any National Environmental Management Strategy that is to be implemented. Ideally, a broad range of people should be involved in commenting on any legislation which is forwarded. Ideally an adequate draft should be produced and endorsed by Cabinet in principle, be widely distributed, with opportunities provided for all sectors of the community to forward their comments to a central point for collation and analysis. A specific period for comment and discussion should be set, before the legislation is reconsidered by the Cabinet.

To address the orderly development and conservation of the country's natural and cultural resources on a nationally consistent basis, the following matters could be included in an integrated Act:

- establishment of an Agency or other body to administer the legislation
- establishment of an Environment Council to advise on national environmental policy
- environmental planning (i.e. physical planning)
- water, land, air and noise pollution
- development control and environmental impact assessment for all development projects, mining, forestry and government programs and policies
- cultural heritage conservation.
- natural heritage conservation
- endangered species protection

[Note: Since this Review was completed, a new Environment Bill was drafted, incorporating a range of the elements suggested in the Review; it presently awaits further consideration by the Solomon Islands Parliament.]

## **6.14 International Conventions and Legislation**

### **International Environmental Conventions**

*Convention on Conservation of Nature in the South Pacific (Apia Convention) 1976*

*Convention on the Conservation of Cultural and Natural Heritage 1974*

*Convention on the Prevention of Marine Pollution by Dumping of Wastes and other matters, 1973*

*United Nations Convention on the Law of the Sea, Montego Bay, 1982*

*Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985*

- *Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987*

*Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea, 1986*

- *Protocol for the Prevention of Pollution of the South Pacific region by Dumping, Noumea, 1986*
- *Concerning Cooperation in Combating Pollution Emergencies in the South Pacific Region, Noumea, 1986*

*Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific 1989*

*Protocol Relating to Intervention in Cases of Marine Pollution by Substances other than Oil, TS 1984, No 5*

*South Pacific Nuclear Free Zone Treaty*

*South Pacific Forum Fisheries Agency Convention 1979*

*United Nations Framework Convention on Climate Change, New York, 1992*

*Convention on Biological Diversity, Rio de Janeiro, 1992*

## **Legislation and Regulations**

This list includes all national and provincial legislation, regulations and amendments as well as recent Bills directly or indirectly related to environmental matters in Solomon Islands. It does not include Provincial Assembly by-laws made under the Local Government Act; these are mentioned in the text where relevant.

### **National**

*Agriculture and Livestock Act 1980*

*Agricultural Quarantine Act 1982*

*Commissions of Inquiry Act (Cap 31)*

*Continental Shelf Act 1970 as amended*

*Delimitation of Marine Waters Act 1978*

*Customary Land Records Bill 1990*

*Environmental Health Act 1980*

*Environmental Management Bill (Harding)*

*Environmental Management Bill (Lipton)*

*Fisheries Act 1972: Amended 1977*

*Fisheries Regulations 1972: Amendments 1973, 1977, 1981, 1989 (1991 draft)*

*Fishery Limits Act 1977 as amended*

*Forest Resources and Timber Utilisation Act 1969: Amendments 1972, 1977, 1984, 1987, 1988, 1989, 1990, 1991*

*Forest Resources and Timber Regulations 1970, 1978, 1985, 1986, 1990*

*Forestry Bill 1990 (Fingleton)*

*Income Tax Act 1965 (and Amendments)*

*Investment Act 1990*

*Land and Titles Act 1970: Amendments 1970, 1972, 1974, 1975, 1977, 1978, 1979*

*Land and Titles Regulations*

*Leadership Code (Further Provisions) Act 1979*

*Local Administration Act 1974*

*Local Courts Act 1973: Amendment 1985*

*Local Government Act 1970*

*Magistrates Courts Act: Amendment 1971, 1978, 1979, 1981*

*Mines and Minerals Act 1990*

*Mines and Minerals Regulations 1991*

*National Parks Act 1954: Amendment 1973*

*North New Georgia Timber Corporation Act 1979: Amendments 1980, 1984*

*Ombudsman (Further Provision) Act 1980*

*Petroleum Act 1987*

*Petroleum Regulations (draft)*

*Pharmacy and Poisons Act 1941 as amended*

*Protection of Wrecks and War Relics Act 1980*

*Provincial Government Act 1981: Amendments 1986, 1991 Nos 1, 2, 3*

*Public Health Bill 1990*

*Quarantine Act 1978*

*Research Act 1982*

*River Waters Act 1978*

*Rural Water Supply Act and Regulations (Draft 1987)*

*Seal Fisheries (Crown Colonies and Protectorate)*

*Solomon Islands Tourist Authority Act 1970: Amendments 1970, 1971*

*Solomon Islands Tourist Authority Regulations*

*Solomon Islands Independence Order 1978*

*Town and Country Planning Act 1979: Amendment 1982*

*Town and Country Planning Regulations 1980, 1986 (tree preservation) 1988 (Honiara)*

*Water Bill*

*Water Supply Act 1981*

*Wild Birds Protection Act 1914*

*Wild Birds Protection Regulations*



## **Provincial Legislation**

### **Guadalcanal Province**

*Wildlife Management Area Ordinance 1990*

*Business and Hawkers Licensing Ordinance 1985 (as amended)*

### **Makira Ulawa Province**

*Business License Ordinance 1984 (as amended)*

*Preservation of Culture and Wildlife Ordinance 1984*

*Draft Provincial Fisheries Ordinance*

### **Santa Isabel Province**

*Business License Ordinance 1984 (as amended)*

*Preservation of Culture Ordinance 1988*

*Wildlife Sanctuary By-laws*

*Wildlife Sanctuary (Amendment) Ordinance 1991*

### **Temotu Province**

*Business License Ordinance 1985*

*Environmental Protection Ordinance 1989*

*Preservation of Culture Ordinance 1990*

### **Western Province**

*Business License (Amendment) Ordinance 1989 (as amended)*

*Building Ordinance 1991*

*Coastal and Lagoon Shipping Ordinance 1991*

*(draft) Environmental Management Ordinance 1991*

*Preservation of Culture Ordinance 1989*

*Public Nuisance Ordinance 1991*

*Simbo Megapode Management Area Ordinance 1990*

## **CHAPTER 7**

## **CONCLUSIONS**

## **7. CONCLUSIONS**

### **7.1 Chief Outcomes of the Reviews**

The chief outcomes of the RETA Legal Reviews are the recommendations and suggestions that were made in each of them. The common themes of the recommendations are:

- (a) A wide variety of recommendations and suggestions was made for the reform of environmental law in each of the countries, with a strong recommendation in several countries for comprehensive environmental legislation to be enacted.
- (b) In a number of areas in each country, the Reviews suggested that further work be undertaken on particular pieces of legislation and certain fields of environmental management, with a view to addressing the problems in greater detail than these Reviews were able to do.
- (c) The Reviews made suggestions in relation to the implementation of the recommendations and suggestions incorporated in each Review. The difficulties of implementation were canvassed to a greater or lesser extent in each Review. A common problem was recognised as being a lack of financial resources for the implementation of the present legislation. The lack of enforcement of existing legislation was also highlighted in a number of instances.
- (d) The implementation of environmental regulation of each country was also perceived to be hampered by the lack of professional and administrative capacity, which indicated the need for training of staff in the environmental management sections of the relevant departments of each government.

