

CHAPTER 7

Conservation Approaches and Strategies I: In Situ Conservation in Protected Areas

*Dr. P. M. B. Kasoma,
Acting Director, MUIENR*

According to Chambers' Biology Dictionary, conservation is "the protection of natural ecosystems from the hand of man with the intention of preserving them as heritage or as a practical gene-bank and the wise management of ecosystems, allowing use at a level which does not impair the future capacity to produce".

Humans are gregarious by nature and often the interests of society override those of the individual. This is why throughout history, many societies have recognised certain geographical areas of special importance to them, often protecting them against abuse by individuals through religious sanction. This idea of protected areas has been enhanced in modern times because of the recognition that the human species can be extremely destructive to the **biosphere**, that part of the earth able to support life. Ecologists tend to categorise different parts of the biosphere in various ways in order to facilitate the understanding of its functioning, e.g. a **biome** is the largest land community region, e.g. tundra, savanna, grassland, desert, temperate forest or tropical forest. There is also a conceptual view of a plant and animal community, emphasising the interactions between living and non-living components and the flow of materials and energy between these components known as an **ecosystem**. Ecosystems are normally characterised by **habitats**. Habitats are the localities or sites with a particular type of local environment and occupied by particular organisms. The smallest geographical unit of the biosphere that can be delimited by convenient boundaries and is characterised by a certain flora and fauna is the **biotope**. It is these units: biotopes, habitats, ecosystems and biomes that comprise the biosphere and which protected areas attempt to conserve.

The first "formal" protected area was Yellowstone National Park established in 1872 in the USA. The European immigrants to America wanted to maintain some areas in a pristine condition because they realised that much of the natural habitats they had found were disappearing. The main characteristic of this park was that people were not allowed to live there (except park staff) and this formed the model on which most other countries established their national parks.

The main problem was that with increasing populations, it was difficult to find pristine areas unoccupied by humans. This realisation led to the evolution of various

---- *Strategies for Protection and Conservation* ----

other types of protected areas that could accommodate the human element, in one way or another. The result has been a multiplicity of types of protected areas.

In order to rationalise the nomenclature of protected areas, the IUCN, then International Union for the Conservation of Nature but now the World Conservation Union, came up with a standardised set of categories in 1978. These have been undergoing reform up to the 4th World Congress on National Parks and Protected Areas in 1992 in Caracas, Venezuela. McNeely *et al* 1994 review these categories.

Over the past 35 to 40 years, the number of protected areas established has continued to rise in spite of mounting pressures of expanding human populations. There is also an increasing recognition that protected areas cannot continue to be "set apart" from humans. They are increasingly being seen as integral to strategic approaches to resource management whereby natural areas would be managed to support development in a sustainable way.

Many countries have declared extensive systems of protected areas and continue to develop and expand them. Approaches have been different in different countries because of varying needs, priorities, as well as differences in legislative and institutional frameworks and financial resources. The common factor is that specific areas are designated as "protected" for a variety of functions, including conservation of biological diversity. This is collectively called *in situ* conservation, literally meaning conservation in the original location.

There are various ecological factors which need to be taken into consideration when designating protected areas, for example, size of the area, whether it has minimum viable populations of the species being protected, nature of land-use in surrounding areas etc.. All these factors need to be considered in order to decide whether the area is viable in the long-term or not.

Having said all that, it would be unreasonable not to mention that protected areas in Africa are having a rough time. There have been moves in recent years to bring people and parks together. A strong consensus is emerging that African parks must involve local people in management decisions, that local people must benefit from parks, and that the support of local people is essential to long-term existence of protected areas in Africa.

The reality is that few parks have applied these new methods. Re-training staff, rewriting management plans, developing community benefits are all expensive activities. Because of the difficult economic circumstances, very few conservation agencies in African nations have had the resources to revamp the protected area system in line with new theories.

---- *Gender and Biodiversity Conservation in Africa* ----

With the emergence of National Environment Action Planning and various other Conservation Strategies, various governments are realising the importance of making resources available to conservation. Donor support is also becoming more crucial in conservation efforts. One hopes that with proper planning at national and local levels, conservation and sustainable development will be achieved.

FURTHER READING

McNeely J. A., J. Harrison and P. Dingwall (1994) *INTRODUCTION: Protected Areas in the Modern World*

Possiel W. J., R. E. Saunier and R. Meganck (1995) *In situ Conservation of Biodiversity*

Alpert, P. *Conserving Biodiversity in Cameroon*

VonDroste B. *Biosphere Reserves: A Comprehensive Approach in "Expanding Partnerships in Conservation"* J. F. McNeely (ed)