



PROCEEDINGS OF THE  
SOUTH PACIFIC CONFERENCE ON  
NATIONAL PARKS AND RESERVES

24-27 February 1975  
Wellington, New Zealand.

Sponsored by the New Zealand  
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the International Union for  
Conservation of Nature and  
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## PREFACE

The formal sessions held in the Legislative Council Chamber, Parliament House, Wellington, from 24 to 27 February 1975 were preceded by a tour visiting places of scenic, historic and cultural interest in the North Island.

The delegates assembled in Auckland on 19 February and the next day were accorded a ceremonial Maori welcome at the Tunohapu Marae, Rotorua. After a visit to the New Zealand Maori Arts and Crafts Institute and the thermal area at Whakarewarewa the visitors proceeded to a Mayoral Reception granted by the Rotorua City Council.

On 21 February the delegates left Rotorua and travelled through Urewera National Park to Napier.

The following day delegates visited the Thermal Valley at Wairakei and inspected Opotaka Pa and parts of Tongariro National Park. Further inspections of the park were made the next morning and in the afternoon delegates visited Mount Lees Reserve; a public park and gardens gifted to the nation by Mr Ormond Wilson.

Urewera and Tongariro National Parks were selected because of their Maori traditions. Urewera - the traditional home of the Tuhoe, "Children of the Mist", retains most strongly the influence of the original Maori inhabitants - and the nucleus of Tongariro National Park was gifted to the nation by Te Heu Heu Tukino and associated Maori Chiefs.

## PART A - RECORD OF PROCEEDINGS

MONDAY 24 FEBRUARY 1975

### WELCOME TO CONFERENCE

The Chairman, Hon. Matiu Rata, called the Conference to order and bid all the delegates from participating countries, states and territories, a very warm welcome. He conveyed to those present the sincere regret of the Rt Hon. W.E. Rowling, the Prime Minister of New Zealand, who was unfortunately unable to deliver the opening address through absence from the country. However, he said it gave him great pleasure to introduce the Rt Hon. Hugh Watt, a former Deputy Prime Minister, at present Minister of Works and Development, and also High Commissioner Designate to Britain. The Rt Hon. Hugh Watt had kindly consented to formally open the Conference and the Chairman accordingly invited him to do so.

### OFFICIAL OPENING ADDRESS - Rt Hon. Hugh Watt

I would like to join with Mr Rata in extending a warm welcome to all delegates present today. New Zealand is indeed honoured in being host nation to this first full-scale South Pacific Conference on National Parks and Reserves. We are privileged in having the International Union for Conservation of Nature and Natural Resources, and the South Pacific Commission, identified with us in sponsoring the Conference. It gives me great pleasure, on behalf of the Government and people of New Zealand to extend to all delegates a very cordial welcome. We hope that the Conference will prove to be a profitable and rewarding experience for each and everyone of you. I have no doubt that it will benefit the countries, states and territories you represent, and the South Pacific region as a whole.

The Conference poses a challenge to each administration represented. We hear a lot of talk in our world today about rights: Unfortunately we hear much less about responsibilities. Yet, rights and responsibilities must go together, because if we, as individuals or nations, are to have rights, we also have the responsibility to see that others' rights are preserved.

It seems to be a simple equation. We will be entitled to one right if we assume one responsibility of equal proportion, but there is something more involved here. If life was simply a matter of accountancy, there wouldn't be much point to it, and certainly little interest. Whether we like it or not, it still remains true that it is better to give than to receive. The outstanding need in our world today is for people who care; for people who are prepared to work actively, collectively and co-operatively to conserve the environment for

protection and preservation. The environmental future of our region is in our hands. We must have a strong belief in this future, and pass on this faith to our fellow countrymen.

Desecration of the environment - and this can include the lack of concern to set aside areas of natural and cultural interest - begins in the mind of man. Therefore a systematic and continuing programme of education is needed to develop the co-operation that is so necessary for the conservation of nature and the environment, both at home and internationally. I am pleased to see, therefore, such thought-provoking topics on the agenda as 'Preserving the Natural and Cultural Environment', 'The Challenge of Preserving the South Pacific Environment', and 'International Co-operation and Involvement'.

Mutual involvement in the environmental field is an important spoke in the wheel of co-operation which must be kept turning in our South Pacific community. New Zealand is keen to continue to play her part. I say 'continue' because from our early days a progressive policy of preserving and maintaining natural recreational areas has been followed by Central Government. Public awareness of the benefits derived from our natural environment has ensured that we are richly endowed with areas of public land for these purposes. Environmental and outdoor education is also pursued to enable visitors to obtain the optimum benefits from their use of such land. New Zealand has a long history of interest and involvement in the South Pacific, but a significant emphasis on relations with the countries of the region has taken place since the Second World War, and particularly since 1955.

Our political and economic relations with Australia, the United States, Canada, Japan and the countries of South-East Asia are of particular importance. Almost half of our overseas trade is with Pacific countries, and this is growing steadily. As part of our good neighbour policy, we have tried to help in the economic development of other island states also, and to increase trade between South Pacific countries. An important reason why New Zealand and its neighbours have become very closely associated, has been the movement of Pacific peoples to this country. Some are New Zealand citizens, and move freely back and forth. The Treaty of Friendship signed in August 1962, for instance, has maintained our long-standing association with Western Samoa, and has resulted in a steady flow of immigrants from that country.

New Zealand's interests in the South-East Asia and Pacific regions are continually expanding. We are looking for new ways to foster multi-racial co-operation and understanding in the Pacific Basin. Our basic motivation is concern for those who lack the essentials of life, or the opportunity to develop their own resources. We are interested in projects

In May 1974 the Associate Minister of Foreign Affairs had the honour, on behalf of the Government of New Zealand, of advising the Director-General of the International Union for Conservation of Nature and Natural Resources, that the Government had decided to adhere, as a state member, to the statutes of the Union. Joining the Union as a state member is consistent with Government policy regarding the integrity of National Parks. It also ensures New Zealand a continuing role in the operation of an important international organisation and it recognises the extent to which we can contribute internationally out of our experience in nature conservation, while gaining from the experience of others.

We are now joined with Australia and Western Samoa in state membership of the Union in this South Pacific region. For some years now, both the National Parks Authority and the Nature Conservation Council have held membership in the Union. Both of these organisations retain their membership ties even though New Zealand has become a state member. Our participation as a state member of the Union will allow us to share our experiences with fellow members, and we will also be able to learn from them.

Our initiative in holding this first South Pacific Conference on National Parks and Reserves emphasises our deep concern about the scope of conservation and environmental control. It also indicates our intentions of helping our South Pacific and South-East Asian neighbours in their efforts in this field. Further proof of these intentions is the fact that machinery has already been set in motion to provide suitable park ranger training for overseas personnel in New Zealand. We are currently training several Nepalese at the Turangi Training School to better equip them for the task of administering and managing Sagamatha National Park. This park, in the Mount Everest region, was recently established by the Government of Nepal, through its National Park and Wildlife Conservation office. Plans are also afoot for Peruvians to be trained here, and also for a New Zealand expert to further assist the National Park movement in Peru under an external aid agreement.

New Zealand is prepared to give similar help to South Pacific countries participating in this Conference. We are also prepared to consider utilising the wealth of our experience in the National Parks and Reserves fields through bilateral and multilateral programmes.

The Governments of Australia and New Zealand are pleased to announce their decision to organise jointly an international training course in national parks administration. The course will commence in March 1976. The aims of the course will be to explore alternative reserve and park systems through their philosophy, organisation and development. The course will be designed for officers at a middle management level

Further apologies were offered for:

Hon. M.A. Morris, Minister for Lands and Forests,  
New South Wales  
Hon. Young Vivian, Minister for Agriculture, Niue  
Hon. S. Tago, Minister for Environment and Conservation,  
Papua New Guinea  
Hon. Lesatele Rapi, Minister of Lands and Lands Registry,  
Western Samoa  
Hon. B.K. Millar, Minister for Tasmania  
Hon. G.R. Broomhill, Minister of Environment and  
Conservation, South Australia  
Hon. K.B. Tompkins, Minister for Lands, Forests and  
Wildlife, Queensland  
Hon. Rex Patterson, Minister for Northern Territory  
Hon. G. Bryant, Minister for the Australian Capital Territory

It was formally moved by the Chairman and seconded by  
Hon. Dr Moss Cass that those apologies be sustained.

Carried

#### INTRODUCTIONS

The Chairman then introduced each member to the Conference  
in turn.

#### INTRODUCTION OF ORGANISATIONS CLOSELY ASSOCIATED WITH CONFERENCE

The Chairman went on to introduce the organisations closely  
associated with the Conference.

He first introduced the International Union for the  
Conservation of Nature and Natural Resources which has its  
headquarters in Switzerland, and said that he did not think he had  
to elaborate on the work done by the IUCN as all would be familiar  
with this organisation.

He mentioned that New Zealand's co-operation with IUCN would  
be taken a step further early in 1976, because the New Zealand  
Government had agreed to host an International Conference on the  
Conservation of Natural Resources in High Mountains, an IUCN/World  
Wildlife Fund project, which was planned to focus attention on  
conservation problems in high mountains and to provide guidelines  
for the conservation of natural resources in those regions.

New Zealand was suggested as the venue for the Conference  
because of the suitability of New Zealand's high mountain areas  
for field study and of the work being done here, particularly by  
the Tussock Grasslands and Mountain Lands Institute and Lincoln  
College which will be the venue for the Conference sessions.

by co-operation with other countries and he wished the Conference a successful meeting.

### Procedural Arrangements

Before proceeding to the business of confirming the procedure and agenda, the Chairman emphasised that he was keen to recognise the full support of Parliament for the principles underlined in this Conference and now took the opportunity of introducing Mr V.S. Young representing Her Majesty's Government Opposition and who was attending this Conference as an observer.

The Chairman then asked the Secretary-General, Mr N.S. Coad, to explain the Procedural Arrangements. These were read as set out in the Conference notes issued to members and amplified by Mr Coad.

### Confirmation of Procedure

The Chairman next asked members to endorse the procedure and it was formally moved by the Chairman and seconded by Hon. Dr Moss Cass that the procedure as set out be adopted. There was no discussion.

Motion Carried.

### Conference Recommendations

The Secretary-General spoke on the proposal to establish a Committee on Recommendations, reminding members that the sessions, should lead to recommendations and not to formal resolutions. He also referred members to the Agenda for the Conference which set down proposed times of presentation of reports. It was moved by Hon. Isakala Paeniu and seconded by Hon. Dr Moss Cass that a Recommendations Committee be formed with the terms of reference set out in the Conference document annexed to the Agenda with the following members:

Hon. Tupui Henry (Chairman)  
 Mr A.P. Hunter  
 Mr Sione Kite  
 Hon. Emile Lecaill  
 Mr P.H.C. Lucas  
 Dr D.F. McMichael  
 Mr F.G. Nicholls  
 Hon. M. Ramzan Ali  
 Mr A.O. Taviai

and with Mr I.D. Campbell as Secretary

There was no discussion.

Motion Carried.



Mr N.S. Coad also said it was difficult to say to what extent but he did think in some areas the reserves did help take pressures off national parks.

Mr F.G. Nicholls made the point that national parks can be started without land ownership. He pointed out that New Zealand, like some of the Pacific areas, had problems of land tenure. The land was owned in some cases by groups of people. He went on to point out the various ways of land acquisition and listed leasing, conservation covenants, easements and even dedication of land for religious purposes saying that the same technique could be used for the acquisition of land for parks purposes.

Hon. Matiu Rata spoke at some length on customary ownership in the Pacific. He said the Crown intended to keep rights of forbears by letting local ownership remain in the descendants' hands and rent was paid by the Crown to Trust Boards under leases renewable every seven years. These leases were actioned by the Maori Land Courts and this enabled members of the public to sit on the Boards and to take part in a conservation exercise. He said the use of conservation easements protected the land rights of the people but enabled the public to have a personal interest.

Mr A.P. Hunter said he was pleased the Crown was at long last recognising customary ownership of land and he was very pleased to hear that the leasing of these lands had been so successful. He then asked what was the rental of Lake Waikaremoana.

Hon. Matiu Rata said the lease provided for seven thousand dollars per annum. He mentioned there were other lands leased at 10 cents per year and this enabled the owners to take up other land from the Crown at the same rental. He also mentioned that the leasing of land had some significance to the Maori people when it was used to acquire lands which had some tribal importance and could be leased in perpetuity as Maori Lands.

Mr R.G. Lyons asked if the owners retained any rights such as fishing rights.

Hon. Matiu Rata said they did and quoted islands which had been purchased but previous owners had been permitted to retain rights of mutton birding.

Mr N.S. Coad explained the New Zealand Walkways system saying they were a chain of walkways throughout the country confined as far as possible to State owned lands with links through privately owned land where negotiations had been carried out with the owners and easements registered against the title. If the easement was not in perpetuity the best terms possible were obtained.

Hon. Dr Moss Cass mentioned the shopkeeper type of land ownership and went on to say he agreed with common ownership and the best possible use being made of the land.

The Chairman asked about the division between state and federal responsibilities.

Hon. Dr Moss Cass replied that the Australian Government had limited powers, that real powers lay with the States, and this was desirable. The implementation of the national park and wildlife service legislation would be done largely through States, which had been invited to submit proposals for land purchase. Funds would be allocated according to need, with a view to preserving significant areas for all. He concluded by pointing out that the Council of Ministers would be a forum for resolving any differences.

The Chairman wished the Council, on behalf of the Conference, "The best of British luck" and thanked Hon. Dr Moss Cass for indicating the way federal and state governments are moving.

#### SITUATION REPORT - AUSTRALIAN CAPITAL TERRITORY

Outlining the Australian Capital Territory situation report Mr C. Davis highlighted the fact that the Territory was quite unique among the areas represented at the Conference in its small size, its exclusively leasehold land tenure system and its high rate of urban population growth. Crown ownership made total land use planning a viable proposition while "purpose clauses" in Crown leases enabled protection of the natural environment. He added that in the past 50-60 years the Territory had graded out the various types of recreation area according to intensity of use, from football fields to forests, and by way of example he mentioned that 60% of the Jervis Bay area was already in parks and reserve holdings. He concluded that after 60 years of practical experience the Territory had developed a philosophy in non-urban planning of conservation, recreational use, public education and scientific study.

#### Discussion

Mr C. Davis in replying to a question from Hon. W.A. Borthwick said that a large number of New South Wales and Victoria residents used the Territory's parks and reserves, as well as New Zealanders. For example, at Jervis Bay, of 200,000 visitors last year, less than 5,000 were from Canberra.

The Chairman thanked Mr Davis for his report.

#### SITUATION REPORT - NORTHERN TERRITORY

Outlining the Northern Territory situation report Mr W.T. Hare highlighted the contrast of the Territory, with the rest of the areas delegates represented, from the point of view of landscape and climate, saying that half was arid or desert country and the balance ranged from open grass land to tropical or sub-tropical areas. In his opinion adequate areas of national park or reserve (currently 3% of the Territory) had not yet been set apart but fortunately large areas of Crown land, suitable for this purpose in the future, were still held. Mr Hare referred to action being taken at Ayers Rock to buy out motel and other concessions in the

The Chairman commented that excessive use was a problem New Zealand would have to face up to in due course. He thanked Mr Hare for his discussion of visitor limitation.

The Chairman at this point introduced Hon. Mrs T.W.M. Tirikatene-Sullivan, Minister for the Environment and Tourism and welcomed her to the Conference. He also congratulated her on the way she had been able to reconcile the possible conflicting demands of her two portfolios.

#### SITUATION REPORT - COOK ISLANDS

Hon. Tupui Henry thought delegates may gather from his country's Situation Report that the Cook Islands had yet to be discovered as far as national parks and reserves were concerned. People in the Cook Islands were still living in remote conditions and Hon. Tupui Henry advised that his Government had not yet started a programme on conservation by way of setting apart parks and reserves. His main purpose in representing the Cook Islands at the Conference was to show his Government's interest in the preservation of national parks, prehistoric sites etc. As the Cook Islands were so small and therefore any areas of special significance were also small the Cook Islands were willing to accept help from any other Government present.

#### Discussion

The Chairman expressed thanks to Hon. Tupui Henry but considered that the size of any area was irrelevant as far as the purpose of the Conference was concerned. The Conference covered not just land and wildlife, but also the cultural aspect of life in each country represented. The important thing, he felt, was to tackle the various problems and he hoped that the Conference would be able to lay out a basis on which this could be done.

Hon. W.A. Borthwick was disturbed that South Pacific countries were concerned as to what was a national park. There had been discussion at a conference in Sydney three years ago to the effect that areas should not be made national parks unless they were large and he considered this to be wrong. He felt, for instance, that a magnificent geographic feature covering a small area could be made a national park and mentioned that there were instances of this in both the United States and Australia.

Mr H. Chapman commented that if areas were set apart as national parks people must be brought to them. He felt it was necessary to find a way to work out the carrying capacity of any areas to be established as national parks or reserves. The concern expressed by the Cook Islands had been expressed by other small countries throughout the world.

Hon. Tupui Henry advised that in the Cook Islands there were several small areas similar to maraes, which at present were simply empty land sites, with no notices or public facilities. He reiterated that the Cook Islands was keen to receive help.

The only constraint on the Government of Fiji was that it had no technical experts to call upon for advice and no trained rangers. The Government was required to give priority to more pressing needs.

### Discussion

The Chairman felt that particularly the field of technical assistance was one to which the Conference could give some further thought in general. He thanked Hon. M. Ramzan Ali for his Situation Report.

### SITUATION REPORT - FRENCH POLYNESIA

Hon. Emile Lecaill mentioned that his country's ambition as far as parks and reserves were concerned was relatively small. This could be appreciated when one realised that Tahiti, the biggest island in French Polynesia, had an area of 100 000 hectares compared with the Urewera National Park with an area of 200 000 hectares.

Hon. Emile Lecaill confined his remarks to three particular aspects which he felt the Conference would be interested in. The first of these was that the importance of a legal system to establish national parks or reserves could not be underestimated. Up to this point in time his country had been primarily concerned with city development. This policy was now obsolete and French Polynesia was anxious to preserve its natural way of life.

The second aspect concerning him was the question of research into the environmental sciences. French Polynesia had decided earlier to create a research centre and would allow French and other scientists to investigate the life of the various flora and fauna on the islands.

The final aspect of concern was that the Education system must provide a way for children to participate in the cause of conservation. In 1973 the Forest Department and the Education Department had organised Arbor Day which proved very successful and attracted public attention to environmental problems through the mass media.

The Chairman expressed delegates' appreciation to Hon. Emile Lecaill for his report.

### SITUATION REPORT - GILBERT & ELLICE ISLANDS

Hon. Isakala Paeniu reported that although the Gilbert and Ellice Islands was still a British dependency, the people were making a considerable effort to become masters in their own country as soon as possible. The British Government was helping the people of the Islands to achieve nationhood.

TUESDAY 25 FEBRUARY 1975

INTRODUCTION

The Chairman welcomed delegates to this the second day of the Conference. He asked the Secretary-General, Mr N. S. Coad, to make any announcements he had for delegates.

The Secretary-General advised members that the record of yesterday's proceedings would be distributed during the morning session.

SITUATION REPORT - NEW CALEDONIA

M. J. Veillon, introduced the Situation Report for New Caledonia, thanked the New Zealand Government for the invitation to participate in the Conference and also for the warm welcome he personally had received. He commented that in a supplementary note to the Report, attention had been drawn to the fact that there were two main problems as regards conservation in his country. The first of these was the exploitation of nickel ore which was the main wealth of the country. The second was the bush fires which occurred and which, through difficulties in control, destroyed large areas of bush.

He said that New Caledonia had areas of exceptional botanical interest and that there were more than 4 000 different species of plants, 93% of which were native, covering an area of 1 675 000 hectares. He advised that the Islands adjoining the main Island could be regarded as virtually free of pollution of the natural environment.

As regards the exploitation of nickel ore, he indicated that this involved open mines in many parts of the territory and particularly on the slopes of mountain ranges. This exploitation was regarded as the direct cause of the destruction of plant life and the discharge of wastes from the mines had also polluted many rivers. As these rivers flowed into the sea, the wastes were invariably carried on to the lagoon reefs which are particularly rich in marine life.

With the exploitation of mining in New Caledonia and the current interest in low grade ore, there was a danger of a large part of the territory being devastated in the not too distant future. The Government was well aware of this and had set up a special commission called the Anti-pollution Commission to control mining, even at the prospecting stage. However, with the amount of money involved in mining it was obvious that the problem is far from being solved. The role of the Commission is to limit damage as far as is possible.

Hon. Dr Moss Cass agreed that other areas were also affected. The conflict arose from the profit that could be made from mining as against the value of preservation of an area. It was very difficult to weigh up the relative values of these two courses of action. He wondered what exactly do the inhabitants of an area do when they were left with a raped environment following exploitation. He felt it was necessary to try and get some assessment of the relative values of exploitation versus preservation and it could then perhaps be shown that it was not worth exploiting the area. He fully sympathised with the problem facing New Caledonia and supported the idea of a strong resolution.

Hon. W. A. Borthwick asked through the Chairman whether Mr Nicholls could indicate the action taken following the 1971 resolution.

Mr F. G. Nicholls explained that the resolution had been passed on to the South Pacific Commission but he was not aware of any positive action taken. He commented that the mines in New Caledonia were not owned by the local people so the long term benefits of mining would not go to them. The resolution passed had aimed at the desirability of the exploiter paying for restoration. He felt that the government concerned in this case may be swayed if other governments in the region were to take up the issue. If the Conference endorsed the resolution he would hope that this would be referred to the French Government to give an indication of the concern felt by others for the New Caledonia situation. He considered that the 1971 resolution had not been made known to the French Government in the best possible way. He supported the use also of non-governmental organisations to promote the philosophies of conservation and protection and to help the local people to withstand the pressures from those exploiting the area's resources. He suggested that if it was decided to pass a resolution, those governments and agencies participating in the Conference should bring the matter up at every opportunity and in every world forum possible.

Hon. Dr Moss Cass indicated his full agreement with the suggestion that such a resolution should be broadcast at every opportunity to ensure that the message was widely heard.

Hon. Tupui Henry referred to nuclear testing activity and asked whether delegates would consider this also as being a serious disturbance to the environment. If a resolution was to be passed by the Conference, he hoped that nuclear testing would form part of this.

The Chairman referring to the proposal that a resolution be passed, suggested that this was a matter that could best be considered by the Recommendations Committee. Similarly, that Committee could consider the inclusion of reference to nuclear testing when formulating any resolution decided upon.

Hon. Dr Moss Cass suggested that one good reason why it had always been difficult for colonised peoples to obtain independence was that the colonisers were obtaining considerable benefit from exploitation of the area concerned. If the importance and value of environmental protection could only be made clear, this could perhaps tip the scales in favour of independence as exploitation may not appear to be as profitable as at first thought. He suggested, therefore, that those peoples seeking independence could perhaps press for environmental conservation as a means of obtaining independence.

Hon. M. Ramzan Ali pointed out that when the new nations in the Pacific Islands obtained independence the top priority was to improve the standard of living. The only means of doing so was by way of exploitation of the resources and, therefore, conservation had a low priority through no choice of the nation concerned. However, he was sure that everyone would agree that provision must be made for restoration for the future.

Dr A. L. Dahl suggested that besides the benefit to outside interests of economic development of an area, there was also a benefit to the world generally from the conservation of the environment. He considered, therefore, that in the interests of ensuring that this latter benefit was obtained, there could be a case for outside assistance from other nations to enable conservation to take place.

The Chairman suggested that everyone would appreciate the need for economic development but he said that a necessary part of all economic policies was the need to ensure that the resources of the country were not over-exploited but were permitted to continue into the future.

Hon. Dr Moss Cass agreed that this was a fundamental approach which must be adopted if the world was to survive. He said that conservation was ensuring that the resources renewed themselves and indeed were allowed to do so. There was, in his view, no value in providing people with a good standard of living if this resulted in nothing being left at the end of a definite period with a resultant decline in the living standards. In all exploitation there was a need to ensure a continuing yield and he hoped that this would be borne in mind whenever this question arose.

#### SITUATION REPORT - NEW SOUTH WALES

Mr D. A. Johnstone expressed apologies for absence of the Premier of New South Wales, Hon. T. Lewis and also the Minister of Lands. Both had been keen to attend the Conference but circumstances had not made this possible. However, both had forwarded their sincere good wishes for the Conference and congratulated the New Zealand Government for its initiative in making the excellent arrangements for it.

SITUATION REPORT - PAPUA NEW GUINEA

## Outlining the Papua New Guinea Situation Report

Mr A. O. Taviai highlighted the fact that his Government was not interested in purchasing land from the local population and all negotiations were carried out with a view to obtaining leases. As the local people often wished to continue with traditional uses which were perfectly compatible with the concept of national parks there was provision for the leases to provide for these. Although the term of the leases was negotiable it was endeavoured to obtain as long a term as possible. The continued involvement of the local population in the management of a national park was also taken into account and in the case of Papua New Guinea's first national park the lease made provision for this. A standard condition in all leases was one which provided for the land to revert to customary ownership in the event of it no longer being required for the purpose for which it was leased.

Mr A. O. Taviai took the opportunity of expressing his Government's thanks to the Australian Government for its assistance in the establishment of his country's first national park and also the New Zealand Government for the invitation to attend the Conference.

Discussion

In reply to Hon. W. A. Borthwick, Mr A. O. Taviai said that oil palm development, the wood chip industry, and the Bougainville copper industry had been a new experience for Papua New Guinea and that the majority of the population was aware that the areas concerned would be considerably altered as a result of these activities. As the majority of the population wanted to ensure that economic development was controlled and the environment not unduly disturbed, negotiations in respect of such activities were very protracted.

Dr Kai Curry-Lindahl said that as the Island of New Guinea was one ecosystem he regretted that Indonesia was not present at the Conference and able to report on the position in the western part of the island.

The Chairman thanked Mr A. O. Taviai for his report.

Before proceeding to the next item on the agenda the Chairman asked the Secretary-General to make some announcements. Mr N. S. Coad drew attention to the proceedings of yesterday's business which was now in front of delegates.

Mr Coad also drew attention to the display of photographs of the pre-conference tour in the foyer and said orders for these may now be placed by delegates.



He mentioned that where natural stocks have been demolished, such as fish in the Pacific, steps need to be taken to bolster this resource in a much more orderly fashion to encourage not only quantity but quality. Oyster and mussel farming had been successful in Japan for many years and it was a matter of learning from nature how to harness resources for continuity of supply.

Dr R. F. Dasmann recognised that plantation forests can take the pressure off the demands that could be made on natural forests but these plantations should be on deteriorated land and he said it was absurd to clear natural forest cover in order to make place for introduced species. He also mentioned fish farming as a wise conservation practice.

Hon. W. A. Borthwick commented on the enormous political problems involved in trying to swing away from the biosphere concept. What was required were more sophisticated land planning methods requiring a feed-in of all the conservation values involved in the broadest possible sense. Where a resource was to be utilised it was necessary to understand the particular ecosystem in which it was found so that its extraction did not completely upset the system.

He quoted, as an example, the freezing of all development within 50km of an estuarine system in Australia until full knowledge of the dynamics of this natural system were understood and this required the expenditure of many millions of dollars as well as experimenting with mathematical models. Any development in an area should be not for the short term but for long term as well. People nowadays want to go back to rural community life to re-identify. An in-depth planning procedure is essential. All the countries at this Conference had been colonially exploited and he called for information on examples of a local approach to ensure the use of natural resources for generations to come, for this would be welcomed. A lot of developers, including Governments, see the existence of resources in their own light rather than as a self-replenishing system for all time. He thought the address of Dr Dasmann was magnificent and hit on the very core of the problem.

Dr R. F. Dasmann replied that he wished he had the answers as to where these examples could be found. The United Nations and other agencies were trying to get together case histories but these mostly related to cases where people had done the wrong thing and information on good examples were difficult to find. The UNDP and World Bank provided many examples of what could be done but most of these were only a few years old, and we may not know they will not fall apart in a few years' time. It was necessary to get away from these practices of an industrialised world which cannot be sustained. We must find renewable or inexhaustible energy sources that can

a self sustaining way of life people should be able to benefit from technology but they should also continue to benefit from the lessons of the past. They must not be allowed to destroy the resources on which they depend. He said the time had arrived when it was now required to re-train people to use their environment in the same way that had once been done naturally, so that a balance of some sort is achieved. He said he could not see that he could really answer this question properly.

Hon. M. Ramzan Ali noted that Dr Dasmann had touched on an important subject and agreed that the clock cannot be turned back. After experiencing the western way of life no one wants to go back to the primitive system. He commented on the fact that the younger people of America had showed that they were dissatisfied with the affluent life and were looking for satisfaction in other ways. Developing countries must be saved from allowing themselves to climb to the top of the pendulum only to drop to the bottom in the same way as America is doing, and he would like to know how this could be avoided.