### **7.2 Effects of the Legal Reviews**

#### **Fostering of Links**

Links between government employees in-country, and between government and non-government bodies were fostered as a result of the RETA Project as a whole, and in particular in relation to the Legal Reviews. The National Environment Management Seminars, and in particular the meetings specifically dealing with environmental legal matters, brought together government employees and members of community groups who had not necessarily worked together before. A particular example of fostering of links was the meeting generated by the Legal Review in the Federated States of Micronesia. This meeting brought together for the first time the Attorneys-General (or their representatives) of the four States and of the National government for the specific purpose of discussing the rationalisation of environmental laws in that country.

#### **Increasing Awareness**

The very fact that the Legal Reviews were undertaken contributed a great deal to the awareness of government and non-government bodies for the need for improved environmental legislation and relevant administrative structures across the board.

## **Solomon Islands Environment Bill**

One of the chief recommendations of the Review of Environmental Law in Solomon Islands was the enactment of a comprehensive *Environment Act*. This need had been identified by previous consultants. However, it appears that the Review was a catalyst for the request to SPREP and subsequently to the Environmental Law Centre of the World Conservation Union to assist with the drafting of the Solomon Islands *Environment Bill*.

## **Workshop on Strengthening Environmental Legislation in the Pacific Region**

This Workshop was separately funded by the Environmental Law and Institutions Programme Activity Centre of UNEP, with the support of SPREP, the Environmental Law Centre of the World Conservation Union, the World Bank and the United Nations University. There was however a strong relationship between the Workshop and the RETA Project. The fact that the Legal Reviews under both the RETA and the NEMS Projects had been done or were underway in quite a number of other Pacific Island countries, contributed a great deal to the success of the Workshop (see further Boer 1993).

## **Future Actions for the Implementation of the Recommendations and Suggestions made in the Legal Reviews**

The major task now is to ensure that appropriate national (and provincial or state, as appropriate) legislation is developed, which reflects the needs of each country, and which incorporates the principles of sustainable development.

The question of resources of the RETA countries in terms of their capacities to implement the recommendations and suggestions contained in the Legal Reviews must be at the forefront of any programme for the development of environmental legislation. Ideally, SPREP should play a major role in ensuring that this legislation is developed. Model legislation, containing the basic provisions, could be drafted and then be adapted to suit the circumstances of each individual country. The role of the SPREP Legal Officer, together with other environmental law experts in the region, is vital in assisting with this legislation.

The ways in which the development of environmental legislation can be promoted are canvassed below.

## **The Implementation of International Conventions**

A wide range of international environmental Conventions and Agreements are directly relevant to Pacific Island countries, and will require domestic legislation to implement them. Some of these Conventions have already been signed and ratified by a number of Pacific Island countries. Other relevant Conventions are still under consideration by these countries. There appears to be a great need for these international instruments to be adequately explained in order for countries to be encouraged to accede to them and to implement them properly. The most relevant instruments for the Pacific are as follows:

- *Convention for the Protection of the World Cultural and Natural Heritage 1972;*
- *Convention on the Conservation of Nature in the South Pacific 1976;*
- *The United Nations Convention on the Law of the Sea 1982 ;*

- *Convention for the Protection of the Natural Resources and Environment of the South Pacific 1986;*
- *South Pacific Forum Fisheries Convention 1979;*
- *Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific 1989;*
- *Convention on International Trade in Endangered Species of Wild Flora and Fauna 1973;*
- *Framework Convention on Climate Change 1992;*
- *Convention on the Conservation on Biological Diversity 1992;*
- *Vienna Convention for the Protection of the Ozone Layer 1985;*
- *Montreal Protocol and its amendments.*

In addition, the *Rio Declaration on Environment and Development, Agenda 21* and the *Statement of Forest Principles* agreed at the UNCED Conference also need to be more particularly focused and discussed through regional workshops and seminars in terms of their applicability to and implementation in Pacific Island countries.

A particularly urgent task seems to be for the *Convention on the Conservation of Nature in the South Pacific* and the *Convention for the Protection of the Natural Resources and Environment of the South Pacific, Noumea 1986* to be thoroughly reassessed and updated. This would entail a series of meetings of the parties and intending parties, preferably through the medium of the regular SPREP Intergovernmental Meetings; it would also entail a good deal of research work.

It would also be advisable to set up a more adequate mechanism for the implementation of all major Conventions affecting the Pacific Island region. One strategy would be for a Treaty Implementation Officer position to be established at SPREP Headquarters in Apia, in addition to the existing Legal Officer position. The Treaty Implementation Officer would be responsible for conducting training programs on a regional and national basis to assist in capacity-building in order to encourage adherence to relevant Conventions by a larger number of countries. In addition, he or she would be responsible giving specific legal and policy advice on the need for legislative and administrative mechanisms for the implementation of conventions.

## Training

### Workshops in Environmental Law

The interest generated by the National Environmental Management Strategy seminars over the two years of the RETA project, together with the enthusiasm shown at the Apia Workshop *Strengthening Environmental Legislation in the Pacific Region* in November 1992, clearly indicates that a series of regional and in-country workshops on a variety of environmental law subject matters would be welcomed. The following areas could be canvassed in these Workshops: Environmental Impact Assessment Law, Heritage Law, Civil Enforcement, Pollution Law, Prosecution, Environmental Dispute Resolution.

Resource persons and short courses could be drawn from the following institutions in the Asian and Pacific region:

- The Law School at the University of the South Pacific;
- The Asia Pacific Environmental Law Centre, established at the National University of Singapore in 1996;

- Environmental Law and Institutions Programme Activity Centre (ELI/PAC), UNEP, Nairobi, which conducts global and regional training programmes in international and national environmental law;
- Australian Centre for Environmental Law, based at the University of Sydney, University of Adelaide and the Australian National University; the Centre offers a range of postgraduate programmes in environmental and resources law;
- Natural Resources Law Programme, University of Wollongong; this programme also offers a variety of postgraduate courses in natural resources and environmental law;
- Faculty of Law, University of Auckland; this Faculty is establishing a variety of courses in environmental and resources law.

