THIRD SOUTH PACIFIC NATIONAL PARKS & RESERVES CONFERENCE

CONFERENCE REPORT — VOLUME 2

COLLECTED KEY ISSUE AND CASE STUDY PAPERS

KEY ISSUE PAPER: ADEQUACY OF COVERAGE OF PROTECTED AREAS IN OCEANIA

Arthur Lyon Dahl
Gorre Rible, Plomodiern
FRANCE

INTRODUCTION

The question of how much conservation is enough is one that is almost impossible to answer. There must first be some agreement on basic principles or goals, such as the desirability of preserving the diversity of life on this planet, but even then the specific application of these principles to local situations can raise many complex issues (is feeding hungry children more important than saving an endangered land snail?). Adequacy of protected area coverage may seem very different viewed from a world scientific perspective or from that of a local decision-maker who seeks to balance many different demands. Ultimately decisions on adequacy must be made by each country, although hopefully the needs of the world community will be taken into account. This paper looks at the principles by which adequacy of protected area coverage must be judged, evaluates the present status of conservation action in Oceania, and then develops some goals for protected area development in the region.

CONSERVATION

Protected areas, like national parks and reserves, are generally established to conserve some part of the natural or cultural heritage. But what precisely does conservation mean? The World Conservation Strategy (IUCN/UNEP/WWF, 1980) lists three objectives for the conservation of nature:

1. maintenance of essential ecological processes and life-support systems;

2. preservation of genetic diversity;

3. sustainable utilization of species and ecosystems.

Each of these has its own particular importance in the Pacific Islands.

Essential ecological processes are such things as the development by natural plant communities of good island soils, the restoration of soil fertility when land is left fallow, and the purification of our wastes by environmental processes. Life support systems include the fresh-water supplies on which we depend for survival, and the air and environmental that we must keep free from poisonous or cancer-causing chemicals. Often these processes and systems are more limited on islands and can be more rapidly damaged here than in big continental areas.

The genetic diversity which underlies the great variety of kinds of plants, animals and other living things is much greater on many islands than it is elsewhere, because the isolation of islands has allowed new species to evolve to suit particular local conditions. This richness of species and varieties is a potential resource of world importance, but the responsibility for its preservation falls on a much smaller human population in the Pacific than in any continental area. For example, there are 54 endangered species of bird in Oceania, or one for every 92,000 people, where in Australia and New Zealand the ratio is 1 : 400,000, in the Caribbean 1 : 670,000 and in North America 1 : 9,000,000. Already the

region shares with other island areas some of the world's highest rates and numbers of species extinctions (Dahl, 1984).

The greatest threat to the aspirations and well-being of the peoples of Oceania is the failure to use island resources in ways that can be sustained on into the future. Island life and most island development projects depend on agriculture, fisheries and forestry, which use resources which are renewable if used wisely, but which can be destroyed if need or greed pushes people to take more than the resource can replace. The trend in most islands today is for total island productivity to decline as natural areas are developed and developed areas become degraded through over-use or misuse. Since islands are inherently limited, such trends can only lead sooner or later to the bankruptcy of island natural systems.

It is hard to argue against these conservation goals. No one wants to condemn his children or grandchildren to misery and suffering. Yet because the threats are gradual and not immediate, there is a natural tendency to concentrate on the short term and forget the eventual consequences. This cannot go on for ever, and governments must sooner or later face up to their responsibilities for conservation.

Protected areas can be important in achieving conservation, since within them ecological processes can continue without disturbance, samples of the genetic diversity of plants and animals are maintained, and species and ecosystems are protected from destruction by development or over-use. However, to achieve these goals, protected areas must be properly designed and well enforced and maintained. Areas that are protected only on paper can give a false sense of conservation accomplishment while the real damage to the country continues.

PROTECTING PACIFIC ECOSYSTEMS

Regardless of whether the primary justification is an endangered species, a natural feature, a scenic site or an essential process or resource, protected areas are usually created to protect the ecosystems of which these species or features are a part. The ecosystem includes both an environment or habitat and the different species, communities and processes that make up the whole working system. Protecting only part of an ecosystem is like protecting only the roots of a tree or the head of a chicken. The size and boundaries of a protected area should ideally conform to or exceed the minimum ecological limits of a viable sample of the ecosystem.

The Regional Ecosystems Survey of the South Pacific (Dahl, 1980), requested ten years ago by the First South Pacific Conference on National Parks and Reserves, attempted to list the kinds and numbers of ecosystems to be found in Oceania as a measure of the needs for conservation. That survey estimated that there were about 2,000 different ecosystems in the region, of which over 600 were specifically listed, ranging from unique marine lakes or loud forests to widespread atoll/beach strand forest. Many of these ecosystems are still unstudied or very poorly known, and further scientific work could well increase the number. Ideally, if the goals of conservation are to be achieved in the long term, adequate samples of all these ecosystems should be included in protected areas.