Dr R. F. Dasmann said that he seemed to be getting all the easy questions. He said a healthy minority of young Americans is dissatisfied and some had gone back to the primitive way of life in the desert like the Indians. Others are trying to develop alternative energy sources and make use of such techniques as compost farming without having to draw on global resources. He said people must seek for the maximum degree of local self sufficiency in food and energy and try to make resources last indefinitely instead of using them up at an accelerating rate. He said there was no monetary advantage in the long run from exploitation of resources. At the same time no-one wants to be cut off from the real benefits of civilisation but must learn how to use the better elements of it. One way is the development of local renewable energy resources

Hon. Isakala Paeniu thought a lot of interesting points had cropped up in the course of this discussion and said that we were all guilty in one way or another of helping to create the present world problems such as the population explosion, scarcity of basic commodities and the nuclear threat. He said the major contribution to the world's problems comes from the west. It was very frustrating for small communities in the Pacific to watch world resources being recklessly exploited. However, they have an advantage in being able to learn from mistakes being made elsewhere and to see the hollowness of the western way of life. The Gilbert and Ellice Islands were prepared to make radical innovations to suit themselves and overcome the influence of British Colonialism and have a golden opportunity to avoid the mistakes made by the other countries, and really to be themselves.

survival is all about, other than trying to bend nature into sustaining more people than it can manage to do. All that our technology and our arts have done is to produce too many people, and man, by exploiting too much, will ultimately destroy himself. It is not possible to find an answer to satisfy everyone. He said that Dr Dasmann's address was a very thought provoking one and emphasised that the answer to the way forward is backward.

The Chairman then closed the proceedings and the Conference adjourned for lunch.

#### THE TRADITION OF CONSERVATION IN THE SOUTH PACIFIC

The Chairman mentioned that Hon. Young Vivian, whose paper this was, was Minister for Education, Agriculture and Economic Development in Niue, all key portfolios in formulating policies for development of the island. Unfortunately, he could not attend and his paper was to be presented by Mr John Springford who is the head of the Island Affairs Division of the Department of Maori and Island Affairs. Mr Springford has lived in Niue at several stages of his career, being Treasurer and Deputy Resident Commissioner. He was also Acting Resident Commissioner at one time. The Chairman mentioned he thought Mr Springford a very appropriate person to deliver this address.

Mr J. Springford mentioned he was sorry Hon. Young Vivian was not present as he was a well-known speaker in the House and a very knowledgeable person. He then presented the paper.

#### Discussion

Hon. Dr Moss Cass mentioned that he found the question of "the chicken or the egg" very interesting and he thought more time should be taken to learn what the diverse cultures were all about. He felt a lot could be learned about environmental protection from the so-called "primitive" people. They have used their resources and traditional cultures to survive for a long time. This thought alone makes this paper very worthwhile and he thought we should study these primitive methods.

Mr J. Springford said that, if he interpreted the writer correctly, he thought that he had thrown this in to provoke discussion. These people had survived for thousands of years and had survived by adopting the natural resources.

Dr A. L. Dahl said he thought another lesson that could be learned from their techniques was the carefully defined limits to which the cultural systems can be pushed. He thought that the Conference should try and salvage as much of the knowledge in terms of biology and anthropology as possible.

section of the community had to be learned by another. He also mentioned maritime parks as a method of conserving sea resources which could be used in the Islands.

Mr C. Davis said he thought that research by biologists and anthropologists could help and he quoted sword making in Japan which had been handed down in a non-reading community and passed from generation to generation.

The Chairman said it was important that the information be preserved and used properly, otherwise we could have an island or a people who were the most researched in the world but no better off than before.

Dr A. L. Dahl mentioned that education in the Pacific had drifted away from the traditional cultures and had become westernised and he thought that it was time it went back to the villages.

Hon. M. Ramzan Ali said that Dr Dahl had made a point and he would like to mention that among several of the Pacific Islands they were taking a lot of trouble to re-learn traditional cultures, for instance, the South Pacific University had a curriculum specially suited to the needs of their own people.

Hon. Isakala Paeniu mentioned that he had listened to remarks by previous speakers and also by Dr Dahl and he could assure them that some Pacific countries had gone out of their way to devise methods of preserving their life styles. In his country they could not afford to join the rat race and it was in their own interests to cling on to their own resources and cultures. He said they were aware of the decline in western culture, particularly in Europe, and he felt that Britain was in such a bad way that the time might come when they might have to colonise it. He mentioned he would like to pay tribute to Hon. Young Vivian, who was his great friend, for his great contribution to the Conference and also to the Pacific as a whole.

Mr A. O. Taviai made comment that his country had its own curriculum best suited for its people and also had a Ministry of Culture. He pointed out that their country had already joined the rat race with Bougainville copper. Their only problem was how to control the development.

The Chairman made mention of the vast knowledge which was available in the older people. As he said, all that was required was to teach them how to impart their knowledge of the traditional cultures.

Mr J. Springford mentioned how grateful he had been to assist Hon. Young Vivian in presenting his address but wished Mr Vivian had been present himself to read his own paper.

added that it was not until the mid 1950's that land acquisition for parks received any major impetus. From the mid 1950's to the present there have been more than 170 reserves of various classifications covering 3.7% of the State. At one stage new parks were being acquired at an exponential rate so that someone calculated a few years ago that the whole of the State would be one giant national park by 1981. He concluded that obviously there had to be a tapering off but the State still hoped to acquire a number of major parks in areas where particular ecosystems were not presently represented. In summary, Mr Lyons commented that the philosophy of "get the land now" had served in the past but that because of its dry climate and extremely fragile ecosystems it may well be that the State was losing more land from over-use, degradation and exotic plant and animal invaders. This arose from inability to give proper care and management. He pointed out that in the near future Australian States with vast areas, small populations, and limited management resources will be looking to the Government for grants for staffing and management of reserves.

### Discussion

Mr W.T. Hare asked about the proportion of national parks in desert or semi-arid countryside.

Mr R.G. Lyons, in reply mentioned that figures alone were misleading since of the 9 million hectares reserved, 5.6 million hectares are in one single park and 1.7 million hectares in another park in the Simpson Desert, with the balance area spread thinly over the rest of the State. Both the largest parks were in fact in the northern part of the State and were desert areas.

The Chairman thanked Mr Lyons for his report.

### SITUATION REPORT - TASMANIA

Introducing the Situation Report for Tasmania, Mr P. Murrell referred to the fact that just as New Zealand consists of two main islands so does Australia. He stressed the particular importance of Tasmania from the point of view of conservation in Australia and considered that it had given the lead in legislation precedents which were now being followed by other States. He referred to changes in national park and wildlife administration in 1971 when a new service was established taking over the duties of two former statutory boards. He added that the State's system consisted of two main types - State reserves and conservation areas. The former was a strong tenure like a traditional national park status and included a total of 81 areas ranging from 1 hectare to 200 000 hectares in size. 6.5% of the State was held under this tenure. Conservation reserves covered a wider range of uses and type of area. Referring back to legislation he suggested that Tasmania's South Pacific friends could well study this as a

countries which would benefit. For example, he doubted if many islands such as his own would ever need to have rangers. Their very real need was for funds to enable the establishment of adequate parks and reserves. Tonga would especially welcome this form of assistance provided there were no "user strings" attached. Lastly, he said he would like to endorse the comments of other delegates in congratulating and thanking the New Zealand Government over its organisation of the Conference and the facilities made available.

### Discussion

Hon. W.A. Borthwick acknowledged the fact that Hon. Tuita had raised a particularly important point about the need for pertinence to the ranger training. He spoke of getting away from the traditional interpretation of a national park and said that the course should be oriented to train people according to the needs of the particular islands concerned. This was very important in his opinion.

Hon. Dr Moss Cass said that he took the point and mentioned that discussion at the Conference in the past few days had suggested new feelings over what parks are about. This could in turn change the definition of rangers. There was still a need to train people to look after areas according to their particular requirements, whether the reserves were large or small, to ensure their protection and avoid overuse.

Mr N.S. Coad added that the training scheme offer included not only national parks but also reserves systems. This was done deliberately in recognition that national park status may not be applicable in some countries. The course would be for managers, not just rangers, and cover those responsible on and off the site.

The Chairman thanked Hon. Tuita for his comments and agreed that there was a need to look again at definitions. These tended to lose their significance after a while and needed to be re-appraised from time to time to ensure a balance between man and his environment.

### SITUATION REPORT - VICTORIA

Hon. W.A. Borthwick commented in supplementing his Situation Report that most of the countries and States represented at the Conference had colonial histories. It was only in recent years that Australia had started to think of itself as a country rather than a "political appendage". It was necessary to continue recognising the values of the past and in Victoria his government was now starting to do some of the things which some of the Pacific delegates at the Conference considered to be essential. Rural land was being bought back to reintroduce young people to the land and environmental study centres for adults were being established. The Victorian government recognised it was necessary to have full public involvement in decisions on land. Four years ago a Land Use Council had been introduced to carry out a total land study

### Discussion

The Chairman thanked Hon. W.E. Stephens for his report and comments.

### SITUATION REPORT - WESTERN SAMOA

Mr A.P. Hunter reported that Western Samoa had not actually gone into the matter of setting apart national parks and reserves. In 1973, however, with assistance from Australian authorities Western Samoa had joined IUCN and in 1974, as a result of a request to IUCN, a team of experts had gone to Western Samoa to carry out a study of potential national park and reserve areas. In December 1974 the Western Samoan Parliament had passed the National Parks and Reserves Act which was to be administered by the Minister of Lands and provided for national parks, recreation reserves, scenic reserves etc. He mentioned that during the Conference the term "national park" had been used widely but he felt that no delegate had come out with a solution as to whether a national park should be based on the importance of scenic values, size, or other qualities. He mentioned that in Western Samoa an area of 5 acres was regarded as big, whereas a 500 acre area was regarded as being huge. He compared areas of this size to the Urewera National Park which he had seen on the pre-Conference tour, and stated that his country just did not have that amount of land to set apart for national parks. He wondered whether it would be possible for national parks to be graded in some way. Perhaps for the benefit of Western Samoa they could be termed "traditional parks" which would probably be more acceptable to the Western Samoan people. On the question of conservation he felt too much emphasis was placed on flora and fauna and perhaps buildings, but not enough emphasis on culture. He said he was impressed with the way the Maori people were trying to maintain their culture and would like to see the Conference come out with some sort of resolution whereby emphasis was put not only on flora and fauna but also on culture.

### Discussion

The Chairman thanked Mr Hunter for his comments and asked the Conference whether there were any thoughts as to the definition of a National Park.

Mr H. Chapman felt that the basic answer to this was that the World's peoples must find their identity. This lay partly in history. A national park was an area containing flora and fauna, and also a history of the past as well as being a living present and only slowly was man finding the true value of his culture. He mentioned that people in the Pacific Islands felt they did not have large areas for reserve but that they had great cultural values. This was similar in some ways to areas such as Hawaii and Alaska where the U.S. National Parks Service, besides preserving and planning for the land, was now beginning to recognise the needs and rights of the people who lived in these regions.

WEDNESDAY, 26 FEBRUARY 1975

INTRODUCTION

The Chairman welcomed delegates to the third day of the Conference and asked the Secretary General to make any announcements he had for the information of those present.

Mr N.S. Coad advised that certain papers had been placed before delegates and he explained that these were the first recommendations from the Recommendations Committee, pages 21-27 of the summary of proceedings from the previous day, the comments of the Conference Chairman on the New Zealand Situation Report and replacement copies of Situations Reports and appendices.

THE CHALLENGE OF PRESERVING THE SOUTH PACIFIC ENVIRONMENT

The Chairman explained that Dr A.L. Dahl who would be presenting this paper was the Regional Ecological Advisor with the South Pacific Commission and a specialist on coral reef ecology and marine algae. He was formerly with the Smithsonian Institute in Washington. Dr Dahl had research and field experience in many parts of the world even to living as an aquanaut in an undersea laboratory.

Dr A.L. Dahl said that he wished to make it quite clear that the views expressed in this paper were his own and not necessarily those of the South Pacific Commission. Dr Dahl then presented his paper.

Discussion

Dr Kai Curry-Lindahl referred to the comment by Dr Dahl on the importance of mangrove forests and said that he would like to expand on this. The case quoted by Dr Dahl involving the almost total elimination of an island was not unique. Delegates would be aware of the tragic loss of life in 1970 in Bangladesh. The areas which had suffered the most were in fact those where mangroves had been cut down in coastal areas and the protection that had previously been provided was lost. There were many values in mangrove areas other than merely the protection provided, one of which was the role these areas played as a spawning ground for fish and crustaceans. All in all mangroves had an important part to play in the field of ecology generally.

Hon. Tupui Henry commented that Dr Dahl had proposed that developed countries should be prepared to contribute 1% of their



the preservation of the islands as far as possible in their natural state and it was reasonable therefore for some contribution to be made to ensure this protection. Indeed, this could be regarded as the reverse of the 'polluter pays principle' in that those people benefitting from preservation should pay.

Dr B. Rollet commented that he had been very interested in Dr Dahl's address. His organisation, UNESCO, was very concerned with the protection of nature and shared with Dr Dahl a very real fear that wholesale destruction would eventuate if sufficient safeguards were not instituted. He advised that UNESCO had considerable information of a scientific nature to share and suggested that there was a need to exchange the extensive knowledge that he was sure was available in libraries throughout the region. There was a need also to exchange news in the field of ecology. Only in this way could all countries and territories be kept fully aware of the information available on the South Pacific generally.

Mr C. Davis said that he had been very interested in Dr Dahl's concept of marginal value and asked whether he had developed this concept.

Dr A.L. Dahl advised that he had not done so in any particular form and said that it would be necessary to apply the concept in specific locations. He quoted as an example the hunting of whales, which covered a vast area of the ocean, but the whale population was now at a level where there was fear for the survival of the species. It was essential for those countries hunting the whale to assess whether the value of the whales caught was really greater than the value of preserving the species.

Mr A.P. Hunter commented that delegates were well aware of the concern among the Pacific Islands regarding the conservation of fish in the face of the extensive commercial fishing carried out by the countries in other parts of the world. As an expert on fish he wondered whether Dr Dahl could advise on any way in which this concern could be alleviated. Did he think it possible that a large area of the sea including international waters could be constituted a protected area or would the acknowledged laws of the sea prevent this.

Dr A.L. Dahl commented that this was an area in which very little study had been undertaken to date. So far, to his knowledge, there had been no concept of an international park including the open sea and any protection afforded a particular area came as a result of agreement between nations using that area. He agreed that further consideration needed to be given to this matter at an international level.

Hon. W.A. Borthwick noted that it was clear from discussion at the Conference that the Island peoples had difficulty in protecting their culture and resources. There was no doubt that the small land areas made it difficult to establish parks on land that would qualify for recognition by the United Nations.

to Dr Dahl's paper he felt that this had stressed the very real need for account to be taken of protective measures in all economic development undertaken by any country or Territory.

Hon. M.E. Stephens said that he was pleased to be able to move a vote of thanks to Dr Dahl for the interesting and thought provoking address which he had delivered and which, from the discussion, was obviously enjoyed by delegates.

Dr A.L. Dahl thanked Hon. M.E. Stephens for his remarks and said that the best reply was the response of the Conference in the discussion which followed his address.

### GENERAL DISCUSSION

The Chairman said that it was intended to devote the next session to a general discussion on establishing and maintaining natural and historic cultural areas having due regard to social aspects, administrative aspects, and economic aspects. He asked Conference for suggestions as to how the discussion should be approached.

Hon. M. Ramzan Ali said that he had been pleased to learn that Australia and New Zealand were to offer training facilities to the Pacific countries. It was, however, essential that the training programmes be related to the needs of the participating countries and suggested that to ensure that this was so the programme should be drawn up in consultation with the countries concerned. He also said that as the various Pacific Island countries varied considerably he was interested in learning the exact type of regional survey that Dr Dahl had referred to in his address. Overall, the idea seemed to be quite attractive but it was essential that sufficient time be spent on them. He was also interested to know where the finance involved would come from. Some thought should also be given to the fact that some countries may not be ready to implement the result of the survey for some years and in these cases the survey could become outdated. In view of this he suggested that the survey should only be undertaken as each country was ready to implement the findings.

Mr F.G. Nicholls said that the Recommendations Committee had put together ideas on the survey and these would answer in part the question by Hon. Ramzan Ali. It was intended that the surveys would be undertaken in the following phases:

#### 1. Examination

This would be done from existing knowledge and consultation with the countries concerned. The latter would involve both visiting the country and correspondence with it.

Hon. Tupui Henry said that one of the recommendations prepared by the Recommendations Committee supported the concept of regional surveys. However, he was worried as to how a country should go about making the invitation and to whom. Should it deal direct with the country or State that it considered could assist most or should it work through a co-ordinating body. If it was the latter, he was concerned that it could take at least a year to get something under way whereas he personally would like to extend an invitation for these representatives to visit the Cook Islands the following week.

Hon. Dr Moss Cass said that if the invitation was made only through formal channels, it would undoubtedly take some time for the visit to take place. He therefore suggested that the best co-ordinated approach would be for both types of approaches to be made.

Dr Kai Curry-Lindahl said that the UNEP was planning a mission to the South Pacific and suggested that this could be co-ordinated with those from the other countries thereby making the whole matter a joint project. If the invitations were delayed for one or two months he was sure that UNEP could join.

Hon. Dr Moss Cass agreed that the co-ordination of visits from the various missions was an excellent idea provided that these were not delayed for more than one or two months.

In reply to Dr B. Rollet, Dr Dahl said that he thought that the material provided by the Earth Resources Technology Satellite was not detailed enough for full use in the Pacific region. However, he would look at the matter further and see whether this could be used without involving too great an effort.

Hon. M. Ramzan Ali asked about fees in parks. He said that in some national parks in United States and elsewhere they charged fees but he wondered if this was ethical. He realised that it cost large sums to maintain parks but felt they belonged to the public who used them.

Dr Kai Curry-Lindahl said that he was interested in the question of fees and pointed out that some countries such as Africa and Asia could not afford not to charge. The economy of their parks was based on the fees which they received. In most cases they have a flexible scale.

Mr H. Chapman described how in Mexico and the United States there had been discussion over many years about a large volcanic area required to be preserved. Along the edge of the Sea of Cortez the coastline had been developed and charges were made for the recreational pursuits. The fees received were then to be used to fund the other reserve. However, he did think that the fee structure was a dilemma and was not used to offset all costs in the United States. Fees quite often deprived people who had the most need from using the parks.

Mr C. Davis commented that it was probably ethical to charge but on the practical side as the initial capital outlay was not large it was better to have people in the parks than to charge and keep them away. He quoted a case where he paid 50c for his car

Mr W.T. Hare said that quite often the cost of collecting the fees was more than the amount collected.

The Chairman said it depended on each individual park board and the public did not normally question a charge for services. Only when they were charged for services which did not appear to have been rendered did they complain. For example, a maritime park could not charge boat owners for sailing in the waters surrounding the park.

Mr D.A. Johnstone said that charges were only made in the major parks around Sydney when services were given. Charges had been increased from 50c per car to \$1.00 per car in the last few years. He said it was the responsibility of Government to provide recreational lands and only a charge should be made when they were developed above natural resources and then he favoured the user pays basis.

The Chairman summed up by saying that obviously, by and large, the Conference did not favour the charging of entrance fees and he personally felt it rested in the hands of each individual country.

The Chairman then adjourned the Conference for lunch until 2.00 p.m.

The Conference resumed at 2.00 p.m.

#### INTERNATIONAL CO-OPERATION AND INVOLVEMENT

The Chairman welcomed Mr Frank G. Nicholls and introduced him as the Deputy-Director-General of the International Union for Conservation of Natural Resources. He joined the IUCN from the United Nations Assignment in Thailand where, for the last 10 years, he has been concerned with the establishment and operation of the Applied Scientific Research Corporation of Thailand. His home organisation, with which he has been associated, is the Commonwealth Scientific Industrial and Research Organisation and he has been concerned with many aspects of research management in both physical and biological sciences.

Mr F.G. Nicholls began by saying that he did not intend to read his report as written as it would be included in the papers with the proceedings of this Conference but he would touch on points he had written about and relate them to the discussions which had already been held as he thought his paper had been overtaken by these discussions and also by the resolutions already on the table.

for Conference members. He said that he would be glad to discuss this with delegates informally. He spoke also of the Endangered Species Convention, which was an attempt to control a traffic in wildlife. Many countries, he said, are not equipped to take care of what is happening in their country illegally. Member countries of the Convention will assist these countries by blocking imports of wildlife without appropriate documentation. Another important convention is the Convention of Wetlands whereby countries agree to declare as reserve at least one Wetland in their area and, should it be necessary to interfere with this, to undertake to substitute another Wetland of biological equivalence.

He concluded by saying that he was grateful for the invitation to attend this Conference with IUCN as a sponsor and regarded the discussions as being very worthwhile.

The Chairman thanked Mr Nicholls for his address and said his paper and his additional comments were now open for discussion.

### Discussion

Dr Kai Curry-Lindahl hoped that UNEP would be able to work very closely with the countries here represented in the plans being proposed for the survey of the Pacific area. He gave some background information on the organisation and financing of UNEP projects which he said were financed by member States and was at present running on about \$100,000,000 which for the first five years, hopefully will be increased. He said that if the original project in the South Pacific was carried out properly it could have important results for all the people and will require quite a lot of co-operative effort from those contributing countries. UNEP would be very willing to collaborate. The Convention mentioned could be important but he questioned if it should not be a little wider to cover conservation of renewable natural resources which could be far reaching from the ecological point of view.

The Chairman said that this Convention was tabled only for information and was not included in the Conference but said that Dr Curry-Lindahl's point of view would be very much appreciated.

Hon. Tupui Henry asked if Mr Nicholls could talk a little more on the matter of aid and also raised the question of what is the minimum permitted size of a National Park and also what did Mr Nicholls mean by a World National Park. In particular, how could such a thing be considered in the Pacific.

Mr H.S. Curtis, through Mr Gardner, was given permission to speak. He said he wanted to take up the point about the concept of National Parks. He said the uniqueness of the idea was not, as originally, where a number of people had got together to protect a wilderness area set apart for all time, but rather that a nation was prepared to sacrifice its present opportunities for use and exploitation of an area to further generations. In a place like the Pacific which had only a small land mass, how much more worthy was this concept, where only a few hectares was available to be set aside. Taking this idea one step further, the idea has got around that we are all one world and that other affluent nations have responsibilities in this connection, such as New Zealand is already showing and he knows the Australian Government feels the same way. If, out of this Conference a small team of experts in the various disciplines, including economics, and under the auspices of the appropriate International Agencies could visit the Pacific countries and decide with local representatives what is to be done and what help is required, he thought this would be a very good step.

Dr B. Rollet said that the idea of biosphere reserves was strongly sponsored by UNESCO and spoke of the criteria of a biosphere as including representativeness, diversity, naturalness and effectiveness. According to the definition as included in the papers, everything can be considered a biosphere reserve, whether it is a natural or a degraded ecosystem. He said how does one identify a representative area as National Park. Surely this is a problem of sampling. He observed that in each ecosystem the population of the various species is intermingled, for example, trees and shrubs. Some are very abundant but some are represented by only a few specimens. Different species have different equilibrium so that a concept of size may be adequate for some species but not for others and this was particularly so in the case of mobile animal populations.

Mr A.P. Hunter said he would like to ask Mr Nicholls to enlarge on his remarks on regional surveys for National Parks. One cannot help but think that phase one has been missed out, namely, the provision of maps. These should first be prepared and be available before a visit can be undertaken. Present day techniques involved aerial surveys. He offered the facilities of the photogrammetric section in Western Samoa for such a purpose. He said this was the second place in the Pacific apart from Melbourne which had such equipment and included laboratories for development of aerial photographs. He asked that Mr Nicholls should speak on the matter of mapping in the Pacific.

Dr A.L. Dahl advised that he had arranged for the IUCN definitions to be copied for delegates. He urged boldness and creativity in classifying areas in the South Pacific. In the case of marine ecosystems in more than one Territory, something of the nature of an international park was called for. New legal mechanisms were required for the particular needs of conservation in the Islands.

Hon. M. Ramzan Ali said that Fiji had found a convenient system of preserving and conserving land by declaring "forest reserves". He mentioned that all one can do is walk through these without disturbing or damaging them. He mentioned some restrictions for protection of these areas and commented that "park" had connotations involving the provision of facilities.

Dr Kai Curry-Lindahl suggested that there were already several international parks in existence, mentioning examples of three in Europe which lay across borders and were run as co-ordinated ecological units but under separate administration. Other examples were in Africa and between the United States and Canada.

Dr B. Rollet said that the term "forest reserve" could be confusing as in many countries it was used to describe an area managed for production, for example as in Malaysia and Africa.

Mr P. Murrell referred to the setting up of a committee in Australia to study the problems of reconciling the differences in terminology for parks and reserves. An agreement was reached but proposals were not adopted at a later Ministerial Conference. He said it was a matter which should still be pressed in Australia. The problem was, that each term meant different things to different people.

Mr A.W. Gardner said that in his opinion the parks mentioned in Europe were multi-national in character rather than international. In the South Pacific delegates were thinking of areas outside territorial waters and the term in this sense had different connotations. He said that in Queensland, like Fiji, many areas of State forest were managed on principles of national parks without actually appearing in the figures for these.

Mr F.G. Nicholls, in reply, spoke firstly of the problem of terminology and mentioned extensive writings by Dr Dasmann on the subject. The debate was a recurring one. The Council of Europe had been working on getting an acceptable system and had come up with an A, B, C type. He agreed that trans-frontier parks are one type, and different from what had been suggested as "world parks", as for example in the case of the Antarctic. He said there would be some merit if the Australian States could standardise. He referred delegates to Dr Dasmann's paper on the aspect of how various types of zones were applicable to most parks. Continuing, he said that he had not meant to indicate that the Danes had set aside the areas he mentioned as national parks. However, the IUCN did list parks even if

The Chairman therefore moved the Conference stand adjourned until 9.30 a.m. on Thursday, 27 February 1975. This proposal was seconded by Mr A.W. Gardner and as there was no discussion the Chairman declared the Conference adjourned at 4.15 p.m.



- Recommendation 7 - Moved: Hon. M. Ramzan Ali  
Seconded: Mr. C. Davis
- Recommendation 8 - Moved: Mr A.O. Taviiai  
Seconded: Mr G. Cowan
- Recommendation 9 - Moved: Hon. Tupui Henry  
Seconded: Mr F.G. Nicholls
- Recommendation 10 - Moved: Hon. Isakala Paeniu  
Seconded: Hon. Emile Lecaill
- Recommendation 11 - Moved: Hon. Tupui Henry  
Seconded: Hon. Matiu Rata
- Recommendation 12 - Moved: Hon. W.A. Borthwick  
Seconded: Mr W.T. Hare
- Recommendation 13 - Moved: Hon. Isakala Paeniu  
Seconded: Mr D.A. Johnstone
- Recommendation 14 - Moved: Mr P. Murrell  
Seconded: Mr A.W. Gardner
- Recommendation 15 - Moved: Hon. Dr Moss Cass  
Seconded: Mr D.A. Johnstone

In the course of the consideration of recommendation 15  
Hon. Dr. Moss Cass read the following statement:

"The representatives of the various Governments, State and Federal, from Australia attending this Conference believe that mutual benefits have flowed from this meeting of South Pacific nations and territories, in promoting understanding of each other's problems (and solutions) relating to nature conservation in this Region. We are pleased that the Conference has agreed to recommend that further Conferences be held on this topic and note that the Government of Western Samoa has offered to convene a Conference in 1976 to consider IUCN's proposed Regional Convention. The Australian Government will be happy to assist Western Samoa in any way that it can, in making the proposed Conference a success.

However, we believe that there will be a need for further conferences from time to time to review progress and re-assess our objectives in this field.

We would like to draw the attention of delegates to the fact that in 1979 the New South Wales Government will be celebrating the 100th anniversary of the establishment of the first National Park in Australia - that is, Royal National Park which lies immediately south of the city of Sydney.

Realizing that local traditions and customs which intuitively respected environmental imperatives had formerly enabled the peoples of those areas to avoid such deterioration;

Convinced of the need to take urgent action to conserve the skills and traditions of the peoples of the region as part of the cultural heritage;

The South Pacific Conference on National Parks and Reserves meeting in Wellington, New Zealand on 27 February 1975;

Urges the Governments of the region to place greater emphasis on restoring and maintaining traditional methods and customs which formerly enabled communities to live in harmony with nature;

Recommends that they orient educational systems so as to emphasize environmental and conservation objectives and to give proper weight to local culture and traditions;

And recommends, further, that appropriate traditional arts, crafts and practices be revived and encouraged and featured as an important element in the planning and operation of national parks and reserves which are situated in areas where such cultural activities are or were practised.

## 2. National Parks and Traditional Land Ownership Systems

Being aware of the importance attaching to the traditional land ownership and tenure systems within many of the countries of the region;

Realizing that many of those who own land or rights to land under these systems desire to ensure that their land is protected against destructive uses so that it may be conserved for use and enjoyment by future generations whilst wishing to retain their land ownership or rights;

Being aware that there are methods for achieving this purpose including the granting of statutory conservation easements, the dedication of land for conservation use, the acceptance of covenants restricting forms of use of the land and the entering into suitable leasing agreements;

The South Pacific Conference on National Parks and Reserves meeting in Wellington, New Zealand on 27 February 1975;

Recommends that the Governments of the region use such methods to provide machinery to enable the indigenous people involved to bring their land under protection as national parks or reserves without relinquishing ownership of the land, or those rights in it which would not be in conflict with the purposes for which the land was reserved.