## **Environmental Law Training Programmes**

A number of Australian institutions have extensive experience in environment-related training both within and outside Australia; these include:

- The Australian Centre for Pacific Development and Training (ACPAC), based in Sydney;
- Graduate School of the Environment, Macquarie University, Sydney;
- Centre for Environmental Studies, James Cook University, Townsville, Queensland;
- Centre for Resource and Environmental Studies, Australian National University;
- Mawson Centre for Environmental Studies, University of Adelaide;
- School of Planning, University of Auckland.

## **Scholarship Scheme for Training in Environmental Law**

In order to promote the implementation of environmental legislation in Pacific Island countries, it would be highly desirable to establish a scholarship scheme to allow government employees and members of other relevant organisations or individuals to study at postgraduate Diploma or Masters level, in institutions in countries such as Australia, New Zealand, Singapore, Canada and the United States.

In addition, the Environmental Law and Institutions Programme Activity Centre of UNEP (ELI/PAC) conducts an attachment programme, whereby lawyers and others from developing countries are able to visit relevant institutions, including ELI/PAC, for short periods to gain experience in particular areas of environmental law.

## **Electronic Mail Network**

Considerable potential for the development of an electronic mail communications network exists through the Internet, for people working in environmental areas in the Pacific. Although establishment and running costs of such a system can be considerable, the benefits of linking with each other, as well as being connected with all the major electronic networks, including such bodies as the United Nations Environment Programme and the United Nations Development Programme, as well as with Universities and libraries around the world, would prove to be invaluable in the longer term. This network could be coordinated through SPREP.

## Role of International Agencies

Given the central importance of environmental law and the implementation of the environmental management strategies, as recognised in many of the recent international environmental documents and Conventions, there is a clear role for a range of international agencies and aid bodies to play in the promotion of environmental legal mechanisms at international, regional and national basis. The main bodies include:

- The Environmental Law and Institutions Programme Activity Centre (ELI/PAC) of the United Nations Environment Programme in Nairobi;
- the Asian Development Bank in Manila;
- the Global Environment Facility of the World Bank, in Washington DC;
- the Economic and Social Commission for Asia and the Pacific in Bangkok;
- The Environmental Law Centre of the World Conservation Union in Bonn;
- International environmental conservation organisations such as The Nature Conservancy, Greenpeace International, the World Wide Fund for Nature, all of which already have programmes running in various parts of the Pacific;
- The Environmental Law Institute, Washington DC.

In addition, bilateral arrangements with the environmental law units within national governments, particularly Australia, New Zealand, the United States and Canada could be established. Links with other countries which regularly fund environmental initiatives could also be further promoted.

## Role of SPREP

Given the interest generated by the Regional Environment Technical Assistance Project and its associated Legal Reviews, there are likely to be more requests emanating from individual countries to SPREP for assistance with particular projects. The Legal Reviews have indicated a wide range of areas in which legislation and associated mechanisms are required. Those recommendations are likely to be used as a basis for requests. The role of SPREP in the coordination of environmental law services in the Pacific region is crucial, as part of the broad role spelt out in the 1993 *Agreement Establishing the South Pacific Regional Environment Programme* (see Appendix).

The need for environmental law and related services exists on several levels. First, at the domestic level, there is a need, first and foremost, to assist in the process of capacity-building within environmental administrations. Building on the increased administrative capacity, there is a need to update and to integrate all environment and resource-related legislation, with a view to building processes for the achievement of sustainable development. Further, there is a need for these countries to pay closer attention to the implementation of international treaties, both global and regional. For this to occur, there needs to be a wider realisation that national and international environmental law must be much more successfully integrated than at present. In other words, any new legislation should incorporate the specific obligations and terminology, as far as appropriate for each country, while at the same time recognising the need to be sensitive to the particular cultural, social and historical context of each jurisdiction.

There is also a need to ensure that overlap of consultancies and other work is avoided as much as possible, so that programmes can be properly targeted, without confusion within countries as to which body is providing advice. Presently, the South Pacific Regional Environment Programme has one Legal Officer. Perhaps one of the priorities for the adequate implementation of the

recommendations found in the Legal Reviews in addition to the Treaty Implementation Officer suggested above, is for the establishment of an adequately resourced Environmental Law Office within SPREP headquarters staffed by experienced environmental lawyers able to cover the British-based, French-based and United States-based legal systems operating in the various countries of the Pacific region.

## **7.3 General Conclusion**

In the South Pacific, there will be an ongoing need for legal analysis and legislative drafting in relation to environmental management. Currently, few Pacific countries have adequate home-grown advice in environmental law matters. This is particularly so in the countries covered by this Report. The need for in-country training in the area of environmental law and policy for non-lawyer professionals within government departments cannot be over-emphasised. In addition, training for lawyers, both in-country and in postgraduate programmes elsewhere also appears to be a high priority. The scholarship scheme outlined above would need to be thoroughly researched, costed and targeted. It would need to be established on a long term basis, preferably in collaboration with the University of the South Pacific and in partnership with other institutions in the region.

The National Environmental Management Strategies and the Reviews of Environmental Law in the five countries indicate a number of common issues and some differences. The common issues are the need for more adequate legislative regimes for the protection of the natural and cultural environments of each country and sustainable development of their natural resources, plus the need to preserve customary land use and practices. Differences relate to the varied cultural contexts and the rates of development of the environmental law of each country. Thus in the former Trust territories of the Federated States of Micronesia and the Republic of the Marshall Islands, the legal and bureaucratic structures for environmental management are relatively well established because of the influence of United States legislative schemes. The three countries which derive much of their legal system from Britain possess a less developed legislative and administrative system for environmental management. These differences need to be taken into account in any regional programme for the further development of national environmental law .

The National Environmental Management Strategies and the Environmental Law Centre of the World Conservation, the Environmental Law and Institutions Programme Activity Centre of UNEP, the Economic and Social Commission for Asia and the Pacific, the Asian Development Bank, the Global Environment Facility and some of the relevant non-government organisations operating in the Pacific region clearly have roles to play in achieving the aim of adequate environmental management regimes in these Pacific island countries. In this endeavour, the legal office of SPREP has a vital role to play in ensuring that there is a high degree of collaboration between these organisations.

In order to achieve the harmonisation of environmental policy and economic decision making at national and provincial level, there is a need to introduce comprehensive and consistent environmental legislation. To be as modern and up to date as possible, any legislation enacted needs to contain a set of clearly defined principles of sustainable development for the natural and cultural resources of each country. In addition, there is a general need for the departments of government which deal with environmental management in each country to be adequately resourced and staffed. Assistance in these matters from all countries associated with or with economic interests in the region will be of great importance as Pacific island countries strive for the goal of ecological, economic and cultural sustainability.



