

# Future Directions for the Oceanian Realm

Arthur Lyon Dahl  
South Pacific Commission  
Noumea, New Caledonia

---

**ABSTRACT.** *Islands are biologically distinctive, due to their isolation and resulting independent biological histories. Therefore, each island must be conserved in its own right. The peoples of the Pacific islands have developed cultures and traditions with an important conservation element. However, present trends, based on external sources of food, capital, and labour, are placing much of the natural and cultural heritage of the Pacific region at risk. It is apparent that protected area conservation must deal both with the natural biota, and the cultural context in which it has existed for hundreds of years. Protected area approaches imported from the mainland are not appropriate, but the IUCN Category VIII Multiple-use area, Category V Cultural landscape, and Category VII Anthropological reserve are all highly relevant for the Pacific. Conservation must build on the existing strong community spirit and traditional cultural means of conservation to evolve a new approach to benefit both people and nature.*

## 1. INTRODUCTION

The Oceanian Realm is characterized by the occurrence of small island systems in a vast expanse of ocean. It is the specificity of the island situation that gives this region its importance for conservation, and that constrains the kinds of conservation action that can be contemplated. This paper focusses on future directions for conservation in the area served by the South Pacific Commission and the South Pacific Regional Environment Programme (Micronesia, Melanesia and Polynesia excluding Hawaii and New Zealand), since this region shares many common features.

The Pacific Islands tend to be small, scattered and isolated. The region has a population of about 5 million inhabiting a total land area of only 550,000 sq km in a

sea area of over 29 million sq km, giving a population density of 9 persons per sq km. Excluding Papua New Guinea, the population is under 2 million on a land area of 88,800 sq km in a sea area of over 26 million sq km (population density 21 persons per sq km). While the population is decreasing on some smaller islands because of outmigration, the general trend is for rapid population growth placing increasing pressure on very limited resources.

It is in the nature of islands to be biologically distinctive, and principles of island biogeography have been developed to explain this. In general, the immigration and extinction rates of organisms are related to the size of the island and its distance from centres of colonization. In Oceania, the great isolation of many islands has led to high rates of endemism. The region has been estimated to have about 2,000 ecosystem types in 20 biogeographic provinces (Dahl, 1980). This rich natural heritage is the responsibility of very small and scattered populations with limited human, scientific and financial resources. It is unreasonable to expect that the burden of conserving this heritage should be borne by the people of the region alone.

The peoples of the Pacific Islands have developed cultures and traditions with an important conservation element. The people are strongly attached to their land, and in general learned to live in harmony with their limited island resources. The frequent taboo areas were the equivalent of parks and reserves. Intensive management practices and controls were developed for each species where required to maintain their abundance. There was in general a strong sense of local responsibility for the natural resources necessary for survival.

Given the benign climate and natural productivity of many islands, material development was limited to

essentials and most efforts went into human relationships and social interactions. It is this strong cultural foundation for conservation that gives hope for the future.

Unfortunately, present trends are placing much of the natural and cultural heritage at risk. With development and population growth, the conflicts between resource uses have been accentuated, and some countries are rapidly approaching the absolute limits of some essential resources such as soil and water. The centrifugal forces resulting from immersion in the outside world are destroying the autonomy and self-sufficiency of island societies. There is an increasing dependence on imports and aid, associated with a loss of a sense of responsibility. The joint trends of urbanization and the marginalization of rural areas are transforming the structure of island communities and the peoples' relationship with their natural resources. However, the strong pressures for westernization are being increasingly countered by a search for new lifestyles and approaches to development more appropriate to the island condition. As people experience the increasing stress on their resources as a result of short-sighted exploitation, they raise more questions about their future. In the recent review of the State of the Environment in the South Pacific (Dahl and Baumgart, 1982), a large majority of countries in the region reported problems of soil erosion, water and lagoon pollution, forest loss, and endangered species. Efforts are now under way through the South Pacific Regional Environment Programme to assist countries in resolving these problems.

## 2. PRESENT STATE OF CONSERVATION ACTION

A good start has been made on the protection of natural areas in the region with the creation over 100 parks and reserves in some 15 countries. However, these protected areas still include only a small proportion of the fauna, flora, unique sites and ecosystems of the South Pacific region. Progress has been slow, and with the very limited resources available for conservation in island countries, the foundation is still insecure. In general, the legal measures providing for the creation of protected areas are well in advance of the political commitment to conservation. Few parks and reserves have been created in most countries, and where they do exist, governments lack the finance and manpower to develop and manage them. Some parks have had to be abandoned, and others are under pressure. In the present situation in most island countries, we cannot expect much improvement with the conservation approaches tried to date.