The South Pacific Conference on National Parks and Reserves meeting in Wellington, New Zealand on 27 February 1975;

Urges the Governments of the region to take steps to protect such sites which are of significance as part of their cultural heritage;

And recommends that, where appropriate and desirable, interpretation and education services be arranged to ensure that their significance is made known to the people of the region and to visitors and that their integrity is maintained.

#### 5. Establishment of World Parks in the Region

Being desirous of protecting marine ecosystems within the South Pacific region outside the territorial waters of the countries, States and territories of the region;

Recalling Recommendation 5 of the Second World Conference on National Parks (Grand Teton National Park, U.S.A., September 1972) which proposed that the Antarctic Continent and the surrounding seas be established as the first world park under the auspices of the United Nations;

Noting that in the South Pacific region, protection of these marine ecosystems is of vital significance to the peoples of the region, but requires the co-operation of all nations to be effective;

The South Pacific Conference on National Parks and Reserves meeting in Wellington, New Zealand, on 27 February 1975;

Recommends that the Governments of the region examine the possibility of taking action to establish one or more world parks in the region to protect significant marine ecosystems and bring forward and support this proposal at the Third United Nations Conference on the Law of the Sea.

#### 6. Marine National Parks and Reserves

Recalling Recommendation 4 of the Second World Conference on National Parks (Grand Teton National Park, U.S.A., September 1972) concerning the establishment of marine national parks and reserves;

Recognizing that marine ecosystems are not easily protected by national parks and reserves covering limited areas, but that such protection requires a broad programme of conservation measures;

Being concerned at the irreparable damage to coral reefs, lagoons, mangrove forests, and other marine sites through pollution, dredging, mining, land reclamation, dumping, dynamiting and other deleterious methods of fishing, shell collecting, and other activities;

- (a) identify the various characteristic ecosystems, and habitats of the region including marine areas and determine the extent to which they are currently protected and/or endangered by exploitation;
- (b) make proposals for the setting aside of additional areas so as to cover the range of characteristic ecosystems and habitats; and
- (c) following consultation with the countries concerned, define projects for technical assistance to implement these findings;

Proposes that the results of this study should be reviewed at a further Regional Symposium on Conservation of Nature to be organised in 1976 by SPC in collaboration with IUCN;

And recommends that this study be so co-ordinated as to identify areas to be designated as biosphere reserves under UNESCO's MAB Project 8.

#### 8. Conservation of Endangered Species

Considering the large number of vertebrates that have become extinct in the islands of the South Pacific during the past 300 years and the large number of endangered species presently occurring in these territories;

Realizing that conservation of habitats through the establishment of national parks and reserves is one of the most effective means of saving endangered animals from extinction;

The South Pacific Conference on National Parks and Reserves meeting in Wellington, New Zealand on 27 February 1975;

Recommends that the Governments referred to below take urgent measures to safeguard the endemic species and sub-species of endangered birds listed under the names of their countries:

##### Cook Islands

Tahiti blue lory (*Vini peruviana*)

##### Fiji

Masked parakeet (*Prosopiea personata*)  
Pink-billed parrot finch (*Erythrura kleinschmidti*)

##### French Polynesia

Tahiti blue lory (*Vini peruviana*)  
Ultramarine lory (*Vini ultramarina*)  
Tahiti flycatcher (*Pomarea nigra nigra*)  
Maupiti Island flycatcher (*Pomarea nigra pomarea*)  
Marquesas ground dove (*Gallicolumba rubescens*)

The South Pacific Conference on National Parks and Reserves meeting in Wellington, New Zealand on 27 February 1975;

Recommends that the South Pacific Commission encourage such co-operation and co-ordination so as to ensure that adequate maps are available for conservation purposes throughout the region.

10. Illegal Fishing by Foreign Vessels

Being informed of the increase of fishing operations by foreign fishing vessels within the territorial waters of many of the countries of the region;

Knowing the vital importance of the off-shore fisheries resources to these countries some of which are dependent on such fisheries for their very survival;

The South Pacific Conference on National Parks and Reserves meeting in Wellington, New Zealand on 27 February 1975;

Urges the Governments of the region to explore the possibility of taking common action in condemning such illegal taking of fish and other marine resources and bringing this matter forcefully to the attention of all Governments concerned in appropriate international meetings including the Governing Council of UNEP, the United Nations Law of the Sea Conference and the OECD Environment Committee.

11. Responsibility for Environmental Damage

Convinced that development activities must be undertaken in accordance with sound ecological principles if maximum short and long term benefits are to accrue to the peoples of the countries concerned;

Being aware that environmental destruction is costly to the community as a whole and that the adverse effects are borne by local peoples whose quality of life may be severely reduced for a very long time to come;

Believing that those who cause environmental damage must bear responsibility for, and meet the costs of, repairing such damage;

The South Pacific Conference on National Parks and Reserves meeting in Wellington, New Zealand on 27 February 1975;

Recommends to the governments of the region and to all organisations concerned:

- (a) That they ensure that all development projects are carried out in such a manner that adverse environmental impacts are reduced to a minimum and that the costs of action to remedy resulting environmental damage are borne by the developers; and

Recommends that concerned Governments should make requests to the Governments, organisations and agencies referred to in this recommendation for technical assistance in the field of national parks.

#### 14. Financial Assistance

Recognizing that conservation of the natural and cultural resources of the South Pacific Islands will ultimately be of great benefit to all mankind and particularly to the nations of the South Pacific region;

Realizing that irreplaceable natural resources represent a large proportion of the total assets in island areas, while the means locally available for their protection are correspondingly small;

Being aware that development projects supported through technical assistance programmes may sometimes have adverse environmental impact on the areas being helped;

Taking note of the suggestion that developed nations make available an amount equal to 1% of their domestic conservation expenditure to provide assistance for conservation projects;

The South Pacific Conference on National Parks and Reserves meeting in Wellington, New Zealand on 27 February 1975;

Recommends that recipient governments include projects for conservation and environmental protection in their requests for assistance;

And also recommends that ecological considerations be included in the planning of all development projects;

And recommends, further, that recipient and donor governments regard such requests as matters of high priority.

#### 15. Future Conferences

Realizing the outstanding value of the present meeting in bringing about a greater understanding of the concept of national parks and reserves in the region, in permitting an exchange of information, and in examining proposals for mutual co-operation within the region;

Admiring the symbol chosen by the New Zealand Government to represent the Conference;

The South Pacific Conference on National Parks and Reserves meeting in Wellington, New Zealand, on 27 February 1975;

Recommends that further meetings in this series be held at appropriate intervals, and that the Second Conference take place in 1979;

submitted to all countries and many of these would not have been responsible for administering islands. He said that he was pleased that the New Zealand Government was still interested in the proposal and that it intended to hold such a meeting. Referring to the purpose of the Convention he said that it was a simple document and had already been discussed at the Pacific Science Congress. It proposed that certain islands be regarded as living laboratories for the protection of genetic and other resources. Their exploitation would be avoided and it was intended that the Convention should only be applied to a small number of uninhabited islands. It was expected that countries would dedicate these to science and make them available to scientists of all nations. An international committee would be appointed to control scientific programmes and to oversee the protection of the islands and ensure observance of local customs and traditions.

Dr A. L. Dahl reminded the Conference that some of the South Pacific countries had not been able to attend and expressed the hope that they would be advised of the results and recommendations and be given the chance to participate in the outcome.

There being no further business, the Chairman adjourned the session at 11.25 a.m.

#### CLOSING CEREMONY

The Chairman said that New Zealand had been honoured to have hosted the Conference and he wanted delegates to know how much the New Zealand Government had appreciated their presence. The Conference had drawn attention to needs in the lives of people from the respective regions of the South Pacific and he said he would like to think that the Conference had added to the principle of regional co-operation.

He considered the discussions to have been worthwhile and to have added to all participants' knowledge of the various park systems. Delegates had had the benefit of listening to very informative keynote addresses and there had been plenty of discussion beneficial to all present. All at the Conference had come to learn from the experience of others and those delegates from countries without park systems had learnt from those whose countries had park systems. He suggested that countries seeking the best way to balance the social and economic conditions of their people, and at the same time conserve their heritage, had taught the older established countries of the regions a great deal.

Delegates would recall the announcement that Australia and New Zealand were to jointly organise an international training course in national parks administration and the Chairman mentioned that this meant that both countries had pledged their aid in this field. The Conference had emphasised that full consultation was necessary to ensure that the needs of the personnel in new park systems were met to the full.

planning of the Conference and for the warm hospitality all had received. Dr Dahl thanked delegates for the constructive spirit of co-operation in which they had entered into the Conference and said he was sure the result would be a chain of reserves and national parks all through the South Pacific.

The Chairman then invited Dr Kai Curry-Lindahl to speak on behalf of UNEP. Dr Kai Curry-Lindahl said he felt there was nothing better than personal relations and the pre-conference tour had established a very good basis for the serious deliberations of the past four days. It had been stimulating to be present and he said he had learnt quite a lot from the Conference. It was possible that the Executive Director of UNEP would visit this part of the world in May and Dr Curry Lindahl assured delegates that he would brief the Executive Director on what had been achieved. He expressed extreme gratitude for the generous hospitality of the New Zealand Government.

The Chairman asked Hon. W. A. Borthwick to speak on behalf of the other delegates.

Hon. W. A. Borthwick said he was quite certain that every delegate at the Conference would return home enriched and with a broader concept of things which really mattered. When delegates had arrived in Auckland they had been made to feel at home and this attention had continued right through the pre-conference tour to the Conference itself and its associated hospitality. Delegates were able to see the work of the Conference while it was meeting; for the Conference to carry on in the manner it had, required many people behind the scenes to work long hours. He mentioned in particular people such as Typists and Rapporteurs, Interpreters, Liaison Officers, Drivers and Administration Staff. The people of New Zealand were reflected in the work which these people had done and he had been greatly impressed at the standard New Zealand had set. This would be very hard to match in any succeeding Conference. He formally moved "That this Conference places on record the appreciation of all delegates for the magnificent service delegates and officers attending the Conference have received from all New Zealand staff servicing the Conference."

The Chairman then invited M. Emile Lecaill to speak.

M. Emile Lecaill mentioned that out of many conferences he had attended this had been one of the most interesting and pleasant and he expressed grateful thanks to the New Zealand Government. The participation at the Conference of the different Governments and international organisations would give the work of the Conference a wider audience and make it more efficient, and with this in mind he urged that delegates should return home to begin work at once. It was now over to countries to take in their own hands the preservation of their natural heritage.



APPENDIX ABRIEF COMMENTS TO THE INTRODUCTION  
OF THE NEW ZEALAND SITUATION REPORTHON. MATIU RATA

I don't intend to comment in direct reference to New Zealand's situation report: This paper has been available for all to study and rather than recap on any aspect of our efforts in the national parks and reserves field, I would like to take up one matter that was raised yesterday. I'm doing so because I consider this an important point, particularly so far as the island nations are concerned.

During his introduction to the situation report for the Gilbert and Ellice Islands yesterday afternoon, Hon. Isakala Paeniu expressed his concern about the particular connotations that attach to the term "national park" and the definitions that are ascribed to this term by some members of the international conservation community. That there is confusion on this particular point is perhaps understandable, bearing in mind the wide diversity of nature resources in various parts of the world, the significant variations in the amount of land that is available for conservation and other uses, and the differing cultural and social backgrounds of the people of each nation.

Let me say that in the context of the New Zealand situation we keep the term "national park" for our most outstanding areas of scenic beauty or natural interest, and for which it is truly in the national interest that these be retained as far as possible in their original state.

Preservation as a national park is for the purpose of retaining areas that contain scenery of distinctive quality or natural features so beautiful or unique that their preservation is desirable and in the national interest.

They are preserved as far as possible in their natural state and there is legislative provision for introduced flora and fauna to be exterminated as far as is possible.

We see national parks as being only a part of the total spectrum of our natural heritage, and certainly, areas worthy of preservation don't have to be designated national parks. Areas of outstanding scenic beauty, but which don't have a "national interest" tag, we set apart as scenic reserves and the reasons for providing these reserves are akin to those for national parks - that is, preservation and public use. These scenic reserves are subjected to plenty of public use because, more often than not, they are closer to the centres of population than are our national parks, but the need for preservation is just as relevant, and in relatively recent years scenic and allied reserves were brought under the "umbrella" of the National Parks Authority.

APPENDIX BSTATEMENT BY HON. MATIU RATA, NEW ZEALAND, ON THE  
USE OF AID FUNDS FOR CONSERVATION

One of the basic principles of the New Zealand aid programme is that the priorities should be determined by recipient governments. We do not wish to determine the importance of particular projects in Wellington and then impose, as it were, the allocation of aid funds on the developing countries of the region. Instead, we send our aid missions to hold thorough discussions with the authorities in each country and they come back with a "shopping list".

As far as conservation is concerned, therefore, New Zealand is ready to assist to the extent that governments feel that this should be given urgent attention. It is appreciated that, in the context of development, many countries in the region will have other priorities and that this area may as a result tend to be left out. Nevertheless, since this Conference has served to underline the inter-relationship between the environment and other aspects of future development in the region I am confident that Island Governments will not lose sight altogether of its long-term significance.

In our bilateral programme for the countries of the region we have ear-marked some \$17 million for the 1974/75 year and will continue to channel at least 50% of our bilateral aid to the region. There should in principle be finance available to cover at least the initial steps towards systematic conservation measures. Moreover, we also allocate a certain amount of money for "regional" projects and, to the extent that a conference of this kind recommends to governments that the problem be tackled on a regional basis, it would be possible for some of these monies to be channelled into worthwhile projects.

I should stress however that there are a number of possible sources which could be tapped and, given the scope of the problem, it may be better for governments to look further afield rather than rely simply on the New Zealand aid programme.

This does not detract in any way from our first principle which I mentioned, that is to fit in with the priorities as determined by Island Governments.

Comment

New Zealand has been co-operating with a number of countries in the technical field with emphasis on the exchange and training

## PART B - KEYNOTE ADDRESSES

KEYNOTE ADDRESS - HON. MATIU RATA  
MINISTER OF LANDS, NEW ZEALAND

PRESERVING THE NATURAL AND CULTURAL ENVIRONMENT

May I first of all associate myself with the welcome extended to you all by my colleague, the Rt Hon. Hugh Watt, this morning. We are pleased and honoured to have this opportunity of welcoming each one of you personally, for each person is, in essence, the representative of the hopes and aspirations of their countries in the matter of the greatest resources of this planet - earth, air, water, humanity and all forms of life. New Zealand is doubly honoured to be host for the South Pacific Conference on National Parks and Reserves and I extend again in conjunction with my co-delegate and colleague, the Hon. Mrs Whetu Tirikatene-Sullivan, Minister for the Environment, a warm welcome.

Our natural resources are precious and should be regarded as an inalienable commodity which we hold in trust for our present and future generations. The South Pacific is without a doubt richly endowed by nature. In its natural state it was regarded by both Polynesians and European explorers as a paradise. The romantic image of the South Pacific has not really been abandoned by the 20th traveller with his transistorised radios, zoom lens cameras, jet-lag travels and air conditioned units.

It is still a paradise. It is still beautiful but there is the danger that uncontrolled, unplanned development could result in an undesirable change. Delegates can no doubt recall their own personal reactions to actual and suggestive changes in their own lands and communities. Some changes evince pleasure, others result in extreme concern, but change is not in itself a bad thing. The extreme concern results from bad planning, lack of an eye for beauty and the lack of feeling for what nature has given.

We have this legacy to the yet unborn to leave what nature has freely given in a better or improved state when we pass it on.

From the early days of settlement, Government land policy and administration have had an important effect on New Zealand's social, economic, and physical development.

Land is the economic and environmental factor we have used over the years in the creation of a basic economic and social structure which forms part of the traditional New Zealand way of life.

By 1922 land purchases and existing Crown land saw the area increased to 58 963 hectares (145,699 acres) while today the figure has increased to over 75 200 hectares (185,822 acres).

Initially, trustees were appointed to administer the park but lack of finance caused a halt to their operations and, for a time, the Department of Tourist and Publicity managed the area.

Under special legislation in 1922, a park board was appointed and the 1952 national parks legislation made provision for a lineal descendant of Te Heuheu Tukino to be appointed to the Tongariro National Park Board by the Minister of Lands on the recommendation of the National Parks Authority.

Te Heuheu Tukino was a far-seeing man who wished that the sacred areas of the Ngati Tuwharetoa be given to the Government to be the property of all the people of New Zealand.

However, the period from the establishment of New Zealand as a Colony until the last decade of the nineteenth century was essentially a time for acquisition and alienation of the land capital of the country.

But from the 1890s, the Government land policy in New Zealand had been consistently aimed towards closer settlement and the elimination of the aggregation of farm land.

In ensuring the maximum economic return from the land, large estates were subdivided and new techniques made more possible the intensive farming of small areas.

This meant that New Zealand was destroying her natural environment through the opening up of extensive tracts of bush country for settlement by the expanding population.

William Pember Reeves in his book "The Long White Cloud", which deals with the early history of New Zealand, provides a true situation report for those times.

He said: "It is almost impossible to restore a New Zealand forest when once destroyed ... The settler comes with axe and firestick and in a few hours unsightly ashes and black funeral stumps have replaced the noble woods which nature took centuries to grow."

But the part played by early legislators in laying the foundations to satisfy the social needs of the community by setting aside, for all time, places of recreation and scenic or scientific worth and beauty led to legislation establishing New Zealand's second national park, Egmont, at the turn of the century.

By 1903 the Scenery Preservation Act had been passed and steps were taken to catalogue and assess natural features and some places of historic interest.

The 1952 legislation established the Director-General of Lands as Chairman of the Authority and the Commissioners of Crown Lands in whose districts the national parks are located, as the Chairman of the individual park boards which are corporate bodies under the Act "to administer, manage and control parks in accordance with the Act and subject to the general policy and direction of the Authority."

The relationship between Authority and Park Board, bearing in mind the differing characteristics of individual parks, is one of guidance, assistance and leadership on a national basis in what is a joint venture.

Briefly, the Authority defines policy and boards interpret and apply it in their own areas.

Administrative and financial services for both the Authority and Park Boards are provided by the Department of Lands and Survey.

New Zealand's next major piece of legislation in the conservation field had its beginnings from what is now considered to be common-place, public reaction.

In the late 1950s a proposal for harnessing the Waikato River in the renowned Aratiatia Rapids Scenic Reserve for hydro-electricity development led to a good deal of controversy.

Following a Scenery Preservation Conference set up by the Government of the day, and following discussions, in 1962 the Nature Conservation Council Act was passed.

This established the Nature Conservation Council to advise Government on the preservation of the native flora and fauna and the natural features and beauty of New Zealand, legislation which has provided an added safeguard in preserving our natural environment.

Experience in the New Zealand situation over the years has shown the need to make provision for alternative opportunities for enjoying open-air recreation, beautiful scenery and the contemplation of nature and wildlife.

The increasing public concern about conservation and preserving the natural and cultural environment and the desire for greater use of these areas by the public has precipitated this need in the past several decades.

Most national parks are generally remote from major cities and a park such as Fiordland would tend to be only an occasional holiday destination for most New Zealanders.

It has been said that far too many New Zealanders are strangers to the many areas of beauty in their own country and this could well be true.

These areas are, and must be, set aside while their natural resources are unspoiled because when development hits it is often far too late to awake to the needs for the preservation and for the protection of the natural and cultural environment for the present public and future generations.

We consider that the preservation and protection of our natural and cultural environment involves the following six responsibilities.

- \* Keeping unique areas free from injury or destruction for the purpose of national parks and nature reserves.
- \* Safeguarding areas in their normal state so that natural processes are enabled to continue.
- \* Conserving the special qualities embedded in the nature of the area itself.
- \* Protecting parks and reserves from outside influences, both man-made and induced.
- \* Maintaining the special values which are inherent in national parks and reserves.
- \* Assembling information on natural resources of flora and fauna, historic places, sites of archaeological interest, water, minerals, scenery, etc., and using this information in park and reserve management.

In my paper I have mentioned environment and I would point out here that in New Zealand we have adopted rather a different approach from many other countries in the way we have organised our environmental improvement programme.

In our public health legislation, administered by the Health Department, in our town and country planning, and water and soil conservation legislation administered by the Ministry of Works and Development, in our agricultural chemical legislation administered by the Ministry of Agriculture and Fisheries and in our national parks and reserves legislation, we have very comprehensive and well established legislation available to be used for the management of the environment.

For this reason we did not need to set up a new major department nor bring down new legislation.

What we have done is to establish a new ministerial portfolio of Minister for the Environment and Mrs Tirikatene-Sullivan, who is my co-delegate, is holding that portfolio with distinction.

She is also the Minister of Tourism.

It can be asked how the apparently conflicting roles of Environment and Tourism can be held effectively by one person but I think that these groupings illustrate a very important principle which we are stressing in New Zealand and that is that these interests, though delicately balanced, and requiring constant adjustment to meet ever-changing priorities, are not necessarily in conflict.

Earlier, I mentioned the establishment of the National Parks Authority, the various Park Boards and the role the Department of Lands and Survey plays.

Each has its part in connection with park finance which, in the main, is received from three main sources - Government funds, Board revenue, and donations and subsidies.

Parliament makes an annual allocation towards the administration, maintenance and improvement of the parks and this is allocated between the 10 on the recommendation of the Authority and myself, as Minister of Lands.

As well as the monetary appropriation through Parliament, Government makes a substantial contribution to the management of the parks through the services and facilities of the Department of Lands and Survey, the executive agency which provides the administration.

In looking at the subject of preserving the natural and cultural environment in the South Pacific we should not be daunted by the fully professional park administrations in other countries as, for example, the United States.

They too had small beginnings.

I have indicated how, in our own experience, we have built up an efficient and workable administration which has kept pace with the need to keep intact a natural, unspoilt environment.

We have been encouraged in our efforts by overseas administrators.

We have profited from their successes and learned from their mistakes in the steps taken to preserve the outstanding natural and historic areas as part of New Zealand's heritage.

The knowledge and the expertise we have gained from our efforts in preserving our natural and cultural environment we are only too happy to pass onto our South Pacific neighbours.

I say this because at the First World Conference on National Parks in 1962, the United States Secretary of the Interior at that time, Stewart L. Udall pointed out that "the hour is late, the opportunities diminish with each passing year ... with each day that passes, the natural world shrinks as we exert greater artificial control over our environment."

That was only 13 years ago but today we can see the foresight and wisdom of his caution.

His reminder that with few exceptions, the places of scenic beauty, the unspoiled landscapes, national parks and reserves that our generation saves and protects will be all that is preserved is a suitable warning to us at this first South Pacific Conference to take stock of our stewardship in our concern for our sector of our planet.

KEYNOTE ADDRESS - RAYMOND F. DASMANN, SENIOR  
ECOLOGIST INTERNATIONAL UNION FOR THE  
CONSERVATION OF NATURE AND NATURAL RESOURCES

NATIONAL PARKS, NATURE CONSERVATION, AND "FUTURE  
PRIMITIVE"

Those who have grown up in Europe or North America, and have assimilated the view of history proclaimed in those civilizations, know that once there was a paradise on earth and it was called the South Pacific. For more than two centuries, adherents of western technological culture have been fleeing from the supposed benefits of their culture in search of that paradise or its remnants. The more they have searched, the farther it has receded from their vision. Finally, in desperation, they have attempted to recreate it in the tourist lands of Hawaii or Tahiti. But the new model has not been pleasing to the soul.

More than a century ago, the European invaders of North America were pushing into what they called the wilderness of the West. Most were concerned only with the problems and perils of each day, but a few could see the realities about them with a vision that transcended the purely utilitarian. George Catlin, the artist, was one of these who was greatly disturbed by the destruction of the North American bison and its consequences for the future of the Plains Indian people. He had a proposal that he hoped might save both wildlife and people:

"And what a splendid contemplation too, when one ... imagines them as they might in the future be seen ... preserved in their pristine beauty and wildness, in a magnificent park, where the world could see for ages to come, the native Indian in his classic attire, galloping his wild horse, with sinewy bow, and shield and lance, amid the fleeting herds of elks and buffaloes. What a beautiful and thrilling specimen for America to preserve and hold up to the view of her refined citizens and the world, in future ages! A nation's Park, containing man and beast, in all the wild and freshness of their nature's beauty!" (Nash, 1968).

This proposal made in 1832 is commonly regarded as being the first request that a large area of wild America be set aside as a national park. Let us ignore for the moment the obvious chauvinism, since this characterized most 19th century Europeans. Catlin's was no modest proposal, for he wanted the entire Great Plains from Mexico to Canada set aside for the protection and use of those people and animals to whom it rightfully belonged.

At the time there was no receptive audience. The West was being won by those to whom, in Catlin's words "power is right and voracity a virtue". Viewed from the other side, however, the howling wilderness that these narrow men were trying to subdue



remain intact against the destructive forces of civilization. In the 1860s George Perkins Marsh wrote about the devastation being created by deforestation and the misuse of lands. (Nash, 1968). During the decades before Yellowstone was set aside, and until the first national forests were reserved in the 1890s, it was not only the Indians who were being massacred. In the 1860s, because of heavy use by domestic grazing animals, virtually the entire native grassland area of California was knocked out, and the grasslands that developed in its place were dominated by exotics from Europe and Asia. A good share of the hardwood forests of eastern America had been cut down and similar destruction was starting in the West. Farming lands, particularly in the American South, were misused and abandoned in an eroded, infertile state. Wildlife was being slaughtered everywhere.

It is little wonder that those concerned with conservation of nature attempted to set some areas aside, and it is remarkable that they were as successful as they were in doing so. But is there not cause to wonder that it was accepted that those lands outside the national parks were going to be beaten and battered, or used in such a way that any hope for the survival of wildlife in their vicinity was to be considered an idle dream? Is it not strange that it was taken for granted that people and nature were somehow incompatible, and that the drive for profit or power must take precedence over any concern for the kind of world in which people will live? People were not always that way. Perhaps it would be well to listen once more to Chief Standing Bear of the Oglala Sioux (known in his day as the Lakotas)(McLuhan, 1971):

"Kinship with all creatures of the earth, sky and water was a real and active principle. For the animal and bird world there existed a brotherly feeling that kept the Lakota safe among them and so close did some of the Lakotas come to their feathered and furred friends that in true brotherhood they spoke a common tongue.

"The old Lakota was wise. He knew that man's heart away from nature becomes hard; he knew that lack of respect for growing, living things soon led to lack of respect for humans too. So he kept his youth close to its softening influence."

Here in the Pacific, if one is to judge from the writings of the early European visitors and invaders, much of the same attitude toward nature must have prevailed. Sir Joseph Banks, who accompanied Captain Cook in his explorations of the Pacific, grew quite ecstatic about the ways of life of the island people and the balance that existing between humanity and the natural world. All who visited the islands before the traders, the raiders, and the missionaries did their evil work, seemed to share that opinion. Among the Australian aboriginal people was a sense of responsibility toward maintaining the man-nature balance, a responsibility that was continually renewed by the visions of Dreamtime through which people were restored to unity with heaven and earth. (Meggitt, 1974).

reported that the people had agreed to sell. The biosphere people have again triumphed and that much more uranium will be turned loose to do the work of the Great Green Ant in ravaging the world (Allen, 1974). Admittedly, some of the ecosystem people who sell out to the biosphere network become very rich, which permits them to go somewhere else to live - so long as there is a somewhere else that the biosphere people have not destroyed.

Biosphere people create national parks. Ecosystem people have always lived in the equivalent of a national park. It is the kind of country that ecosystem people have always protected that biosphere people want to have formally reserved and safeguarded. But, of course, first the ecosystem people must be removed - or at least that has been the prevailing custom. The consequences are almost always destructive to the people affected. Colin Turnbull's book The Mountain People is a particularly disturbing account of what happened to a hunting-subsistence-agriculture people when they were pushed out of Uganda's Kidepo Valley National Park (Turnbull, 1972). A similar, but perhaps less severe, disintegration took place among the elephant-hunting Waliangulu who were displaced by Tasavo National Park - a park that has subsequently suffered from a plague of elephants (Gomm, 1974). As Tururin, chief of the Pataxo Indians of Brazil, has put it "We Indians are like plants: when changed from one place to another we don't die but we never fully recover. We will not leave here because even before the reservation existed we already lived on this land. It may be bad, it may be good but it's our land." But in Brazil the previously isolated ecosystem people are being threatened or destroyed by the massive drive for the exploitation of Amazonia - a process far less benign than any effort to create national parks (Supysáua, 1974).

It is a characteristic of wealthier biosphere people that they do not want to stay at home. They wander the globe always searching - searching for something they seem to have lost along the way in their rush to capture the resources of the world and accumulate its wealth. Thus they give rise to the tourist industry, and this in turn provides a financial justification for creating and maintaining national parks. In these parks the wanderers can see some of the wonders that they left behind, and can pretend for a while that they have not really destroyed the natural world - at least not all of it. They will pay highly for this experience. But for some reason the money nearly always tends to be channelled back into the biosphere network. It does not go to those who were once ecosystem people and who have the strange idea that what is now called a national park is really just the land that was home.