# Appendix

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## Agreement Establishing the South Pacific Regional Environment Programme, 1993

The Parties,

*Recognising* the importance of protecting the environment and conserving the natural resources of the South Pacific region;

*Conscious* of their responsibility to preserve their natural heritage for the benefit and enjoyment of present and future generations and their role as custodians of natural resources of global importance;

*Recognising* the special hydrological, geological, atmospheric and ecological characteristics of the region which require special care and responsible management;

*Seeking* to ensure that resource development takes proper account of the need to protect and preserve the unique environmental values of the region and of the principles of sustainable development;

*Recognising* the need for co-operation within the region and with competent international, regional and sub-regional organisations in order to ensure coordination and cooperation in efforts to protect the environment and use the natural resources of the region on a sustainable basis;

*Wishing to establish* a comprehensive Programme to assist the region in maintaining and improving its environment and to act as the central coordinating point for environmental protection measures within the region;

*Recalling* the decision taken at the Conference on the Human Environment in the South Pacific, held at Rarotonga, Cook Islands, on 8-11 March 1982, to establish the South Pacific Regional Environment Programme as a separate entity within the South Pacific Commission;

*Recalling* with appreciation the role of UNEP, ESCAP, the South Pacific Forum and the South Pacific Conference in supporting the establishment and encouraging the development of the South Pacific Regional Environment Programme as a regional programme and as part of the UNEP Regional Seas Programme;

*Noting* with satisfaction that the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, done at Noumea on 24 November 1986, and its related Protocols, and the Convention on Conservation of Nature in the South Pacific, done at Apia on 12 June 1976, entered into force in 1990;

*Appreciative* of the valuable efforts that have been undertaken by the South Pacific Regional Environment Programme to promote environmental protection within the region and the support given to the Programme by the South Pacific Commission;

*Taking into account* the decisions of the Third and Fourth Intergovernmental Meetings of the South Pacific Regional Environment Programme, held in Noumea in September 1990 and July 1991, and the endorsement of the Thirtieth South Pacific Conference, held in Noumea in October 1990; and

*Desiring to accord* the South Pacific Regional Environment Programme the full and formal legal status necessary to operate as an autonomous body, to manage fully its own affairs and to

provide the basis for the continued operation of SPREP in accordance with the traditions of cooperation in the region;

Have Agreed as Follows:

## **Article 1**

### **Establishment of SPREP**

1. The South Pacific Regional Environment Programme (hereinafter referred to as SPREP) is hereby established as an intergovernmental organisation.
2. The organs of SPREP are the SPREP Meeting and the Secretariat.
3. The Secretariat shall be located in Apia, Western Samoa, unless the SPREP Meeting decides otherwise.

## **Article 2**

### **Purposes**

1. The purposes of SPREP are to promote co-operation in the South Pacific region and to provide assistance in order to protect and improve its environment and to ensure sustainable development for present and future generations. SPREP shall achieve these purposes through the Action Plan adopted from time to time by the SPREP Meeting, setting the strategies and objectives of SPREP.
2. The Action Plan shall include:
  - (a) coordinating regional activities addressing the environment;
  - (b) monitoring and assessing the state of the environment in the region including the impacts of human activities on the ecosystems of the region and encouraging development undertaken to be directed towards maintaining or enhancing environmental qualities;
  - (c) promoting and developing programmes, including research programmes, to protect the atmosphere and terrestrial, freshwater, coastal and marine ecosystems and species, while ensuring ecologically sustainable utilisation of resources;
  - (d) reducing, through prevention and management, atmospheric, land based, freshwater and marine pollution;
  - (e) strengthening national and regional capabilities and institutional arrangements;
  - (f) increasing and improving training, educational and public awareness activities; and
  - (g) promoting integrated legal, planning and management mechanisms.

### **Article 3** **SPREP Meetings**

1. The SPREP meeting shall be open to the Membership Parties to this Agreement and, with the appropriate authorisation of the Party having responsibility for its international affairs, of each of the following
  - American Samoa
  - French Polynesia
  - Guam
  - New Caledonia
  - Northern Mariana Islands
  - Palau
  - Tokelau
  - Wallis and Futuna
2. The SPREP Meeting shall be held at such times as the SPREP Meeting may determine. A special SPREP Meeting may be held at any time as provided in the Rules of Procedure.
3. The SPREP Meeting shall be the plenary body and its functions shall be:
  - (a) to provide a forum for the Membership Parties to consult on matters of common concern with regard to the protection and improvement of the environment of the South Pacific region and, in particular, to further the purposes of SPREP;
  - (b) to approve and review the Action Plan for SPREP and to determine the general policies of SPREP;
  - (c) to adopt the report of the Director on the operation of SPREP;
  - (d) to adopt the work programmes of SPREP and review progress in their implementation;
  - (e) to adopt the Budget estimates of SPREP;
  - (f) to make recommendations to Members;
  - (g) to appoint the Director;
  - (h) to give directions to the Director concerning the implementation of the Work Programme;
  - (i) to approve rules and conditions for the appointment of the staff of the Secretariat; and,
  - (j) to carry out such other functions as are specified in this Agreement or are necessary for the effective functioning of SPREP.
4. The SPREP Meeting may establish such committees and sub-committees and other subsidiary bodies as it considers necessary.
5. In addition to the functions referred to in paragraph (3) of this Article, the SPREP Meeting shall, through such mechanisms as it considers appropriate, consult and cooperate with the Meetings of Parties to:

- (a) the Convention on Conservation of Nature in the South Pacific adopted at Apia on 12 June 1976;
- (b) the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region adopted at Noumea on 24 November 1986 and related Protocols; and
- (c) any other international or regional Agreement that may be concluded for the protection of the environment of the South Pacific region,

with a view to ensuring the achievement of the purpose of SPREP and of this Agreement and facilitating the achievement of the purposes of those Conventions.

#### **Article 4** **Meeting Procedure**

- 1. The SPREP Meeting shall elect from among its Members a Chairperson and such other officers as it decides, who shall remain in office until the next SPREP Meeting. In principle, the role of the Chairperson shall rotate as decided by the SPREP Meeting.
- 2. The SPREP Meeting shall adopt its own Rules of Procedure.
- 3.
  - (a) The Parties shall ensure the full involvement of all Members in the work of the SPREP Meeting. The work of the SPREP Meeting shall be conducted on the basis of consensus of all Members, taking into account the practices and procedures of the South Pacific region.
  - b) In the event that a decision is required in the SPREP Meeting, that decision shall be taken by a consensus of the Parties. The consensus of the Parties shall ensure that the views of all Members of the SPREP Meeting have been properly considered and taken into account in reaching that consensus.
- 4. The attendance by observers in SPREP Meetings shall be provided for in the Rules of Procedure.
- 5. The SPREP meeting shall be convened by the Director.
- 6. The working languages of SPREP shall include English and French

#### **Article 5** **Budget**

- 1. The Budget estimates for SPREP shall be prepared by the Director.
- 2. Adoption of the Budget of SPREP and determination of all other questions relating to the Budget shall be by consensus.
- 3. The SPREP Meeting shall adopt financial regulations for the administration of SPREP. Such regulations may authorise SPREP to accept contributions from private and public sources.