The status of the Convention on Conservation of Nature in the South Pacific is indicative. The Convention was drafted in 1976, and signed that year at a plenary meeting in Apia, Western Samoa. However, no country has yet ratified it, and the political support seems inadequate to make any rapid progress.

Meanwhile, there is a steady reduction in the remaining natural areas as more land is cleared, pollution increases, and resource exploitation is intensified. The number of endangered species and ecosystems is uncomfortably large, and would certainly be larger if better information were available.

## 3. FUTURE DIRECTIONS FOR CONSERVATION

It is clear that, in island societies, where the people much more than the governments control the land and its resources, conservation actions must be based on popular understanding and support and must be adapted to the limited small island situation where single-purpose reserves are seldom possible. The following are some requirements for the future progress of conservation in the Oceanian Realm.

### 3.1. Information

A prerequisite to effective conservation is better information on natural areas and species. There are few scientists in the region, and the understanding of many island ecosystems is still very rudimentary. What information exists is generally in foreign experts and overseas research institutions and thus largely unavailable locally where it is most needed. Many conservation tragedies are the result of simple ignorance of the value of an organism or site. Areas and resources of conservation interest must be identified and mapped, sometimes even down to individual trees where these are very rare. This information should be produced in forms useful both for planning and for education. Regular monitoring is then required to identify trends, such as loss of forest cover or degradation of coral reefs, that may threaten conservation objectives.

Both of the above can be done with outside assistance if necessary, but it may be even more important to restore the local knowledge of species and areas. Traditional island societies had their fishing masters, hunters, healers and sorcerers who passed on their deep knowledge of the natural world and its uses from generation to generation. These people controlled the use of resources based on their intimate knowledge and their powers of observation. Their information was locally available and frequently consulted. However, the impact of missionaries and modern educational systems has undercut and all but eliminated this traditional environmental management. It is important to try to salvage what little traditional knowledge remains as a basis for renewed resource management approaches.

### 3.2. Protected areas

Much more flexibility is needed in the approaches to the protection of species, ecosystems and habitats. Most

legislation in the region was copied from often inappropriate examples elsewhere, but already some experiments in new approaches have been tried and others could be considered. There is a trend towards permitting the limited traditional use of organisms rather than establishing a total prohibition which is unenforceable.

Two examples are the wildlife management areas in Papua New Guinea and the farming of species under pressure to meet the commercial demand. New Caledonia has established a rotating marine reserve, in which three sections of the barrier reef are closed successively for three-year intervals. There has been discussion of the possibility of family reserves on land held in communal family ownership. A modification of the principle of the traditional fallow system could require a certain percentage of the land be held in forest, allowing some land clearing and use as other areas of forest regenerate. Reserved areas will frequently need to cater to multiple uses where these are compatible, such as watershed protection, medicinal plant collection, the cutting of trees for canoes or house posts, and other appropriate uses. Reserves may be more successful if they follow the pattern of traditional taboo areas. It may in some instances be necessary to include local inhabitants and their activities within a conservation area, or even to manage a whole island so that essential natural features are preserved alongside human activities.

### 3.3. Local support and responsibility

Central authority still tends to be weak and limited in its scope in most island countries, particularly in the many areas and islands that are remote from the seat of the government. Conservation in such areas will only be effective if supported by public opinion and particularly by the customary land owners. Where traditional authority is still respected, it should be used to enforce conservation actions, reinforced as necessary with laws and educational programmes.

Customary land tenure has been seen as a major barrier to park and reserve creation, but it could be turned into an asset through approaches in which the customary owners themselves help to define the conservation actions required, and make and enforce the necessary regulations with the support and encouragement of national authorities. This approach has showed promise in the wildlife management areas of Papua New Guinea (Kwapena, this volume). Such approaches do not involve taking away family land (which would be politically unacceptable even where it is possible), but apply controls protecting the resources on the land while leaving the peoples' ties to the land undisturbed. Local protection should be recognized by and enforceable under national law, and where development or management of the site as a conservation area is required, some financial and technical support could be made available.