There is, however, a basic problem with the use of protected areas for nature conservation on islands. The number of species on most islands is related to the size of the island and its distance from other land areas. On smaller islands, it is harder for a newly-arrived species to get

established, and easier for it to be wiped out by a natural disaster or other cause; therefore the total number of species is less. The same principle applies to protected areas, which may become "islands" of nature in a sea of disturbed or developed areas. No protected area can assure the best chance for the long-term survival of all an island's flora and fauna unless it includes the whole island. The smaller the protected area, the fewer the number of species it can protect. Parks and reserves are thus an important but only partial solution to the problems of conservation on islands.

CONSERVATION AND MAN

If we eliminated all people, the environment would return to its natural state and there would be no need for conservation. Conservation is needed precisely because there are people, and indeed it is for people. Conservation is not against development, it is part of development, and its goal is the same as that of development: the progress and well-being of the people. Development that does not fit with the goals of conservation is not really development, but short-sighted exploitation that can only lead to the exhaustion of resources, unhappiness, frustrated desires and a declining quality of life.

Since resources are particularly limited on islands, people who live there must learn to live within those limits or face the consequences. The striking example of island environmental disaster is Easter Island, where a growing population destroyed the forest and exhausted the soil, leading to wars, disease and other factors that reduced the population to a handful. Because islands are small, maximum use must be made of all resources, and conservation principles are a guide to the greatest sustainable development. It is seldom possible to reserve a major part of an island for only a single need like preserving genetic resources. However, different essential needs can often fit together to achieve conservation of species while assuring life support systems and sustainable use. Conservation actions like creating parks and reserves can contribute to the wise use of all resources.

PROTECTED AREAS FOR CONSERVATION

A protected area is an area of land or water with defined boundaries recognised by law which is protected from all or certain classes of human activities to preserve natural or cultural features. There are many categories of protected areas which serve different needs. IUCN (1982) recognises ten categories which are summarised here to show the wide variety of uses of protected areas. A greater application of these different types in the Pacific Islands would help to solve a number of conservation and environmental problems.

1. Scientific or Strict Nature Reserves are closed to all use except scientific research to protect fragile natural areas or endangered species.

2. National Parks (or Territorial Parks) are relatively large natural areas, usually over 1,000 ha, open to visitors for education and recreation.

3. Natural Monuments or Landmarks are significant natural features of any size protected for public education and appreciation.

4. Nature Conservation Reserves, Managed Nature Reserves and Wildlife Sanctuaries are areas for the protection of particular species or habitats in which some use or management is permitted to ensure the survival or development of the species.

5. Protected Landscapes are areas either of natural beauty important for tourism or of traditional land uses and villages which are protected from incompatible developments.

6. Resource Reserves are areas temporarily protected from all but traditional subsistence uses until decisions are made as to alternate uses of the resources.

7. Anthropological Reserves are protected so that the people in them can continue their traditional life-style without outside interference.

8. Multiple Use Management Areas or Managed Resource Areas are large areas such as forests in which all resources are managed under government control on a sustained yield basis to meet the needs of the country.

9. Biosphere Reserves have both national legal protection and recognition by the UNESCO Man and the Biosphere programme with zoning to protect both natural and cultural values and human uses while permitting research on man's relation to natural systems.

10. World Heritage Sites are areas of world rather than just national interest which are nominated by countries that are party to the World Heritage Convention as areas of outstanding universal value.

There are about a hundred protected areas in Oceania, most of which are either strict nature reserves or wildlife sanctuaries. Only three countries have established national parks. Several smaller countries still have no protected areas.

Much more use could be made of protected areas in the islands, going beyond their narrow use for nature conservation to combine conservation with water supply protection, the maintenance of tourism resources, fisheries management, and wildlife resources management. These broader types of protected areas could help to make the most efficient multiple use of island resources on a sustainable basis.

However, protected areas are not the solution to all conservation problems, and other approaches are also needed to achieve essential conservation objectives consistent with maximum human benefits from the island. These approaches may include the protection of rare or endangered species wherever they occur, seasonal restrictions on the taking of certain species (often during the breeding season), licensing or other limitations on the numbers of people allowed to use a natural resource, habitat improvements to increase the area in which wild species can thrive (even in areas of human use), the control of environmentally damaging actions leading to pollution or erosion, etc.

ACHIEVING PROTECTED AREA DEVELOPMENT IN OCEANIA

It should be clear from the above that national parks and reserves cannot solve all the problems of nature conservation in the islands, and that in many cases human constraints will prevent their establishment even when they are desirable. What then are realistic goals for the coverage of protected areas in Oceania?