## **Article 6**

### **Director**

1. The Director of SPREP shall be the head of the Secretariat.
2. The Director shall appoint staff to the Secretariat in accordance with such rules and conditions as the SPREP Meeting may determine.
3. The Director shall report annually to the South Pacific Conference and the South Pacific Forum on the activities of SPREP.
4. The Director shall be responsible to the SPREP Meeting for the administration and management of SPREP and such other functions as the SPREP Meeting may decide.

## **Article 7**

### **Functions of the Secretariat**

1. The functions of the Secretariat shall be to implement the activities of SPREP, which shall include:
  - (a) to promote, undertake and co-ordinate the implementation of the SPREP Action Plan through the annual Programmes of Work, and review and report regularly on progress thereon to Members;
  - (b) to carry out research and studies as required to implement the SPREP Action Plan through the annual Programmes of Work;
  - (c) to advise and assist Members on the implementation of activities carried out under the SPREP Action Plan or consistent with its purpose;
  - (d) to provide a means of regular consultation among members on the implementation of activities under the SPREP Action Plan and on other relevant issues;
  - (e) to co-ordinate and establish working arrangements with relevant national, regional and international organisations;
  - (f) to gather and disseminate relevant information for Members and other interested Governments and organisations;
  - (g) to promote the development and training of personnel of Members and to promote public awareness and education, including the publication of materials;
  - (h) to assist Members in the acquisition, interpretation and evaluation of scientific and technical data and information;
  - (i) to undertake such other activities and follow such procedures as the SPREP Meeting may decide; and
  - (j) to seek financial and technical resources for SPREP.
2. In addition to the functions described in paragraph (1) of this Article, the Secretariat shall be responsible for the co-ordination and implementation of any functions that the SPREP Meeting may agree to undertake relating to:
  - (a) the Convention on Conservation of Nature in the South Pacific;

- (b) the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, the Protocol for the Prevention of Pollution of the South Pacific Region by Dumping, and the Protocol Concerning Cooperation in Combating Pollution Emergencies in the South Pacific Region; and
- (c) any other international or regional Agreement that may be concluded for the protection of the environment of the South Pacific region

### **Article 8**

#### **Legal Status, Privileges and Immunities**

1. SPREP shall have such legal personality as is necessary for it to carry out its functions and responsibilities and, in particular, shall have the capacity to contract, to acquire and dispose of moveable and immovable property and to sue and be sued.
2. SPREP, its officers and employees, together with representatives to the SPREP Meeting shall enjoy such privileges and immunities necessary for the fulfilment of their functions, as may be agreed between SPREP and the Party in whose territory the Secretariat is located, and as may be provided by other Parties.

### **Article 9**

#### **Sovereign Rights and Jurisdiction of States**

Nothing in this Agreement shall be interpreted as prejudicing the sovereignty of the Parties over their territory, territorial sea, internal or archipelagic waters, or their sovereign rights:

- (a) in their exclusive economic zones and fishing zones for the purpose of exploring or exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the sea-bed and of the sea-bed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone; or,
- (b) over their continental shelves for the purpose of exploring them and exploiting the natural resources thereof.

### **Article 10**

#### **Signature, Ratification, Acceptance,**

#### **Approval and Accession**

1. This Agreement shall be open for signature from the sixteenth day of June 1993 until the sixteenth day of June 1994, and shall thereafter remain open for accession, by:
  - Australia
  - Cook Islands
  - Federated States of Micronesia
  - Republic of Fiji
  - Republic of France

- Republic of Kiribati
  - Republic of the Marshall Islands
  - Republic of Nauru
  - New Zealand
  - Niue
  - Papua New Guinea
  - Solomon Islands
  - Kingdom of Tonga
  - Tuvalu
  - United Kingdom of Great Britain and Northern Ireland on behalf of Pitcairn Islands
  - United States of America
  - Republic of Vanuatu
  - Western Samoa
2. This Agreement is subject to ratification, acceptance, or approval by the Signatories.
  3. Reservations to this Agreement shall not be permitted.
  4. This Agreement shall enter into force thirty days from the date of deposit of the tenth instrument of ratification, acceptance, approval, or accession with the Depositary, and thereafter for each State, thirty days after the date of deposit of its instrument of ratification, acceptance, approval, or accession with the Depositary.
  5. Following the expiry of the period when this Agreement is open for signature, and provided that this Agreement has entered into force, this Agreement shall be open for accession by any State other than those referred to in this Article which, desiring to accede to this Agreement, may so notify the Depositary, which shall in turn notify the Parties. In the absence of a written objection by a Party within six months of receipt of such notification, a State may accede by deposit of an instrument of accession with the Depositary, and accession shall take effect thirty days after the date of deposit.
  6. The Government of Western Samoa is hereby designated as the Depositary.
  7. The Depositary shall transmit certified copies of this Agreement to all Members and shall register this Agreement in accordance with Article 102 of the Charter of the United Nations.

## **Article 11**

### **Amendment and Withdrawal**

1. Any Party may propose amendments to this Agreement for consideration by the SPREP Meeting. The text of any amendment shall be circulated to Members no less than six months in advance of the Meeting at which it is to be considered.
2. An amendment shall be adopted at a SPREP meeting by consensus of all Parties attending the SPREP Meeting and shall enter into force thirty days after the receipt by the Depositary of instruments of ratifications acceptance or approval of that amendment by all Parties.

3. Any Party to this Agreement may withdraw from this Agreement by giving written notice to the Depository. Withdrawal shall take effect one year after receipt of such notice by the depository.

Done at Apia this sixteenth day of June 1993 in a single copy in the English and French languages, the two texts being equally authentic.