It will still be necessary to find ways of sharing the burden on those land owners who are denied devel-

opment opportunities because their land happens to have conservation interest. In many islands, it is not possible to provide other land in compensation, and spiritual and ancestral ties with the land cannot be replaced.

The conservation of marine and coastal areas presents a particular problem. Many parts of Oceania had traditional marine tenure systems which allowed for limited access and local responsibility for the management of fisheries resources.

However, European legal systems have made such areas public, creating a new "tragedy of the commons". It may be necessary to restore traditional systems of marine resources ownership to achieve the effective management and conservation of these resources.

A basic principle for conservation in the Pacific islands should be to decentralize authority and responsibility to a level where enforcement is possible and where the greatest knowledge of the resources exists. In most instances, this will be the village, family or island level.

The essential support for this decentralized conservation will be strong and continuing public education campaigns and the provision of extension services. This may indeed be the most appropriate type of conservation activity on a national and regional basis. Since the populations involved are small, a moderate commitment of resources should make it possible to reach a large percentage of the population.

### 3.4. Integration with planning and development

The small land area of islands makes for greater conflicts in resource use. Conservation must therefore be closely integrated into the planning process, and not just set aside as the responsibility of a national parks unit. The reservation of natural areas should be seen as a kind of development which contributes to resource management and tourism as well as to nature conservation. In the many countries of Oceania where tourism is a major economic activity, there is a great need for more park development to improve the tourist experience and to prevent the industry from destroying the very resources on which it depends.

Most countries with islands of any size should aim for a few major national parks for tourism, public education and the protection of significant ecosystems, plus many small sites under local responsibility for areas of ecological, scenic, historic or recreation interest.

Rural communities should be encouraged to return to their pre-missionary state where they saw their activities as part of nature rather than working against nature. Their development should respect the continuity of the natural systems on which they depend.

### 3.5. Local resource managers

A pilot project is now being developed in the region to implement the future direction for conservation and resource management described above through the training of local resource managers. These people will be trained to bring modern scientific experience together with the traditional approaches and knowledge which have proven their effectiveness over generations, so that they can take on an advisory and management role in their own local community. The trainees will research the past use of local resources, and learn basic scientific methods so that they can design and carry out their own experimental trials and resource monitoring.

They will have continuing access to scientific advice, and contribute to national planning and data collection, while carrying out their primary role of guiding the development and uses of the resources of their community. They must have the agreement and support of the traditional authorities and the community for their new role, which will be comparable to the wise men of pre-European communities or local scientists in a western country. The presence in each village of a local resource manager who is aware of the need for conservation and knows what requires protection should catalyse more effective conservation action than could ever be imposed from the national level.

### 4. CONCLUSION

These future directions for conservation in Oceania may not seem practical when viewed from a European, African or American perspective, but they reflect the realities of the small isolated island communities in the region.

The Oceanian Realm probably has more unique natural areas and endemic species per capita than any other region. There are probably also more governments and government ministers per capita, but with much less at the base of the governmental pyramid to actually execute programmes. Government officers need to be generalists rather than specialists, and it will never be possible for island governments to carry out the same range of functions or responsibilities as in larger countries. Much more responsibility must therefore be left with the people themselves.

There is in the Pacific a strong community spirit and a sense of regionalism that is expressed through effective regional institutions, but there is also a strong resistance to the imposition of approaches from the outside. Past attempts at conservation have too often come from outside and been supported largely by expatriates. A new approach is needed, building on the foundation of the traditional island ways. The rapid erosion of those traditions that achieved effective conservation must be reversed. It is fortunately not too late to turn the tide with education and creative solutions to conservation problems, and thus to save a significant part of the rich natural heritage of the Oceanian Realm.

# National Parks, Conservation, and Development

## The Role of Protected Areas in Sustaining Society

---

Edited by **Jeffrey A. McNeely** and **Kenton R. Miller**  
IUCN Commission on National Parks and Protected Areas  
Proceedings of the World Congress on National Parks  
Bali, Indonesia, 11–22 October 1982

---

International Union for Conservation  
of Nature and Natural Resources

in cooperation with

United Nations Environment Programme  
United Nations Educational, Scientific and Cultural Organization

World Wildlife Fund–U.S.

PARKS Canada  
United States National Park Service

---