At present less than 20 percent of the ecosystems in the region are represented in protected areas. Thus 80 percent of the natural biotic communities and habitats presently have no assured protection. Some may not be in areas immediately threatened by development, and others may be sufficiently widespread that they are not in immediate danger of disappearance, but that still leaves a large number of unique island ecosystems and their associated species that are vulnerable to complete disappearance, often through unconscious acts in the normal course of island development. A species that is lost is gone forever, and with it an unknown potential for human use or betterment. An ecosystem cannot be reconstructed unless all its species can be reassembled, and even then there is much we do not know about the workings of such complex systems. Extinct species and lost ecosystems mean islands that are that much poorer and perhaps less able to respond to changing world needs and development possibilities. No country can afford to lose irreplaceable resources, and protecting them is therefore worth a considerable effort.

The ideal situation would be for each country to have a system of protected areas of different types which, together with other conservation measures, would assure the survival of all the ecosystems and species that make up the country's natural heritage. The same system of protected areas could safeguard island water supplies and hydro-electric potentials, prevent erosion in mountain areas, supply forest products, maintain fisheries productivity, encourage tourism, protect the cultural heritage, and help to ensure a high quality of life for island people. The designation of protected areas may be one of the most effective ways for a government to protect fragile or vulnerable island resources with minimum interference with peoples' attachment to their land.

Obviously such complete systems of parks and reserves cannot and should not be created overnight. Public support is necessary, the needs vary from country to country and island to island, and the resources available are very limited. The following are some suggested steps along the way towards adequate coverage of protected areas. The order is not necessarily important and can vary with country needs and possibilities.

1. Legislation will be needed to provide for protected area establishment. Even where national park Acts exist in the Pacific, they are often too narrow to allow the creation of a wide range of protected areas better adapted to island conditions. There should be provision for the creation of at least some types of protected areas on freehold or customarily owned land either with the consent of the owners or through easements, leasehold or other arrangements.

2. Each country should make a survey of all potential protected areas with natural or cultural interest. Such a survey can be used by planners to steer development away from sites with conservation interest even when it is not possible to provide formal protection for all the sites immediately.

3. Valuable natural areas that are in immediate danger should be identified for priority conservation action.

4. A few carefully selected parks and reserves can be established as demonstrations to show the values of such areas and to accustom the public to this approach to island development and management.

Several suggestions can help to make the development of protected areas easier. Whenever possible try to plan park and reserve development well in advance of any land or resource use conflicts; it can be almost impossible to set aside an area if someone else wants the resource for immediate development. In the same way try to discourage development in areas of conservation interest, such as by avoiding road building (which improves access), withholding development financing or not allowing the use of government bulldozers or other machinery in such areas. If there is a choice between several areas with similar natural interest, make reserves in those with the least development potential and the maximum inherent protection, such as broken terrain, steep slopes, remote reefs and inaccessible islands or valleys. Above all, make a major effort in public information and education so that the people will understand and support the parks and reserves. Without such support, enforcement will be almost impossible; with it, enforcement will hardly be necessary.

GOALS FOR ADEQUATE PROTECTED AREA COVERAGE

While it is clear that the coverage of protected areas in Oceania is far from adequate, a good start has been made. Steps such as broadening the categories of protected areas, and drawing on traditional knowledge and examples should help to make progress easier.

Perhaps this conference could consider setting goals or targets for conservation accomplishments by the time of the next South Pacific National Parks and Reserves Conference. Such goals might include:

a. the establishment of at least one protected area in each country and territory of the region;

b. an increase to 40 percent in the number of ecosystems receiving some kind of protection; and

c. the establishment of 50 new protected areas in the region (on the average hardly more than two per country).

Such accomplishments are within the reach of the countries and territories of the Pacific. They will require the constant efforts of those responsible for conservation in each country, and the continuing support and encouragement of regional and international bodies such as the South Pacific Regional Environment Programme and the International Union for Conservation of Nature and Natural Resources. If they are achieved or surpassed, then good progress will have been made towards an adequate coverage of protected areas in Oceania.

SUMMARY

Protected areas contribute to the essential goals of conservation: maintenance of essential ecological processes and life-support systems, preservation of genetic diversity, and sustainable utilization of species and ecosystems. Such areas are usually created to protect ecosystems of which species and processes are parts. There are perhaps 2,000 kinds of ecosystems in Oceania, and ideally samples of all of them should be included in protected areas. Conservation is part of wise development and conservation areas can contribute to meeting essential human needs.

There are many categories of protected areas which could be useful in island environmental management, but of the approximately 100 parks and reserves in the region, most are more narrowly focused on nature conservation. Even these areas protect less than 20% of the ecosystems in Oceania, and many natural areas and species risk destruction, often as an unconscious side effect of development. A coherent system of protected areas can bring a country many benefits, but this requires adequate legislation, a survey of all potential protected areas, priority action for areas in immediate danger and demonstrations of the usefulness of protected areas to gain public support. Conflicts between conservation and development activities should be avoided whenever possible.

Potential targets for protected area accomplishments before the next conference might include the establishment of a protected area in each country, increasing the coverage of ecosystems in protected areas to 40%, and creating 50 new protected areas in the region.