# Bibliography

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- Adede, A. Address to Workshop on the International Covenant on Environment and Development, IUCN General Assembly, Buenos Aires, January 1994 (unpublished).
- Angelo, A. H. *Environmental Legislation Review - Tokelau*. Report for the South Pacific Regional Environment Programme and the Office of Tokelau Affairs, 1993.
- Annalen der Hydrographie 1886.
- Asian Development Bank/SPREP. *Work Plan for the Solomon Islands*, Regional Environmental Technical Assistance, November 1990 to April 1993.
- Baines, G. *Environmental Management for Sustainable Development in the Solomons*, a Report on Environment and Resources, Report Prepared for the Government of the Solomon Islands.
- Behrens, J. and Tsamenyi, M. (eds). Workshop Proceedings, *Our Common Future*, Law School, University of Tasmania), 1991.
- Boer, B. W. "Institutionalising Ecologically Sustainable Development: The Roles of National, State and Local Governments in Translating Grand Strategy into Action" (1995a) 31 *Willamette Law Review* 307.
- Boer, B. W. "The Globalisation of Environmental Law: The Role of the United Nations" (1995b) 20 *Melbourne University Law Review* 101.
- Boer, B. W. "Environmental Law and the South Pacific: Law of the Sea Issues" in Crawford, J. and Rothwell, D. R. (eds.) *The Law of the Sea in the Asian Pacific Region*, 67-92, 1995.
- Boer, B.W. (ed). *Strengthening Environmental Legislation in the Pacific Region: Workshop Proceedings*, South Pacific Regional Environment Programme, 1993.
- Burhenne, W. E. and Hassan, P. Foreword to the *Draft Covenant on Environment and Development*, as presented to the United Nations Congress on Public International Law in March 1995.
- Brundtland, G. H. Quoted in Pearce, D., Markandya, A., Barbier, E. B. 1989. *Blueprint for a Green Economy* (A report for the United Kingdom Department of the Environment), Earthscan Publications, London, 1987.
- Campbell, D. "Local courts in the Solomon Islands", in *Pacific Courts and Justice*, Institute of Pacific Studies, 45, 1977.
- Carew-Reid, J. *Environment, Aid and Regionalism in the South Pacific*, National Centre for Development Studies, Pacific Research Monograph No 22, Australian National University, 1989.
- Carew-Reid, J. Prescott-Allen, R. Bass, S. Dalai-Clayton, B. *Strategies for National Sustainable Development: A Handbook for their Implementation*, prepared by IUCN in collaboration with the International Institute for Environment and Development, Earthscan, 1994.
- Castro, F. *Land Tenure and Rural Productivity in the Pacific Islands*, UNFAO/ SPREP/ USP, Institute of Pacific Studies, Suva, Fiji. 1984
- Cook Islands Census on Agriculture 1988*.
- Cook Islands State of the Environment Report 1992*.
- Cook Islands State of the Environment Report 1992* prepared by Teariki Rongo, Director, Conservation Service.

- Compact of Free Association between the Government of the United States and the Government of the Federated States of Micronesia*. U.S. Public Law 99-239, 99 Stat. 1770, 1986.
- Convention for the Protection of the Natural Resources and Environment of the South Pacific Region and Related Protocols*, UNEP (Environmental Programme), Nairobi, 1987.
- Crawford, M. *Task Force on Environmental Management and Sustainable Development; State of the Environment Report, Working Draft, Republic of the Marshall Islands, 1991*.
- Crocombe, R. *The South Pacific; An introduction*, Institute of Pacific Studies, University of the South Pacific, 1989.
- Crocombe, R. "Tomorrow's customary tenure in relation to conservation", in Thomas, P. E. J. *Report of the Workshop on Customary Tenure, Traditional Resource Management and Nature Conservation*, SPREP, 1988
- Crocombe, R. "The Cook Islands, Fragmentation and Emigration" in *Land Tenure in the Pacific*, Institute of Pacific Studies, University of the South Pacific, Suva (1964) *Land Tenure in the Cook Islands*, Oxford University Press, Melbourne, 1987
- Crocombe, R. and Marsters, W. "Land Tenure in a Test Tube", in *Land Tenure in the Atolls*, Institute of Pacific Studies, University of the South Pacific, Suva, 1987.
- Dahl, C, Wilson-Molina, A. M. *Kosrae Island Resources Management Program Guide*, Kosrae State Coastal Resource Management Committee, April, 1991.
- Dahl, C, *Recommendations for a Kosrae Island Resource Management Program*, Preliminary Report, National Sea Grant College Program, Pacific Islands Network, 1991.
- Dunlap, T. P. "Marshallse Property Law: A Clash between Native Customs and Western Law" (1977) Nov/Dec *Californian State Bar Journal* 500.
- Eaton, P. "Wildlife management areas in Papua New Guinea", in Thomas, P. E. J. (ed). *Report on the Workshop on Customary Tenure, Traditional Resource Management and Nature Conservation*, South Pacific Regional Environment Programme, New Caledonia, 1989.
- Eaton, P. *Land Tenure and Conservation : Protected Areas in the South Pacific*. South Pacific Regional Environment Programme, January 1985.
- Emory, K. P. "Kapingamarangi, social and religious life of a Polynesian atoll", Bernice, P. *Bishop Museum Bulletin* 228, Honolulu, Hawaii, 1965.
- ESCAP. *Environment Management Plan for the Kingdom of Tonga, 1990*.
- Fa'anunu Haniteli. "Agriculture in the South Pacific with Particular Emphasis on the Multiple Cropping System in Tonga".
- Fakalata, O. "An introduction to Tonga and its Geography, Population, Agriculture, Soils and main Pest Problems" Conference Paper.
- Federated States of Micronesia *Nationwide Environmental Management Strategies for the Federated States of Micronesia, 1992*.
- Federated States of Micronesia. *Draft Second National Development Plan, 1990-1994, 1992*
- Federated States of Micronesia. *Compilation of Agreements Between the Government of the United States and the Freely Associated State of the Federated States of Micronesia*, The U.S. President's Personal Representative for Micronesian Status Negotiations, Washington, DC 1987.
- Federated States of Micronesia. *First National Development Plan, 1985-1989, 1985*.