This situation must not continue. National parks must not serve as a means for displacing the members of traditional societies who have always cared for the land and its biota. Nor can national parks survive as islands surrounded by hostile people who have lost the land that was once their home. Parks cannot survive in a natural state if they are surrounded by lands that are degraded or devastated by failure to obey the simplest ecological rules. Today, with the increase in human numbers and the enormous pressure being exerted on all ecosystems, one of the distinctions between ecosystem and total biosphere is being broken down. No longer can biosphere

3. Wherever national parks are created, their protection needs to be coordinated with the people who occupy the surrounding lands. Those who are most affected by the presence of a national park must fully share in its benefits, financial or other. They must become the protectors of the park, whether they are directly employed by the park, receive a share of park receipts, or are in other ways brought to appreciate its value. Without this, we will find that we are entering a waiting game, at best. The people outside the park will await the change in government or the relaxation of vigilance that will permit them to invade the park.

4. Land use in areas surrounding parks must be compatible with the protection of nature inside the park. This too will require negotiation and understanding among the people who own or occupy these lands. It cannot be effectively accomplished by some sweeping government decree unless the lands are unoccupied.

This is not a comprehensive list of rules, but only an attempt to emphasize those rules which have been far too generally ignored in the establishment of national parks in the past. However, if national parks are really to survive, and if they are going to accomplish their objectives, then we must have more than just a set of rules concerning the parks and their surroundings. I cannot see much hope for the future of either parks or people, unless some of the old sense of belonging to the natural world, of being a part of nature, and not hostile to it, is restored. In an article prepared for Planet Drum, Jerry Gorsline and Linn House have made this comparison:

"We have been awakened to the richness and complexity of the primitive mind which merges sanctity, food, life and death - where culture is integrated with nature at the level of the particular ecosystem and employs for its cognition a body of metaphor drawn from and structured in relation to that ecosystem. We have found therein a mode of thinking parallel to modern science but operating at the entirely different level of sensible intuition, a tradition that prepared the ground for the neolithic revolution; a science of the concrete, where nature is the model for culture because the mind has been nourished and weaned on nature; a logic that recognizes soil fertility, the magic of animals, the continuum of mind between species. Successful culture is a semi-permeable membrane between man and nature. We are witnessing North America's post-industrial phase right now, during which human society strives to remain predominant over nature. No mere extrapolation from present to future seems possible. We are in transition from one condition of symbiotic balance - the primitive - to another which we will call the future primitive ... a condition having the attributes of a mature ecosystem: stable, diverse, in symbiotic balance again. ... If we wish to integrate our cultures with nature we do so at the level of the ecosystem which everywhere has a common structure and progression but everywhere varies specifically in composition and function according to time and place." (Gorsline and House, 1974).

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KEYNOTE ADDRESS - HON. Y. VIVIAN,  
MINISTER OF AGRICULTURE, NIUE

TRADITION OF CONSERVATION IN THE SOUTH PACIFIC

People of the South Pacific had a common ancestry - the proto-Malay so there is the possibility that there were policies and practices common to many peoples rooted in the common ancestry, but which might have changed in form to meet local conditions.

As the common ancestors moved down the Malay Peninsular and into the bush islands of Indonesia, Melanesia and much of Polynesia, was there a need to conserve resources? The climate, soils and topography suited the food plants they brought with them, and local wild plants which were abundant were soon cultivated. But even, say, in Indonesia, pressures of increasing population forced the development of new measures and so grew the great hydraulic civilizations based on wet lands rice agriculture. Once a resource is found inadequate and another has to be developed, common sense dictates a need to conserve the rare one- a pragmatic approach to problems which is paralleled today in the need to create or find new energy sources.

But as the ancestors of present Pacific peoples moved east, lands were colonized which did not have the abundance that the western archipelagos had; atolls were settled and soil scarcity, rainfall irregularity and the small areas of land indicate that there must have developed a need to husband resources very carefully - as today in the atolls such as the Tokelaus, every piece of natural material is collected and used for mulch and compost to conserve the quality of the sparse, poor soil.

There can be interesting speculation on a cause - effect argument or more commonly the chicken-egg type - which came first. There are ancient practices of conservation, which will be discussed later, some of which carry through to the present day. These practices now have deep cultural value, manifesting themselves in socio-religious forms and patterns as well in direct agricultural practices. But the interesting question is - did the socio-religious practices derive from an actual need to practice conservation of resources, or were the conservation practices overlaid on existing socio-religious values? A third possibility is of course that it was neither, but the conservation concept and the socio-religious practices developed side by side independently and later were 'married' together. Because of the lack of written records, and because of the notorious distortions which occur in the oral tradition, we, at this stage in our knowledge, cannot come to any definite answer. All we can say is that there is a tradition of conservation showing itself in many forms and inextricably interwoven in the socio-religious practices of peoples of the South Pacific, thus indicating a deep cultural need and value.

Limited or local tapus such as the fono on Niue conserve small personal resources. The fono is a commonly accepted and recognized sign, such as a palm leaf on a path or tied around a palm trunk. Its effect is to prohibit access to personal resources which are needed for specific purposes: in modern terms Keep Out, Hands Off, Trespassers will be Prosecuted. Other tapus apply to areas of the reef, seasonal types of fishing and so on. A particularly widely observed one is the marine mate-tapu in which a section of the water and reef is closed to food gathering due to a drowning.

There are many instances of local tapus associated with the sacred aspects of a culture, but are beyond the intention of this paper except as where they apply to the preservation of natural features - marae sites, burial mounds and caves, or sites associated with magic or spiritual qualities, often originating from many generations in the past. Perhaps the dolmen like structures in Tonga fit into these categories. It is in the wider applicability of the concept of conservation to aspects of preservation that reserves are set up. Such reserves have deep meanings and value to people in their sense of cultural identity, in their appreciation of their history, satisfying deeply felt psychic and emotional needs.

An interpretation from the conservation point of view of Pacific mythology, in such anthologies as those of Sir George Grey and Sir Peter Buck, lend credence to the point of view that conservation practices were wide spread. The Niuean legend of Taliu and Kulatea illustrates trouble for people who are greedy and destroy the only fish in a certain area. The well known New Zealand legends of Tane, god of the forests, and particularly that of Rata and his canoe are revealing. Acts of supplication, propitiation and thanksgiving were made to the gods of nature. These acts ensured that resources were not used indiscriminately, impulsively and wantonly, but were treated with respect and their use well thought out.

A social trait found throughout the Pacific is that of sharing. One aspect illustrates the point that many customs of conservation could have had their roots in the common proto-Malay ancestry. In Java an ancient custom, which has become a part of the practices of the more modern Muslim religion, is that of the ritual feast called slametan. After the feast, the participants take food gifts back to their families, and token amounts are sent to neighbours who could not attend. Is this not similar to the polynesian communal feasts, the kai? The kai tangi of New Zealand, the galue of Niue - at these the resources are shared, the poorer receiving to supplement their own, and as communal feasts take place in many places, at many times, for many purposes so the act of sharing moves around. What appears to be an exhaustion of one's food for others becomes an obligation on the others to do likewise in turn. It all balances out in the end, and possibly maintaining a balance is a main point behind all measures at conservation.

Enough examples have been given to point the fact that there was a great tradition of conservation practice in the Pacific. No doubt there were exceptions but these probably depended on the availability of plentiful supplies of resources in relation to the size of the population. Recent research in New Zealand in the

(Siratro seed is an export crop for Niue). Maximum use is made of these developed areas, by encouraging the grower to plant coconuts or fruit trees in unused pockets - seedlings are provided free, or at a very slight cost to growers.

Other important conservation aspects carried out by the Agriculture Department are :

Quarantine: Strict quarantine regulations are adhered to by the department, and many imported crops and plant materials are fumigated in order to prevent the introduction of harmful insects or pathogens. For the same reason all imported shells are fumigated. The Agriculture Department is fully aware of the disastrous results of lax quarantine procedures, particularly in the Pacific and is anxious to maintain the present good health of the flora of Niue.

Weed Control: Weed eradication programmes are being formulated to control Derris elliptica, or 'Tuba', which has had such harmful effects on reef life and Blue Rat's Tail and Merican Sunflower, two introduced weed species which have already encroached into native bush, as well as developed areas.

Vaipapahi Farm: This farm is essentially a quarantine and experimental area, but it also possesses a free nursery; ornamentals as well as fruit trees are grown in large numbers, and are supplied to growers for a minimal sum.

Finally, the Agriculture Department provides trees and assistance for beautification, whether for private houses, churches or for whole villages.

The Niuean Government is introducing legislation (see appendix) to protect the reef, the land, historic sites, and the flora and fauna associated with these.

The Education Department is developing curricula which is reviving the interest of children in their heritage - the sea, the land, and historic sites, and the culture and language. Planting is a big feature, visiting sites and hearing the legends are common, developing understanding of the forces of nature, and developing a deep seated love of their island are the aims. Archaeologists are locating, mapping and interpreting historic sites and more expenditures are planned for the future.

Niue is one small island, but these developments show the respect accorded to the tradition of conservation which is a part of the value system of the Niuean culture. The intention is to maintain and develop, not destroy, and so demonstrate in a real way the love of the people for, and the pride they have in, their lovely island. The utilitarian is interwoven with the aesthetic in agriculture and social culture.

A P P E N D I X

## ENVIRONMENTAL PROTECTION

## Explanatory Memorandum

The purpose of this Bill is to constitute a Ministry of Environmental Protection, establish environmental protection areas, provide measures for the protection of the environment and related matters such as establishing a national museum and protecting Niuean antiquities.

For some time now Cabinet has been conscious of the need to protect the environment in Niue. With self-government and the jet-age of tourism, we have to look to the mistakes of other areas in the Pacific region, as well as our own. We look at our neighbours and we find dead reefs, despoiled coral and ruined landscapes - all in the name of industry, progress and tourism. Protecting the environment is like investing capital in a bank. You use the capital to get interest. If we waste our capital there will be no interest left for our children to enjoy.

Already in the history of Niue we can find instances of dangers to the environment. The Niukini creeper was introduced to make it easier to catch fish. It is now a serious danger. Bamboo, blue ratstail and sunflower are also a potential threat.

At present one of the biggest polluters in Niue is the Government itself. Each Department needs to be kept aware of its responsibilities. It is for this reason that a separate Ministry has been created independent of the established departments. It will provide a safeguard for the environment.

The Ministry will work in conjunction with Village Councils and provide assistance and advice regarding measures to protect the environment.

The public will also need to be made aware of the problem. The Ministry will encourage education and publicity concerning the environment.

The Act endeavours to work in with existing Niuean custom. We have our traditional tapu areas where certain activities are forbidden. The Act creates Environmental Protection Areas and gives powers for them to be declared no longer Environmental Protection Areas.

In other words the Minister for Environmental Protection is given power to impose a national tapu. He acts with the concurrence of Cabinet. The tapu relates only to certain usages and practices carried out in the area. Ownership and title is not affected. The Government is not taking the land. It is merely imposing restrictions to protect it. The restrictions can be removed by the Minister with the concurrence of Cabinet.



Clause 11 provides for the temporary custody of firearms including spearguns. The Minister must be satisfied that temporary custody is necessary or desirable for the protection of the environment.

Clause 12 establishes a national museum which can be used as an art gallery and for other educational purposes.

Clause 13 provides for an annual report.

Clause 14 provides that no proceedings under the Act shall be instituted except on the direction of the Minister.

Clause 15 provides for a fine of \$500 or imprisonment for six months for any offence committed against this Act.

Clause 16 relates to consequential amendments.

Clause 17 provides for the making of regulations.

The first Schedule sets out the enactments administered by the Ministry.

The second Schedule defines the areas declared to be environmental protection areas.

The third Schedule contains the consequential amendments.

3. Ministry established - There is hereby established under the control of the Minister a Department of Government to be known as the Ministry of Environmental Protection which shall be charged with the administration of the enactments specified in the First Schedule hereto and with such other functions as may from time to time be lawfully conferred on it.

4. Functions of Ministry - The functions of the Ministry shall be:

- (a) To promote and encourage the protection of the environment and natural features in Niue with a view to maintaining a healthy ecological balance; and
- (b) To invite, promote and encourage researches, investigations and evaluations of measures desirable for the protection of the environment and natural features in Niue; and
- (c) To undertake such measures of beautification and restoration as may be necessary for the preservation and protection of the environment in Niue; and
- (d) To publish reports, information and advice concerning the protection of the environment and natural features in Niue; and
- (e) To receive and consider suggestions, complaints and representations relating to the protection of the environment and natural features in Niue from any person and to take such action thereon, within the scope of its functions, as it thinks fit; and
- (f) To advise and make recommendations to any Department of the Government on matters relating to the protection of the environment and natural features in Niue; and
- (g) To advise and make recommendations to Village Councils on the discharge of their functions under this Act; and
- (h) To exercise such other powers as may be conferred upon it by this Act or by regulations made under this Act.

5. Secretary for Environmental Protection - (1) There shall from time to time be appointed by the Public Service Commission a Secretary for Environmental Protection who shall be the administrative head of the Ministry of Environmental Protection.

(2) The office of the Secretary for Environmental Protection may be held in conjunction with any other office which the Public Service Commission shall consider to be not incompatible therewith.

(3) The Public Service Commission shall from time to time appoint such other officers as may be necessary for the due administration of this Act.

(i) No act or defacement or defilement whether by means of chopping, cutting, painting or inscription or otherwise shall be performed in the area;

(j) No pesticide, insecticide or fertiliser or other substance deemed by the Minister to be a potential danger to the environment shall be introduced into or used in the area except with the consent in writing of the Minister first had and obtained.

(3) Any person who wilfully fails to comply with the provisions of this section commits an offence against this Act.

(4) The Minister acting with the concurrence of the Cabinet and by notice in the Gazette may -

(a) declare any area in Niue to be an Environmental Protection Area and may in like manner revoke such declaration;

(b) declare any area set out in Second Schedule hereto to no longer be an Environmental Protection Area.

(5) Where any area declared to be an Environmental Protection Area within the meaning of this Act is adjacent to or abuts on to the foreshore or seabed within the meaning of the Niue Act, that area shall be deemed to include such foreshore and seabed.

7. Restrictions on export of certain items native or natural to Niue - (1) The export of any marine polyp or coral or of any marine organism akin to any marine polyp or coral, that is native or natural to Niue, is hereby totally prohibited.

(2) The export of any aquatic shell, mollusc or of any marine organism akin to any aquatic shell or mollusc, that is native or natural to Niue, is hereby totally prohibited.

(3) The export of any bush, shrub or tree that is native or natural to Niue or of any timber derived from any bush, shrub or tree that is native or natural to Niue, is hereby totally prohibited.

(4) The export of any absolutely protected animal within the meaning of the Wildlife Ordinance 1972 is hereby totally prohibited.

(5) The Minister acting with the concurrence of the Cabinet, and by notice in the Gazette, may place restrictions on the export of any other items or things native or natural to Niue, and may in like manner revoke any such restrictions other than the restrictions specifically imposed by this section.

(6) Any person who wilfully exports any item or thing native or natural to Niue, in breach of the provisions of this section commits an offence against this Act.

(7) Notwithstanding anything contained in this section, the Minister acting with the concurrence of the Cabinet may authorise the export of any specified item for all or any of the following purposes, namely -

(2) Upon the receipt of any report in terms of subsection (1) of this section, the Minister acting with the concurrence of the Cabinet and by notice in the Gazette may prohibit or restrict, subject to such conditions as he may deem necessary, the introduction into or usage in Niue of any pesticide, insecticide or fertiliser or other substance deemed by the Minister to be a potential danger to the environment that is not native or natural to Niue.

(3) No pesticide, insecticide or fertiliser or other substance deemed by the Minister to be a potential danger to the environment should be sold or otherwise disposed of or be kept or stored in any type of container which is used in Niue for the sale or purchase of any beverage or foodstuff, unless and until such container has been treated in such manner as may from time to time be specified by the Minister by notice published in the Gazette.

11. Temporary custody of firearms - (1) For the purposes of this section the expression "firearm" shall be deemed to include any speargun designed for the purposes of catching or taking fish.

(2) The Minister acting with the concurrence of the Cabinet and by notice in the Gazette, may from time to time make a temporary custody order for such period not exceeding six months as the Minister thinks fit, in respect of all or any description or class of firearms and may in like manner revoke any such temporary custody order.

(3) A temporary custody order shall not be made in terms of this section unless the Minister is satisfied that such a measure is necessary or desirable for the protection of the environment and natural features in Niue.

(4) It shall be the duty of every owner of a firearm or firearms within 7 days after the making of any temporary custody order to deliver such firearm to the Arms Officer, and the Arms Officer acting in consultation with the Minister shall cause such firearm to be stored in premises suitable for the storage of firearms.

(5) Any owner of a firearm who wilfully fails to comply with the provisions of subsection 4 of this section commits an offence against this Act.

12. National Museum established - The Minister acting with the concurrence of the Cabinet and by notice in the Gazette, may from time to time set aside any area of Government land for the establishment or maintenance of a national museum for the purpose of storage and exhibition of and research into Niuean antiquities and all other articles or things of artistic, educational or historical or scientific value or interest and relating to Niue and including any botanical mineral or zoological collections or specimens.

13. Annual Report - (1) The Secretary shall as soon as practicable after the end of each financial year furnish to the Minister a report on the operations of the Ministry for that year.

(2) A copy of the report shall be laid before the Assembly.

FIRST SCHEDULE

Section 3

Enactments To Be Administered By The  
Ministry of Environmental Protection

Fish Protection Ordinance 1965 No.32.

Wildlife Ordinance 1972 No.74.

Niue Act 1966 (NZ) Part XXIX thereof.

THIRD SCHEDULE

Enactment Amended	Amendment
Fish Protection Ordinance 1965	<p>By omitting from section 3 the definition of the term "Niue waters" and substituting the following new definition:</p> <p>"'Niue waters' means the sea adjacent to Niue bounded on the landward side by the low water mark along the coast of Niue and on the seaward side by a line every point of which is distant three international nautical miles from the nearest point of that low water mark."</p>
	<p>By omitting from this Ordinance the words "Chief Agricultural Officer" wherever it appears and substituting the words "Secretary for Environmental Protection".</p>
	<p>By omitting from this Ordinance the words "Resident Commissioner" wherever they appear and substituting the words "Minister for Environmental Protection".</p>
	<p>By omitting from section 6(1) the words "On the recommendation of the Chief Agricultural Officer, the Executive Committee" and substituting "The Minister for Environmental Protection".</p>
Wildlife Ordinance 1972	<p>By omitting from this Ordinance the words "Resident Commissioner" wherever they appear and substituting the words "Minister for Environmental Protection".</p>
Niue Act Part XXIX	<p>By omitting from this part of this Act the the word "Minister" wherever it appears and substituting the words "Minister for Environmental Protection".</p>

to plan in the islands for future civilisations is it wise for us to commit ourselves, technologically and in terms of our economic development, to patterns and growth - the patterns of our society that are going to become obsolete in 20 or 30 years and have to be entirely changed? Does it now seem reasonable for us to make a heavy commitment to one kind of civilisation that is rapidly going to have to change in other directions?

The resource base of the future will inevitably be biological, since it is only the biological resources of agriculture, forests and fisheries that are infinitely renewable if properly managed. It is only these resources that can continue to provide a basis for civilisation - not for tens of years or hundreds of years but hundreds of thousands of years if we take proper care of them and use them wisely. Man will learn to incorporate his civilisation into the natural cycles of ecosystems, rather than destroying nature and attempting to live apart from the natural world. He will eventually be breeding ecosystems in much the same way that present agricultural workers breed new crop varieties. We can see this tendency taking place in natural systems where in unstable environments over long periods of time, a great diversity of organisms has developed and worked together to build very complex and highly productive biological systems such as those of the coral reef or the tropical rain forest. There is no reason why man's society cannot evolve in similar productive dimensions, gradually increasing the efficiency of his utilisation of his resources and making certain that they can recycle with an hypothesis of ever increasing efficiency and productivity. The essential raw materials for this new development of civilisation will be the diverse species, communities and gene pools of the natural systems of today and of course it is the islands of the Pacific that have a disproportionate share of these genetic resources, these endemic and unusual species and interesting communities.

We cannot yet take full advantage of these resources, we don't yet know enough about them to use them properly, but the time will soon come when they will be as important for society as the great oil reserves of the Middle East are today. Dr Dasmann in his excellent talk yesterday referred to the ecosystem people as the people of the future. I think this is in a sense true, but in the sense that in the future we must develop that sense of being part of the ecosystem on a world basis, we must develop in a sense a world ecosystem and I do not think this necessarily means a future primitive. It means that the future will be different from the society of today, but it may be very advanced in a sense much closer to the example that we see in the island peoples of the past in the traditional approach they have taken to their own more limited systems. In fact, I think we can take the example of island cultures of the past as an example of the whole world civilisation of the future.

Ecosystems are very resilient within certain limits. We can exploit them to some considerable extent without necessarily destroying their basis for the future, but we must have the wisdom to know how far we can push a resource before we destroy the very underlying foundation of its productivity and lose the possibility of ever restoring it. It is a delicate path, but one that I think is very important in making these decisions about immediate versus future requirements. Often it is only necessary to channel economic development along those lines that are most compatible with the potential and limits of the natural environment. I think that the concept here of marginal value is a very important one to consider in planning for development. If you have a large section of forest, if you cut ten percent of that you still have ninety percent of the forest remaining, if you cut fifty percent of the forest you still have fifty percent remaining, but if, however, you have reduced the resource to only ten percent and then you cut that last ten percent you have eliminated the possibility of every re-establishing that natural system because it is gone. So there is always a proportion of a resource that can be effectively used but as the remaining proportion diminishes the significance of that proportion for conservation increases.

We have seen this in the parks in the North Island here in New Zealand which seem to enshrine the few remaining natural forests left and therefore have great significance. In the days when that forest covered the entire North Island it seemed to be highly expendable and this principle is very pertinent in the islands because they reach that final proportion so much faster since their resources are much more limited.

There has fortunately been a steady increase in efforts to protect samples of the natural environment in the Pacific. The 1974 United Nations List of National Parks and Equivalent Reserves lists five parks within the area of the South Pacific Commission that meet its high standards for inclusion, plus many others in Australia and New Zealand. With the rapidly increasing pace of conservation activities throughout the area and the many park and reserve projects in process that we have been hearing about in the reports from the territories and governments, we can hope that other areas will qualify for this list in future years in a number more appropriate to the biological resources of the region that need to be protected.

This then is where we stand today with respect to the preservation of the South Pacific environment. We have a valuable heritage that is being rapidly eroded by both useful and unwise development projects in face of small and largely tentative efforts to protect some of the most significant areas. What then is there still to do?



other threats to our existence. We have never had to pay for these benefits, so we often forget how valuable they are, yet if we allow the natural systems that provide them to be damaged or destroyed we shall suffer the unpleasant consequences. Indeed, there are already too many examples of this throughout the Islands.

I can think of one instance on which I was working on a small coral island surrounded by a mangrove area - or originally it had been surrounded by a mangrove area. It was the mangroves that had accumulated the sand, the material of which the island was built. However, the mangrove harboured mosquitoes so the owners of the island cut all of the mangroves to eliminate the mosquitoes and this was fine - it was a lovely improvement to their environment - until the next hurricane. The last time I visited the island all that was left was a pile of sand about one foot high and five feet in diameter. There was nothing else left of the buildings, the trees, the vegetation, everything on that island. The mangrove had been an essential resource for the protection of that island, of the system on which people depended. But it is only once we lose one of these natural benefits that we realise how valuable they are and that we must find enormous sums of money to re-establish that natural balance that formerly we had had for free.

Ultimately, therefore, areas where natural systems fall within all of these categories, must be given some type of protective status that will maintain them in a state that will be most useful to us. The final question therefore is how can we do this?

The preservation of the South Pacific environment will require courage, leadership, creativity, scientific research and understanding and public education and support. The conservation methods of continental nations do not always lend themselves to the Island situation particularly as we have seen in our discussions here, things such as the outright ownership of park land or the concept of the exclusion of all human activities for preserved areas. A national park should be named or determined by its relative as well as its absolute part. The ideal 1000 hectares minimum area may be logical on the Continent where it is only a small fraction of the resource. It may have to be the exception rather than the rule in many Pacific Island countries.

There are many unique dimensions to the problem of conservation in the Pacific. The highly limited land areas on which many demands must be made to support the people who inhabit them. There are the attitudes of many Island people for whom their land has a meaning and an importance far beyond its economic value because it is the roots of their culture of their life. There is the fragility, the complexity and the rarity, inherent in many island ecosystems in the tropical rain forests, in the lagoons, the mangroves, and the coral reefs, and there are the advanced marine areas and ocean areas between

Beyond this there is room for considerable creativity in developing kinds of protection particularly suited to each territory and culture. Government ownership of the land is not always necessary as we have seen - a legal ban on disturbing activities of certain sorts which would be the modern equivalent of traditional taboo might be just as effective and we can see an example of this in the legislation that Young Vivian has appended to his talk, the legislation proposed for environmental protection in Niue. A conservation easement or other means whereby the Government purchases all development rights could also be considered. Supervision of the protected areas could be provided by a village council, perhaps with some small compensation, or under the auspices of the local or regional board or a national trust. It is possible to include in any agreements for protection reverter clauses or other legal guarantees so that the land owners, the traditional owners, can be certain that the Government is not trying to benefit at their expense.

A third essential element in conservation involves the development of Governmental and public interest in and support for the goal for preservation in general, the means to be used to achieve this preservation, and the specific areas to be preserved. Without at least some measure of public support conservation efforts are ineffective and legal protection cannot even be enforced. Therefore means should be created for either the Government or the public to take the lead in environmental protection or preservation and in the establishment of parks and reserves because we see in some instances it is the public that wants to protect their land and the Government that is pushing for development at all costs. In other cases it is the Government that feels the need for protection and the public who want to continue to use their resources in a way that may be destructive to their own long term interests.

Finally, this protective status must be embodied in appropriate legislation or other effective action and provision must be made for management and enforcement.

The clerical legal definition of permitted and prohibited activities in such areas tailors the protective status to local needs and conditions whether those needs or conditions are natural or cultural. It is certainly possible to include in a definition of a protected area a series of permitted traditional activities, the removal of an occasional tree for a canoe, the hunting of certain species for traditional ceremonial purposes and so on. In fact absolute prohibition on the utilising of a source can sometimes be counter-productive. I think of an example in the Solomon Islands where there is a bird called the Mekapo, that breeds by laying eggs in large mountains of rotting material and these eggs are an important item of the traditional diet. It would be unreasonable to expect the people to give up an important source of protein readily available to them, in order to protect the endangered species. The logical approach would be to encourage the cultivation of Mekapos and have them hatching their eggs in captivity so that the food need of the people can be met and the pressure taken off the resource in the wild. A traditional approach to conservation legislation that would forbid any use of the bird in any stage of its life cycle would endanger the species further, for as legislation that allows for the cultivation of the bird and

I will leave that question for your discussion after the talk.

Most of this discussion has focused specifically on the protection of the most significant natural areas with some kind of legal status as national parks or reserves. However, much of the South Pacific environment will never lend itself to such special status, yet it too needs to be appropriately managed if the environmental values of the area are to be maintained. This will require a much broader, long term programme of activities ranging from environmental education to comprehensive planning and possibly land use control and including the careful ecological evaluation of development projects to ensure that their environmental impact is minimized.

Further discussion of these topics would go beyond the scope of this Conference.

This then is the challenge of preserving the South Pacific environment. The region has both rare and wonderful species and natural heritage. It has been well cared for by the traditional people of the region but it is unfortunately now threatened by creeping destruction from growth and development.

Change may be another factor in the modern world but environmental destruction is not. Development projects can be carefully selected to match the environmental potential and limit of the region and the most significant natural area can be set aside in appropriate parks and reserves. This will have its own benefits and a chain of magnificent national parks and protected areas stretching through the South Pacific will set an example for, and provide a great attraction to those from other parts of the world whose own environment has become degraded through neglect.

The preservation of a South Pacific environment will not be easy, the short term pressures for development and personal gain are strong and not easily overcome. The opportunity of preservation will not last for long; in a few more years at the present rate only remnants of the region's natural heritage will remain. Now is the chance to demonstrate another dimension of what has been called the Pacific way, the harmonious development of natural resources for the continuing benefit of Pacific Island peoples.

In each case the prime objective is to examine the extent to which existing protected areas cover the various types of natural ecosystems of the region and to recommend new candidate areas that should be added to the network of parks and reserves. An attempt is also being made to bring into existence machinery to facilitate cooperation between the national parks authorities within each region.

The national park concept involves recognition that certain areas are of importance to the nation and that their protection and management is a national responsibility. The logical development of this concept is awareness that certain areas have universal significance and that they should be regarded as part of the natural and cultural heritage of mankind to be protected through international cooperation.

This has led to proposals for collective action to conserve the World Heritage, now embodied in the Convention Concerning the Protection of the World Cultural and Natural Heritage adopted by the General Conference of UNESCO in Paris in November 1972. The Convention recognizes that deterioration or disappearance of these natural and cultural resources is an impoverishment of the heritage of all the nations of the world, and that an effective system of collective protection is required with a sharing of knowledge and effort.

The region which is the concern of this South Pacific Conference on National Parks and Reserves comprises one of the seven biogeographical regions (namely, the "Australian" region) recognized under the system of biotic provinces of the world evolved by IUCN as a tool for helping in the systematic examination of areas that should be protected in a world system of national parks and reserves. It is noteworthy that the subdivision of this "Australian" region into biotic provinces involves identification of most of the island territories as separate and distinct units (see Appendix). This reflects the special character of island fauna and flora with a limited number of species frequently unique to the island cluster in question.