- Federated States of Micronesia. *Memorandum of Understanding with Respect to the Division of Grant Assistance under the Compact of Free Association among the National and State Governments of the Federated States of Micronesia*, signed January and February, 1984.
- Fingleton, J. S. *Final Report to the Government of Solomon Islands on Forestry Legislation, Assistance in the Revision of Forestry Policy and Legislation Consultancy Report No 3*, Food and Agriculture Organisation of the United Nations, Rome, 1990.
- Fischer, J. L. *The Eastern Carolines*, New Haven, Connecticut, USA, 1966.
- Fischer, J. L. "Contemporary Ponape Island Land Tenure", *Land Tenure Patterns, Trust Territory of the Pacific Islands*, Vol. 1, Part II, 1958.
- Food and Agriculture Organisation. *FAO Interim Report on Legislation for Conservation and Restoration in Land Use to the Government of the Cook Islands, 1991*.
- Food and Agriculture Organisation. *The Revision of the Fisheries Legislation in Solomon Islands* (Final Report by G Moore), Food and Agriculture Organisation of the United Nations, Rome 1987.
- Forster, M. *Environmental Law in Vanuatu; a Description and Valuation*, A Report prepared on behalf of the IUCN Environmental Law Centre at the request of the Asian Development Bank, 1991.
- Forum Fisheries Agency. *Current Fisheries Development*, 1990
- Forum Fisheries Agency. *The Forum Fisheries Agency: Achievements, Challenges and Prospects*, University of the South Pacific, 1990.
- Foundation for Environmental Law and Development, (London). *Draft Convention for the Conservation and Wise Use of Forests* (Discussion paper only), 1991.
- Fowler, R. "Environmental Law and its Administration in Australia" 1 *Environmental and Planning Law Journal*, 1984.
- Gatu, B. "Dispute settlement in the Solomon Islands", in *Pacific Courts and Justice*, Institute of Pacific Studies, Fiji, 1977.
- Harding, E. *Mission Report to Solomon Islands, United Nations, Economic and Social Commission for Asia and the Pacific Division of Industry, Human Settlements and Environment*, 8-22 March 1990.
- Hibberd, J. J and Schenk J. *Country Report for the 1992 UNCED Conference: Solomon Islands*, South Pacific Regional Environment Programme, 1992.
- Halavatau, S. M. and Asghar, M. "Land Use and Conservation Farming in Tonga" *Alafua Agricultural Bulletin*, Vol. 14, No. 3, pp 41-47.
- Honiara Town Council. *Honiara Town Council Development Plan 1988-1992*, 1988.
- IUCN, WWF, UNEP. *Caring For the Earth: A Strategy for Sustainable Living*, 1991.
- IUCN. *Guide to the Convention on the Conservation of Biological Diversity*, 1994.
- IUCN. *From Strategy to Action: The IUCN Response to the Report of the World Commission on Environment and Development*, IUCN, Gland, Switzerland, 1989.
- IUCN. *World Conservation Strategy*, International Union for the Conservation of Nature and Natural Resources, World Wildlife Fund and United Nations Environment Programme, 1980.
- Kosrae State. *Kosrae State Code of Laws*, 1985.
- Kosrae State. "Proposed Intestate Succession", *Kosrae State Land Commission Policy Guideline*, 1992.

- Kosrae State. "Kosraean Customary Land Acquisitions", *Kosrae State Land Commission Policy Guideline*, 1992.
- Land Tenure in the Atolls*. Institute of Pacific Studies University of the South Pacific, 1987.
- Larmour, P. "Solomon Islands", in *Decentralisation in the South Pacific: Local, Provincial and State Government in Twenty Countries*, University of the South Pacific, 1985.
- Lausche, B. J. *Guidelines for Protected Areas Legislation*, IUCN Environmental Policy and Law Paper, No. 16.
- Lawrence, P. "Regional Strategies for the Implementation of Environmental Conventions: Lessons from the South Pacific?" (1994) 15 *Australian Yearbook of International Law* 203.
- Leary, T. *Survey of Wildlife Management in Solomon Islands SPREP Project PA 17*, Final Report, February 1990.
- Leary, T. *Solomon Islands State of the Environment Report*, South Pacific Regional Environment Programme, Environment and Conservation Division, Ministry of Natural Resources, Honiara, 1991.
- Lees, A. *A Protected Forests System for the Solomon Islands* (produced for the Environment Division, Ministry of Natural Resources on behalf of the National Parks and Wildlife Service, Australia), Maruia Society, New Zealand, 1990.
- MacKinnon, J. and K., Child, G. and Thorsell, J. *Managing Protected Areas in the Tropics*, IUCN, Gland, Switzerland, 1986.
- Mahoney, F. *Land Tenure Patterns on Yap Island*, Vol 1. Land Tenure Patterns, Trust Territory of the Pacific Islands, 1958.
- Malaita Province. *Malaita Province Provincial Plan 1988-1992*, 1988.
- Maude, A and Sevele F. "Tonga, Equality Overtakes Privilege", in *Land Tenure in the South Pacific*, 1987.
- McGrath, W. A. and Wilson, W. S. "The Marshall, Caroline and Mariana Islands", Land Tenure in the Pacific, Crocombe *et al.* Fiji: Institute of Pacific Studies, University of the South Pacific. 1987.
- Menesia, L. *Book about Custom*, Western Provincial Government 1987.
- Ministry of Lands. *Land; Proposal for a Government Policy*, (no date, presumed 1990).
- Ministry of Natural Resources. *Forestry Division - Forest Policy*, 1989.
- Ministry of Natural Resources. Technical Assistance for the drafting of the Energy Act for the Solomon Islands, (internal draft memorandum), 1991.
- Ministry of Natural Resources. Forestry Division, *Annual Report*, 1989, Government Printing Office, Solomon Islands, 1991a.
- Ministry of Natural Resources. *Provincial Reports on the Environment*, Background Paper No 1, National Environmental Management Strategy Seminar, November 1991, Honiara, 1991b.
- Ministry of Natural Resources. *Sector Reports on the Environment*, Background Paper No 2, National Environmental Management Seminar, November 1991, Honiara, 1991c.
- Ministry of Natural Resources. *State of the Environment Report*, Executive Summary, Background Paper No 3, National Environmental management Strategy Seminar, November 1991, Honiara, 1991d.
- Ministry of Tourism and Aviation and Tourism Council of the South Pacific. *Solomon Islands Tourism Development Plan 1991-2000*, 1990.

- Ministry of Tourism and Aviation. *Advantages and benefits to Solomon Islands of joining the World Heritage Convention*, Educational Awareness Programme, 1991a.
- Ministry of Tourism and Aviation. *The World Heritage Convention*, Educational Awareness Programme, 1991b.
- Ministry of Tourism and Aviation. *Rennell Island and Morovo Lagoon Proposed World Heritage Sites*, Educational Awareness Programme, 1991c.
- National Environment Management Strategy Seminar. *Provincial Reports on the Environment*, Background Paper No 1; Ministry of Natural Resources, 1991a.
- National Environment Management Strategy Seminar. *Sector Reports on the Environment*, Background Paper No 2; Ministry of Natural Resources, 1991b.
- Netherlands Institute for the Law of the Sea. *International Organisations and the Law of the Sea, Documentary Yearbook 1987*, Vol. 3, Graham & Trotman, Martinus Nijhoff, London/Dordrecht/Boston, 1987.
- Nichols BG. Letter of 10.12.90 to Minister of Natural Resources regarding *Forest Resources and Timber Utilisation (Amendment) Act 1990*.
- Ombudsman, *Report of the Ombudsman for the Year Ended 30 June 1991*, Solomon Islands.
- Ombudsman, *Report of the Ombudsman for the Year Ended 30 June 1989*, Solomon Islands.
- Office of the Ombudsman, *Third Annual Report of the Ombudsman, July 1983-June 1984*, Solomon Islands.
- Office of the Ombudsman, Minutes of Eleventh Conference of Australasian and Pacific Ombudsman, 8-12 October 1990.
- Pain, N. "Human Rights and the Environment"; *Human Rights and the Environment Workshop*, International Environmental Law Centre, held at the University of New South Wales, October 12 1991, (on file, Australian Centre for Environmental Law, Faculty of Law, University of Sydney).
- Paine, J. R. *Cook Islands, An Overview of its Protected Areas System*, World Conservation Monitoring Centre, United Kingdom, 1989.
- Peteru, C. *Environmental Legislation Review - Niue*. Report for the South Pacific Regional Environment Programme and the Government of Niue, 1993a.
- Peteru, C. *Environmental Legislation Review - Western Samoa*. Report for the South Pacific Regional Environment Programme and the Government of Western Samoa, 1993b.
- Phelan, M. *Report to the Legal and Administrative Working Group, Federated States of Micronesia National Seminar on Environmental Planning and Management for Sustainable Development*, Palikir, Pohnpei, February 5-7, 1992.
- Pohnpei State. *Pohnpei State Statistics Yearbook 1991*, Office of Budget, Planning & Statistics, Pohnpei State Government, 1991.
- Pohnpei State/Federated States of Micronesia. *Nan Madol Brochure*, Pohnpei State and Federated States of Micronesia Historic Preservation Offices, Kolonia, Pohnpei, January, 1989.
- Pulea, M. and Farrier, D. *Environmental Legislation Review - Tuvalu*. Report for the South Pacific Regional Environment Programme and the Government of Tuvalu, 1994.
- Pulea, M. and Farrier, D. *Environmental Legislation Review - Kiribati*. Report for the South Pacific Regional Environment Programme and the Republic of Kiribati, 1993.