Islands have particular significance in any attempt to develop a world network of parks and reserves since they usually represent unique associations of species not found elsewhere.

In order to catalogue protected areas that meet certain standards of protection and management, IUCN prepares each year the United Nations List of National Parks and Equivalent Reserves. The 1974 UN List includes 131 protected areas in the "Australian" region and of these 122 are in Australia and New Zealand. Of the remaining 9, 2 are in Hawaii, 2 in Celebes-Sundra and 2 in Papua-New Guinea, leaving 3 only in the islands of the South Pacific. Clearly these islands deserve close examination.

Execution of such projects is likely to be a matter for FAO and in some areas for UNESCO. FAO has been responsible for overall advice on the establishment of systems of national parks and for projects for the establishment and operation of individual parks as well as for providing vocational training. UNESCO is concerned more particularly with research aspects, especially those related to the MAB programme and with professional and other training.

It is possible that both the World Bank and the Asian Development Bank might consider projects for national parks development provided that these were linked with tourism.

Within the region the South Pacific Commission can be a channel for technical assistance. The regional ecologist on the staff of the Commission is able to give advice on projects concerned with national parks.

Expert help and training opportunities are available also under bilateral assistance programmes. Australia and New Zealand have indicated that support for parks projects will be available and we know that other countries are prepared to assist in this field.

Private foundations have supported the development of national parks in various parts of the world. In particular, the World Wildlife Fund, IUCN's sister organization, has a long record in this field and the projects it funds and operates jointly with IUCN include a high proportion concerned with support for national parks. During 1975 a special fund-raising effort will be devoted to tropical rainforest projects, mostly concerned with protecting specific areas, and countries may seek help for reserves in rainforests.

The Zoological Society of Frankfurt, and the New York Zoological Society and the Fauna Preservation Society have also given special help with projects of this kind. The Rockefeller Brothers Fund, New York, has supported projects linked with national parks in some parts of the world, as have other US-based foundations.

IUCN, through its International Commission on National Parks and its wide network of contacts, can provide advice and information on national parks. It helps its members in formulating requests for technical assistance from the various sources mentioned, and its services are available as a catalyst and as adviser. IUCN sees its role as providing preliminary help in surveying areas and formulating requests; the carrying out of large-scale technical assistance projects falls into the province of the UN agencies or bilateral assistance programmes.

Wild Fauna and Flora (Washington, D.C. 1973); the Convention Concerning the Protection of the World Cultural and Natural Heritage (Paris, 1973); and the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar, 1971).

The text of the draft Convention is included in the papers for the present Conference for information. Detailed discussion of the terms of the proposed Convention will be a matter for the Governments involved and will be the subject of an intergovernmental meeting to be held in Western Samoa in 1976.

Within the region, considerable experience and expertise is available, and it is known that those countries which already have well-developed systems of national parks and reserves are willing to share this knowledge and skill with other countries that are only now setting up protected areas and developing parks administrations. Through such sharing we may hope soon to achieve the desirable objective of providing full protection and effective management for a balanced network of parks and reserves throughout the whole of the South Pacific Region.

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Principal Biome Types

Mixed island systems cont...

Biotic Province

Cook-Austral  
Society Islands  
Tuamotus  
Marquesas  
Hawaiian Islands  
Easter Island

CLIMATE

Australia is the world's driest continent with nearly 60 per cent of the country receiving an average annual rainfall of less than 380 mm. Troudaninna in South Australia has the lowest average rainfall of only 105 mm. In the south-east, the east coast and the south-west rainfall is much higher with Tully in coastal north Queensland receiving an annual average of 4,500 mm. and Lake Margaret, Tasmania, 3,700 mm. In much of Australia the rainfall is extremely variable. In 1974 substantial falls were recorded over some of the driest parts of the country.

During January average maximum temperatures exceed 35° C over a large area of the continent's interior. July is the coldest month with regular frosts being recorded in the higher regions of southern Australia, and extensive snow falls over great areas above 1,370 metres.

The greater part of the continent receives more than 3,000 hours of sunshine each year and in central Australia, totals in excess of 3,500 hours occur. A minimum of approximately 1,750 hours occurs on the west coast and highlands of Tasmania.

POPULATION

Australia's population now exceeds 13 million and is expected to be about 20 million by the turn of the century.

The population is concentrated mainly in the south-eastern part of the continent with a smaller concentration in the south-west. Over 85 per cent of the population lives in urban areas with about 41 per cent concentrated in the two major cities of Sydney and Melbourne.

AREAS RESERVED

Throughout Australia there have been some 13.8 million hectares reserved as national parks, wildlife reserves and historic sites under the different Australian and State Government systems for national park and wildlife conservation areas. This represents about 2 per cent of Australia's area. (See Appendix for approximate distribution of these areas within Australia).

The Australian Government has direct responsibility for national parks and reserves in the Australian Capital Territory and the Northern Territory.

Northern Territory

Under the Crown Lands Ordinance of the Northern Territory Crown lands can be reserved for various public purposes such as national parks, flora and fauna reserves, scenic reserves, historical reserves and recreation reserves. National Parks covered 226,181 hectares and other reserved areas covered 4,828,020 hectares in June 1974 representing 3.8% of the area of the Northern Territory.



## CONSERVATION AND ENVIRONMENTAL AGENCIES

The major Australian Government environmental agency is the Department of the Environment and Conservation established in December 1972.

The role of the Department is seen as being largely concerned with environment and conservation policy formulation. The Department provides a means for the Government to be concerned with the Australian environment, and the social, technological and ecological factors relating to proposed actions or progressive changes affecting the environment. It provides a service in evaluating different developments and recommending those that are seen as being beneficial environmentally. The Department formulates policies on environmental matters, organises public hearings where appropriate, and supports citizens, both individually and in groups, who are concerned with various aspects of the environment.

Policy recommendations are formulated by the Department within the framework of overall planning and environmental objectives for the protection of Australian flora and fauna and their habitats, for the adequate reservation and conservation of selected lands and waters as national parks and nature reserves, and for the conservation and management of water, soil, marine and atmospheric resources. The Department is concerned with the care and management of natural resources, and landscape, and the integrity of the bio-geochemical systems upon which man depends.

A Council of Nature Conservation Ministers was established in January 1974 by the Australian and State Government Ministers with responsibility for nature conservation. The Australian Minister for Science is also a member.

The Council aims to further the development of co-ordinated policies for nature conservation and especially for the reservation and management of adequate areas of land for the conservation of Australia's wildlife.

A Standing Committee, comprising one officer representing each Minister (usually the permanent head of the relevant department) advises the Council on all matters relating to its functions.

### POLICY

The Australian Government aims to ensure that adequate samples of Australia's unique flora and fauna are preserved in a comprehensive system of national parks and equivalent reserves both for environmental conservation and recreation purposes. This will be achieved by dedication of lands in the Territories and by providing assistance to the States.

In the international sphere Australia is actively co-operating with the United Nations, the Organisation for Economic Co-operation and Development, and the International

APPENDIX

30.6.1974	National Park Area (hectares)	% of State	Other Reserved Areas (hectares)	% of State	Total Areas Reserved (hectares)	% of State	Area of State (hectares)
N.S.W.	1,364,039	1.7	274,531	0.3	1,638,570	2.0	80,143,147
SA	177,966	0.2	3,414,446	3.5	3,592,412	3.7	98,438,130
TAS	400,140	5.8	66,621	1.0	466,761	6.8	6,833,197
VIC	205,264	0.9	61,891	0.3	267,155	1.2	22,761,956
QLD	1,117,297	0.7	29,940	0.2	1,147,237	0.7	172,753,000
WA*	1,767,289	0.7	3,195	-	1,770,484	0.7	252,763,280
NT	226,181	0.2	4,828,020	3.6	5,054,201	3.8	134,752,520
ACT	-		9,713	3.9	9,713	3.9	243,201
AUSTRALIA	5,258,176	.7	8,688,357	1.1	13,946,533	1.8	768,688,431

139.

\* WA figures are for National Parks Board of WA areas only as accurate figures for fauna reserves etc., were not available. (Fauna reserves, etc. are of the order of 5 million hectares in 1974).

The vegetation of the lowlands has been greatly disturbed since European settlement, but the original pattern can still be recognised - woodland and grassland on the heavier, deeper soils and open forest on the shallow soils.

The ACT is drained by the Murrumbidgee River system. Its main tributaries within the Territory are the Molonglo (on which Canberra is sited), the Cotter (on which three of Canberra's water supply storages have been built), and the Naas-Gudgenby.

The valleys of these systems, particularly the Cotter and the Naas-Gudgenby rivers and their tributaries, provide the mountain slopes - generally forested areas of between 600 metres and 1200 metres in elevation.

The plains country in and around the ACT, known as the Monaro region, proved attractive to the early rural settlers, particularly for the grazing of sheep. Though large parcels of what were once rural holdings have now given way to the growth of Canberra, some 141 750 hectares remained as rural holdings at June 1972.

The Jervis Bay Territory is a peninsular of 2286 hectares forming the southern promontory of Jervis Bay itself. It lies on the eastern seaboard of New South Wales about 258 kilometres from Canberra, ACT. The territory is located on the southern extremity of the Hawkebury sandstone formation which is overlain by extensive dunes of Pleistocene to Recent origin. The territory is almost surrounded by lake, bay and ocean waters and has a fine array of beaches and dramatic cliffs. The offshore shelf is very narrow and so waters are very deep and clear. The vegetation is diverse in response to the varied dune based topography and ranges from heath to forest and rainforest.

Within the Jervis Bay territory are two small villages, a naval college and a number of military installations.

## CLIMATE

The climate reflects some continental influence. Summers are hot with temperatures occasionally rising above the century, and winters are cold with early morning temperatures often falling below freezing point. The average maximum at Canberra is 19°C and the average minimum 7°C. Rainfall amounts to about 610 mm distributed evenly throughout the year, but there are considerable variations from year to year. In the first half of 1965 Canberra received only 63 mm of rain compared with an average of about 305 mm. Widespread deaths of native trees as well as crop, pasture and pine plantation losses resulted.

The rainfall is higher than in the lowlands, but there are variations due to aspect. Winter storms bring snow, but this seldom lies for long, except in a few sheltered places at very high levels.

The mountain ridges of the ACT generally are not high enough to reach above the treeline, though on higher peaks trees give way to low shrubby growth or form thickets in more sheltered

Reserve) to highly modified landscape.

(a) ACT Nature Reserves

1. Tidbinbilla Nature Reserve ( 5 515 hectares)

This reserve is about 40 kilometres from Canberra near Tharwa. It lies on the north-east extremity of a continuous natural area composed of Kosciusko National Park (NSW), Gudgenby National Park and the Cotter catchment (ACT) which forms a large part of the highland region of south-east Australia.

An area of relatively high rainfall, the reserve contains vegetation associations ranging from grassland through wet sclerophyll forest to alpine woodland.

About 16 kilometres of nature trails have been provided in the wetter areas and a wildlife display area is being developed on the grassland. This includes the display of waterfowl, kangaroos and emus, koalas and other native wildlife. Rangers are on duty to assist visitors.

Accommodation is available in Canberra, and camping is permitted in the Cotter Reserve, 18 kilometres from Tidbinbilla.

2. Jervis Bay Nature Reserve ( 3 807 hectares)

This nature reserve occupies most of the Australian Territory of Jervis Bay, the southern promontory of the Bay.

The reserve is about 258 kilometres from Canberra and about 194 kilometres from Sydney.

Being surrounded by the waters of Jervis Bay, St Georges Basin and the Pacific Ocean, the reserve has a fine array of ocean beaches and sheltered waters, making it a popular place for water recreation. The clear waters and diverse marine environment attract many skin divers, but spear guns are not permitted in the reserve. On land, the vegetation is complex and varied, ranging from heath to forest and rainforest. Nature walks are provided and two camping areas are available. Campers should make contact with the rangers as soon as possible. Other accommodation is available at Huskisson and nearby resorts.

3. Black Mountain and the City Reserves

The Black Mountain Reserve (521 hectares) and the Ainslie-Majura Reserve (1 137 hectares) form the nucleus of a nature reserve system in the urban area of Canberra. Further reserves will be added in the future. These reserves contain vegetation communities in near natural state (Black Mountain) and communities modified by past land use. They provide for a range of activities from serious study in the natural areas to nature study by schools, bush walks and informal recreation of many types in other areas. Nature trails and picnic facilities exist in some areas. Rangers assist visitors and schools in understanding and using the reserves.

- (c) Survey the vegetation of the territory and undertake research and management duties associated with the conservation of native flora and its ecological requirements.
- (d) Conduct intensive investigations so as to advise on the planning and development of parks and reserves in the ACT (including Jervis Bay).
- (e) Undertake responsibility for the day to day management and operation of parks and reserves.
- (f) Develop public education programmes relating to all aspects of conservation education.
- (g) Administer conservation legislation and advise the Department on all aspects of environmental conservation in the ACT and Jervis Bay.

### Staff

Conservation staff include seven professional officers, eleven technical officers and sixteen rangers. Other clerical and support personnel give a total staff of sixty.

### CONSERVATION AND ENVIRONMENTAL AGENCIES

The main supporting organisation is the ACT Nature Conservation Advisory Committee which is composed of eminent scientists and community leaders. Its function is to advise the Minister for the Capital Territory on all aspects of environmental conservation in the ACT and Jervis Bay.

In addition, the Minister for the Capital Territory is a member of the Australian Environment Council, The Council of Nature Conservation Ministers (CONCOM).

### POLICY

This Department sees Nature Conservation as an important major function within its general policy of total land-use planning and management within the ACT and Jervis Bay. Because of its unique position as the manager of all land in the territory, rational allocation of land resources is achieved. For this reason the Department is able to apply conservation principles and techniques to all of its land and watersheds - not only those in reserved areas.

The Department supports the general principles and policies of IUCN and UNEP and endeavours to apply these in its own operations and elsewhere through its participation in interstate and overseas meetings and committees.

Mangaia the next largest island is Rarotonga's nearest neighbour lying 204 kilometres to the south east. Penrhyn the furthest away is 1 367 kilometres northeast of Rarotonga clearly indicating the formidable problems in maintaining an effective system of administration of the neighbour islands from Rarotonga. Isolation has therefore been a characteristic feature of the development of the Cook Islands since the earliest period of first contact with the outside world.

### CLIMATE

The climate of the Cook Islands generally is equable and mild with the southeast trade winds providing a moderating effect on the micro-climate of each island. Rainfall on all the islands is evenly distributed with a marked difference between the dry and wet seasons. Rarotonga's average annual rainfall is about 2.11 metres with much of the rain falling between November and April. This is also the hurricane season when tropical downpours or periods of intermittent sunshine and rain are a characteristic feature of the climate particularly of the Southern Group. The Cook Islands lies within the hurricane belt which extends south eastward from the Wallis Islands. The extreme temperatures from 8.9° C in July-August to 32° C in December-January. The relatively cooler months, which is also the dry season, extends from April till October while the summer months from November till March are very warm and humid.

### POPULATION

The Cook Islands population is maintained at 19 000 to 21 000 by a steady drift of Cook Islanders to New Zealand particularly to the main urban centres of Auckland and Wellington. According to estimates there are about 20 000 Cook Islanders residing in New Zealand.

Of the Cook Islands total population over 50% live on Rarotonga. About 51% of Rarotonga's population live within the township of Avarua suggesting an increase in urbanisation on Rarotonga as the influx of younger people continues in a one-way drift from the dull village-life and static socio-economy to a relatively more exciting life of the urban centres. Usually Rarotonga is a staging point for further migration to the sophisticated life of the New Zealand metropolitan areas.

### AREAS RESERVED

Only an infinitesimally small area of land is reserved for public parks or conservation areas throughout the Cook Islands. In Rarotonga these reserves are mainly located along a short section of the coastal strips especially between Avarua town westward to the airport.

POLICY

Although, currently, there is no definite written policy for the establishment and administration of National Parks in the Cook Islands the aims and objectives of Government have often been expressed, however, in relation to tourism or other project developments, to protect, in broad terms, the cultural heritage of the people and the natural environment. There is therefore an urgent need for a positive action to be launched in order that these aims and objectives are achieved in a manner that will be of educational benefit not only to the people of the Cook Islands but to the rest of the Pacific Region and the world.

## ENVIRONMENTAL LEGISLATION

The main pieces of relevant legislation affecting land use are the Crown Lands Ordinance (CAP.113 of the Laws of Fiji), Native Lands Ordinance (CAP.114), Crown Acquisition of Land Ordinance (CAP.119), Land Conservation and Improvement Ordinance (CAP.120) and the Forestry Ordinance (CAP.128). Existing nature reserves have been created under the last of these. Under the National Trust for Fiji Ordinance of 1970, that body is "to promote the permanent preservation for the benefit of the nation lands (including reefs), buildings, ... having national, historic, architectural, or natural interest or beauty", and is therefore pressing for the creation of parks and more reserves on crown land and, under long-term lease, native land.

## ADMINISTRATION

Existing nature reserves are administered by the Forestry Department of the Ministry of Agriculture, Forests, and Fisheries. The National Trust for Fiji, which is a statutory body whose Council is chosen by the Minister for Urban Development, Housing, and Social Welfare, is promoting national park development. Park administration and development will draw on the services of those ministries with assistance from the Ministry of Communication, Works, and Tourism (who are helping finance small rural parks) and the Ministry of Lands and Mineral Resources.

## CONSERVATION AND ENVIRONMENT AGENCIES

No government agency has been created specifically to monitor or advise on environmental legislation, policy, or impact assessment of major development projects. Individuals within various ministries are involved with various aspects of these issues. For example, preliminary work on a Clean Air Act and a comprehensive Environmental Act is being done within the Ministry of Health and an environmental committee is chaired by a planner from the Ministry of Urban Development, Housing and Social Welfare. Staff of the University of the South Pacific often advise on specific issues. Protection of flora and fauna is the responsibility of the National Trust and the Ministry of Agriculture, Forests, and Fisheries.

## POLICY

Fiji's policy is to participate in as many environmental seminars and U.N. conferences as possible on environmental issues within available resources. At the 1972 Stockholm Conference Fiji's main concerns were for immediate international control of biosphere degradation, preservation of the marine environment from pollution (including radio-active fallout), and the increasing debasement of the quality of life by the industrialised countries.



At the World Population Conference in Bucharest in 1974, Fiji supported the Draft World Population Plan of Action. Locally the main areas of concern are: (a) harbour, estuarine, and coastal pollution associated with urban development and ship oil discharges; (b) industrial and traffic air pollution; and (c) waste disposal in urban areas. In rural areas the aim is to preserve for the public benefit marine and terrestrial ecosystems in the form of parks and reserves.

Although atolls are numerous in the tropical Pacific, only two are known by us to have been reserved mainly for scientific purposes. These are the Rose Atoll in Western Samoa and Tairao of the Tuamoto Archipelago in French Polynesia. But Wailagilala is a different type of atoll.

(B) For science, Wailagilala is distinguished for having attracted the attention of the famous coral reef investigator, Alexander Agassiz at the end of the 19th century. In an effort to check the hypothesis of Atoll formation proposed by Charles Darwin, Alexander Agassiz drilled into the limestone basis of several atolls, of which Wailagilala was one. Its foundation for an important lighthouse has historic interest.

(C) PRELIMINARY STUDY

(i) Photography

Extensive photography is essential. This will have to include documentation of geomorphological, fauna and flora features, which accompanied by field notes will provide an important repository of knowledge and comparison for future studies.

(ii) Geomorphology

The atoll's islets will have to be mapped; sediments, beach rock and reef rubble formation located and described. Profile transects across the reef flats of a normal to the reef edge need to be surveyed at a number of points with underwater surveyors of bathymetry of the seaweed ends of these transects. The profiles with written descriptions of the reef will provide an idea of the structure and evolutionary history of the atoll reef and serve as a basis for a possible future study in more detail.

(D) VEGETATION

All plants species should be identified with the collection of specific which are uncertain. Main vegetation types should be described in terms of structure, composition, and substrate. These vegetation types should be mapped in conjunction with the geomorphological survey. Collection of mosses, liveworts, algae, and lichens will be made.

(E) TERRESTRIAL FAUNA SURVEY

Birds species, insects and arachnids should be recorded and population sizes estimated to the extent of expertise available. Also numbers and species of turtles and their nesting habits can be studied.

SITUATION REPORT - FRENCH POLYNESIA

(Translation from French)

INTRODUCTION

French Polynesia consists of 130 islands and atolls making up a surface of 400 000 hectares, of which the island of Tahiti alone accounts for 104 200 hectares. The five archipelagos which make up French Polynesia are scattered over an area of ocean of 400 000 000 hectares, - a portion of the earth's surface comparable in area to Western Europe.

THE FIVE ARCHIPELAGOS

The Society Islands, between longitudes 148° and 158° West and latitudes 16° and 18° South, comprise six main islands divided between the Windward Islands (Iles du Vent), which include Tahiti, the largest of the islands of French Polynesia, and the Leeward Islands (Iles Sous-le-Vent).

To the north are the Marquesas, approximately 1500 kilometres from Tahiti; a grouping of ten mountainous islands situated between the meridians of 138° and 141° West and the parallels of 7° and 11° South.

To the south are the Austral Islands, 600 kilometres from Tahiti and separated from one another by between 160 and 230 kilometres. These widely dispersed islands lie between the meridians of 140° and 155° West and the parallels of 22° to 28° South.

To the south-east are the Gambier Islands, made up to ten islets, latitude 23° 15' South and longitude 135° West, 1900 kilometres from Tahiti.

Lastly there are the Tuamotu Islands, some 25 flat coral atolls forming a chain from the north-east to the south-east between the meridians of 137° and 151° West and the parallels of 14° and 23° South.

1 The W.A. Robinson Fully-protected Reserve

On 1 August 1972 it was decided that the atoll of TAIARO, 300 nautical miles east-north-east of Tahiti in the Tuamotu Archipelago, would become a reserve for scientific research.

A brochure dealing with this reserve can be obtained from Post Office Box 866, Papeete, Tahiti, French Polynesia.

2 Tetiaroa Nature Park

This atoll, the former summer residence of the Polynesian kings, is only 20 minutes from Tahiti by air and comprises 12 islets, 5 of which are in the process of being classified as bird sanctuaries. The rest of the atoll, also under protection, is set aside for educational and public recreation purposes. Belonging to Mr Marlon Brando, this atoll has a hotel and experimental stations.

3 Taiarapu archaeological and nature park

Situated in the Tahiti Peninsula and with a surface area of about 10 000 kilometres this park project, preliminary studies for which are in progress, aims at handing down historical evidence (an archaeological site) to future generations; it will be the "expression" of the island of Tahiti, and, at the same time, a nature observation school.

4 Faatemu-Raiatea (Leeward Islands) Protected Area

The purpose of this is to enable, in the first instance, a study of the lagoon environment to be carried out so as legislation may be prepared to protect this environment; in the second instance, studies of the possibilities of utilising the area for economic purposes in harmony with the ecology will be attempted.

5 Mont Marau Highland Park

This park, which is close to Papeete and which is situated at an altitude of over 700 metres, will offer visitors a marvellous view of mountain vegetation. It is also a sanctuary for endemic birds, which are progressively being driven away from the coastal strip due to inopportune introductions and the economic development of the Territory.

LEGISLATION

The protection of the natural heritage has been codified in two main texts: , the Territorial Development Code and the legislation on waters, forests, hunting, and fishing.

ADMINISTRATIVE ORGANISATION OF PARKS AND RESERVES

At the proposal of a special committee (the Natural Monuments and Sites Committee) preliminary studies are entrusted to research organisations working in the Territory, which are co-ordinated by the Environment Section of the Development Service.

SITUATION REPORT - GILBERT AND ELLICE ISLANDSPREAMBLE

The Gilbert and Ellice Islands are small in land area, but cover a vast expanse of ocean. While it is possible to give legal protection to various islands, physical conservation is extremely difficult. The country is only now awakening to its need to protect its wildlife and conserve its heritage.

GEOGRAPHY

The land area of the Gilbert and Ellice Islands is only about 750 square kilometres, of which more than one third is represented by a single island (Christmas). There are forty two coral islands scattered over more than seven million square kilometres of water, from Ocean Island at 169° East to Caroline at 151° West, and from Washington at 5° North to Niulakita at 12° South. The islands vary little in make-up. Ocean Island is a raised island, about 70 metres high, but all the remaining islands are coral atolls, either reef or lagoon type, rarely exceeding three or four metres in height. The largest is Christmas Island, of over 260 square kilometres, but the remainder are seldom more than 25 square kilometres or so. The soil skeleton consists of coral rock fragments, coral sand, shells and other calcareous marine deposits, resulting in soil of high alkalinity. There is a severe deficiency of iron, manganese, zinc and copper, aggravated by the high alkalinity which inhibits their absorption and the vegetation is often chlorotic. The vegetation is poor, since the sandy coral "soil" has little depth or nutriment. The characteristic growth is the coconut palm: the pandanus is also widespread. Breadfruit and mangroves grow fairly well, and on the uninhabited islands can be found stands of pisonia.

There is no native fauna apart from a wealth of birds and the Polynesian rat. Various of the Phoenix Islands, and Christmas Island are bird sanctuaries and wild birds abound.

CLIMATE

The climate of the central Gilberts, the Phoenix Islands and Ocean Island is of the maritime equatorial type, but that of the islands farther north and south is of tropical maritime type. The mean annual temperature is 27°C and both the annual and diurnal ranges are slight near the equator and increase with distance from it. The trade winds blow throughout the year with a strong easterly component and exercise a moderating influence on the temperature. In the western portion of the Colony, particularly near Ocean Island, the regularity of the wind system is broken occasionally by gales from the west or northwest. In spite of their equatorial situation, some of the islands suffer from drought. The Ellice Islands are more favoured than the Gilberts. The wettest months are December, January and February and the driest are August, September and October.

SITUATION REPORT - NEW SOUTH WALESPREAMBLE

In recent years the residents of New South Wales have become increasingly aware of the environment in which they live. This awareness has been encouraged by the State Government through the National Parks and Wildlife Service and other environmental authorities. The functions of the Service are to investigate and acquire land for National Parks, Nature Reserves, Historic Sites, Aboriginal Areas and Game Reserves; to manage its parks and reserve system for nature conservation and historic preservation purposes; to manage and conserve wildlife in the State and to implement educational programmes to increase community awareness in the fields of nature conservation and historical preservation. The present role of the Service is explained in the following report.

GEOGRAPHY

Situated between latitudes 28° and 38° South, the State of New South Wales covers an area of over 81 million hectares. This represents 10% of the total land area of Australia. The coastline stretches over 1 475 kilometres from Queensland in the north to Victoria in the south. In the west, New South Wales has a common boundary with South Australia. The physical structure of New South Wales comprises a series of broad parallel bands of land type. The eastern coastline is characterised in the north by long sandy beaches formed near the mouths of the major coastal rivers. Large rugged headlands and numerous bays are also a feature of the coastline, particularly on the south coast. Behind the immediate coast are the coastal lowlands which extend westward up to 90 kilometres until the mountainous eastern edge of the tablelands is reached. The tablelands comprise three distinct regions:- the New England Tableland, Central Tableland and Southern Highlands which includes the Monaro Tableland. Bordering the Monaro Tableland to the south-west are the Australian Alps which contain Australia's highest peak, Mount Kosciusko at 2 229 metres. West of the tablelands the land gently falls away along the headwaters and upper reaches of the great rivers of the Murray-Darling Basin. About two fifths of New South Wales is made up of relatively flat plains through which the western rivers flow.

CLIMATE

New South Wales has a favourable climate as it is situated between latitude 28° and 38° South. These latitudes are in the influence of both the sub-tropical and the temperate climatic zones. The concentric pattern of landforms throughout the State also has a major bearing on the rainfall pattern. However, the north coast is subject to the tropical influence of Northern Australia. This causes heavy summer rainfalls with high humidity.

The coastal climate is also influenced by the ocean as the warm east Australian current runs just offshore. This current has the effect of cooling summer temperatures while keeping winter temperatures higher than they would normally be. The interior of the State is protected from moist air masses by remoteness and the physical

Some of the best known National Parks in New South Wales are Kosciusko in the southern alps, and Royal and Ku-ring-gai, both only a short drive from the centre of Sydney. National Parks and State Parks are both defined in the 1967 Act as Parks. The National Parks and Wildlife Bill of 1974 groups National and State Parks under the one heading of National Parks. The only difference between National Parks and State Parks is -

- (a) the areas to be reserved as National Parks are spacious areas containing unique or outstanding scenery or natural features,
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The following description of National Parks and State Parks as at 31 October 1974, places the parks together according to their geographical regions.

Regions and parks are :

#### North Coast

Hat Head, Broadwater, Crowdy Bay and Myall Lakes. All these National Parks have scientifically important coastal landforms with heath vegetation and coastal sand dunes. The Myall Lakes constitute the most natural coastal lake system in New South Wales. Mount Warning State Park provides a different landscape, being a volcanic plug rising from rugged rainforest covered hills.

#### South Coast (and Immediate Foothills)

The National Parks, Murramarang, Ben Boyd and Mimosa Rocks, with the two State Parks, Seven Mile Beach and Wallaga Lake, have the typical south coast rugged scenery of headlands and bays. Mimosa Rocks is one of the most picturesque areas under Service control within 8 km long coastline of beaches, caves and headlands.