- Pulea, M. *Environmental Legislation Review - Palau*. Report for the South Pacific Regional Environment Programme and the Government of the Republic of Palau, 1994.
- Pulea, M. "The Law, Custom and Development", in Thomas, P. E. J. (ed), *Report on the Workshop on Customary Tenure, Traditional Resource Management and Nature Conservation*, South Pacific Regional Environment Programme, 1988.
- Pulea, M. *Customary Law Relating to the Environment*, SPREP Topic Review 21 SPREP, Noumea, 1985.
- RETA (Regional Environment Technical Assistance Project). *National Environmental Management Strategy for Solomon Islands*, produced in collaboration with the Ministry of Natural Resources, 1992.
- Reti, I. "The role of custom in environmental management and law in the Pacific" in Boer, B. W. (ed). *Strengthening Environmental Legislation in the Pacific Region: Workshop Proceedings*, South Pacific Regional Environment Programme.
- Riesenberg, S. H. *The Native Polity of Ponape*, Smithsonian Institution Press, U.S. Government Printing Office, Washington, DC, Library of Congress No. 68-29128, 1968.
- Republic of the Marshall Islands (RMI-OPS). *Draft Second Five Year Development Plan 1992-96*. Office of Planning and Statistics, 1991
- Robinson, D. *Endangered Species Protection in Temotu Province Solomon Islands*, Field Study Report IUCN and SPREP, February 1991, Environmental Defenders Office, Sydney.
- Roe, D. and Totu, V. "The Aola Case: widening the debate", (unpublished Conference paper available from the Guadalcanal Cultural Centre), 1990.
- Schenk, J. R. (ed). *Conservation Strategy for Forest Utilisation in Solomon Islands*, Honiara, Solomon Islands, May 1984.
- Scheuring, D. *Draft State of the Environment Report*, Federated States of Micronesia RETA Project, 1991.
- Shield, E. D. *Policy, Legislative Framework, Economic and Utilisation Aspects*, Project Working paper No 2, ACIL Australia Pty Ltd in association with International Forest Environment Research and Management and Ersis Australia, Consultants Report, 1990.
- Solanes, M. *Mission Report to the Solomon Islands*, Water Resources Branch, Natural Resources and Energy Division, United Nations, New York (re draft Water legislation for Solomon Islands), 1988.
- South Pacific Commission. *Country Review 6*, Report prepared for Fourth South Pacific Conference on Nature Conservation and Protected Areas, Port Vila, Vanuatu, 4-12 September 1989.
- SPREP. *Action Strategy for Nature Conservation in the South Pacific Region 1994-1998*. South Pacific Regional Environment Programme 1994.
- SPREP. *Komarindi Catchment Area Wildlife Sanctuary - A Concept Plan for an Integrated Hydro Electric Development Scheme and conservation Reserve for the Komarindi River Catchment Area and Access Corridor, Guadalcanal Province, Solomon Island*, SPREP Project No. PA 17, 1991.
- Teiwaki, R. *Management of Marine Resources in Kiribati*, University of the South Pacific, 1988.
- Thistlethwaite, R. *Environment Sector Strategies and Programs for Solomon Islands*, report prepared for Office of Environment of the Asian Development Bank, November 1990. Tourism Council of the South Pacific, *Guidelines for the Integration of Tourism Development and Environmental Protection in the South Pacific*, Suva, 1990.

- Thomas, P. E. J. (ed). *Report on the Workshop on Customary Tenure, Traditional Resource Management and Nature Conservation*, South Pacific Regional Environment Programme, New Caledonia, 1989.
- Tobin, J. A. "Land Tenure in the Marshall Islands" in de Young, J. E. (ed.) *Land Tenure Patterns in the Trust Territory of the Pacific Islands*, Trust Territories Government, 1991.
- Tonga's *Sixth Development Plan* (1991-95).
- Tourism Council of the South Pacific. *Guidelines for the Integration of Tourism, Development and Environmental Protection in the South Pacific*. TCSP. Fiji, 1990.
- Tsamenyi, B.M. "Regional Cooperation in International Law Environmental in the South Pacific Region" (1991) 7 *Queensland University of Technology Law Journal* 145. *Trust Territory Report (TTR)* Volumes 1-8, 1969.
- Forest Principles Non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests*, 1992. United Nations Conference on Environment and Development.
- UNCED Report of the Kingdom of Tonga to the United Nations Conference on Environment and Development 1992a*.
- UNCED, Report of Solomon Islands to the United Nations Conference on Environment and Development, Report 1992b*.
- WCED (The World Commission on Environment and Development). *Our Common Future*, Oxford (also known as the Brundtland Report), 1987.
- Wendt, N. and Sheppard, D. in Boer, B. W. (ed). *Strengthening Environmental Legislation in the Pacific Region: Workshop Proceedings*, South Pacific Regional Environment Programme, 1993.
- Western Province. *Western Province Policy on the Environment*, 1990a.
- Western Province. *Western Province Tourism Policy*, 1990b.
- Yap State. *Marine Resources Coastal Management Plan Working Paper 3: Legislation* 1992.

**IUCN Communications Division**  
Rue Mauverney 28  
CH-1196 Gland, Switzerland  
Tel: ++ 41 22-999 00 01  
Fax: ++ 41 22-999 00 10  
E-mail: [mail@hq.iucn.org](mailto:mail@hq.iucn.org)

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