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Ku-ring-gai, Royal, Brisbane Water, Dharug and Blue Mountains National Parks coupled with Bouddi, Heathcote and Macquarie Pass State Parks offer Sydney residents ideal outdoor recreational facilities. All have hiking trails, camping sites and provide opportunity for study of native fauna and flora.

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The two Aboriginal areas are dedicated to preserve and prevent disturbance to camp sites such as middens or caves, art sites, ceremonial grounds and other relics of Aboriginal life.

There are now 97 Nature Reserves with a total of 305 338 hectares. These wildlife conservation areas are dedicated to ensure the retention of samples of the natural environment. They also provide habitat for native fauna.

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The Crown Lands Consolidation Act 1913 enables the reservation of public land for a multitude of purposes, some having nature conservation overtones. There are thousands of these reserves. Though most are quite small, many have local importance to conservation.

The Crown Lands Consolidation Act also provides for the establishment of State Recreation Areas. In concept, these are midway between the small local reserves and the National Parks. They are of significant size and are substantially natural. The Forestry Act 1916 allows reservation of small parts of State Forests as Flora Reserves. There are several of these reserves. Usually small, they aim at protecting particular unusual or endangered plant species and thus fulfil a useful conservation role. Again, the State Forest system, which takes in great tracts of native forest, makes a valuable contribution to conservation of native species while, in recent times, the controlling body (Forestry Commission) has endeavoured to



- \* the evolution and crystallization of broad policy;
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#### Aboriginal Relics Advisory Committee

This expert Committee advises the Director on the conservation of Aboriginal Relics. Most members are professional archaeologists or anthropologists.

#### Trusts

As noted elsewhere, some eight areas reserved under the National Parks and Wildlife Act are managed by Boards of Trustees. It would be argued that this style of management is particularly efficient in certain - but not all - operational circumstances.

#### Advisory Committees

These Committees tend to be local in nature. Committees may be constituted for each park or site under the National Parks and Wildlife Act. Members are usually people who live near the park concerned or people who have special knowledge of the parks' resources.

In the wildlife sphere, the Service aims to prevent extinction of native species. However it recognises that destruction of individual native animals may be necessary for economic or other reasons provided that the species is not thereby endangered.

The Service keenly supports the concept of assisting and co-operating with similar bodies in other administrations. In practice this has hitherto revolved around Ranger training, secondment of staff, publication of Park Sign and Furniture Manuals and participation in conferences such as this.

sheltered from the trade winds by the central range, has generally less than 1 m annually. The mean annual temperature is 22°4 with a maximum of 25°6 in February and a minimum of 18°8 in August. The difference between these extremes is 6°8.

### POPULATION

The population of the territory at the census of 23 April 1974 was 131 665 (40.8% Melanesians, 39.2% Europeans, 20% miscellaneous: Polynesians, Vietnamese, Indonesians, West Indians, Japanese, Indians, Arabs). The annual increase since March 1969 was of the order of 5.5%. All races showed an absolute increase but the proportion of Melanesians decreased over this period.

### PROTECTED AREAS

Several types of reserve have been formed on the main island and the Isle of Pines to protect the flora and fauna in the public interest.

These include:

- (1) Complete reserves -
 

Montagne des Sources	5 870 hectares
Oro Peninsula (Isle of Pines)	848 hectares
- (2) Botanical reserves -
 

Mont Panie	5 080 hectares
Mont Humbolt	1 600 hectares
Mont Mou	675 hectares
- (3) Reserves where hunting and fishing are prohibited have been created in many parts of the island. They cover 38 603 hectares.
- (4) A National Park including the whole Isle of Pines - 141 400 hectares.
- (5) Areas completely protected against mining prospecting - 13 508 hectares.
- (6) Areas where mining prospecting is restricted - 173 280 hectares.
- (7) Local reserves to protect sites of tourist interest, archaeological sites (petroglyphs) and water supplies (hydraulic reserves). The protected areas, apart from local reserves, cover about 88 000 hectares, a little more than 5% of the main island.
- (8) The YVES MERLET marine reserve between the main island and the Isle of Pines includes about 16 500 hectares of islets and reefs.

The Chief of the Service of Mines and Geology;  
The Chief of the Forestry Service;  
The Chief of the Service of Rural Engineering;  
A representative of the "Centre ORSTOM de Noumea".

POLICY

It is the duty of the Territorial Government to carry out an energetic programme to protect the natural environment. The small size of the territory and its dependencies requires a firm policy, for the benefit of future generations, against all damage to the natural biotopes.

At present an attempt is being made to redefine the regulations for the existing reserves as outlined by the London Convention.

The second crucial nature-protection problem in New Caledonia is bush fires:

- \*Fires deliberately lit by hunters and mine operators,
- \*Accidentally lit fires, caused by negligence for the most part.

The result is disastrous, because each year areas of several thousands of hectares burn out again and again.

New Caledonia has no means of fighting these fires and, moreover, the very rugged terrain makes it difficult to penetrate into the interior of the country.

APPENDIX "A" - SITUATION REPORT - NEW HEBRIDES

Some basic information relevant to the establishment of National Parks in the New Hebrides: by R. M. Bennett, Condominium Forest Officer

SUMMARY

The New Hebrides consists of a group of small South Pacific islands comprising a total area of 1 190 000 hectares. The islands consist of volcanic cores surrounded by coral plateaux. The mountainous interiors are almost uninhabited and the 80 000 inhabitants are found mainly on the coasts. The climate is on the whole rather hot and wet and subject to cyclones. The vegetation is of the Malayan type but rather poor in species and mostly of a secondary nature due to past cultivation and cyclone damage.

The islands are jointly administered by Britain and France but there is no state land as all the islands are privately owned under one form of tenure or another. Although there is some spectacular scenery within the New Hebrides, including several active volcanoes, most of it is seldom appreciated due to inaccessibility and lack of facilities.

The economy of the country is subsidised by Britain and France there is little public money available for the development of the tourist industry which is still young. The prospects for the establishment of National Parks are not good although certain Nature Reserves may be created to preserve flora and fauna threatened by development and uncontrolled hunting.

GEOGRAPHY1. Situation and Extent

The New Hebrides are a group of islands lying between 13° and 20° South and 166°-170° East. There are some 95 islands and islets and the total area is 119 000 hectares. However only 12 islands have a land area exceeding 26 000 hectares.

2. Population

The population according to the 1967 census was 76 582 of whom 5 745 were non-New Hebrideans. The Melanesians tend to live around the coast of the islands and the interior of the islands, especially where they are mountainous, are often uninhabited.

3. Climate

The climate is oceanic but varies considerably from the North to the South of the Group and on the larger islands between the east and west coasts. There are two seasons, hot and wet from November to April and cool drier from May to October. The seasons are more pronounced in the South than

2. There is no "State land" in the New Hebrides and land falls into the following categories:

(a) Registered or Freehold Land

This is land which has been surveyed and registered by the Joint Court. Most of this land is owned by French Nationals or French Companies or by the French State. Some is owned by the British subjects and some by the Condominium;

(b) Land under Claim

This is land on which the Joint Court has not yet made a decision;

(c) Native Reserves

This land has been reserved for specified native groups or individual natives. It cannot be alienated without the authority of the Resident Commissioners;

(d) Native Land

This is all other land which by traditional implication belongs to the native people who may have it registered personally in their names after judgement by the Joint Court.

NATIONAL PARKS

There are two aspects to National Parks - the conservation aspect and the touristic aspect. Ideally the income from tourists should pay for the establishment and maintenance of the Parks. The ingredients for a successful Park should be scenic beauty, and interesting flora and fauna, a conservation-minded administration with adequate funds to develop the Park and a population sufficiently urbanised to appreciate the wilderness.

In the New Hebrides the land area may be divided into two zones: firstly the partly developed coastal area and secondly the uninhabited mountains of the interior. The coastal areas are accessible and provide splendid beaches, but the land is expensive as it is required for European and Melanesian agriculture and it is important from the conservation aspect to preserve certain areas as nature reserves. In the mountains the land has a very low value as it is largely uninhabited and is mainly inaccessible. The cost of putting roads in is enormous and this safeguards it from the sort of development that would threaten its natural flora and fauna. It also closes it to tourists visiting the New Hebrides who are by and large affluent and not young. Apart from the scenery the interiors of the islands have little to offer the tourist - no lions or kangaroos, no facilities such as rest houses whatsoever, and with the high rainfall not much sunshine.

APPENDIX "B" - SITUATION REPORT - NEW HEBRIDESProposals for a New Hebrides Nature Conservation Programme by H. L. Bregulla, Ornithologist and Naturalist for the Cultural Centre and Museum - Vila New Hebrides

In the New Hebrides the Cultural Centre and Museum has been and is always concerned with problems of the environment and the protection and conservation of natural resources which, once destroyed, cannot be replaced.

In order to implement this policy the Managing Committee of the Cultural Centre has outlined the following objectives:

- The protection of the Fauna
- The protection of the Flora
- The protection of undisturbed areas (natural forest and beauty spots)
- The protection of inland waters and coastline
- The protection of archeological sites and historic monuments
- The creation of Reserves both on land and sea.

Following a detailed study by the Naturalist from the Cultural Centre and Museum three projects have been taken up by the President of the Managing Committee, in collaboration with the Secretary and the Naturalist, and submitted to the Administration for approval.

- (a) Reef Island to be an island for scientific studies.
- (b) Nature Reserve around Duck Lake at Rentapao, Efate.
- (c) Botanical Garden and Bird Reserve at Malapoa Point near Vila (capital of the New Hebrides).

These three projects have the strong support of an influential group of local people as well as backing from several Natural History Museums and International Organisations concerned with Nature Conservation.

REEF ISLAND - NATURE RESERVE COMPRISING REEFS AND LAGOONS

The area, in the north of the Banks Islands between Moto Lava (Valua) and Ureparapara, consists of fifteen flat islets, some of sand others of coral with a maximum elevation of about three metres. The total land area is about 92 hectares but it also includes a large lagoon surrounded by reefs. The vegetation consists of pioneer tree species of medium height, such as Pandanus, shrubs, succulent creepers and grass; also casuarinas and coconut palms introduced by former inhabitants.



is hoped that the administration will approve this project before the end of this year.

(A map of the atoll Reef Island is attached.)

DUCK LAKE - NATURE RESERVE NEAR RENTAPAO, EFATE

At present the only island in the New Hebrides on which a Reserve is urgently needed is Efate, and the need is beyond question as the rate of land clearing has reached considerable proportions. The conservation of the indigenous flora and fauna in the Group can be achieved by protecting an area of land sufficient to satisfy the scientific requirements as well as the aesthetic values and public opinion.

The reserve could have an area of three to five thousand hectares and would encompass Duck Lake in the South, be bordered by the Rentapao river in the East (where there is access from the road), and include in the North an extremely mountainous and broken area which is of little economic value. The indigenous vegetation is quite variable and little disturbed by human activity.

The lake, which is surrounded by swamps and marshes and is of about three hectares, is one of the most important breeding grounds for freshwater and swamp birds; three species of duck, three of rails, one grebe and one cormorant. For this reason alone the area should be protected. The fact that the colony of cormorants, known locally as "Japanese Ducks", has been almost wiped out by irresponsible hunters emphasises the need for protection.

The high forest on the surrounding mountains will also serve as a sanctuary for most of the fauna species as well as preserving the flora.

Among the 41 bird species found within the area are the following which are unique or rare to the New Hebrides:

- Tanna Fruit Dove - Ptilinopus tannensis endemic to the New Hebrides.
- Green Palm Lorikeet - Vini palmarum endemic to the New Hebrides.
- Buff-bellied Flycatcher - Neolalage banksiana endemic to the New Hebrides.
- Royal Parrot Finch - Erythrura cyanovirens only reported from a few islands of the New Hebrides and 2 islands in Samoa.
- Pacific Pigeon - Ducula pacifica fairly rare, threatened by uncontrolled hunting.

A small part of the Reserve, about 100 hectares, may be set aside as a National Park and opened to the public. From a point on the Reserve boundary near to the access road a simple system of roads and tracks would allow the public to see the wide variety of the New Hebridean flora and fauna and appreciate the need for its protection. A car park, picnic and toilet facilities will also be provided.

(A list of the fauna in the Reserve and a map of Efate are attached.)

#### BOTANICAL GARDENS AND BIRD SANCTUARY

(To be created on Malapoa Point, Efate near Vila - area about 5 hectares.)

The gardens will aim to show local inhabitants as well as visitors the more interesting species of the local Flora and Fauna as well as that of other Pacific Islands. The Gardens will have a small biological department where experts will have facilities to study species threatened with extinction due to growing populations in the Pacific and the rapid clearing of the indigenous forest.

These Gardens should have considerable scientific, aesthetic and touristic appeal.

#### FAUNA PROTECTED BY THE DUCK LAKE NATURE RESERVE

##### Birds

Australian Dabchick	<i>Podiceps novaehollandiae</i>
Australian Grey Duck	<i>Anas superciliosa</i>
Swamp Harrier	<i>Circus approximans</i>
Peregrine Falcon	<i>Falcon peregrinus</i>
Banded Rail	<i>Rallus phillippensis</i>
Purple Swamp Hen	<i>Porphyrio porphyrio</i>
Red-Bellied Fruit Dove	<i>Ptilinopus greyii</i>
Green-winged Ground Pigeon	<i>Chalcophaps incidca</i>
Coconut Lory	<i>Trichoglossus haematodus</i>
Barn Owl	<i>Tyto alba</i>
Vanikoro Swiftlet	<i>Collocalia vanikorensis</i>
Glossy Swiftlet	<i>Collocalia esculenta</i>
White-collared Kingfisher	<i>Halcyon chloris</i>
Pacific Swallow	<i>Hirundo tahitica</i>
Long-tailed Triller	<i>Lalage leucopyga</i>
Polynesian Triller	<i>Lalage maculosa</i>
Spotted Fantail	<i>Rhipidura spilodera</i>
Collared Fantail	<i>Rhipidura fuliginosa</i>
Broad-billed Flycatcher	<i>Myagra caledonica</i>
Southern Shrikebill	<i>Clytorhynchus pachycephaloides</i>
Scarlet Robin	<i>Petroica multicolor</i>
Golden Whistler	<i>Pachycephala pertoralis</i>
White-breasted Wood Swallow	<i>Artamus leucorhynchus</i>

## SITUATION REPORT - NEW SOUTH WALES

### PREAMBLE

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This expert Committee advises the Director on the conservation of Aboriginal Relics. Most members are professional archaeologists or anthropologists.

#### Trusts

As noted elsewhere, some eight areas reserved under the National Parks and Wildlife Act are managed by Boards of Trustees. It would be argued that this style of management is particularly efficient in certain - but not all - operational circumstances.

#### Advisory Committees

These Committees tend to be local in nature. Committees may be constituted for each park or site under the National Parks and Wildlife Act. Members are usually people who live near the park concerned or people who have special knowledge of the parks' resources.

In the wildlife sphere, the Service aims to prevent extinction of native species. However, it recognises that destruction of individual native animals may be necessary for economic or other reasons provided that the species is not thereby endangered.

The Service keenly supports the concept of assisting and co-operating with similar bodies in other administrations. In practice this has hitherto revolved around Ranger training, secondment of staff, publication of Park Sign and Furniture Manuals and participation in conferences such as this.

The mountain features also play a part in controlling the distribution of rainfall as the highest falls occur where the mountains are exposed to the direct sweep of the westerly and north westerly winds. For the greater part of the country the rainfall range is between 600 and 1500mm per annum but as little as 300mm falls in a small area of Central Otago to over 7000mm in some areas of the Southern Alps. In much of the forest covered mountainous and unoccupied lands of both Islands, rainfall exceeds 2500mm per year. For a large part of the country the rainfall generally is spread fairly evenly through the year.

Mean temperatures at sea level decrease from 15°C in the far north to 12°C around the Cook Strait region then to about 9°C in the South. The difference between mean temperature of the warmest and coldest months varies between about 8°C and 14°C. January and February are the warmest months of the year and July the coldest.

A large portion of the country is favoured with at least 2000 hours of bright sunshine annually. The sunniest areas are located around Blenheim, Nelson and Whakatane where the average duration is in excess of 2400 hours.

### POPULATION

New Zealand's total population now slightly exceeds 3 million (31 December 1973) in equal proportions of male and female. This figure includes approximately 245,000 Maoris and in excess of 50,000 Pacific Islanders. Population projections indicate a likely figure of 5 million by the turn of the century.

Nearly threequarters of the population resides in the North Island with a large concentration in the Auckland area. Over 80% of New Zealand's population is located in urban areas.

### AREAS RESERVED

Some 2.6 million hectares of Crown land have been permanently reserved as national parks, scenic reserves, historic reserves, domains and reserves for the preservation of flora and fauna. This represents about one tenth of the country's land area.

With an area of 2 152 677 hectares, New Zealand's 10 national parks comprise the bulk of the reserved areas. They have a special place in New Zealand's open space system - in serving their true purpose they play a complementary role in a diverse system within which there is provision for alternative opportunities for enjoying open air recreation, beautiful scenery and the contemplation of nature and wildlife. Brief details of each park are:

Urewera National Park (200 117 hectares), surrounds Lake Waikaremoana and contains the largest remaining forest area in the North Island. Kiwi, kaka, and most other native birds are found and the area is rich in Maori history.



Land, places and natural objects of historic, archaeological, scientific, educational or other special national interest are contained in 78 historic reserves with an area of almost 1 550 hectares - some being reserved for both scenic and historic purposes.

Historic reserves mark the landfall and landing places of early voyagers such as Tasman and Cook, the site of missionary Samuel Marsden's first sermon on New Zealand soil, sites of fortifications and engagements during the Maori Wars, and buildings of historic significance. Sites of Maori rock drawings, archaeological importance and places of significance in New Zealand's early constitutional history are also reserved.

Areas that provide a habitat for bird or plant life of such importance that some control over public access is desirable are reserved for the preservation of flora and fauna. Generally access to these reserves is by written permit only.

In all there are some 55 reserves in this category with a total area of 188 000 hectares. Some are mainland areas such as the Cape Kidnapper Gannet Colony in Hawke's Bay, Farewell Spit in Nelson and the White Heron Colony in Westland but most are offshore, outlying and subantarctic islands where remoteness and the sea provide a natural protection from noxious animals and other external influences.

Public domains and recreation reserves of varying sizes provide localities with land for the recreational needs of the people as a whole. Many of these areas are designed primarily to provide for organised sport of various descriptions but there is also a large number which preserve attractive natural areas for passive use and provide facilities for camping particularly along the coastline, lakes and rivers. The 874 public domains have a total area in excess of 22 000 hectares.

There are two constituted maritime parks - one in the North Island (Hauraki Gulf) and the other in the South Island (Marlborough Sounds). These provide for the co-ordinated management of existing and proposed scenic, historic, recreation and other public reserves including appropriate island reserves within the coastal region.

#### ENVIRONMENTAL LEGISLATION

The main pieces of legislation providing for the setting aside of land for public use, its administration, management and control are the Land Act 1948, the National Parks Act 1952 and the Reserves and Domains Act 1953. These Acts are administered in the Department of Lands and Survey.

The Land Act, inter alia, enables land owned by the Crown and foreshore areas to be reserved for any purpose e.g. recreation, preservation of flora and fauna, scenic, historic etc., which is desirable in the public interest. The reserves are then administered in terms of the Reserves and Domains Act. Crown owned land may be constituted national park in terms of the provisions in the National Parks Act. These pieces of legislation also

- (b) Department of Tourist and Publicity: Tourism and accommodation through Tourist Hotel Corporation.
- (c) New Zealand Forest Service: Noxious Animals Act 1956 - Control of deer, goats, chamois, pigs and other introduced wild animals. Forest and Rural Fires Act 1955 - provides for fire protection in the vegetation of national parks and scenic reserves.
- (d) Ministry of Works and Development: Water and Soil Conservation Act 1967 - Covers the granting of water rights and planning for the best use of New Zealand's natural water resources. Town and Country Planning Act 1953 - the Ministry, in conjunction with the Department of Lands and Survey is responsible for ensuring that adequate provision is made in town and country planning schemes for reserves and other public areas.
- (e) Ministry of Transport: Harbours Act 1950 - Relates to control of navigable lakes, rivers etc. in parks and reserves - pleasure craft, jetties and other similar structures, water skiing.
- (f) Mines Department: Controls all prospecting and mining under several pieces of legislation.

#### CONSERVATION AND ENVIRONMENTAL AGENCIES

The Nature Conservation Council Act passed in 1962 provided for the establishment of the Nature Conservation Council. Although the Department of Lands and Survey provides the administrative services for the Council, it is independent of any government departmental policy jurisdiction. Its function primarily is to act as an advisory body to Government on scientific and technical aspects of nature conservation and any other matters affecting nature conservation which is defined in the Act as "the preservation of the native flora and fauna and the natural features and natural beauty of New Zealand." In this regard it inquires into the effect of proposed public works on any aspect of nature conservation. Recent years have seen an upsurge in public awareness of conservation and the environment and a resulting increase in the number of official bodies engaged in this field. A physical Environment Conference held in 1970 led to the establishment of the Environmental Council, a 15 member body of officials and private citizens, at present attached to the Commission for the Environment. An advisory body, the Environmental Council's role is broadly to monitor the effectiveness of existing legislative measures affecting the environment and to make recommendations on changes or on new legislation. It maintains a close liaison with the Nature Conservation Council.

Subsequent to the establishment of a Ministerial portfolio for the environment early in 1972, a Commission for the Environment was set up as a small unit independent of any Government department to serve as a clearing-house for environmental issues, particularly involving central government activity. One of its major tasks is in auditing Environmental Impact Reports prepared by agencies

Our reserves legislation is not only geared to the preservation of scenic areas, but exists also to provide a wide variety of natural, historic and recreational values for community use, benefit and enjoyment. Referring back to the total spectrum concept, we have at the end of a scale the complete preservation-type of reserve such as the Kapiti Island Bird Sanctuary, which most of you saw as you approached Wellington on Sunday. This reserve is considered of such importance for the preservation of its flora and fauna that public access is severely restricted.

At the other end of the scale are the concentrated public-use areas of popular coastal resorts, where reserves are necessary to meet heavy public demands for ready access to the beaches and waters of lakes and seashores. In between these extremes we have reserves set aside for their historic, and archaeological interest, areas preserved for their value as wildlife habitat, biological reserves, maritime parks and recreational areas.

To ensure that a representative example of reserves is provided, a number of surveys and others projects are being undertaken for the purpose of indicating where land should be set apart for public benefit and use. For example, in 1966 we initiated a survey of the nation's coastline as the first step in a programme of purchasing land prior to the onset of undesirable development. Obviously, we couldn't hope to succeed in beating the developer in every case but the survey reports have been a valuable tool in identifying priority areas for the expenditure of public funds.

In addition to work directed towards identifying land for public acquisition, existing reserves are being reviewed to assess their value in terms of public use and benefit. In this regard emphasis is being given to biological values and to areas having historical and archaeological worth.

Emphasis is also being placed on recreational needs and there is under way the preparation of an Outdoor Recreation Plan for New Zealand.

This is designed to assess recreational demand and the resources available to meet that demand so that we can plan to fill the gaps between resources and demand.

Overall, our goal is to establish and manage as wide a range as possible of parks and reserves to protect our natural, historic, cultural and recreational heritage.

CLIMATE

Although more than four-fifths of the Territory lies north of the Tropic of Capricorn and the climate of the greater part is subject to the influence of the north-west monsoon, only the northern rivers' section (Australian Meteorological District No. 14) of about 25 899 800 hectares, experiences an annual rainfall of between 508 millimetres and 1524 millimetres and may properly be described as a monsoonal region. Southward from Daly Waters the annual rainfall declines from 635 millimetres to about 254 millimetres at Alice Springs and to little more than 127 millimetres at Finke. The annual rainfall over the great cattle-grazing area known as the Barkly Tableland, which extends from the centre of the Territory south-eastward into Queensland, varies from 305 millimetres to 510 millimetres. The inland plateau region of Central Australia surrounding Alice Springs also supports pastoral leases, but it is semi-arid and subject to periodic droughts. Because the rainfall is sporadic in nature some droughts have lasted for several years.

In the monsoonal region, there is no spring, summer, autumn or winter as in temperate regions. Instead the year has two main climatic seasons - the 'wet' and the 'dry'. The wet season proper extends from Late December to March and the dry season from May to September. Of the remaining months October and November may be called pre-wet season months and April a post-wet season month. These months are transition periods between the two main seasons. The weather is hot and humid and is notable for the intensity of its thunderstorms. The wet season is characterised by warm, humid and cloudy weather conditions with frequent heavy rains. Usually sporadic thunderstorms herald the 'wet' and begin in October, increasing during November and December and continuing until about mid-April. During January, February and March periods of continuous wet weather are caused by moist airstreams which converge over North Australia from the north and west and several of these rainy spells, each continuing for up to a week, usually occur. They produce 90 per cent of the annual rainfall during the first three months of the year. Streams of tropical air occasionally extend through the southern half of the Territory and bring beneficial rains to pastoral areas.

Between December and April occasional tropical cyclones occur off the Territory coast. These are usually not as intense as cyclones off the coast of Queensland or the north coast of Western Australia and the effects of the strong winds are usually not felt farther than about 80 kilometres from their centres. When these cyclones move inland, however, rains cause extensive flooding of the river systems.

By early May, cool, dry, south-easterly winds from the high-pressure systems of the southern winter regions extend over the Territory, bringing warm days, cool nights, low humidity and few clouds. Although maximum day temperatures remain in the middle to high twenties over the monsoonal region, daytime temperatures in southern areas rarely exceed 24°C between May and August. Cooler nights are experienced throughout the Territory during the dry season and frosts are quite common south of Tennant Creek. Periodic dust storms associated with the

Corroboree Rock Scenic Area & National Reserve. (7 hectares).  
Scenic and significant to early Aborigines.

Trephina Gorge Scenic & Recreation Reserve. (1 772 hectares).  
East Macdonnell Range rock scenery, large sandy creek picnic area.

N'Dhala Gorge Scenic Reserve. (501 hectares). East  
Macdonnell Range scenery and ancient rock engravings.

Heavitree Gap Old Police Station National Reserve. (4 047 sq  
metres). Historical. The old building, constructed about 1890,  
has been restored.

Alice Springs Telegraph Station National Reserve. (443  
hectares). The first Alice Springs where the Telegraph Station  
was established in 1872 and operated until 1932. The old buildings  
are being restored to their original condition in about 1890.

Central Mt. Stuart Memorial National Reserve. (2 580 sq metres)  
Memorial to John McDouall Stuart. The geographical centre of  
Australia.

Devils Marbles Scenic Reserve. (1 829 hectares). Hundreds  
of curved granite boulders, which appear to be precariously perched  
one on top of another.

John Flynn's Memorial Monument National Reserve. (4 755 sq  
metres). Historical.

Attack Creek Memorial National Reserve. (2 200 sq metres).  
Memorial to John McDouall Stuart. It was here in 1860 that  
hostile natives forced him to turn back south.

Mataranka Pool Recreation & Scenic Reserve. (4 hectares).  
Thermal spring and pool in rain forest.

Cutta Cutta Caves Scenic & National Reserve. (259 hectares).  
Limestone caves.

Katherine Low Level Recreation Reserve. (24 hectares).  
Picturesque recreation area on banks of Katherine River.

Katherine Gorge National Park. (22 690 hectares). Large  
expanse of water where Katherine River runs between towering cliffs.  
Boat tours by commercial operators. Scenic walks.

Kintore Caves Scenic & National Reserve. (423 hectares).  
Limestone caves of anthropological importance, as well as scenic  
value.

Edith Falls Scenic & Recreation Reserve. (163 hectares). A  
small lake fed by falls on the Edith River.

Douglas Hot Springs Recreation Reserve. (3 108 hectares).  
Thermal Spring.

Daly River Recreation Reserve. (60 hectares). On the banks  
of the Daly River. Fishing and boating.

of Wildlife who at present is the officer controlling the Forestry, Fisheries, Wildlife, Environment and National Parks Branch.

POLICY

Policy of the controlling Authorities is to administer the areas for the purposes for which they have been set aside and to add additional areas so that ecologically viable units are preserved.

The climate of much, though not all, of the country falls into three season category with a distinct wet season, a distinct dry season and a period "in between". This regime is altered and on occasions reversed by topographic influences.

Annual mean rainfalls vary enormously from 1000 mm in the Port Moresby area to 6000 mm in the Papuan Gulf and southern New Britain areas. Over half the country, however, receives 2500 mm or more per annum.

In lowland regions temperatures are high throughout the year with little or no monthly variation; the mean maximum is between 30°C - 33°C and the mean minimum 21°C - 25°C. In highlands the same general characteristics apply except that absolute temperatures are lower and there is a greater diurnal temperature range.

### POPULATION

The population of Papua New Guinea is estimated at 2,693,000. Its distribution throughout the country is erratic and population density varies enormously. The highlands is the area of heaviest rural population density with some areas having a density of 61 or more persons per km<sup>2</sup>. Large tracts of Western Papua and the Gulf district are virtually uninhabited and rate a density of considerably less than 1 person per km<sup>2</sup>.

### AREA RESERVED

Papua New Guinea entered the field of national parks and reserves much later than the more developed countries of the region. In 1966 legislation was passed establishing a National Parks Board which came into being the following year. For a variety of reasons little progress was made in the early years. However, since 1970, much work has been carried out - particularly in the investigation of potential areas for parks or reserves. This work is now being followed up with more intensive investigation and negotiations with the customary owners.

The main stumbling block to the establishment of national parks and reserves in Papua New Guinea is the land tenure system. To all intents and purposes there is no Crown land in the country. Since the first European involvement in the country the various administrations and, more recently, the Government have and, in the case of the latter, still do purchase or lease customary owned land. It is the only authority permitted to deal direct with the customary owners. However the amount of Government owned or leased land is only a very small proportion of the land surface and the vast bulk of the land is still in customary ownership.

Under the National Parks Act 1966 only land owned or leased by the Government can be set aside as national parks. This means that when an area has been investigated and found suitable for a national park negotiations have to commence for the purchase or lease of the land from the customary owners. If the owners are not keen on either selling or leasing their land then nothing further can be done until or unless they change their minds. For this reason the setting aside of areas for national parks and reserves has been, and will continue to be, a very slow process indeed.

## ENVIRONMENTAL LEGISLATION

The main pieces of legislation providing for the setting aside of land for public use, its administration, management and control are the Lands Act 1962 (as amended) and the National Parks and Gardens Act 1966 (as amended) and the Fauna Protection Act 1966 (as amended).

The Lands Act, inter alia, enables government owned or leased land to be reserved, for a purpose specified in the notice. It also permits the appointment of trustees for land so reserved.

The National Parks and Gardens Act, inter alia, enables land that has been reserved under the Lands Act to be committed to the care, control and management of the National Parks Board for a place for the recreation or amusement of the public, a national park, a monument, a botanical garden, a zoological garden, a reserve or sanctuary for the protection of flora or fauna or for any similar purpose.

The Fauna Protection Act, inter alia, enables the declaration of an area as a sanctuary for the protection of fauna.

## ADMINISTRATION

The National Parks and Gardens Act established the National Parks Board as the authority responsible for the care, control and management of land gazetted as national park, monument etc.

The Board therefore has the responsibility for the development and management of these areas but also is responsible for recommending areas of potential national parks etc to the government. It also has the responsibility of promoting the concept of national parks and the conservation of natural resources. It is also empowered to give advice and assistance to local councils or people wishing to manage and develop their own land for conservation or recreational purposes.

To enable it to carry out its various functions the Board has established a National Parks Service whose officers are in its direct employ. The Service is responsible for carrying out the day to day management role of the Board.

Government departments that are involved with conservation of the environment are:

- a) Department of Lands, Surveys & Mines
- b) Department of Agriculture, Stock & Fisheries
- c) Office of Environment and Conservation.

## CONSERVATION AND ENVIRONMENT AGENCIES

The Ministry of Environment and Conservation, which was created in April 1974, is the government section which is responsible for environmental protection and planning in Papua New Guinea. The Minister for Environment and Conservation is supported by the staff of the Office of Environment and Conservation which will function as a policy and co-ordination unit with operational responsibility delegated to appropriate Government Departments. The Office will have a number of functions:



## SITUATION REPORT - QUEENSLAND

### PREAMBLE:

Queensland's National Park system had its origins in a visit to Yellowstone in 1878 by R.M. Collins who was a Member of the Legislative Assembly from 1896 to 1913, and Queensland has continued to follow the United States traditions in its park administration. However, lacking the magnificent scenery on a grand scale which is such a feature of that country, Queensland's National Parks have tended to be more modest in area. Considerable emphasis is given to ecosystem preservation, as it is Government policy to include within the park system adequate samples of as complete a range as possible of all major natural habitats.

Queensland's first National Park was declared in 1908, and the administration of the parks has always been the responsibility of the Authority responsible for Forestry.

### GEOGRAPHY:

The State of Queensland, with an area of about  $1\frac{3}{4}$  million square kilometres occupies the north-eastern portion of the Australian continent. It lies within 10 and 29 degrees south latitude and 138 and 154 degrees east longitude and it has 5,200 km of coastline. From north to south its greatest distance is 2,060 km and from east to west 1,480 km. The area is  $22\frac{1}{2}$  percent of the Australian continent, and the occupied area 31 percent of the Australian total.

Four landscape regions may be recognised in Queensland: the Eastern Highlands, the Western Plains, the North-Western Uplands, and the islands and reefs which project above the Continental Shelf. On the east coast narrow coastal plains may be present, and around the Gulf of Carpentaria, the coastal plain merges into the western plains.

Less than 1 percent of the area of Queensland has not been allocated either for private production or for public reserves; this is mainly in the far south-west. The area leased for pastoral and other purposes is 80 percent of the whole territory. About 15 percent of the State is held as freehold or is in the process of purchase, and this includes most of the good coastal and sub-coastal lands.

### CLIMATE:

Queensland has a typical sub-tropical to tropical climate, which has proved itself suitable for settlement in most parts of the State. High daytime temperatures are a normal feature of the period from October to March, resulting in quite a short spring and long summer. Temperatures increase fairly rapidly in September and October and many days over  $38^{\circ}\text{C}$  are experienced in inland areas even before the official commencement of summer on 1st December. Living conditions, however, are not as uncomfortable as they might appear because the higher temperatures of the inland areas are associated with lower humidities.

Dipperu is a Brigalow (*Acacia harpophylla*) area; Hinchinbrook, a rugged mountainous island - one of the largest island National Parks in the world.

There are a further 44 parks of between 1 000 and 10 000 hectares, including two Marine National Parks of 9 700 and 3 000 hectares, and over 200 parks of less than 1 000 hectares. Some of the latter are quite valuable despite their small size, for example, the coral cays of the Bunker Group which are important sea-bird rookeries and are highly attractive in themselves but are only a few hectares in area; Mt. Webb, north of Cooktown, preserves a sample of rainforest on basalt, at low elevation - a vegetation type almost completely lost because of the attraction of basaltic soils for cultivation; a relatively large number of islands have been reserved as National Parks, and especially where whole groups have been reserved are very useful additions to the park estate.

However, there are other small parks which should more appropriately be given some other classification. At present this is difficult to effect because of the attitude rightly held by certain sections of the community, notably the National Parks Association of Queensland, that any National Park must be regarded as absolutely sacrosanct, and any departure from this sets a dangerous precedent.

#### ENVIRONMENTAL LEGISLATION:

In Queensland, legislation to provide for the preservation, management etc. of the natural environment comes under a number of Acts of Parliament and is administered by a number of Government Departments.

In 1970 an Amendment to the State Development and Public Works Organisation Acts 1938-1964 provided for the establishment of the Environmental Control Council, an interdepartmental committee composed of 20 members under the Chairmanship of the Co-ordinator General. In 1971 the Act was amended and renamed The State and Regional Planning and Development, Public Works Organization and Environmental Control Act. It aims at co-ordinating the work of Government Departments, Local Authorities, Statutory bodies and associations in their respective fields of endeavour, and ensuring consistency in their respective policies and objectives, with respect to the environment.

With regard to the dedication of land for environmental purposes, the Forestry Act (1959-1971) provide for the establishment and management of National Parks. On the recommendation of the Conservator of Forests, areas within National Parks may be classified and declared by Order in Council as -

- (a) a primitive area
- (b) a Primitive and recreation area.
- (c) a recreation area
- (d) a scientific area, or
- (e) an historic area

with appropriate lines of management for these areas specifically outlined in the Act.

There is no harvesting of timber - trees are allowed to mature, die, fall to the ground and rot away, as part of the natural cycle of nature.

There is no gathering or destruction of flora.

There is no attempt to adorn nature in any way.

There is no deliberate introduction of any exotic species of plant or animal.

There is a total prohibition on shooting.

The chief work which has been carried out has been the establishment of carefully located walking tracks on easy grade, constructed with minimum disturbance so as to fit unobtrusively into the landscape.

Generally, public roads provide access to the perimeter of the parks and from here, on the more frequented areas, walking track systems have been put in along which visitors may stroll at leisure and observe the beauty of the parks at close quarters.

The actual entrances to the track systems have been featured by appropriate designs using local materials to harmonise with the surroundings.

At carefully selected spots, picnic grounds have been developed whereon toilets and shelter sheds have been erected and fire places, barbecues and tables provided.

Radiating from these picnic grounds are short circuit tracks taking in features of interest on the park and these can be walked by all, including elderly persons, without fatigue.

On many of the parks selected trees have been name-plated, feature lookouts constructed and safety fences erected.

A comprehensive system of distinctive timber signs, often in red cedar with its natural colouring, has been developed to guide and inform the visiting public.

Where the signs are painted a standard uniform colouring of chocolate with lemon lettering is adopted. This colour scheme blends unobtrusively with the surroundings.

In many instances in the naming of parks or features within the parks, Australian Aboriginal names associated with the locality have been used. In this way Aboriginal affiliations are perpetuated.

SITUATION REPORT - SOUTH AUSTRALIAPREAMBLE

The State of South Australia has the Southern Ocean to the south and is flanked on the other sides by land. It lies south of the 26th parallel of south latitude and has as a western boundary the 129th meridian of east longitude. The eastern boundary, north of the River Murray, corresponds with the 141st meridian, while to the south, between the river and sea, the boundary lies approximately three kilometres to the west of this meridian.

GEOGRAPHY

The State is approximately 1201 kilometres from east to west at the northern boundary and 1143 kilometres at the head of the Great Australian Bight; from north to south it varies from 630 kilometres near the western extremity to approximately 1325 kilometres near the eastern boundary; its coastline, excluding islands, measures approximately 3540 kilometres. South Australia covers a total area of 98 437 500 hectares (one-eighth of the area of the Australian continent); however, approximately one-third of this area has no significant economic use and over one-half is devoted to extensive pastoral pursuits. Approximately 99 per cent of the population live south of the 32nd parallel.

South Australia is a land of generally low relief, the inland area being largely covered by featureless plains or sand and gibber deserts. Approximately 50 per cent of the State is less than 150 metres above sea level and over 80 per cent is less than 300 metres. Even the dominant mountains, the Mount Lofty-Flinders Ranges system, nowhere exceed 1200 metres and have at no point proved difficult barriers to communication.

On the other hand the pattern of communication and development has been greatly influenced by the nature of the coastline, the south-easterly trend of which is interrupted by two major indentations, Spencer Gulf and Gulf St Vincent. These two relatively shallow depressions cut into the settled areas a distance of approximately 300 and 150 kilometres respectively. The resultant natural divisions earlier tended to develop their own centres and many ports were constructed along the coast in spite of the fact that, with the exception of the area between Port Lincoln and Fowlers Bay, the nature of the coastline is not particularly accommodating to port development.

Kangaroo Island, approximately 480 kilometres in circumference and covering 435 000 hectares, is the predominant island off the South Australian coastline. There are, however, approximately 100 islands in all, relatively few of which are utilised.

CLIMATE

In the Southern Hemisphere, because of the extensive ocean areas and the absence of a broad land mass connecting the Antarctic with the tropical regions, the southern continents are not subject to the same range of weather extremes that are experienced in northern countries at similar latitudes. The ameliorating effect of this land-sea distribution is particularly noticeable in southern South Australia.

Briefly, the basic features of the South Australian climate are hot, dry summers with relatively mild nights and cool but not severe winters with most rainfall occurring during the months of May, June, July and August.

Rainfall

South Australia is by far the driest of the Australian States and Territories with just over four-fifths of the State receiving an average of less than 250 millimetres of rain annually. An indication of the shortage of rain in the State is given in the following table which compares the relative distribution of rainfall in South Australia and in Australia as a whole.

Distribution of Rainfall - South Australia & Australia

	Proportion of Total Area	
	South Australia	Australia
	Per cent	Per cent
Under 250 mm	82.6	38.8
250 mm and under 400 mm	9.1	19.8
400 mm and under 500 mm	4.5	11.2
500 mm and under 600 mm	2.6	9.5
600 mm and under 750 mm	0.8	7.5
750 mm and under 1000 mm	0.4	6.2
1000 mm and over	(a)	7.0
Total	100.0	100.0

(a) Less than 0.05 per cent - an area of the order of 750 hectares in the Mount Lofty Ranges.

Over the southern half of South Australia the main source of rain is from showers associated with unstable moist westerly air-streams occurring fairly regularly during winter. The wettest part of the State is in the Mount Lofty Ranges, immediately east of Adelaide in the vicinity of Stirling, where the average annual rainfall is about 1200 millimetres. The Flinders Ranges have the effect of extending a strip area of higher rainfall well to the north.

involved. Some species such as the desert oak achieve a stature comparable with large temperate zone trees. Chenopod shrubs (Blue Bush, Salt Bush) are often prominent in the shrub stratum, and *Triodia* (Porcupine Grass) in the herbaceous cover, but there is considerable diversity in the Eremaean flora. The development of cattle and sheep grazing industries and overstocking for long periods and especially in times of drought has led to the depletion of, and alteration to, much of the vegetation of this area.

In general, vegetation characteristics of the temperate zone of South Australia succeed each other in a fairly predictable sequence from the highest to the lowest rainfalls. Under the high and intermediate rainfalls (about 750-1000 millimetres) dry sclerophyll forest is well developed, particularly in the Mount Lofty Ranges, where it constitutes a western outlier of the dry sclerophyll forest system occurring in eastern Australia. *Eucalyptus obliqua* and *Eucalyptus baxteri* predominate, but other species such as *Eucalyptus rubida* (the candlebark) are sometimes prominent.

Such forest is replete with lesser trees *Acacia melanoxylon* (blackwood) at a lower canopy level and a rich array of sclerophyllous shrubs and sub-shrubs beneath. Most species have generic analogues in equivalent dry sclerophyll forests of both eastern and western Australia. Sclerophyll forest in South Australia has been cut over extensively and is being invaded by aliens. Lower rainfall areas down to about 400 millimetres per annum support mainly savannah woodlands and layered woodlands with South Australian bluegum (*Eucalyptus leucoxylon*) and peppermint gum (*Eucalyptus odorata*) as predominant trees. Associated trees include river redgum (*Eucalyptus camaldulensis*) especially along river and creek frontages, sheoak (*Casuarina* spp.), and manna gum (*Eucalyptus viminalis*). In these vegetations the grass stratum is expressed and the shrub stratum rather suppressed. These vegetations are now almost entirely replaced by agricultural areas. In some places on the lower rainfall extreme of the temperate zone, variant vegetations occurred. These included substantial conifer (*Callitris* spp.) and conifer-eucalypt forests and woodlands (particularly in the Flinders Ranges), and areas of pure savannah, as once occurred about Burra.

The simple division of the State into Eremaean and temperate areas needs qualifying on two counts:

- (i) Heath. Certain higher rainfall temperate areas do not support the expected vegetation as a consequence of limiting soil fertility. The Coonalpyn Downs area is an example. Here low nutrient dune fields are super-imposed on the landscape and support only a heath vegetation where the rainfall regime is suitable for woodland. Such "light land" is the scene of contemporary agricultural expansion.
- (ii) Mallee. Intercalated between the Eremaean and temperate systems proper, there is developed in South Australia extensive mallee vegetation, dominated by eucalypts, the various stems of which all rise from underground lignotubers. The term "mallee" refers both to eucalypt species exhibiting this growth habit and to vegetation dominated by such species. Mallee vegetation is associated in its temperate reaches with heath, and in its Eremaean extensions with various vegetation types.

The diminutive Kangaroo Island emu disappeared soon after the European settlement and the night or spinifex parrot (*Geopsittacus occidentalis*) is probably extinct in South Australia.

Many species of birds can be observed close to Adelaide in the Mount Lofty Ranges and on Kangaroo Island. Mallee areas with their lower rainfall are moderately rich in bird life although the removal of native flora has caused the disappearance of many in certain districts. Within the State may be found the boundaries between numerous western and eastern species and sub-species of birds.

Well over 100 species of reptiles have been recorded. Of the few that are peculiar to the State, the white dragon lizard (*Amphibolurus maculosus*) found on the salt-encrusted margins of Lake Eyre and other inland playas is of particular interest. Undescribed species of lizards are known to occur in the Flinders Ranges.

The 19 species of frogs include one that is restricted to the State. This number is only 16 per cent of the Australian frog fauna (123 species) and reflects, in large degree, the predominantly arid nature of the State.

Marine and freshwater fishes number about 390 species - not a very rich fauna for a State with a coastline of 4000 kilometres. There is, however, an abundance of certain species of economic importance.

The insects of the coastal regions show affinities with those of similar regions to the east and west, while many of the restricted number of species of the inland extend widely through arid Australia.

Among insect groups that are prominent elsewhere in Australia but are scarce in this State are butterflies and cicadas, while insects that depend on permanent streams or swamps, such as dragonflies and caddisflies, are rather poorly represented. Similarly, few species of freshwater crustaceans occur. In eastern and western Australia, hosts of wasps, native bees, jewel beetles and other insects are attracted to the flowers of native shrubs in spring and summer. These insects are less numerous in South Australia largely because of the nature and limited extent of the bushland.

Among the restricted range of insects of the arid interior are a number of interesting forms. Of these certain desert-adapted grasshoppers (*Acridiidae*) are notable. Other groups with specialised species are lacewings (*Neuroptera*) and beetles and moths. Some are never abundant but the populations of others may fluctuate enormously. Moths can prolong the pupal stage to survive dry periods and may emerge in great numbers after heavy rain.

#### AREAS RESERVED

The National Parks and Wildlife Act 1972 (proclaimed 3 July 1972) repealed several Acts and amalgamated the previous functions of and areas controlled by the National Parks Commission, National Pleasure Resorts, the Fauna and Flora Board and the Fauna Section of the Fisheries and Fauna Conservation Department to form the National Parks and Wildlife Service. The Service is a Division

SITUATION REPORT - TASMANIAGEOGRAPHY

Situated between latitudes 40° 38' and 43° 39' South and longitudes 144° 36' and 148° 23' East the island State of Tasmania is the most southerly state in Australia. It occupies an area of 6 833 100 hectares, about the same as Ceylon.

Tasmania is a very mountainous island with peaks up to 1617 metres. There is a narrow coastal plain mainly along the east, north and west coasts. The highest mountain is Mt Ossa, 1617 metres. The central section consists of a plateau mainly in excess of 600 metres. The western half of the island is composed of a number of roughly parallel mountain chains with deep valleys between.

The coastline is deeply indented with a number of drowned estuaries providing safe anchorage for small vessels. There are numerous off-shore islands on the north, east and south coasts, and Macquarie Island 1300 kilometres to the south is also part of the State.

CLIMATE

Tasmania has a temperature marine climate producing mild winters and cool summers. Rainfall varies from 500mm annually in the east to 2500mm in areas of the West Coast.

The highest annual temperatures are in the east and south-east of the State. In mid-winter the high plateau areas have the lowest minima. Snowfalls can occur over the mountains at any time of the year but the heaviest falls are generally confined to late winter and spring.

POPULATION

The population of Tasmania is 395,000, concentrated in two main areas, urban Hobart (32%) and urban Launceston (16%). There is little population in the central, western and south-western areas of the State.

AREAS RESERVED

Over 441 000 hectares of Crown land are classified as State reserves. These comprise national parks, scenic reserves, wildlife and historical reserves, and represent approximately 6.5% of the state's land area.



9. Freycinet National Park (7 541 hectares) comprises the Freycinet Peninsula. Schouten Island 2 kilometres south of the peninsula is also a state reserve. Several walking tracks enable visitors to traverse the peninsula. It is a very popular area for camping and caravanning families.
10. Strzelecki National Park (3 946 hectares) is the only park in the Furneaux Group of islands in Bass Strait. It is on the southern end of Flinders Island and contains a variety of flora and fauna from seashore to mountain types. It is largely undeveloped.
11. Rocky Cape National Park (1 619 hectares) is known for the beauty of its coastal scenery and for its flora and fauna. There is a wide range of coastal heath vegetation including many native orchids. There are aboriginal rockshelters and caves within the park.
12. Included in the state reserve system is Macquarie Island (12 343 hectares) which supports a large population of sub-antarctic flora and fauna and is under the active management of the Service.

The state reserves can be divided into:-

11 National Parks	-	400 140 hectares
20 Historic Reserves	-	456 hectares
5 Nature Reserves	-	12 800 hectares
1 Aboriginal Site	-	132 hectares
44 Scenic and other Reserves	-	27,133 hectares.

There are 38 conservation areas (26 100 hectares) wholly under National Parks and Wildlife Service management and 36 others (488 003 hectares) under joint management with the owner or other authority.

#### STATE ENVIRONMENTAL LEGISLATION

- (a) National Parks and Wildlife Act 1970 provides for the setting up and management of conservation areas and state reserves, the control of wildlife and the administration and management of these areas of responsibility, by the National Parks and Wildlife Service.
- (b) Environment Protection Act 1973 covers aspects of environmental protection and provides for the administration of the Act by the Environmental Department. It is primarily concerned with pollution and noise control.
- (c) Litter Act 1973 covers all forms of litter and vests powers under the Act in police officers, officers authorised under the Environment Protection Act and bailiffs of Crown lands.
- (d) State Planning legislation is in course of preparation and could become law during 1975.

National parks are managed as wilderness areas and management is directed towards maintaining the wilderness character.

Although a considerable percentage of the state is protected as state reserve, a number of important samples of the natural environment are not included and efforts will be continued to make the state reserve system fully representative.

Where the Service has the responsibility for areas of historical importance, its efforts are concentrated on the maintenance and wherever possible restoration, of important buildings and other structures.

In wildlife matters the main guideline is the proper management of each species to maintain numbers to ensure the survival of the species.

POPULATION

The population is currently 95 104 with 63 101 living on the main island of Tongatapu, 11 022 in the Ha'apai group, 4178 in 'Eua and 14 527 in Vava'u. The remainder inhabit the smaller islands of the Kingdom. At the end of 1973 there were 9735 school children between the ages of 15 and 19 years and 22 520 between the ages of 6 and 14 years. On Tongatapu, the most densely populated island, the density per hectare at the end of 1972 was 2.44.

In a serious attempt to control the population explosion, reduce the growing demands on our limited land resources and therefore improve the quality of life for what is already a large population in relation to useable land area, the Kingdom in conjunction with the United Nations, is actively engaged in a Family Planning programme which is only now beginning to show some positive results.

AREAS RESERVED

At present there are only 4 land and sea areas which are designated as National Parks. These include two reefs, namely Hakaumama'o and Hakauloa, both of approximately 260 hectares in size. Hakaumama'o is about 4 kilometres directly north from Nuku'alofa and Hakauloa, also approximately the same distance from Nuku'alofa, lies in a westerly direction. The other national reserve is the Muihopohoponga and the Ha'amonga Trilithon. The Muihopohoponga is a 2 kilometre coastal stretch situated in the extreme eastern part of Tongatapu facing the island of 'Eua. Finally, the Ha'amonga trilithon is a 23 hectare allotment situated near the village of Niutoua which is also at the eastern part of Tongatapu. These were dedicated by His Majesty King Taufa'ahau Tupou IV as National Parks on the 13th May 1972.

Important scenic and historical sites however, such as Captain Cook's landing place; the Terraced Tombs at Mu'a; the Blowholes at Houma; the flying foxes at Kolovai; and the landing place of the first missionary, are regrettably not as yet covered by any environmental or protective legislation.

ENVIRONMENTAL LEGISLATION

Currently there is no specific Environmental Legislation. There is however a Land Act administered by the Ministry of Land and Natural Resources.

The Tongan Constitution states that all land is vested in the Crown and this is incorporated in the Land Act.

Any thoughts we have however, on Environmental Legislation must be influenced by the fact that each Tongan male on reaching the age of 16 years may be granted, subject to availability, an allotment of 3.3 hectares. With an ever expanding population, this Ministry is subject to considerable strain in attempting to comply with this Constitutional Requirement. It is therefore no easy task to consider environmental legislation covering both land and sea when the areas under consideration could and should

SITUATION REPORT - VICTORIAPREAMBLE

Nowadays, Victorians are very mindful of the importance of preserving, for posterity and their own enjoyment and edification, the outstanding features of their environmental and cultural heritage. We are particularly well endowed botanically with a wide variety of ecological systems, many interesting geological and geographical features and areas of scenic beauty. The first steps to preserve public land for such purposes were taken almost one hundred years ago.

GEOGRAPHY

Formerly the Port Phillip district of the colony of New South Wales, Victoria was constituted a State in 1851 and became, on federation of the States in 1901, part of the Commonwealth of Australia.

Situated at the south-eastern extremity of the Australian continent, it occupies about 2.96 per cent of the land-mass covering an area of approximately 22 776 000 hectares.

The State is bounded on the north and north-east by New South Wales from which it is separated by the River Murray and a boundary of approximately 176 kilometres long running north-westerly from Cape Howe to the nearest source of the Murray. The meridian of longitude 140°58' east divides Victoria from South Australia while the former's eastern extremity extends to 150° east. Victoria lies between latitudes 34 degrees south and 39 degrees south.

Topographically, the State consists of a northern plain (the Murray River Basin Plain) separated from a series of southern plains (the Western District and Gippsland Plains) by an east-west range of highlands (the Central Highlands). South-west and south-east of Melbourne are two highland areas (the Southern Uplands). The highest mountain peaks lie in the East Central Highlands - Mount Bogong (1986 metres) being the tallest.

CLIMATE

The Central Highlands play a major role in the provision of cooler and wetter weather in southern Victoria generally.

Though without a precise northern hemisphere counterpart, Victoria's climate approaches the mediterranean type with sub-alpine and semi-arid variants and, on a world-wide comparative basis, is rather equable. Nevertheless, it ranges from the hot north-western Mallee region summer to the winter blizzard conditions of the north-eastern alps and from the relatively dry wheat belt to the wet eastern stream-forming elevated regions.

More than seven-tenths of the population is concentrated in the Melbourne and metropolitan area with a populace exceeding 2½ million.

Geelong and environs has 126,500 persons, Ballarat over 60,000 and Bendigo approximately 40,000. Shepparton, Warrnambool, Wangaratta and Yallourn-Morwell each contain more than 20,000 residents.

#### AREAS RESERVED

Almost 2.6 million hectares of Crown land has been reserved. This consists of Reserved Forest (2 290 000 hectares), Wildlife Reserves (55 000 hectares) and National Parks (205 280 hectares). This represents approximately 10% of the area of the State. Reserved Forests, which are administered by the Forests Commission, include 56 358 hectares of Forest Parks, Alpine, Scenic, Wild-flower and special purpose reservations.

There are 24 Victorian National Parks, brief details of which follow:

#### Alfred National Park (2297 hectares)

On the Princes Highway and located in the far-eastern section of the State, it preserves the "jungle" type flora of Mount Drummer. It represents, also, the southern limit of a tongue of tropical-type environment which extends south from Queensland along the eastern border of the Great Dividing Range. It is the habitat of many rare ferns as well as some plants and animals restricted to eastern Victoria.

#### Bulga and Tarra Valley National Parks (37 hectares and 136 hectares respectively)

In south-central Gippsland and almost adjoining, they are similar ecologically. Though small, their viability is supported by the presence of a nearby reasonably large tract of Forests Commission land with good cover.

#### Captain James Cook National Park (2711 hectares)

This historic park is situated on the East Gippsland coast between Marlo and Wingan Inlet. Dedicated in 1969, foreshadowing the commemoration of the Captain James Cook bicentenary in April 1970, it possesses immense dunes, virgin forest and unspoiled beaches and effectively encircles Point Hicks (formerly Cape Everard) and the lighthouse area. It is historically significant as Point Hicks was Captain Cook's Australian landfall on his voyage along the east coast of Australia.

#### Churchill National Park (193 hectares)

Approximately 32 kilometres east of Melbourne, between Dandenong and Fern Tree Gully, on the slopes of the Lysterfield Hills and formerly part of the Dandenong Police Paddock, it is covered with open secondary-growth eucalypt forest and would seem to represent a reasonable approximation to the original pre-settlement condition of much of the southern metropolitan area. It is popular for family picnics and recreation and has a varied bird population.

Lind National Park (1166 hectares)

Situated near Club Terrace, East Gippsland, this park is forested country typical of this part of Gippsland. The Gippsland Waratah is found there.

Little Desert National Park (35 237 hectares)

Set in the extreme central-western region of the State, the park is composed of typical Mallee country and extensive sandy plains. It is noted for its very wide variety of wildflowers and birds, including the Mallee Fowl whose mound-building and nesting activities remain a scientific enigma. The Kiata Mallee Fowl Sanctuary is part of the park which also contains approximately 12.8 kilometres of frontage to the Wimmera River. In 1973 an Interpretative Centre was opened in the former Kiata State School which is situated along the Western Highway a few kilometres from the park.

Lower Glenelg National Park (9065 hectares)

This magnificent park, set between Portland and Nelson, close to the South Australian border, is approximately 416 kilometres from Melbourne. One of its outstanding features is the 64 kilometre stretch of the interesting gorge of the Glenelg River whose precipitous cliffs contain many limestone caves, some of aesthetic and scientific interest. Recent scientific investigations of prehistoric animal remains found in "death" caves has led to the conclusion that the Giant Kangaroo and the Marsupial Lion roamed the countryside about 15,000 years ago. It also includes portions of the Kentbruck Heath and the southern bank of the Glenelg River. One of the most ecologically diverse regions of the State, it is the habitat of over 660 species of native plants. Among the wide variety of animals and birds are the Platypus, Red-necked Wallaby and the rare Southern Emu-Wren.

Mallacoota Inlet National Park (4545 hectares)

The park is a strip 1209 metres wide round a series of small estuaries which make up this large scenic Inlet. It is a popular resort for fishermen. Its wooded shores harbour over 200 species of native birds - Pelicans, Sea Eagles and Oyster-Catchers - and provide habitat for the rare Sandpaper Fig (*Ficus coronata*).

Morwell National Park (140 hectares)

About 160 kilometres south-east of Melbourne, this attractive small park consists of the timbered slopes of a West Gippsland Valley. It is the habitat of the rare epiphytic Gunn's Orchid or Butterfly Orchid.

Mount Buffalo National Park (11 040 hectares)

This national park is a great granitic plateau or batholith which in itself is an outlier of the eastern highlands. It is popular for snow sports, with overnight accommodation for more than 180 guests at the Victorian Railways Chalet. In summer, the delightful walks along the wooded plateau to various vantage points for spectacular views to the distant ranges are also a strong

Wyperfeld National Park (56 559 hectares)

This is Victoria's largest national park. Located in the north-west (Mallee) part of the State, it borders the northern extremity of the Wimmera river system. It shelters over 600 species of native plants and more than 200 types of native fauna. Emus, Regent Parrots, Pink Cockatoos, are common birds, while the Mallee Fowl is also present. Black-faced kangaroos frequent the Tourist Area and are a special visitor attraction.

ENVIRONMENTAL LEGISLATION

Section 14 of the Land Act 1958 makes provision for reservation of selected public lands for a wide variety of purposes - from wharves, hospitals, cemeteries and sports ovals to wildflower areas and wildlife reserves already referred to. Such reservations are made by way of Orders in Council. The Forests Acts provide for the establishment of Reserved Forests by Ministerial action after conference between the Ministers for Lands and Forests.

The National Parks Act of 1970 is a development and refinement of the inaugural Act of 1956. The objects of the Act are basically the same as those on page 5 of New Zealand's situation report though there is some emphasis in the Victorian legislation on the provision "for the education and enjoyment of visitors to national parks and for the encouragement and control of such visitors".

ADMINISTRATION

Act No.8364 of December 1972 established a Ministry for Conservation and under Section 5(1)(g) made the Minister for Conservation responsible for "promoting the establishment of national parks and the proper management of existing national parks". More particularly, Sections 7 and 8 of the National Parks Act specify the duties and powers of the Minister in relation to his control of national parks.

The National Parks Service consists of the Director, along with a technical-administrative Head Office staff and embraces the field staff of rangers and ancillary park staff. A regional organisation is in the process of being established.

Apart from the Director, the National Parks Advisory Council now exists also to advise the Minister on the operation of the Act and to suggest extensions in policy.

CONSERVATION AND ENVIRONMENTAL AGENCIES

The Ministry for Conservation may be regarded as the largest agency of this type in Victoria. It embraces the divisions of the Environment Protection Authority (which controls and monitors levels of air, noise, industrial and domestic pollution); the Land Conservation Council which, inter alia, firstly investigates and then recommends to the Minister on the disposition of public lands; the Fisheries and Wildlife Division; the National Parks Service and the Port Phillip Authority.

SITUATION REPORT - WESTERN AUSTRALIAPREAMBLE

The first National Parks in Western Australia were established in the period 1895-1925. Subsequent to the publication in 1965 of the report on National Parks and Nature Reserves in Western Australia by the Western Australian Sub Committee of the Australian Academy of Science Committee on National Parks, the area of National Parks in Western Australia has increased more than ten fold.

GEOGRAPHY

Western Australia occupies almost one third of the island continent of Australia. It lies between the latitude 13°44'South and 35°08'South and between longitude 113°09'East and 129°East. To the north lies the Timor Sea, to the south the Southern Ocean and to the west the Indian Ocean. The area of the State is 252 762 900 hectares and is mostly occupied by a plateau of 300 - 450 metres average height above sea level and rises to over 1 200 metres in the north-west of the State. While for the most part the countryside is gently undulating, parts of the plateau are deeply dissected. The extreme length of the State from north-east to south-west is 2 382 kilometres and the extreme breadth from east to west is 1 609 kilometres. There are some 7 000 kilometres of coastline. Open forest and high open forest occur in the south-western corner of the State and this merges into woodland, open woodland and open scrub interspersed with open heath further to the east. Much of the interior of the State is covered by desert or semi desert vegetation except in the extreme north where large areas of woodland and open woodland occur.

CLIMATE

The extreme north is tropical and subject to the influence of monsoonal rains and cyclones. The semi desert interior is very dependent upon occasional cyclones to bring rain. The south-west of the State has a Mediterranean type of climate with winter rainfall carried in from the Southern and Indian Oceans by the prevailing south-westerly winds. The extreme south of the State which is more influenced by the Southern Ocean and has a proportion of its rainfall during the summer, has a more temperate climate.

POPULATION

The population of Western Australia (1971) was 1 030 469 of whom about half live in the Perth Metropolitan Area.



Fitzgerald River National Park 242 727 hectares is situated on the south coast between the Gairdner, Fitzgerald and Phillips Rivers. It contains the Fitzgerald and Hamersley River Gorges with spectacular cream coloured spongolite cliffs. It has magnificent coastal and mountain scenery and unique biological features.

Geikie Gorge National Park 3 136 hectares about 16 kilometres from Fitzroy Crossing, contains a beautiful gorge where the river cuts through an ancient limestone barrier reef. River trips are operated by the Ranger.

Hamersley Range National Park 590 206 hectares in the north-west of the State contains spectacular mountains, gorges, water courses and plateaux. Scenic points are Yampire Gorge, Fortescue Falls, Circular Pool, Dales Gorge, Joffre Falls and Red Gorge.

Kalbarri National Park 186 623 hectares is 344 kilometres north of Perth near the mouth of the Murchison River. The park has outstanding gorge scenery along the river and the limestone and sandstone cliffs provide magnificent coastal scenery. It is a popular area for holiday making with excellent fishing.

Nambung National Park 17 332 hectares is remarkable for its wildflowers, moving sand dunes and limestone formations.

Torndirrup National Park 3 916 hectares is located south-west of the Town of Albany. It is noted for its flora and fauna and rugged coastline.

Walyunga National Park 1 790 hectares is situated approximately 37 kilometres north-west of Perth where the Avon River emerges from the Darling Escarpment. It is noted for its scenery, geological features and flora. The attraction of permanent pools in the river has made it one of the most popular picnic spots adjacent to Perth.

Windjana Gorge National Park 2 134 hectares is in the Kimberleys and contains a remarkable gorge where the Lennard River cuts through an ancient limestone reef.

Yalgorup National Park 10 480 hectares is situated on the coastal plain south of Mandurah and contains a system of parallel lakes which are noted for their birdlife. It contains delightful scenery, interesting geological features and is also noted for its flora and animal life.

Cape Naturaliste to Cape Leeuwin Ridge This remarkable geological feature with its rugged coastline facing the Indian and Southern Oceans, its steep eastward escarpment and hills of granite, limestone and sand dune, is one of the most attractive areas of the State. It contains a series of relatively small National Parks along its length.

SITUATION REPORT  
THE INDEPENDENT STATE OF WESTERN SAMOA

PREAMBLE

The enactment of National Parks and Reserves legislation in December 1974 indicates that Western Samoa, like many other developing countries having limited land resources and a rapidly growing population, is conscious of the need to preserve representative portions of a rapidly diminishing natural environment. Impetus, enabling the proposed legislation to obtain priority for consideration and approval by the Legislative Assembly, was provided initially by Western Samoan membership of IUCN and subsequently by the visit to Western Samoa in 1974 of Mr Colin Holloway, an IUCN ecologist. Assisting Mr Holloway was Mr Colin Floyd of the United Nations Development Advisory Team for the South Pacific, who financed the mission. The main objective of the mission was the identification of parks and related reserves that would meet Samoan needs and to advise Government on the necessary organisation required to administer such areas. The mission's report has just come to hand (3 February 1975) and following its acceptance by the Government of Western Samoa it is hoped to release it as an example to other South Pacific countries of at least one practical way of protecting part of our natural heritage.

GEOGRAPHY

Western Samoa is located in central Polynesia, north of Tonga and north-east of Fiji. It consists of nine islands with an area covering 285 000 hectares. The two main islands are Savaii (170 790 hectares) and Upolu (111 770 hectares), where the seat of government and commerce is concentrated in the city of Apia. Of the other islands only Manono and Apolima are inhabited. Four of the remaining five islands lie off the eastern end of Upolu and while being of insignificant economic value nevertheless have sufficiently unique and unmodified natural environments to be of value for national park and reserve purposes.

The islands are volcanic in origin with Upolu having a high point of 1100 metres above sea level and Savaii 1860 metres above sea level. Some volcanic activity has been relatively recent and in north-eastern Savaii can be seen the effects of a lava flow that occurred in 1905. Although the soil cover is consequently very thin, Samoa is still sufficiently warm and well-watered to support a wide range of equatorial flora. Much of the island of Upolu has been modified by commercial plantation development or clearance

## POPULATION

The population of Western Samoa, estimated to be 155,000 in 1974, is characterised by a high birth rate and relatively low death rate. The national average annual rate of increase is one of the highest in the world. During the five year period 1966-1971 the average annual increase was 3.6 per cent. The outward migration however is quite high so that the net average annual rate of increase during the 1966-1971 period was only 2.2 per cent. At a very conservative estimate the population will double in 32 years.

Since out-migration is age selective, a disproportionately high percentage of the population (50 per cent) is under 15 years. There are in fact more persons outside the working age class (15-64 years) than persons inside the working age class.

The Apia urban area is attracting an increasingly higher share of the population. In 1971 the portion was 21 per cent and if current trends prevail it is estimated that in 1979 the share will be 23 per cent.

A family planning programme has been inaugurated and it is intended to develop this further in the successive five-year economic development planning programmes. It is not likely to have any noticeable immediate impact however and the consequences of high population growth during the last 25 years will continue to be felt for at least the next 20 years.

## AREAS RESERVED

As at the moment no specific areas in Western Samoa have been set aside as National Parks, although certain areas have been set aside as recreation and historical reserves. In the case of recreation reserves there are two large areas inside the Apia town and environs. These are:

- (a) Apia Park
- (b) Reclaimed area at Matafele

In the case of historical reserves, the Mulinuu Peninsula in Apia has always been recognised as having significant historical and cultural value to the Samoan people and this area contains not only Parliament Building, Land and Titles Court but it is also the burial ground of kingly Samoans. Another area which could be considered as having a characteristic of Mulinuu is Vailima, the former residence of Robert Louis Stevenson and now the official residence of the Head of State, and Government House. Now that Western Samoa has National Parks and Reserves legislation, which legislation covers the setting up of National Parks, Nature Reserves, Historic Reserves and reserves for other purposes, in addition to the completion of the study undertaken by IUCN and UNDAT, the Department of Lands and Survey is proposing to put forward proposals to Government for its support and approval of the following projects:

(b) Nature Reserves

7. Mount Vaea: The area has a widely-known historical connection with Robert Louis Stevenson, and a unique position in the midst of urban Apia and adjacent to the residence of the Head of State. In spite of some forest degradation, through exploitation and introduction of exotic plant species, the area is undoubtedly a potential candidate for national park status, but the present area is too small to meet international criteria. Acquisition of land within this region would be difficult and expensive. It is suggested that the area recommended be accorded the status of a nature reserve and that the possibility of adding further land to the south be examined, to enable it to be declared a national park in due course. The present area includes all categories of land ownership.

8. Lata Forest: A block of undisturbed foothill forest, situated entirely on public land.

9. Cape Puava Forest: A relatively undisturbed block of dry lowland forest, of which few, if any, sizeable samples still remain. Situated entirely on freehold land. All the major types of coastal ecosystems are represented on its narrow northern coastline.

10. Apolimafou: Probably the best remaining example of a lowland rush and reed swamp in Western Samoa. There is a high proportion of ferns in the swamp which suggests that some reduction in water supply may have occurred as a result of its partial surround of coconut groves, and some management of the area may be required to restore it to its original form.

11. Vaipu: One of the only two substantial upland rush and reed swamps in Western Samoa. Some upland swamp scrub and forest, principally in the south. Vegetation elsewhere is low and there is open water in the north-east. The neighbouring swamp of Afulilo may be submerged by a hydro-electric scheme in the foreseeable future.

12. Maugaloa: A rare example of a sizeable upland swamp forest, situated entirely on public land. The proposed new road on Savaii will provide access to this region, which includes Lake Mafane and Lake Mataulano.

13. Taupou's Grave Lava Flow: An interesting and very accessible example of lava flow that is, as yet, only sparsely colonized by scrub. Includes the Taupou's Grave Historic site.

14. Lake Mafane and

15. Lake Mataulano: Two examples of undisturbed upland primary forest and upland swamp forest, in association with crater lakes. Both areas are situated partially on public land.

16. Tiavi and

17. Fuipisia/Sopo'aga: Examples of riverain forest, containing a variety of palms and tree ferns on very steep slopes. Numerous species of birds inhabit these valleys,

Salamumu has special significance because it is a stretch of coast where palolo (*Eunice viridis*) is still numerous. The proposed reserve includes a very small rocky islet (Nuuavasa Island). Leanamoea includes a coastal fresh-water spring.

30. Aopo Cave: There are numerous caves (lava tubes) in Western Samoa, many of which contain bats nesting white-rumped swiftlets (*Collocalia spodiopygia*) and a diverse invertebrate fauna. Aopo cave appears to be particularly productive and it is recommended that it be accorded strict nature reserve status. Other, less productive caves could be included in the parks system, in due course, to which visits by the public would be permitted.

(c) Archaeological Sites

31. Vailele: The archaeological structures consist of very large earthen mounds (in the Tausala, Tapuitia and Papa-i-galagala groups) on three separate sites, on WSTEC land, within a relatively short distance of each other and within easy reach of Apia. There is a good motorable road to the first site; the other sites would have to be visited on foot or the track to these areas would require improvement. Sufficient information exists to enable tentative interpretive material to be prepared, but excavation of selected sites would probably be required to ascertain the full significance of these mounds.

32. Luatuanuu: Consists of two ridge-top settlements (Tula-i-mata fale and Tula-i-pue), comprising earthen terraces with house pavements and outlines, and earthwork fortifications, with fairly easy access, although the road will require attention; together with a fort at a higher elevation inland, which would be inaccessible to all but the more hardy visitor. The areas of the settlements are fern-covered and are not threatened by cultivation or other development. Sufficient data exist for the preparation of interpretive material. Further study, including excavation, would be desirable at some later date.

33. Vaigafa: A large inland village with numerous individual sites of paths, mounds, ovens, house pavements, house platforms, and terraces. Traditionally regarded as an important site in coastal villages such as Lotofaga and Salani; cultivation within the area is probably inevitable and could cause some damage to the structures. Scrub clearance would be required if the area were opened to the public. It is adjacent to Vaipu Swamp and might be reserved in conjunction with the swamp.

34. Moamoa: An earthwork fortification, in very good condition, on church land and within very easy reach of the centre of Apia. It has not been studied and would need to be cleared of scrub, mapped and dated before provision of public access is considered.

the members of the Legislative Assembly and gaining the support of two-thirds of the votes cast there.

Other legislation which may contribute, however little, to the protection of natural environments include:

1. Agriculture, Forest and Fisheries Ordinance 1959

This ordinance is administered by the Department of Agriculture, Forestry and Fisheries. Its effect on future National Park or Reserve programmes will probably be mainly in the field of commercial forest production.

2. Land Ordinance 1959

This ordinance is administered by the Department of Lands and Survey. Its most important provision insofar as the administration of National Parks and Reserves is concerned relates to the Land Board (see below).

3. Taking of Land Act 1964

This Act is also administered by the Department of Lands and Survey and is the guiding legislation for the taking of land for public purposes. National Parks and Reserves are considered as coming within the category of public purposes in terms of this Act.

4. Water Act 1964

This Act provides for the protection of water catchment zones of which there are 6 on Upolu and 3 in Savaii.

In 1973 a Bill drawn up to make provision for regional and town planning in Western Samoa was presented for consideration by the Legislative Assembly. It did not however become enacted principally because of fears about its application to customary land. If this Bill had been passed it would have been useful in that through subsequent Regional or Town Plans much needed publicity would have been given to those areas considered to be of value for National Park and Reserve purposes.

ADMINISTRATION

The 1974 National Parks Act is administered by the Department of Lands and Survey under the control of the Minister of Lands. The Minister must, however, consult with the Land Board (a Board established by, and to administer the provisions of, the Land Ordinance 1959), before he exercises his functions and powers under the Act. The Minister can delegate any or all of his authority to the Director of Lands.

## PART D - PAPERS PREPARED BY IUCN

## BIOSPHERE RESERVES

Prepared by IUCN Secretariat

The concept that representative areas of the world's ecosystem should be protected in perpetuity for scientific study and for their integral value has been accepted from the very beginning of Unesco's Man and the Biosphere Programme (MAB). It received official endorsement at the first meeting of the MAB International Coordinating Council in November 1971, and became a central concern of MAB Project 8 - Conservation of natural areas and of the genetic materials they contain.

At a meeting of a panel of experts on Project 8, held in Morges, Switzerland, in September 1973, it was agreed that a global network of biosphere reserves be established to accomplish the goals of science and conservation. The concept of biosphere reserves was further elaborated at a task force meeting held at Unesco headquarters, Paris, in May 1974. At the Third Meeting of the MAB International Coordinating Council in September 1974, the proclamation of a number of biosphere reserves was announced by several countries including Malaysia, the Philippines and the United States.

The biosphere reserve concept appears particularly appropriate for strengthening nature conservation in the Pacific and it is the purpose of this paper to call it to the attention of delegates to the South Pacific Conference on National Parks.

What is a biosphere reserve?

A biosphere reserve is an area set aside for the conservation of nature, for scientific research compatible with such conservation, and for compatible use in education and training. On continental areas a biosphere reserve would normally be of large size, since

2. Diversity: A single reserve should, where feasible, contain a maximum representation of the various societies, associations, formations, seral stages, or other variables of the biome in which it is located.
3. Naturalness: Areas showing the least degree of human modification are to be preferred.
4. Effectiveness: The size, shape and location of the reserve should be planned to allow the greatest degree of self-regulation and the least likelihood of disturbance by external factors.

#### Other characteristics of biosphere reserves

Where undisturbed natural areas are involved, scientific research may be only marginally compatible with the goals of conservation. In reserves intended to protect natural communities, therefore, it is advisable to establish a core area of relatively large size which would remain undisturbed, although available for observational research, and a surrounding buffer zone within the same biotic communities in which more intensive research and experimental management can be conducted. Buffer zones will be available for a variety of uses providing that these are compatible with protection of the central area. Such uses can include tourism or even certain forms of controlled exploitation which will not endanger the species involved. They can be of particular value as centres for education and training.

In marine areas, it is often less important to provide a buffer zone as such as it is to provide for a buffering function. This would necessarily involve control of pollution or siltation in waters that affect the core areas as well as careful control over any forms of exploitative use of such waters.

It should be obvious that certain large national parks that include wilderness or strict nature reserve, may be fully suitable for proclamation as biosphere reserves. However, it is important



A COORDINATED SYSTEM OF NATIONAL PARKS  
AND RESERVES IN THE SOUTH PACIFIC

Prepared by IUCN Secretariat

The matter of regional cooperation on national parks has been raised at international meetings on various occasions. Thus, for example, the Second World Conference on National Parks (Yellowstone and Grand Teton National Parks, U.S.A., September 1972) drew attention to the value of collective action by governments to establish regional systems of national parks and other protected areas and recommended that such action should be taken wherever possible.

IUCN with assistance from the Fund of UNEP and in cooperation with FAO and UNESCO has recently organized two regional meetings to examine such cooperation. The first of these was concerned with eastern Africa and was held in the Serengeti National Park in Tanzania in October 1974. The meeting decided to extend and elaborate the "wildlife conferences" that have been held over the past few years successively in Kenya, Tanzania and Uganda under the auspices of the national parks authorities of these countries.

The participants considered that the development and expansion of this idea would be the best method of obtaining coordination on a regional basis to carry out a two-part programme that would (1) define the various biomes and ecosystems of the area and classify them according to their management security, and (2) provide a mechanism to ensure the security of all representative biomes and ecosystems of the region within a national park or equivalent reserve and to improve management systems by active cooperation in training, research, exchange of information, etc.

CO-OPERATION IN THE DEVELOPMENT  
OF A CO-ORDINATED SYSTEM OF  
NATIONAL PARKS AND RESERVES IN  
THE SOUTH PACIFIC

Prepared by IUCN Secretariat

Another paper on this topic sets out some ideas regarding regional action in the field of national parks and reserves. Reference was made in that paper to a draft Convention on Conservation in the South Pacific Region which IUCN has submitted to the Governments concerned.

The Government of the Independent State of Western Samoa has offered to convene an intergovernmental meeting to conclude such a Convention during 1976.

Although such a Convention will provide a formal framework for co-operation within the region in matters relating to conservation, it seems desirable to make an immediate start in bringing about co-operative arrangements. The present paper summarizes suggestions for specific action that have arisen from informal discussion during the pre-Conference tour.

The Governments of Australia and New Zealand have already indicated that they are willing to provide technical assistance in matters concerning national parks to their partners in the South Pacific Commission and to share their experiences and resources in this field.

The South Pacific Commission has implemented a recommendation of the Regional Symposium on Conservation of Nature (Noumea, August 1971) and appointed Dr A.L. Dahl as Regional Ecological Adviser. He took up duty in July 1974 and has already made extensive visits to the region.

The United Nations Environment Programme has expressed a strong interest in the region. It is supporting work by IUCN on conservation of ecosystems and to this end has already funded the regional studies discussed in the above-mentioned paper.

3. The results of the above-mentioned study would be reviewed at a further Regional Symposium on Conservation organized by SPC in collaboration with IUCN. This might be held in association with the proposed meeting to conclude the Convention.
4. During the study action would be taken to identify areas that should be designated as biosphere reserves under UNESCO's MAB Project 8.

## ARTICLE I

Definitions

For the purpose of this Convention, unless the context otherwise requires:

(a) "Protected area" means national park or national reserve;

Note 1 (b) "National park" means an area established for the protection and conservation of ecosystems not materially altered by human exploitation and occupation, containing animal and plant species, geomorphological sites and habitats of special scientific, educative and recreational interest or a natural landscape of great beauty, which is under the control of the highest competent governmental authority and open to visits by the public;

Note 2 (c) "National reserve" means an area under government control established for protection and conservation of natural resources, and includes strict nature reserve, managed nature reserve, wilderness reserve, fauna or flora reserve, game reserve, bird sanctuary, geological or forest reserve, anthropological reserve, archaeological reserve and historical reserve, these being reserves affording various degrees of protection to the natural and cultural heritage according to the purposes for which they are established;

(d) "Migratory species" means a species of animal, including marine species, all or some specimens of which may at any season cross the boundaries of the territories of any of the Parties;

## ARTICLE III

National Parks

- Note 5
1. The boundaries of national parks shall not be altered, or any portion thereof be capable of alienation, except by the competent legislative authority. The resources of these protected areas shall not be subject to exploitation for commercial profit.
  2. The hunting, killing, and capturing of specimens of the fauna and destruction or collection of specimens of the flora in national parks shall be prohibited except when carried out by or under the direction or control of the parks authorities or for duly authorized scientific investigations.
  3. Provision shall be made for visitors to enter national parks, under appropriate conditions, for inspirational, educative, cultural and recreative purposes.

## ARTICLE IV

National Reserves

- Note 6
- National reserves shall be maintained inviolate, as far as practicable, except for duly authorized scientific investigations or government inspection, or such uses as are consistent with the purposes for which the protected area was established.

2. The Parties shall conduct research relating to the conservation of nature and natural resources. They shall as appropriate coordinate such research with research carried out by other Parties. They shall exchange information on the results of such research and on the management of protected areas and of species referred to in this Convention.
3. The Parties shall take action to promote exchanges of personnel and shall cooperate in the training of personnel for the conservation of nature and natural resources.
4. The Parties shall work towards unification of objectives and standards relating to the the conservation of nature and natural resources.

#### ARTICLE VII

##### Avoidance of Disturbing Activities

Note 10 Each Party shall take all necessary measures to prevent any disturbing activities that may affect the conservation of nature either in its own territory or the territory of another Party.

#### ARTICLE VIII

##### Measures to be taken by Parties

Note 11 Each Party shall take appropriate measures to enforce the provisions of this Convention.

ARTICLE XII

Signature

Note 16 This Convention shall be open for signature at .....  
until ..... by all States eligible for member-  
ship of the South Pacific Commission.

ARTICLE XIII

Ratification, Acceptance, Approval

Note 17 This Convention shall be subject to ratification, acceptance or  
approval. Instruments of ratification, acceptance or approval  
shall be deposited with ..... which shall be the  
Depositary.

ARTICLE XIV

Accession

Note 18 This Convention shall be open indefinitely for accession by the  
States referred to in Article XII and by other States which are  
unanimously invited by the Parties to accede to it. Instruments  
of ratification shall be deposited with the Depositary.

deposited with the Depositary, which shall transmit certified copies thereof to all States that have signed it or deposited instruments of accession to it.

2. The Depositary shall inform all signatory and acceding States of signatures, deposits of instruments of ratification, acceptance, approval or accession, entry into force of this Convention, amendments to the Annex thereof, and notifications of denunciation.
  
3. The Depositary shall transmit certified copies of this Convention to the Secretary-General of the United Nations for registration and publication in accordance with Article 102 of the Charter of the United Nations.

IN WITNESS WHEREOF the undersigned, being duly authorized by their Governments, have signed this Convention.

DONE at ..... this ..... day of  
..... One Thousand Nine Hundred and Seventy .....



Article IV

6. This Article sets out the protection to be given to National reserves.

Article V

7. This Article calls for protection of indigenous fauna and flora outside protected areas, with particular reference to migratory species and those listed in the Appendix.
8. This paragraph is concerned with species in danger of extinction. The Appendix will be drafted in due course.

Article VI

9. This Article calls for cooperation between the Parties and specified particular matters on which such cooperation is required.

Article VII

10. This Article calls for avoidance of activities that may disturb nature conservation.

Article VIII

11. This Article requires each Party to take action to implement the provisions of the Convention.

Article IX

12. This Article is linked with Article VII.

Article X

13. This Article may require further elaboration.

Article XI

14. This Article is concerned with future collaboration. More specific provision for regular meetings of the Parties could be envisaged.
15. It may be appropriate to consider naming the South Pacific Commission to carry out these duties.

Article XII

16. This Article and those that follow may be elaborated but the pattern proposed follows earlier precedents.

The question of which States may adhere to the Convention needs examination. This is linked with Article XIV.

## LIST OF PARTICIPANTS

### AUSTRALIA

- \* Hon. Dr Moss Cass, Minister for the Environment and Conservation
- Dr D.F. McMichael, Secretary, Department of the Environment and Conservation
- Mr N.C. Gare, Executive Officer, National Parks and Wildlife Service
- Mr V.S. Russell, Principal Environment Officer, Department of Environment and Conservation

### AUSTRALIAN CAPITAL TERRITORY

- \* Mr C.H.C. Davis, First Assistant Secretary, Lands Branch, Department of the Capital Territory and Chairman of Standing Committee for Australian Council of National Conservation Ministers
- Mr D. Everall, Reserves Officer, Conservation and Agriculture Branch, Department of the Capital Territory

### COOK ISLANDS

- Hon. Tupui Henry, Minister of Lands and Survey, Justice and Internal Affairs
- \* Mr G. Cowan, Chief Surveyor

### FIJI

- Hon. M. Ramzan Ali, M.B.E., Minister for Urban Development, Housing and Social Welfare
- Dr Isireli Q. Lasaqa, Permanent Secretary for Urban Development, Housing and Social Welfare
- Mr F.M.K. Sherani, Chairman of the Council for the National Trust for Fiji

SOUTH AUSTRALIA

Mr R.G. Lyons, Director of National Parks and Wildlife

TASMANIA

Mr P. Murrell, Director of National Parks and Wildlife

TONGA

Hon. Tuita, Deputy Prime Minister and Minister of Lands, Survey  
and Natural Resources

Mr Sione Kite, Assistant Secretary, Ministry of Lands, Survey  
and Natural Resources

VICTORIA

Hon. W.A. Borthwick, Minister for Conservation

Mr D.S. Saunders, Deputy Director of National Parks

WESTERN AUSTRALIA

Hon. M.E. Stephens, Minister for Conservation and Environment

Dr F. Smith, Director of National Parks

WESTERN SAMOA

Mr A.P. Hunter, Director of Lands, Department of Lands and Survey

Mr T.E. Suisala, Land Board Officer, Department of Lands and Survey

INTERNATIONAL UNION FOR THE CONSERVATION OF NATURE AND NATURAL  
RESOURCES

Mr F.G. Nicholls, Deputy Director-General

Dr R.F. Dasmann, Senior Ecologist

SOUTH PACIFIC COMMISSION

Dr A.L. Dahl, Regional Ecological Adviser

UNITED NATIONS ENVIRONMENT PROGRAMME

Dr Kai Curry-Lindahl, Senior Adviser on Ecology and Conservation

UNESCO

Dr B. Rollet, Regional Ecology Adviser, Field Science Office,  
Jakarta, Indonesia

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